

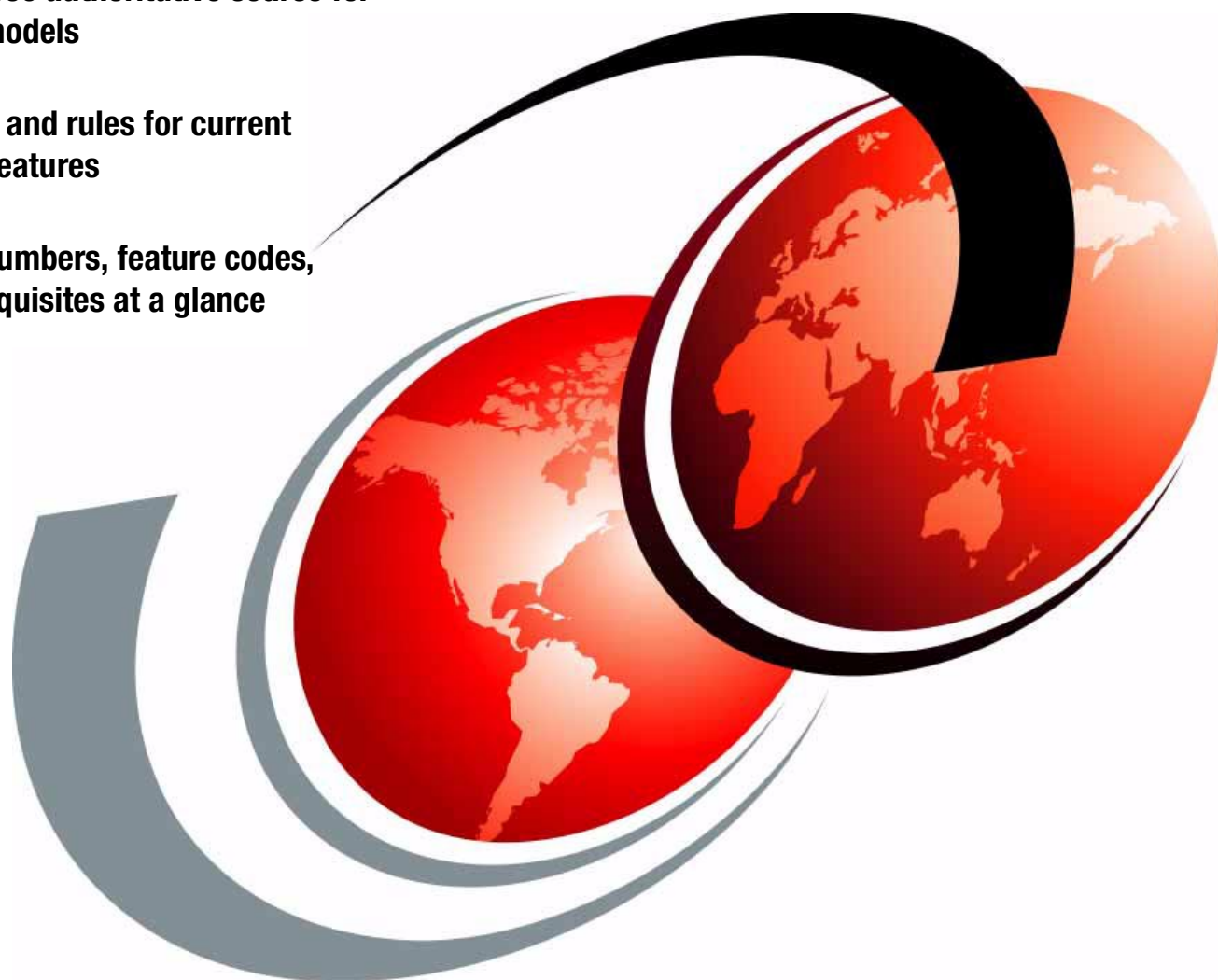
iSeries and AS/400e System Builder

Version 4 Release 5

The AS/400e authoritative source for
all RISC models

Fast facts and rules for current
AS/400e features

Product numbers, feature codes,
and prerequisites at a glance



Redbooks



iSeries and AS/400e System Builder

February 2001

Take Note!

Before using this information and the product it supports, be sure to read the general information in Appendix A, "Special Notices" on page 533.

Fifth Edition (February 2001)

This document was updated on 13 February 2001.

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Preface

Note

This IBM Redbook reflects the introduction of IBM @server iSeries 400. iSeries 400 servers are Models 270, 820, 830, 840, SB2, and SB3 announced in May 2000 (supported by OS/400 V4R5). Throughout this redbook, we use “iSeries” to refer to these models. AS/400e servers are all RISC models announced from June 1995 onward to May 2000, as well as the Model 250. AS/400 is the name used for CISC systems announced from 1988 onward to the RISC family. Software names and other product names remain the same at this time.

This sixth worldwide-distributed edition of the *iSeries and AS/400e System Builder* offers you a comprehensive guide to the iSeries and AS/400e hardware and software marketed by IBM representatives since the AS/400 announcement in 1988. With this softcopy edition, the Builder has been updated to reflect detailed information on the hardware and software iSeries and AS/400e-related announcements made through 13 February 2001. It includes the 8xx range, the Models 250, 270, SB2 and SB3, and the latest release of OS/400 software, Version 4 Release 5.

The industry standard Peripheral Component Interconnect (PCI) technology was introduced to the AS/400 product line in August of 1997. The commitment to PCI architecture is asserted again with the May 2000 announcement of an expansion unit supporting PCI (only) cards. This allows SPD-based systems to have a more flexible connectivity option.

Processor architectures are differentiated between CISC and RISC technologies. CISC are those models announced prior to June 1995. In this edition of the *iSeries and AS/400e System Builder*, detailed information on CISC models has been removed; only summary tables remain. For those still requiring CISC information, refer to the red paper available in softcopy at: <http://www.redbooks.ibm.com/>

The *iSeries and AS/400e System Builder* is divided into these major sections: Models 250, 270, 8xx, SBx, 170, 7xx, 6xx, and Sxx models, 9402, 9406, Server models, External Storage Devices, CCIN and feature tables, and Software. For ease of use, the 250, 270, and 8xx models appear in separate sections near the front of the book since these newest models are the ones users refer to most often.

Within each model, the features are divided up into these categories: Processors, Power and Packaging, Main Storage, Workstation Controllers, Communications, LANS and ATM, Disk Units, Internal Tape Units, and Magnetic Media Controllers. Features are listed in numerical sequence within each category. To help control the size of this book, duplicate feature descriptions are not repeated in every section. The 8xx section includes information on new features only. For migrated features, refer to Chapter 9, “9406 6xx Models” on page 211, and Chapter 8, “9406 7xx Models” on page 157.

Every chargeable feature is included in the *iSeries and AS/400e System Builder*, plus some non-chargeable features. However, non-chargeable features may need to be ordered. Note that the items listed in this book may not be announced in all countries.

This book is a comprehensive guide for configuration and installation support. However, it is not exhaustive. Use online systems (including the configurators, announcement letters, and online sales manuals) to verify customer orders. This becomes more important over time when announcements are made after the initial hardcopy publication of this book.

Softcopy updates and revisions are made to keep readers informed about changes between hardcopy editions. Revisions are updated on the softcopy version of the Builder, annotated as -05B, where “B” represents a level of update. This soft copy is available on the Web at: <http://www.redbooks.ibm.com/> Once

the incremental revision is made to the online edition, it is still available in hardcopy by ordering a print-on-demand copy from FatBrain via the IBM Redbooks Web site.

For the latest update to the *iSeries and AS/400e System Builder*, enter the search parameter SG24-2155 on the Web site: <http://www.redbooks.ibm.com>

The Team that Wrote this Redbook

We continually receive feedback and suggestions for improvement on the content and layout of the *iSeries and AS/400e System Builder*. Your input is appreciated. We have done our best to accommodate all such feedback.

If you have further suggestions or comments on the content, layout, and usefulness of this book, we again welcome your input. We are eager to do whatever is necessary to continue to improve this publication so that it is as useful as possible for those who need it most.

Many people contributed to the production of the May 2000 edition. This project represents a close cooperation between the ITSO, engineering, lab, and administrative departments. The team that dedicated their skills, time, and services during ITSO residencies between September 1999 and September 2000 are proud to bring you this update.



The team that updated the May 2000 edition are pictured from left to right: Dwight Harrison, Kendall Kinnear, Jonathan Perry, Mark Huntley, Louis Cuyppers, and Glen McClymont.



The team that updated the October 2000 softcopy edition are pictured from left to right: Dale Barrick and Miroslav Iwachow.

I am grateful for the dedicated hard work of technicians, engineers, and administrative staff around the world, including:

- **Glen McClymont**, Senior AS/400 Techline Specialist with IBM in Canada. Since 1988, he has worked with the AS/400 system in customer hardware support, software support, and most recently in pre-sales marketing support. Glen has 30 years with IBM.
- **Louis Cuypers**, AS/400 Technical Support Specialist. He has been with IBM Belgium for 23 years. He specializes in technical support and problem determination hardware/software for the AS/400 system. His previous experience includes working with the System/32, System/34, System/36, System/38, and AS/400. He has participated in several residencies in the ITSO since the release of V4R1.
- **Dwight Harrison**, AS/400 Remote Support Specialist, working for IBM in Rochester. His IBM career of 30 years includes being a Customer Engineer in Nebraska and a lab technician developing and testing disk drives in Rochester. Dwight has spent the past seven years in the Rochester AS/400 hardware support center. He conducts remote diagnostics on the AS/400 system and interfaces with developers to resolve customer reported problems both in hardware and software support.
- **Mark Huntley**, Technical Manager for Tier One UK Business Partner, TSF, specializing in e-business and Domino-based CRM solutions. Mark previously worked for IBM UK for fourteen years providing pre-sales support and consulting. This is the second edition of the Handbook and Builder Mark has worked on.
- **Kendall Kinneer**, System Consultant for Data Systems International in Dallas, Texas. Kendall is a Systems Consultant for Data Systems International, in Dallas, Texas. Kendall has 26 years experience in the IBM midrange solution, from the System/3, through the System/34 and System/38, to the AS/400e. Kendall brings substantial experience from his tenure at companies like IBM, EDS, StorageTek, and Jack Henry and Associates. He has experience as a System Programmer, Systems Analyst, Systems Engineer, Systems Administrator, Application Programmer, Application Designer, Educator and Speaker, and is an alumni resident from previous Handbook and Builder publications.
- **Jonathan Perry**, Associate Consultant with ASTECH, an IBM Business Partner. Jonathan has been with ASTECH for three and a half years and specializes in the areas of AS/400 System Operator, Networking, Security, and AS/400 Application Porting. His previous experience includes being a programmer in AS/400 RPG and UNIX 4GL. He holds an Honors Diploma in Computer Studies from the Keyin Technical College in St. John's Newfoundland.
- **Dale Barrick** has been with IBM since 1976 beginning as a CE. In 1983, he became a Systems Engineer working with mid-range systems in a primarily manufacturing territory. In 1992 he joined Techline and is the Southern Area AS/400 focal point in Atlanta. He also works closely with the Rochester Technology Solutions Center for LPAR documentation, education, and systems validation.
- **Miroslav Iwachow** is an AS/400 TeCenter support specialist for Avnet in Germany, a distributor of IBM. Previously Mirek worked for six years for IBM in the Czech Republic as the AS/400 product manager and team leader. He currently specializes in supporting IBM Business Partners and teaches courses that prepare them for IBM certifications.
- Many developers working several weeks in the months before the residency to establish and maintain the materials used to father this publication and its companion, the *iSeries Handbook*, GA19-5486. Dave Wells and his team of Jerry Allen, Teresa Barre, and Denis Nizinski devoted their time to explain, clarify, discuss, correct, and validate all of the hardware information, with Jeff Trachy and Jason Clegg providing input and validation on migration information. Among the extended team were Dan O'Hare for storage information, Jenny Wong for programming language updates, and Carole Miner for Client Access updates, and Bill Shaffer for printing products. On the behalf of the

field, I am grateful for their hours of dedication and drive to make this publication the outstanding product it is.



Susan Powers, Senior I/T Specialist
ITSO, Rochester, MN

Comments Welcome

Your comments are important to us!

We want our Redbooks to be as helpful as possible. Please send us your comments about this or other Redbooks in one of the following ways:

- Fax the evaluation form found in “IBM Redbooks review” on page 539 to the fax number shown on the form.
- Use the online evaluation form found at <http://www.redbooks.ibm.com/>
- Send your comments in an Internet note to redbook@us.ibm.com

Chapter 1. AS/400e Server 250

This chapter identifies the features associated with each 250 system, such as the processor features, power and packaging, main storage, workstation controllers, and communications (including WAN, LAN, and ATM), disk units, internal tape units and CD-ROM, and magnetic media controllers.

1.1 Model 250 Overview

The AS/400e Model 250 systems are Customer Setup (CSU).

OS/400 V4R5 is required to support the 250 systems.

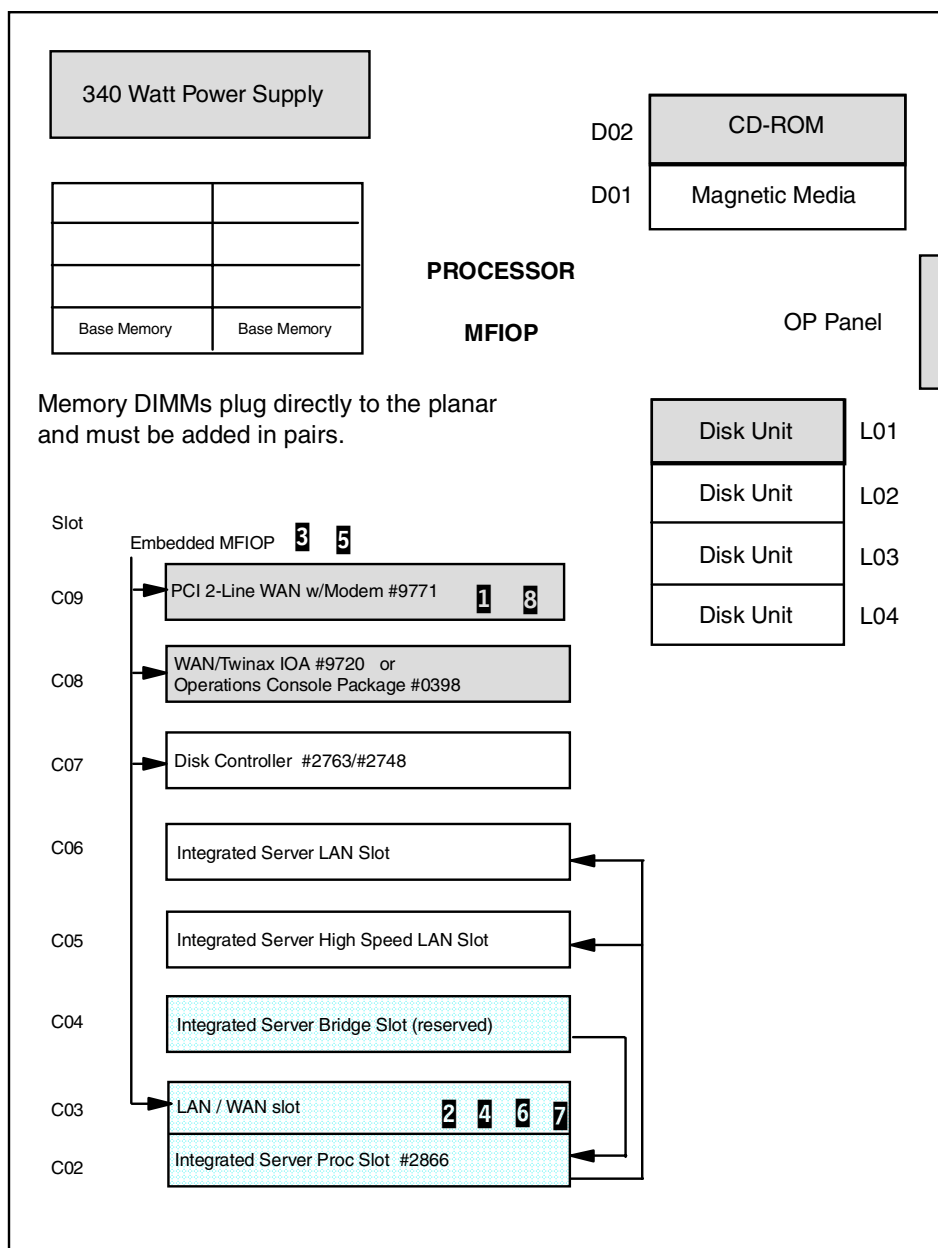
Model	250	
Processor Feature	#2295	#2296
Relative System Performance (CPW - See Note 1 and 2)		
Processor Performance	50	75
Interactive Performance	15	20
Number of N-Way Multiprocessors	1	1
L2 Cache (MB)	0	0
Main Storage (MB) Minimum/Maximum	256-1024	256-1024
Main Storage or DIMMS Minimum/Maximum	2/8	2/8
Processor Group	PPS/P05	PPS/P05

	Base System for all processors	System Unit Expansion #7102	Total Maximum
Disk Storage (GB)			
Minimum Internal	8.58	0	8.58
Maximum Internal	70.16	105.24	175.40
System I/O Card Slots	6	9	15
Maximum Communication Lines (see Note 4)	1-12	0-26	30
ATM Adapters (see Note 6)	0	0-2	2
Maximum LAN/ATM Adapters (see Note 6)	2	4	6
Non-Integrated Server LAN Low-Speed TR/Ethernet	1	4	5
Non-Integrated Server LAN 100/10 Ethernet	1	2	3
Integrated Server LAN Low-Speed TR/Ethernet	2	2	4
Integrated Server LAN 100/10 Ethernet	1	1	2
Maximum Workstation Controllers - Twinaxial	2	5	6
Maximum Workstations - Twinaxial	28-80	200	240
Cryptographic Processors	0	2	2
¼-inch Cartridge Tape (Internal)	0-1	0	1
8mm ½-inch Cartridge (External)	0	0-2	2
Tape Libraries (see Note 5)	0	0-2	2
CD-ROM	1	0	1
Optical Libraries - direct attach	0	0-2	2

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	Processor performance represents the relative performance (maximum capacity) of a processor feature running CPW in a client/server environment. Processor capacity is achievable when the commercial workload is not constrained by main storage and DASD. Interactive Performance represents the relative performance available to perform host-centric workloads. The amount of interactive capacity consumed reduces the available processor capacity by the same amount.
Note 3:	The Integrated Server is mutually exclusive with the high-speed slot C03 for LAN/ATM/communication in the Base System Unit.
Note 4:	One line is used by the Operations Console if selected.
Note 5:	Total number of external tape drives does not increase.
Note 6:	Integrated Server refers to Integrated Netfinity Server.

1.2 Model 250 System Unit and System Expansion Unit

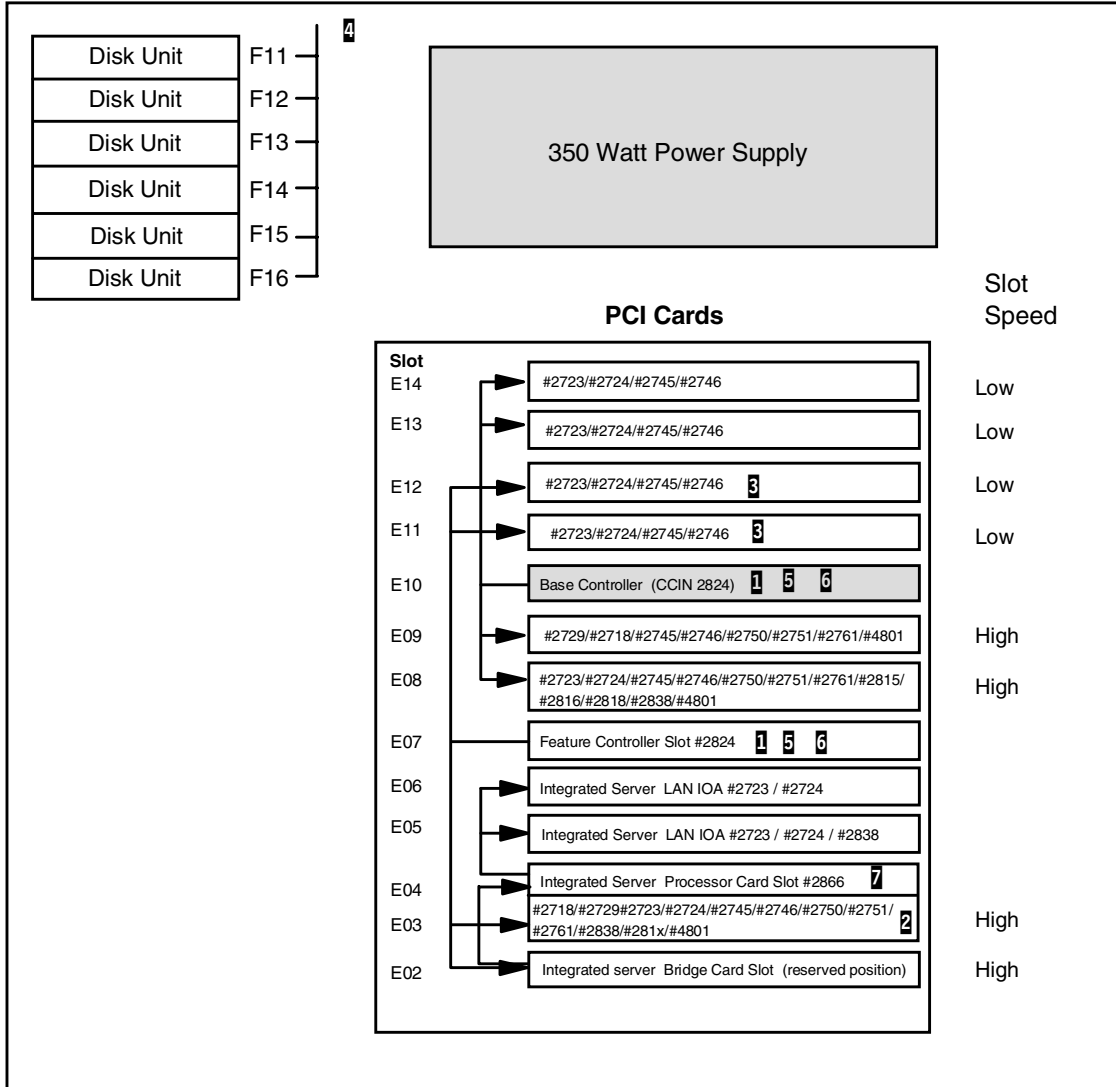
9406 Model 250 System Unit - PCI Card Placement



Notes:

1. No high-speed LAN is allowed in Slot C09.
2. If any LAN is in Slot C03, no LAN card is allowed in Slot C09.
3. A maximum of three LAN cards are allowed on the MFIOP (including Integrated Server slots C05 and C06).
4. Communications cards #2750, #2751, and #2761 are *only* allowed in high-speed Slot C03.
5. The processors include an embedded base disk controller (CCIN 9728). A separate #9728 is not needed.
6. If any IPCS is in Slots C02/C04, C03 must remain empty.
7. In C03, #2723, #2724, #2745, #2746, #2750, #2751, #2761, and #2838 are supported.
8. C09 supports #2720, #2723/#9723, #2724/#9724, #2745/#9745, #2746. When the system is ordered with a base LAN, a #2746, and no #0398, the #2746 goes into C09 and the #9771 into C08.
9. The #0398 Operations Console Package is required with the LAN Option, and includes both the CCIN 2745 and CCIN 0367 Operations Console Cable.

9406 Model 250 #7102 System Expansion Unit

**Notes:**

1. A maximum of one High Speed LAN/ATM or maximum of two low speed LANS per controller.
2. If an Integrated Server is in slots E02/E04, E03 must remain empty.
3. A maximum of one LAN in E11 or E12 with Integrated Server in E02/E04.
4. The disk units in the expansion unit are controlled by the #2763 or #2748 disk controller in the System Unit.
5. Communications cards #2750, #2751, and #2761 are allowed in slots E03, E08, and E09 (maximum one per IOP).
6. Cryptographic card #4801 is allowed in high-speed slots E03, E08, or E09 (maximum one per IOP).
7. Integrated Server refers to Integrated Netfinity Server.

1.3 Model 250 Optional Features

PROCESSORS	
#2295	50.0 CPW Processor in Client/Server Environment, 15.0 Relative System Performance (RSP) CPW Processor in Interactive Environment. Base Memory 256 MB.
#2296	75.0 CPW Processor in Client/Server Environment, 20.0 Relative System Performance (RSP) CPW Processor in Interactive Environment. Base Memory 256 MB.
POWER AND PACKAGING	
#7102	System Expansion Unit This feature allows the addition of up to nine PCI cards. It includes a Base Controller (CCIN 2824) with 32 MB of memory as standard and can have another controller added by ordering #2824. The #7102 can also support one #2866 Integrated PC Server. The #7102 additionally supports up to six disks (driven by the optional RAID disk controller located in the system unit). Maximum: One per system. Requires one line (power) cord #14xx.
#1402	Line cord 9-feet 120 volt Feature #1402 specifies 9-feet long (2.8 m), 15 Amp, and 120 volt (US default). This specify feature provides one line cord. One #1402 must be ordered for the system unit and one for the Expansion unit. If only the System Unit is ordered, only one line cord is required.
#1403	Line cord 9-feet 240 volt Feature #1403 specifies 9-feet long (2.8 m), 15 Amp, and 240 volt. This specify feature provides one line cord. One #1403 must be ordered for the system unit and one for the Expansion unit. If only the System Unit is ordered, only one line cord is required.
#143x	Line cord 2.8-meter 200 volt/10 amp Power Cord Feature #1403 specifies 2.8 meter, 10 Amp, and 200 volt. This specify feature provides one line cord. One #143x must be ordered for the system unit and one for the Expansion unit. If only the System Unit is ordered, only one line cord is required. #1430 Au/NZ #1431 EU/Asia #1432 Denmark #1433 S. Africa #1434 UK #1435 Swiss #1436 Italy #1437 Israel
MAIN STORAGE	
Base	There are no features to specify the base memory of 256 MB on the Model 250 Processors #2295 and #2296. The base memory positions contain two 128 MB DIMMs (CCIN 3022) Note: Main storage cards must be added in pairs on a Model 250 to a total maximum of 6 storage cards. There are no feature exchanges when swapping memory DIMMs.
#3022	128 MB Main Storage Card Plugs directly into the processor. Must be added in pairs. Maximum: Six This is a Customer Install Feature (CIF).
#3024	256 MB Main Storage Card Plugs directly into the processor. Must be added in pairs. Maximum: Two. This is a Customer Install Feature (CIF).

WORKSTATION CONTROLLERS	
Base MFIOP	<p>Base Multifunction IOP</p> <p>The MFIOP (CCIN 6757) and the processor are combined together on the planar board. It also includes embedded Base Disk Unit Controller CCIN 9728. A separate #9728 Base Controller is not required.</p> <p>The MFIOP drives two low-speed slots C08, C09, and two high-speed PCI slots C03 and C07.</p> <p>C07 supports disk drive controllers #2763 or #2748 when there are more than four disk drives, or RAID-5 is required.</p> <p>Slots C02/C04 are reserved for one #2866 PCI Integrated Netfinity Server and can only be used if there is no card in slot C03.</p> <p>Slot C03 supports one of #2723/#9723/#2724/#9724/#2838/#9738 PCI LAN IOAs or WAN #2745, #2750, #2751, and #2761 PCI IOAs or #2746 Twinax IOA.</p> <p>Slot C08 is reserved for one base ECS/Console IOA #9720, or #0398 (Operations Console package) or #9771 if #2746 is on order.</p> <p>Slot C09 supports the base #9771 2-Line WAN with Modem. It also supports #2720, #2723/#9723, #2724/#9724, #2745/#9745, and #2746.</p>
Base IOP	<p>Base Controller for #7102 Expansion Unit</p> <p>One LAN/WAN/Workstation IOP (CCIN 2824) is supplied as standard within the #7102, and is installed in slot E10. It provides support for two high-speed PCI card slots E08 and E09, and two low-speed PCI card slots E13 and E14.</p> <ul style="list-style-type: none"> Slot E08 supports one of the following LAN cards: #2838, #2723, #2724 or #281x ATM cards or the #2745 PCI two-line WAN IOA or the #2746 Twinax IOA or the #2750/#2751 PCI ISDN IOA, the #2761 Integrated Analog Modem, or the #4801 Crypto Coprocessor. Slot E09 supports the #2718/#2729 PCI Magnetic Media Controller, the #2745 Two-line WAN IOA, the #2746 Twinax IOA, the #2750/#2751 PCI ISDN IOA, the #2761 Integrated Analog Modem, or the #4801 Crypto Co-processor. The low-speed slots E13 and E14 support cards #2723, #2724, #2745, or #2746. There is a maximum of one high speed LAN/ATM with no additional LAN per controller or there is a maximum of two low speed LAN with no high speed LAN/ATM per controller. Maximum of one #2750, #2751 or #2761 per Base IOP
#2720 #9720	<p>Base PCI WAN/Twinaxial IOA</p> <p>This combined twinaxial/communications adapter can be included as base in the Model 250. It provides four ports supporting a maximum of 28 Twinaxial devices. It also provides a single communications line to support ECS. It is mutually exclusive with #0398. #2720 is not supported in the configurator. RPO only. #2720 is provided for customers who want to change to a twinax console. #9720 is supported for migration only. #0348 V.24/EIA232 20ft (6m) PCI cable is required for ECS. See "Comm Restrictions" on page 9 for communications rules and restrictions.</p> <p>PCI slots required: One</p> <p>Maximum: One</p>
#2746	<p>PCI Twinaxial Workstation IOA</p> <p>The Twinaxial Workstation IOA provides support for up to 40 active twinaxial displays and printers addresses or up to 120 active shared sessions. A 20-foot cable (6.2 m) with an eight port expansion (breakout) box is included with this adapter. Each port supports seven attached devices, allowing for 56 total attached devices, of which only 40 can be active. This feature can be attached both to high- and low-speed slots.</p> <p>PCI slots required: One</p> <p>Maximum: Six</p> <p>This is a Customer Install Feature (CIF).</p>

#2824	<p>PCI Feature Controller Feature Controller for LAN/WAN/Workstation #2824 has 32MB of memory and can be ordered and installed in slot E07 #7102 System Expansion Unit. In #7102 System Expansion Unit, one Base controller (CCIN 2824) is supplied as standard with no feature required (see Base IOP in this section). The Feature Controller #2824 provides support for two low-speed PCI card slots E11 and E12, and one high-speed PCI card slot E03.</p> <ul style="list-style-type: none"> Slot E03 can only be used if no #2866 Integrated Netfinity Server card is installed in slots E02/E04. Slot E03 supports one of #2718, #2729, #2723, #2724, #2745, #2746, #2750, #2751, #2761, #281x, #2838, or #4801. Slots E11 and E12 supports #2723, #2724, #2745, and #2746. There is a maximum of one high speed LAN/ATM with no additional LAN per controller or there is a maximum of two low speed LAN with no high speed LAN/ATM per controller. There is a maximum of one low speed LAN supported in E11/E12 if a #2866 Integrated Netfinity Server is installed in E02/E04. <p>Maximum: One in the #7102. This is a Customer Install Feature (CIF).</p>
COMMUNICATIONS	
#2720 #9720	<p>Base PCI WAN/Twinaxial IOA This combined twinaxial/communications adapter can be included as base in the Model 250. It provides four ports supporting a maximum of 28 twinaxial devices. It also provides a single communications line. It is mutually exclusive with #0398. #2720 is not supported in the configurator. RPO only. #2720 is provided for customers who wish to change to a twinax console. #9720 is supported for migration only. #0348 V.24/EIA232 20ft (6m) PCI cable is required for ECS. PCI slots required: One Maximum: One</p>
#2745	<p>PCI Two-Line WAN IOA Supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft/6m PCI cable #0349 V.24/EIA232 50ft/15m PCI cable #0353 V.35 20ft/6m PCI cable #0354 V.35 50ft/6m PCI cable #0355 V.35 80ft/24m PCI cable #0356 V.36 20ft/6m PCI cable #0358 V.36 150ft/45m PCI cable #0359 X.21 20ft/6m PCI cable #0360 X.21 50ft/15m PCI cable #0365 V.24/EIA 232 80ft/24m PCI cable #0367 Operations Console PCI Cable (Not supported in configurator) <p>There are some restrictions on communications using #2745. For communication restrictions, see "Comm Restrictions" on page 9. PCI slots required: One (low or high-speed). This is a Customer Install Feature (CIF).</p>
#2750	<p>PCI ISDN BRI U Adapter (only available in the United States and Canada) #2750 is a four-port (8 channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. #2750 is the "U"-bus (2 wire) version of the ISDN BRI PCI card. #2750 feature supports the following protocols: PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax</p> <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2750 feature. For configuration purposes, each #2750 counts as eight lines (two lines per port) toward the system communication maximums. Allowed in high-speed slots C03 (Base Unit), E03, E08, or E09 (System Expansion Unit). Supports full duplex. Requirements: This feature requires country certification or homologation. Full-sized PCI card slot. Maximum: One per IOP This is a Customer Install Feature (CIF).</p>

#2751	<p>PCI ISDN BRI S/T IOA</p> <p>The #2751 is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #2751 is the "S/T"-bus (four wire) version of the ISDN BRI PCI card.</p> <p>Note: This requires a Network Terminating device in the circuit. In the United States and Canada this must be provided by the customer. In other countries it is most likely provided by the telephone company.</p> <p>The #2751 feature supports the following protocols:</p> <ul style="list-style-type: none"> PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2751 feature. For configuration purposes, each #2751 counts as eight lines (two lines per port) towards the system communication maximums. Allowed in high-speed slots C03 (Base Unit), E03, E08, or E09 (System Expansion Unit). Supports full duplex.</p> <p>Requirements: This feature requires country certification or homologation.</p> <p>Full sized PCI card slot.</p> <p>Maximum: One per IOP</p> <p>This is a Customer Install Feature (CIF).</p>
#2761	<p>Integrated Analog Modem</p> <p>The #2761 allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). It runs the following protocols without the need for an external modem:</p> <ul style="list-style-type: none"> SLIP/PPP uses V.90, so max line speed is 56K bps SDLC uses V.34 or 33.6K bps max line speed Fax uses V.17 to achieve a 14.4K bps max line speed <p>An asynchronous line description is required for Fax and can only be used for Fax. ECS line not supported. Eight 30-foot (9.3 m) phone cables are shipped with each #2761. To the iSeries or AS/400e server, the #2761 appears like a single IOA with eight individual resources available. For configuration purposes, each #2761 counts as eight communications lines. Allowed in high-speed slots C03 (Base Unit), E03, E08, or E09 (System Expansion Unit). Supports full duplex.</p> <p>Requirements: This feature requires country certification or homologation.</p> <p>Full sized PCI card slot.</p> <p>Maximum: One per IOP</p> <p>This is a Customer Install Feature (CIF).</p>
#4801	<p>PCI Crypto Coprocessor</p> <p>The #4801 is a hardware cryptography solution. The #4801 is a half-length PC form-factor PCI card which offers rich cryptography function, secure storage of cryptographic keys, and 12 MB/s performance (at the card level) for bulk data encryption. The level of cryptographic function is determined by the Cryptographic Access Provider Licensed Program, which is downloaded to the adapter.</p> <p>Due to temperature requirements (card temperature must not drop below 5 F (-15 C)), the #4801 is shipped separate from the system in a special package.</p> <p>Prerequisite: #7102 System Expansion Unit.</p> <p>PCI Card Slot required: One. Only allowed in high speed slots E03, E08, or E09.</p> <p>Maximum: One per IOP.</p> <p>This is a Customer Install Feature (CIF).</p>

#9771	<p>PCI 2-Line WAN w/Modem</p> <p>#9771 is a 2-line WAN adapter. One port supports V.90 56K Async Data on PPP via an internal modem. The second port supports multiple protocol communications. Connection to the V.90 port uses a telephone cable. Connection to the communication port is through one of the following cables:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft PCI cable #0349 V.24/EIA232 50ft PCI cable #0353 V.35 20ft PCI cable #0354 V.35 50ft PCI cable #0355 V.35 80ft/24m PCI cable #0356 V.36 20ft PCI cable #0358 V.36 150ft/45m PCI cable #0359 X.21 20ft PCI cable #0360 X.21 50ft PCI cable #0365 V.24/EIA232 80ft PCI cable <p>ECS and Fax are not supported on the V.90 port at this time. IBM intends to support ECS on the V.90 port in a future release of OS/400 and with a Group PTF for V4R5.</p> <p>The #9771 is allowed in C08 when #2746 is installed in C09.</p> <p>ECS operates on the WAN port of the #9771 by changing the *RSRCNAME parameter of the QESLINE and QTILINE line descriptions to that of the WAN port on the #9771 card.</p> <p>When the #9771 is selected to support ECS, one of the following cables must be specified and connects to the WAN port:</p> <ul style="list-style-type: none"> • #0348 V.24/EIA232 20ft PCI cable (Default) • #0349 V.24/EIA232 50ft PCI cable • #0365 V.24/EIA232 80ft PCI cable <p>The #9771 does not support the #5544 Operations Console as the Systems Console.</p> <p>There are some restrictions on communications using #9771. For other communication restrictions, see "Comm Restrictions" on page 9.</p>
Comm Restrictions	<p>Restrictions may apply when using any of the following communications functions on a Model 250 PCI system:</p> <ul style="list-style-type: none"> • Frame Relay protocol • IPX protocol • X.25 with more than 16 virtual circuits per line • SDLC protocol if used to connect to more than 64 remote sites • Communications line speeds greater than 64 Kbps and up to 2.048 Mbps for the SDLC or Frame Relay protocols (Bisync is always limited to a maximum of 64 Kbps) • Asynchronous communications or Asynchronous PPP line speeds greater than 115.2 Kbps • Non-Asynchronous Communications line speeds greater than 64 Kbps and up to 640 Kbps for X.25 • No high speed communication line allowed when a feature code #2750, #2751, or #2761 is installed under the same IOP • V.25 Autocall cable not supported • Select standby mode not supported <p>In particular, this applies when using #2745 PCI Two-Line WAN IOA or the IPX protocol (IPX is used over LAN, ATM, or frame relay).</p> <p>For further sizing rules and considerations, refer to the feature descriptions in this chapter. For restrictions for specific adapters or IOPs, see "Comm Restrictions" on page 187.</p> <p>For general communications performance considerations, refer to the <i>AS/400 Performance Capabilities Reference, Version 4, Release 5</i>, SC41-0607. This publication is available in softcopy only by visiting the Web site at: http://publib.boulder.ibm.com/pubs/html/as400/online1ib.htm Select your language of choice, and then click What's New.</p>

LANs AND ATM	
#2723 #9723	<p>PCI Ethernet IOA</p> <p>Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC), plus IEEE 802.2 Logical Link Control (LLC) functions. Has an RJ-45 connector and a 15-pin D-shell connector for attachment of customer supplied cabling. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. AUI Ethernet or RJ-45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B. The #9723 is a base LAN.</p> <p>For each #2723/#9723 PCI Ethernet IOA that is selected to be run on a #2866 Integrated Netfinity Server, one #0221 must be selected to indicate this placement.</p> <p>PCI slots required: One</p> <p>The #2723 is a Customer Install Feature (CIF).</p>
#2724 #9724	<p>PCI 16/4 Mbps Token Ring IOA</p> <p>Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring-Network. It consists of an adapter card, internal code that supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions, and an external 8ft (2.4m) cable. Alternatively a twisted pair cable for attachment to the RJ-45 connector on the IOA can be ordered separately. The #9724 is a base LAN.</p> <p>For each #2724/#9724 PCI Token Ring IOA that is selected to be run on a #2866 Integrated Netfinity Server, one #0220 must be selected to indicate this placement. The IOA is capable of operating in half or full duplex mode.</p> <p>PCI slots required: One</p> <p>The #2724 is a Customer Install Feature (CIF).</p>
#2815	<p>PCI 155 Mbps UTP OC3 ATM IOA</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>The #2815 is typically used where 155 Mbps speeds are required over distances of less than 100 meters.</p> <p>Prerequisite: #7102 System Expansion Unit.</p> <p>High-speed PCI slots required: One</p> <p>This is a Customer Install Feature (CIF).</p>
#2816	<p>PCI 155 Mbps MMF ATM IOA</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>The #2816 is typically used where 155 Mbps speeds are required over distances of less than 2 kilometers.</p> <p>Prerequisite: #7102 System Expansion Unit.</p> <p>High-speed PCI slots required: One</p> <p>This is a Customer Install Feature (CIF).</p>
#2818	<p>PCI 155 Mbps SMF OC3 ATM IOA</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Single Mode Fibre (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment, but can be used for local area switches. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>The #2818 is typically used where 155 Mbps speed is required over distances of 16 to 40 kilometers.</p> <p>Prerequisite: #7102 System Expansion Unit.</p> <p>High-speed PCI slots required: One</p> <p>This is a Customer Install Feature (CIF).</p>
#2838 #9738	<p>PCI 100/10 Mbps Ethernet IOA</p> <p>Provides attachment to standard 100 Mbps high-speed Ethernet LANs and also allows attachment to existing 10 Mbps Ethernet LANs. #9738 is a base LAN. If #2838/#9738 PCI 100/10 Mbps Ethernet IOA is selected to be run on a #2866/Integrated Netfinity Server, then one specify feature #0222 100/10 Mbps Ethernet on IP/CS/Integrated Netfinity Server is required. The IOA is capable of operating in half or full duplex mode. The adapter comes standard with an RJ-45 connector for attachment to UTP-5 media. Cabling for 10 Mbps must be CAT-3 or CAT-5, cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. Maximum cable length is 100 meters.</p> <p>High-speed PCI slots required: One</p> <p>Maximum: One per Integrated Netfinity Server</p> <p>The #2838 is a Customer Install Feature (CIF).</p>

#2866	<p>PCI Integrated Netfinity Server</p> <p>The PCI Integrated Netfinity Server contains a 333 MHz Pentium II Processor, two LAN IOA slots for high performance serving to LAN-attached PCs, and four main storage slots.</p> <p>The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. No Base main store Memory is supplied. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory #2867 256 MB Integrated PC Server Memory <p>Minimum one and maximum two of any of the following LAN IOAs are supported:</p> <p>Only one of the IOAs can be #2838/#9738</p> <ul style="list-style-type: none"> #2723/9723 PCI Ethernet IOA Specify #0221 is required for each IOA ordered. #2724/9724 PCI Token Ring IOA Specify #0220 is required for each IOA ordered. #2838/9738 PCI 100/10 Mbps Ethernet IOA Specify feature #0222 is required for each IOA ordered. <p>A minimum of 64MB IOP memory is required for Windows NT.</p> <p>#0325 PCI Integrated Netfinity Server Extension Cable for Windows NT or Windows 2000 is required.</p> <p>#1700 PCI Integrated Netfinity Server Keyboard/Mouse for Windows NT or Windows 2000. It is the default in the USA.</p> <p>If running OS/2 #0325 is not allowed, a display unit is required to support Windows NT and Windows 2000.</p> <p>For country-specific keyboard/mouse and display support, access the site at: http://www.ibm.com/eserver/iseries/windowsintegration/ This is a Customer Install Feature (CIF).</p>
DISK UNITS	
#6813	<p>8.58 GB Additional Two-byte Disk Unit (Ultra SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk unit (7200 RPM). This is a Customer Install Feature (CIF).</p>
#6817	<p>8.58 GB Additional Two-byte 10k RPM Disk Unit (Ultra SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 8.58 GB of high-performance (10k RPM) capacity. This is a Customer Install Feature (CIF).</p>
#6818	<p>17.54 GB Additional Two-byte 10k RPM Disk Unit (Ultra SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 17.54 GB of high-performance (10k RPM) capacity. This is a Customer Install Feature (CIF).</p>
#6824	<p>17.54 GB Additional Two-byte Disk Unit (Ultra SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage (7200 RPM). This is a Customer Install Feature (CIF).</p>
#6831	<p>1.6 GB Read Cache Device</p> <p>This feature provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with the compression function turned off on the disk controller. Mirroring is not supported on this feature.</p> <p>Prerequisites: #2748 PCI RAID Disk Unit Controller.</p> <p>One DASD Slot.</p> <p>Maximum: One per #2748 IOP.</p>
#8917	<p>8.58 GB Optional Base 10 k RPM Disk Unit (Ultra SCSI)</p> <p>Provides an optional 3 ½-inch single disk unit with 8.58 GB of high-performance (10k RPM) capacity.</p>
#8918	<p>17.54 GB Optional Base 10 k RPM Disk Unit (Ultra SCSI)</p> <p>Provides an optional 3 ½-inch single disk unit with 17.54 GB of high-performance (10k RPM) capacity.</p>
#8924	<p>17.54 GB Optional Base Two-byte Disk Unit (Ultra SCSI)</p> <p>Provides an optional 3 ½-inch single disk unit with 17.54 GB capacity as the optional Base disk unit (7200 RPM).</p>
#9313	<p>8.58 GB Base Two-byte Disk Unit (Ultra SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 8.58 GB capacity as the Base disk unit. Is the configurator default (7200 RPM).</p>
INTERNAL TAPE UNITS	
#6381	<p>2.5 GB ¼-inch Cartridge Tape Unit</p> <p>Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. It should be ordered when compatibility with System/36 ¼-inch cartridge tape unit is required. This is a Customer Install Feature (CIF).</p>
#6382	<p>4 GB ¼-inch Cartridge Tape Unit</p> <p>Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).</p>

#6383	<p>16 GB ¼-Inch Cartridge Tape Unit</p> <p>Is mounted in the system unit. With a data rate of 1.5 Mbps and capacity of 16 GB per cartridge (3 MB/sec and 32 GB per cartridge with data compaction), the #6383 provides a growth path for the iSeries or AS/400e models that use QIC tape technology for save/restore. #6383 is controlled by the MFIOF.</p> <p>The #6383 provides read/write compatibility with the following formats:</p> <ul style="list-style-type: none"> • 16 GB (up to 32 GB with compression in QIC5010 format) with IBM MLR-116 GB Data Cartridge • 13 GB (up to 26 GB with compression in QIC5010 format) with IBM DC5010 Data Cartridge. <p>The #6383 provides read compatibility with the following formats:</p> <ul style="list-style-type: none"> • 8 GB (QIC4DC compressed format) with SLR5-4 GB Data Cartridge • 5 GB(QIC2DC compressed format) with IBM DC9250 Data Cartridge • 4 GB (QIC4GB format) with SLR5-4 GB Data Cartridge • 2.5 GB (QIC2GB format) with IBM DC9250 Data Cartridge <p>This is a Customer Install Feature (CIF).</p>
#6386	<p>25 GB ¼-inch Cartridge Tape Unit</p> <p>Is mounted in the system unit. With a data rate of 2 Mbps and capacity of 25 GB per cartridge (4 MB/sec and 50 GB per cartridge with data compaction), the #6386 provides a growth path for the iSeries or AS/400e models that use QIC tape technology for save/restore. Can be used for alternate IPL. #6386 is controlled by the MFIOF.</p> <p>The #6386 provides read/write compatibility with the following formats:</p> <ul style="list-style-type: none"> • 25 GB (up to 50 GB with compression in MLR3 compacted format) with MLR-3 Data Cartridge • 16 GB (up to 32 GB with compression in QIC5010 format) with IBM MLR-116 GB Data Cartridge • 13 GB (up to 26 GB with compression in QIC5010 format) with IBM DC5010 Data Cartridge. <p>The #6386 provides read compatibility with the following formats:</p> <ul style="list-style-type: none"> • 8 GB (QIC4DC compressed format) with SLR5-4 GB Data Cartridge • 5 GB(QIC2DC compressed format) with IBM DC9250 Data Cartridge • 4 GB (QIC4GB format) with SLR5-4 GB Data Cartridge • 2.5 GB (QIC2GB format) with IBM DC9250 Data Cartridge <p>This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>This is a Customer Install Feature (CIF).</p>
MAGNETIC MEDIA CONTROLLERS	
#2718	<p>PCI Magnetic Media Controller</p> <p>The #2718 is an Ultra SCSI Tape IOA that provides attachment capability for the 7207-122 QIC-SLR Tape Bridge Box. #2718 can attach one 7207.</p> <p>Prerequisite: #7102 System Expansion Unit.</p> <p>This is a Customer Install Feature (CIF).</p>
#2729	<p>PCI Magnetic Media Controller</p> <p>Provides SCSI attachment for one 3490E C11/C22/C1A/C2A with feature #5040, 3590 Exx/Bxx, 3490E Exx, 3490E Fxx, 3494 D1x or L1x, 3570, 3590, 7208, 9348 or 9427 Tape Subsystem models or 3995 C4x Optical Library Dataserver.</p> <p>Prerequisite: #7102 System Expansion Unit</p> <p>High-speed PCI slots required: One</p> <p>Maximum: Two</p> <p>This is a Customer Install Feature (CIF).</p>
#2748	<p>PCI RAID Disk Unit Controller—26 MB Cache (RAID/Mirrored/Unprotected)</p> <p>This SCSI disk and tape controller with a 26 MB write-cache provides RAID-5 protection and DASD compression capability for internal disk units, and also supports internal tape and CD-ROM units.</p> <p>The #2748 controls Ultra and Fast Wide SCSI disk units installed in the Base System and the #7102 System Expansion Unit. In addition to providing RAID-5 and compression, #2748 works as a high-performance controller for disks protected by system mirroring or disks with no protection.</p> <p>The #2748 supports a maximum of 10 disk units.</p> <p>A minimum of four disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of two arrays are allowed per controller, with a maximum of ten disk units per array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to seven disk units. For systems started with eight disk units in an array, the parity for that array is spread across eight disk units. For systems started with less than eight disk units in an array and later upgraded to eight, nine or ten disk units, the RAID function must be stopped and then started before the parity is spread across eight disk units.</p> <p>The #2748 supports one CD-ROM and one internal tape unit, and concurrent DASD add/maintenance.</p> <p>The #2748 also supports the #6831 1.6 GB Read Cache Device, which is mutually exclusive with DASD compression.</p> <p>Required - Disk Controller PCI card Slot C07.</p> <p>Maximum: One</p>

#2763	<p>PCI RAID Disk Unit Controller—10 MB Cache (RAID/Mirrored/Unprotected)</p> <p>The #2763 is an Ultra SCSI disk and tape controller with a 10MB write-cache that provides RAID-5 protection for internal disk units.</p> <p>The #2763 is designed to control Ultra, Fast Wide, and Fast Narrow SCSI disk and tape units that are installed in the base system unit and the #7102 System Expansion Unit. In addition to providing RAID-5 protection for disks, #2763 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. In the RAID-5 configuration, disk unit protection is provided at less cost than mirroring, and with greater performance than system checksums.</p> <p>The #2763 controller supports a maximum of 10 drives. A minimum of four drives of the same capacity are needed for a valid RAID-5 configuration. A maximum of two arrays are allowed with a maximum of 10 drives allowed per array. All drives in an array must be of the same capacity. Parity is spread across four drives for arrays of four to seven drives. Parity can be spread across either four or eight drives for arrays of 8 to 10 drives. For systems started with eight to ten drives in an array, the parity for that array will be spread across eight drives. For systems that are started with less than eight drives in an array and are later upgraded to 8, 9, or 10 drives, the RAID function must be stopped and then re-started before the parity is spread across all eight drives.</p> <p>The #2763 also supports one CD-ROM and one internal tape unit.</p> <p>Parts are included with this feature that are installed in the base system unit to support Concurrent DASD Add/Maintenance.</p> <p>Does not support hardware disk compression. Does not support #6831 1.6 GB Read Cache Device.</p> <p>The #2763 is automatically selected as the default PCI Disk Unit Controller when five or more DASD files are ordered.</p> <p>Required - Disk Controller PCI card Slot C07.</p>
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1.4 Model 250 Upgrade

The #2295 can be upgraded to the #2296 Model 250 processor.

1.5 AS/400e RISC to RISC Data Migration

The #0205 is used when a customer orders a new (RISC) AS/400e server to replace an existing (RISC) AS/400e server. The #0205 is orderable on any initial order AS/400e server 250 model. Preloading Licensed Programs, by manufacturing, is not allowed with the #0205. Manufacturing loads SLIC only and up through QSYS of OS/400 when the #0205 is ordered. The #0205 and #5000 are mutually exclusive.

Chapter 2. 9406 270 Models

This chapter identifies the features associated with each 270 system, such as the processor features, power and packaging, main storage, workstation controllers, and communications (including WAN, LAN, and ATM), disk units, internal tape units and CD-ROM, and magnetic media controllers.

The 270 model product family provides more flexibility in the placement of IOPs and IOAs. This results in more efficient use of card slots, potentially resulting in a lower cost of implementation. Increased flexibility of configuration also adds, in certain cases, an increased requirement to understand the detailed configuration rules. See Chapter 5, "PCI Card Placement Rules" on page 101, for a complete understanding of these rules.

2.1 9406 270 Model Overview

The iSeries Model 270 systems are Customer Setup (CSU).

OS/400 V4R5 is required to support the 270 systems.

Summary of the iSeries server 270

Model	270			
Processor Feature	#2248	#2250	#2252	#2253
Relative System Performance (See Notes 1 and 2)				
Processor CPW	150	370	950	2000
Interactive CPW				
Base #1516 (Note 5)	-	0	0	0
#1517	25	-	-	-
#1518	-	30	-	-
#1519	-	-	50	-
#1520	-	-	-	70
Number of Processors/Type of Processor	1/Pulsar	1/Pulsar	1/Pulsar	2/Pulsar
L2 Cache (MB)/Processor	0	0	2	4
Main Storage (MB Min/Max)	256-4096	256-4096	256-8192	256-8192
Main Storage DIMMs or Cards (Min/Max)	2/8	2/8	2/16	2/16
Processor Group (Note 7)	P05	P10/P10	P10/P10	P20/P20

Model	270 Dedicated Server for Domino		
Processor Feature	#2422	#2423	#2424
Relative System Performance (CPW - Notes 1 & 2)			
Processor CPW	50	100	200
Interactive Environment (Note 5)	0	0	0
Simple Mail Users	2400	3860	7580
Mail and Calendaring Users	1600	2570	5050
Number of Processors/Type of Processor	1/Pulsar	1/Pulsar	2/Pulsar
L2 Cache (MB)/Processor	0	2	4
Main Storage (MB Min/Max)	256-4096	256-8192	256-8192
Main Storage DIMMs or Cards (Min/Max)	2/8	2/16	2/16
Processor Group	P05	P05	P10

	Base System	System Unit Expansion #7104	PCI Expansion Tower #5075	Total Maximum
Disk Storage (GB)				
Minimum Internal	8.58	0	0	8.58
Maximum Internal	105.2	210.5	105.2	421.1
DASD Arms Maximum	6	12	6	24
Physical Packaging				
External HSL Ports	2	-	-	2
External HSL Loops	1	-	-	1
#5075 Towers supported	1	-	-	1
#5074 Towers supported	0	-	-	0
Embedded IOP	1	-	1	2
PCI Card Slots	7	-	8	15
Maximum PCI IOA Cards	6	-	7	13
Maximum Communication Lines (Note 4)	20	0	34	50
Maximum LAN Ports	3	-	5	8
Maximum Integrated Netfinity Server	1	-	2	3
Twinaxial Workstation Controllers	4	0	6	6
Twinaxial Workstations	160	0	240	240
CD-ROM/Internal Tape (Note 6)	2	0	0	2
External Tape	3	0	3	3
Tape Libraries (Note 3)	3	-	3	3
Optical Libraries	3	0	4	4
Diskettes (5.25 inch or 8-inch)	0	0	0	0
Fax Adapters	0	0	-	0
Cryptographic Processor	3	0	3	3

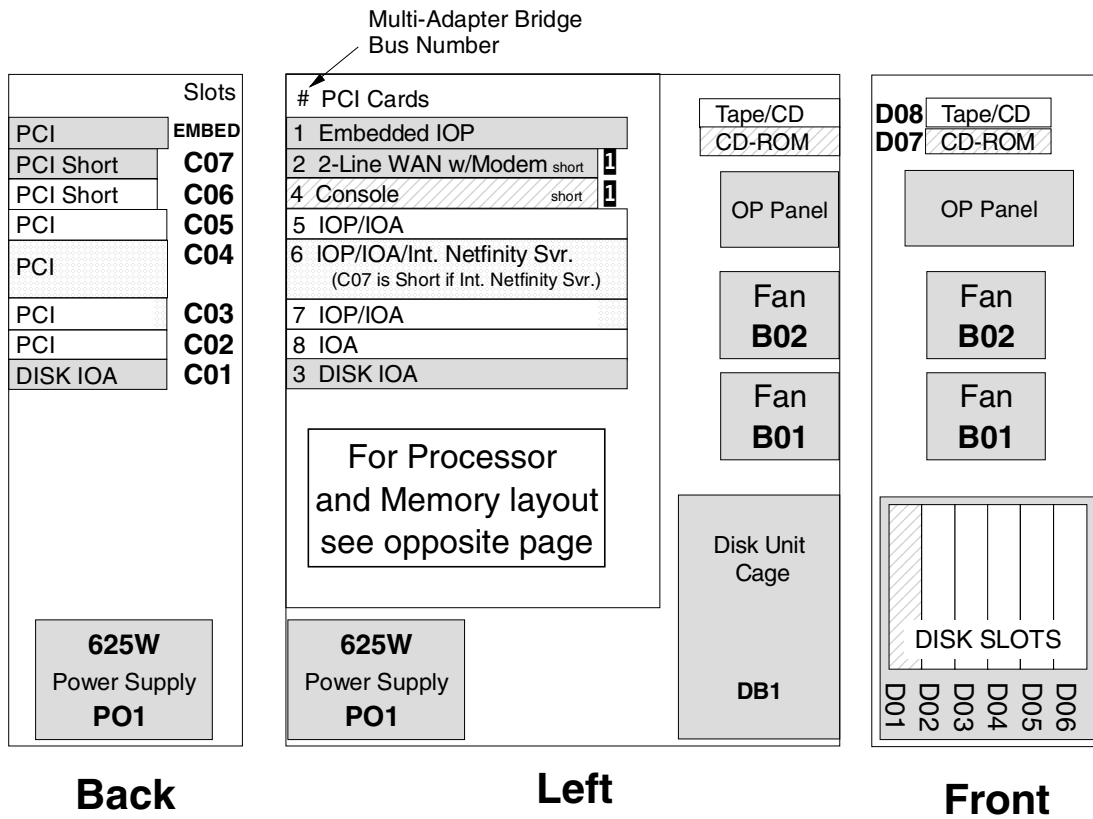
Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application running determines what performance is achievable. With the introduction of the Dedicated Servers for Domino, Simple Mail Users and Mail and Calendaring Users are added as a performance measurement.
Note 2:	Processor performance represents the relative performance (maximum capacity) of a processor feature running CPW in a client/server environment. Processor capacity is achievable when the commercial workload is not constrained by main storage and DASD. Interactive Performance represents the relative performance available to perform host-centric workloads. The amount of interactive capacity consumed reduces the available processor capacity by the same amount. On the Dedicated Servers for Domino, the Processor CPW is an approximate value reflecting the maximum amount of non-Domino workload (10-15% of CPU) that can be supported.
Note 3:	The total number of tape drives does not increase.
Note 4:	One line is used by the Operations Console if selected.
Note 5:	<p>This interactive CPW value of 0 represents the amount of 5250 processing capability available for customer applications. CPW=0 supports system administration functions performed by:</p> <ul style="list-style-type: none"> • A single interactive job • Operations Navigator • Any job submitted to batch <p>Multiple system administrators performing simultaneous tasks is not supported.</p> <p>There is no Interactive Feature Code card for the base interactive #1516. Interactive performance is included in the base. The #2248 comes with the #1517 only.</p>
Note 6:	There must be one CD-ROM per system.

Note 7:	Processor Group is determined by a combination of the Processor and Interactive Feature. The following table provides a cross reference.			
	Processor	Interactive Feature	Processor Feature	Processor Group
	#2248	#1517	#22A2	P05
	#2250	#1516	#22A4	P10
		#1518	#22A5	P10
	#2252	#1516	#22A7	P10
		#1519	#22A8	P10
	#2253	#1516	#22AA	P20
		#1520	#22AB	P20

General note: The capacities shown may require prerequisites. Some combinations of features may not be valid.

2.2 Model 270 System Unit

Model 270 System Unit



Note 1: Cards may be reversed depending on your choice of console.

Legend

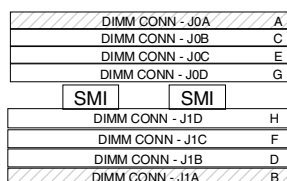
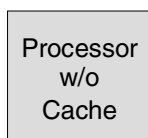
Base Feature

Required Feature

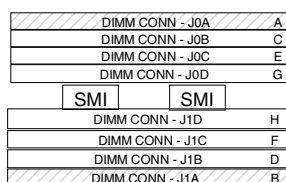
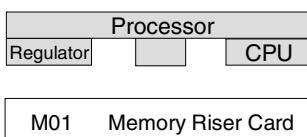
Unavailable if
Integrated Netfinity
Server is installed

Model 270 Processor and Memory

#2248, #2250, #2422

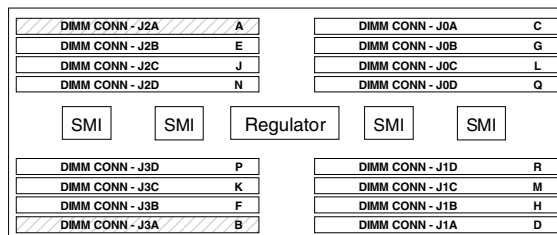


#2252, #2423



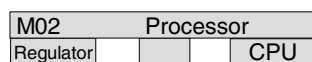
or

Memory Riser Card

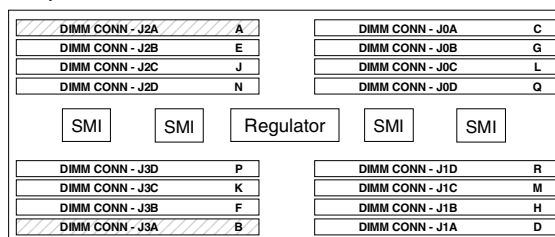


Note: all memory on motherboard once a riser card is installed is moved to the riser card

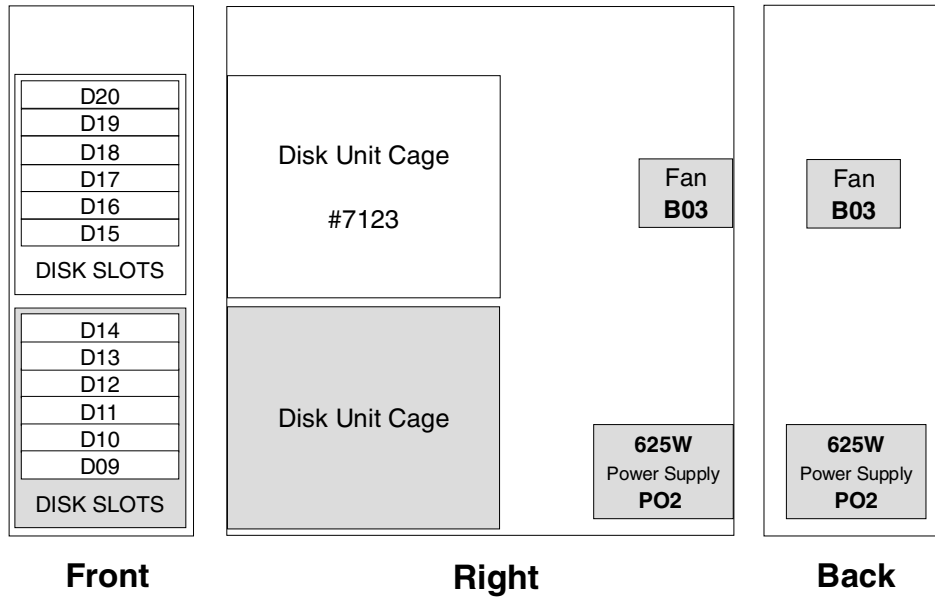
#2253, #2424



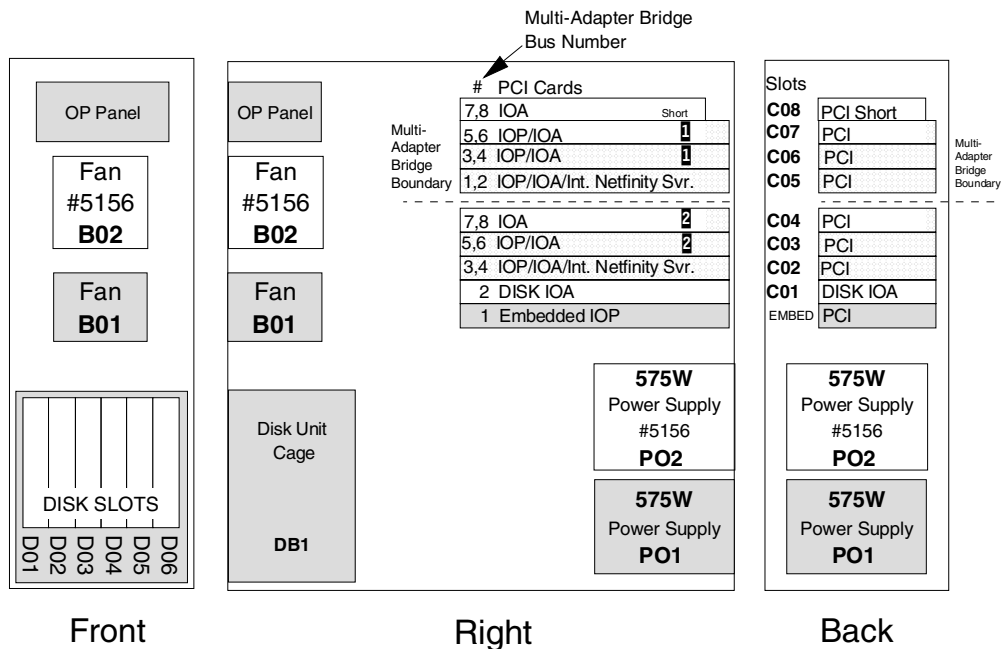
Memory Riser Card



Model 270 #7104 System Unit Expansion DASD Sidecar



#5075 PCI Expansion Tower



Legend

Base Feature

Required Feature

Unavailable if Integrated
Netfinity Server is
installed

Note 1: If C05 has an Integrated Netfinity Server, slot C06 is unavailable, and slot C07 is available only as a short slot.

Note 2: If C02 has an Integrated Netfinity Server, slot C03 is not available and slot C04 is available only as a short slot.

2.3 9406 Models 270

270 PROCESSORS		
#2248	Interactive Feature	150 CPW 1-Way Processor in Client/Server Environment. Required Minimum Memory 256 MB. If the ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. <ul style="list-style-type: none"> Includes eight DIMM memory positions (plug directly onto the backplane - Direct Attach). Includes embedded Base IOP (CCIN 284D) Includes Common Service Processor (CSP) (CCIN 2249)
	1517	Optional 25 CPW in Interactive Environment. The #2395-1517 is represented by Processor Feature Code 22A2. Processor Group P05.
#2250	Interactive Feature	370 CPW 1-Way Processor in Client/Server Environment. If the ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. <ul style="list-style-type: none"> Includes eight DIMM memory positions (which plug directly onto the backplane - Direct Attach). Includes embedded Base IOP (CCIN 284D) Includes Common Service Processor (CSP) (CCIN 2249)
	1516	Base 0 CPW in Interactive Environment. The #2250-1516 is represented by Processor Feature Code 22A4. Processor Group P10.
	1518	Optional 30 CPW in Interactive Environment. The #2250-1518 is represented by Processor Feature Code 22A5. Processor Group P10.
#2252	Interactive Feature	950 CPW 1-Way Processor in Client/Server Environment. Required Minimum Memory 256 MB. If the ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. <ul style="list-style-type: none"> Includes eight DIMM memory positions (which plug directly onto the processor - Direct Attach). Optional priced #2884 Main Storage Expansion Card Feature is available that supports 16 DIMM memory positions. The customer can select direct attach <i>or</i> purchase a memory riser feature, but <i>cannot use both</i>. Includes Base I/O Backplane (CCIN 282F) Includes embedded Base IOP (CCIN 284E) Includes Common Service Processor (CSP) (CCIN 2249) Includes internal flex cable for HSL enablement (tower attachment)
	1516	Base 0 CPW in Interactive Environment. The #2252-1516 is represented by Processor Feature Code 22A7. Processor Group P10.
	1519	Optional 50 CPW in Interactive Environment. The #2252-1519 is represented by Processor Feature Code 22A8 Processor Group P10.
#2253	Interactive Feature	2000 CPW 2-Way Processor in Client/Server Environment. Required Minimum Memory 256 MB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. <ul style="list-style-type: none"> Includes 16 DIMM memory positions via the main storage expansion card (CCIN 2884). Includes Base I/O Backplane (CCIN 282F) Includes embedded Base IOP (CCIN 284E) Includes Common Service Processor (CSP) (CCIN 2249) Includes internal flex cable for HSL enablement (tower attachment)
	1516	Base 0 CPW in Interactive Environment. The #2253-1516 is represented by Processor Feature Code 22AA. Processor Group P20.
	1520	Optional 70 CPW in Interactive Environment. The #2253-1520 is represented by Processor Feature Code 22AB. Processor Group P20.
#2422	Dedicated Domino Processor	Dedicated Domino Processor 1-Way, 2200 Simple Mail Users, 1380 Mail and Calendaring Users. 50 CPW (Non-Domino Workload), 0 CPW (Interactive Environment). Required Minimum Memory 256 MB. <ul style="list-style-type: none"> Includes eight DIMM memory positions (which plug directly onto the backplane) Includes embedded base IOP (CCIN 284D) Includes Common service Processor (CCIN 2249) The #2422 is represented by Processor Feature Code 2422. Processor Group P05.
#2423	Dedicated Domino Processor	Dedicated Domino Processor 1-Way, 4250 Simple Mail Users, 2620 Mail and Calendaring Users. 100 CPW (Non-Domino Workload), 0 CPW (Interactive Environment). Required Minimum Memory 256 MB. <ul style="list-style-type: none"> Includes Base I/O backplane (CCIN 282F) Includes embedded base IOP (CCIN 284E) Includes Common service Processor (CCIN 2249) Includes internal flex cable for HSL enablement The #2423 is represented by Processor Feature Code 2423. Processor Group P05.

#2424	Dedicated Domino Processor	Dedicated Domino Processor 2-Way, 8000 Simple Mail Users, 4950 Mail and Calendaring Users. 200 CPW (Non-Domino Workload), 0 CPW (Interactive Environment). Required Minimum Memory 256 MB. <ul style="list-style-type: none"> Includes Base I/O backplane (CCIN 282F) Includes embedded base IOP (CCIN 284E) Includes Common service Processor (CCIN 2249) Includes internal flex cable for HSL enablement The #2424 is represented by Processor Feature Code 2424. Processor Group P10.
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POWER AND PACKAGING		
#0121	Lower Unit in Rack Specify	The #0121 identifies the 270 system that is to be installed in a #0551 270 Rack in the lower position. This #0121 provides the appropriate mounting rails and tray for installing the 270 system unit with the #7104 System Unit Expansion. Prerequisite: #0551 270 Rack
#0122	Upper Unit in Rack Specify	The #0122 identifies the 270 system that is to be installed in a #0551 270 Rack in the upper position. This #0122 provides the appropriate mounting rails and tray for installing the 270 system unit with the #7104 System Unit Expansion. Prerequisite: #0551 270 Rack
#0382	Remote Control Panel Cable	If you are connecting the remote control panel cable to the iSeries servers 270, 820, 830, or 840, you need an available parallel port (LPT) instead of a COM port on your PC. The parallel port must be configured to use Enhanced Parallel Port (EPP) support, which may require a change in the PCs Basic Input/Output Services (BIOS). Check with your PC manufacturer for any assistance, if needed. Some PCs may not support this function due to BIOS or hardware incompatibilities. This is a Customer Install Feature (CIF).
#0551	270 Rack Mount	The #0551 270 Rack is a 1.8 m rack that holds two 270 system units with their #7104 System Unit Expansions. The two 270 systems must be ordered separately and features #0121 Lower Unit in Rack Specify and #0122 Upper Unit in Rack Specify must be included in the 270 orders to indicate the position they are to be placed in the rack. Both 270s must have the #7104 System Unit Expansion. The two 270s combined take up the lower part of the 1.8 m rack leaving 6 EIA units available at the top of the rack. The rack does not have a power distribution unit. You must order separate power cords for each 270 system. The 270 systems report as separate units. Upgrades from #2248 and #2250 to #2252 and #2253 are not supported. Upgrades from #2422 to #2423 or #2424 are also not supported. Requirements: #0121 and #0122. This is a plant only installation.
#5075	PCI Expansion Tower	#5075 is for adding up to six disk units and up to seven PCI IOAs. The #5075 includes a 32 MB PCI IOP embedded in the tower. When the #5075 is attached to the Model 270, the seven PCI IOAs are supported (driven) by an embedded 32 MB PCI IOP and by feature #2842 PCI IOPs. The #2780 Integrated Netfinity Servers can also support selected LAN cards. #5156 may be added to provide redundant power supply and cooling fan. Select one of the following HSL cables. #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable Select one of the following SPCN cables: #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #5075 is capable of controlling Ultra2 SCSI disk units. One #14xx power cord must be specified (geography dependant). Maximum: One on the Model 270. This is a Customer Install Feature (CIF).
#5156	Redundant Power and Cooling	#5156 adds an additional 575 watt power supply for redundancy and an additional cooling fan to the #5075 expansion tower. This is a Customer Install Feature (CIF).
#7002	HSL Enabler - Internal Flex cable	#7002 is a feature High Speed Link (HSL) internal flex cable, which enables connection to a #5075 Tower feature. Only orderable with the #2248, #2250, and #2422. On processor upgrades from #2248, #2250, and #2422 to #2252, #2253, #2423, and #2424, RPO remove the #7002. These processor upgrade paths are "roll-in/roll-out" system upgrades. The new system unit comes standard with the internal flex cable. This is a Customer Install Feature (CIF).

#7104	System Unit Expansion The #7104 is a feature system unit expansion that allows up to an additional twelve disk units to be added to the Model 270. The #7104 comes with support for six disk units standard and requires a #7123 when installing over six disk units. The #7104 disk units are driven by a disk unit controller located in the card enclosure. The #7104 requires a separate line cord from the system unit. One #14xx power cord must be specified (geography dependent). Maximum: One #7104 Prerequisite: #7133 on processors #2248, #2250 or #2422. This is a Customer Install Feature (CIF).
#7123	DASD Expansion Unit #7123 is a concurrent maintenance DASD six position expansion feature, which may be ordered to support an additional six disk units (for a total of twelve) in the #7104 on the Model 270. Prerequisite: #7104 on Model 270. This is a Customer Install Feature (CIF).
#7133	DASD Concurrent Maintenance Cage #7133 is a DASD six disk cage that may be ordered for the Model 270 with processors #2248, #2250, and #2422. The #7133 enables disk unit concurrent maintenance and replaces the standard base non-concurrent maintenance DASD six disk cage. Note: On processor upgrades from #2248, #2250 or #2422 to #2252, #2253, #2423, or #2424, RPO remove the #7133. These processor upgrade paths are “roll-in/roll-out” system upgrades and the new system tower comes standard with a concurrent maintenance disk unit cage. Prerequisite: #7104 on processors #2248, #2250, and #2422.
MAIN STORAGE	
Base	There is no base memory on the 270 models.
Model 270 Main Memory Rules	All main storage cards must be added in <i>pairs</i> when directly attached to the Processor, or <i>quads</i> when attached to the #2884 Main Storage Expansion Riser Card. The pair or quad set must be of the same feature code. There are eight slots available in the base system (except #2253 and #2424) for main storage cards, which plug directly on to the processor (direct attach) and do not require a Main Storage Expansion Riser Card. Processors #2253 and #2424 have sixteen base memory slots using a “base” Main Storage Expansion Riser Card. For Processors #2252/#2423, when more than eight total cards are required, a #2884 Main Storage Expansion Riser Card must be ordered as a separate priced feature and <i>all</i> memory cards must plug into the #2884 card. When #2884 is used, direct attach of DIMMs to the processor is not allowed. Processors (#2252/#2253/#2423/#2424) using the #2884 Main Storage Expansion Riser Card must install DIMMs, in sets of four (quads). A single PAIR of DIMMs is allowed on the initial order if they are the only two on the system. Any memory DIMMs added beyond the initial pair must be placed in quads, and the initial DIMM pair must be completed to a quad. There are sixteen slots available in the system using the #2884 Main Storage Expansion Riser Card for placement of main storage DIMMs. Note that feature codes #3025 and #3026 can neither be mixed within pairs nor within quads. See the tower diagrams for details of memory placement.
#2884	Main Storage Expansion Riser Card #2884 mounts additional main storage cards. It contains 16 sockets for placement of 128 MB, 256 MB or 512 MB memory cards. For placement, initial pair of memory cards is allowed (in Slot A and Slot B) without quads. After that, all cards must be plugged in quads. Starting from the outer four corners going toward the center (A, B, C, D, then E, F, G, H, etc.). Use of the same feature code number within a quad is required. See the tower diagrams for details of memory placement. Mixing quad “groups” on the same riser card is also allowed. Refer to “Model 270 Main Memory Rules” for memory restrictions. Maximum: One on Processor #2252/#2423. One as “base” on #2253/#2424. <i>Not supported</i> on Processor #2248/#2250/#2422. This is a Customer Install Feature (CIF).
#3022	128 MB Main Storage Card Maximum: Eight cards (physically) on Processors #2248, #2250, #2422; Sixteen on Processors #2252, #2253, #2423, and #2424. Refer to “Model 270 Main Memory Rules” for memory restrictions. This is a Customer Install Feature (CIF).
#3024	256 MB Main Storage Card Model 270 only. See “Model 270 Main Memory Rules”. Maximum: Eight cards (physically) on Processors #2248, #2250, #2422; Sixteen on Processors #2252, #2253, #2423, and #2424. Refer to “Model 270 Main Memory Rules” for memory restrictions. This is a Customer Install Feature (CIF).

#3025	512 MB Main Storage Card (128Mb technology) Model 270 only. Maximum: Eight cards (physically) on Processors #2248, #2250, #2422; Sixteen on Processors #2252, #2253, #2423, and #2424. Refer to "Model 270 Main Memory Rules" for memory restrictions. This is a Customer Install Feature (CIF).
#3026	512 MB Main Storage Card ((256Mb technology) Model 270 only. Replaces #3025 512 MB Main Storage Card. Maximum: Eight cards (physically) on Processors #2248, #2250, #2422; Sixteen on Processors #2252, #2253, #2423, and #2424. Refer to "Model 270 Main Memory Rules" for memory restrictions. This is a Customer Install Feature (CIF).
PCI IOP CONTROLLERS	
Embedded IOP	Embedded 32 MB Base PCI IOP The embedded IOP is standard on every 270 system tower and the #5075 expansion tower. This IOP is embedded and, therefore, does not require a PCI card slot. Provides support for maximum of up to four IOAs, including the SCSI IOA #9767 Base PCI Disk Unit Controller, the #9771 base 2-line WAN with modem and either #5540 System Console on twinax or #5544 System Console on Operations Console. See the #2842 for list of other cards supported. See Chapter 5, "PCI Card Placement Rules" on page 101, for plugging rules.
#2842	PCI IOP #2842 is a PCI I/O processor with 32 MB of memory which drives PCI IOA adapters on the Model 270 and on the #5075 PCI Expansion Tower. The #2842 can drive up to four IOAs. The following IOAs are supported (driven) by the embedded PCI IOP and the #2842 PCI IOP: #2743 - PCI 1 Gbps Ethernet IOA #2744 - PCI 100 Mbps Token Ring #2749 - PCI Ultra Magnetic Media Controller #2763 - PCI RAID Disk Unit Controller #2768 - PCI Magnetic Media Controller #4723 - PCI 10 Mbps Ethernet IOA #4745 - PCI 2-line WAN IOA #4746 - PCI Twinaxial IOA #4748 - PCI RAID Disk Unit Controller #4750 - PCI ISDN BRI U IOA #4751 - PCI ISDN BRI S/T IOA #4761 - PCI Integrated Analog Modem #4801 - PCI Cryptographic Coprocessor #4815 - PCI ATM 155 Mbps UTP OC3 #4816 - PCI ATM 155 Mbps MMF #4818 - PCI ATM 155 Mbps SMF OC3 #4838 - PCI 100/10 Mbps Ethernet IOA #9767 - Base PCI Disk Unit Controller Note: PCI cards are subject to plugging rules. See Chapter 5, "PCI Card Placement Rules" on page 101, for details. Maximum: Two in the 270 system unit; three in a #5075 Expansion Tower. This is a Customer Install Feature (CIF).

#2890 or #2891	<p>Integrated Netfinity Server or Integrated xSeries Server</p> <p>The #2890 Integrated Netfinity Server contains a 700MHz processor and the #2891 contains a 850 MHz processor. Both processors contain four main storage slots. The #2890/#2891 is supported in the system tower of Model 270 and in the #5075 PCI Expansion Tower when it is attached to the Model 270.</p> <p>Each main storage slot can contain either a 128 MB main storage card, a 256 MB main storage card, or a 1024 MB main storage card providing a total main storage capacity ranging from 128 MB to 4096 MB (4GB). When the maximum memory is installed, only 3712 MB is addressable. At least one main storage card is required. The feature numbers of the main storage cards are as follows:</p> <ul style="list-style-type: none"> #2895 - 128 MB IOP Memory #2896 - 256 MB IOP Memory #2897 - 1 GB IOP Memory <p>The #2890/#2891 can support PCI 100/16/4 Mbps Token Ring IOAs or a PCI 100/10 Mbps Ethernet IOAs in any combination. At least one LAN IOA is required. The features for the LAN IOAs are as follows:</p> <ul style="list-style-type: none"> #4838 PCI 100/10 Mbps Ethernet IOA #2744 PCI 100 Mbps Token Ring IOA #2744 PCI 100 Mbps Token Ring IOA <p>When a #2890/#2891 is on the order, if the #4838 is selected, specify code #0224 is required for each #4838 selected to run on the #2890/#2891. If the #2744 is selected, specify code #0223 is required for each #2744 selected to run on the #2890/#2891. Up to three IOA LAN features can be supported by the #2890/#2891, depending on which PCI card position the #2890/#2891 is placed. Up to two IOA LAN features can be supported by the #2890/#2891, depending on which system or expansion tower position the #2890/#2891 is placed.</p> <p>The #2890/#2891 does not require a #2843 or #9943, but placement is limited to specific slots within the various system towers and expansion towers.</p> <p>Pre-requisite: R450 for #2890 and #2891 also requires CUM C1005450. The #2890/#2891 requires two PCI card slots in the Model 270 CEC. One slot is consumed and the second slot is reduced to a short card slot (which is used by the first attached LAN IOA card). The #2890/#2891 requires three PCI card slots in the #5075 PCI Expansion Tower. The #2890/#2891 requires three PCI slots in the #5075 PCI Expansion Tower. One slot is consumed. The second slot is unusable, and the third slot is reduced to a short LAN card (which is used by the first attached LAN IOA card). The #2890/#2891 supports only the Windows NT and Windows 2000 operating systems. The following rules apply:</p> <ul style="list-style-type: none"> #0325 (IPCS Extension Cable for Windows) is the default (but may be removed). #1700 (IPCS Keyboard/Mouse for Windows) is the default (in those countries offering it). <p>A display must be connected to the Integrated Netfinity Server to support Windows.</p> <p>For non-US keyboard/mouse and display, see http://www.ibm.com/eserver/iseriess/windowsintegration/</p> <p>The #2890/#2891 ships with a keyboard/mouse splitter cable.</p> <p>Restrictions: Native OS/400 functions are <i>not</i> supported. The #2890/#2891 does not support external host LAN.</p> <p>This is a Customer Install Feature (CIF).</p>
WORKSTATION CONTROLLERS	
#4746	<p>PCI Twinaxial Workstation IOA</p> <p>The Twinaxial Workstation IOA provides support for up to 40 active twinaxial displays and printers addresses or up to 120 active shared sessions. A 20-foot (6.2 m) cable with an eight port expansion (breakout) box is included with this adapter. Each port supports seven attached devices, allowing for 56 total attached devices, of which only 40 can be active</p> <p>This is a Customer Install Feature (CIF).</p>
#5540	<p>System Console Attached to Twinaxial Adapter</p> <p>A system console specify code must be selected on each new order, either #5540 or #5544.</p> <p>When #5540 is on the order, the system console is driven by a twinaxial adapter. The following adapters are added to the order:</p> <ul style="list-style-type: none"> #4746 PCI Twinaxial IOA (Console) #9771 Base PCI 2-Line WAN w/Modem
#5544	<p>System Console Attached to WAN Adapter</p> <p>A system console specify code must be selected on each new order, either #5540 or #5544.</p> <p>When #5544 is on the order, the system console is driven by an Operations console via a WAN adapter. The following adapters and cable are added to the order:</p> <ul style="list-style-type: none"> #4745 PCI Two-Line WAN IOA (Console) #0367 Operations Console PCI Cable #9771 Base PCI 2-Line WAN w/Modem

LAN/WAN ADAPTERS	
#2743	<p>PCI 1 Gbps Ethernet Adapter</p> <p>The #2743 PCI 1 Gbps Ethernet IOA feature allows the iSeries or AS/400e server to attach to IEEE standard 802.3Z high speed Ethernet LANs (1 Gbps). It can also be used to connect to existing 100 Mbps Ethernet LANs using switches with 10/100/1000 Mbps ports. The adapter supports multi-mode fiber media attachment to customer supplied cabling.</p> <p>Restrictions: The #2743 requires a gigabit-capable switch with at least one port that supports a 1000BASE-SX interface with IEEE 802.3z and 802.3u compliance. It supports only a multi-mode fiber optic cable connection from the adapter to the switch. The #2743 supports 1000 Mbps (1Gbps) full duplex interface only. Cannot negotiate down to a lower speed. Stations on the 10 Mb and 1000 Mb switched LANs can communicate with the #2743 through a switch that is capable of handling all these speeds. In this case, the switch handles the speeds.</p> <p>The #2743 is not supported by the #2890 Integrated Netfinity Server or #2891 Integrated xSeries Server.</p> <p>Requires a 64-bit card slot except on the Model 270 where it is supported in a 32-bit slot.</p> <p>Protocols supported: TCP/IP only. SNA and IPX connections are not supported.</p> <p>Maximum: One per Multi-Adapter Bridge boundary.</p> <p>This is a Customer Install Feature (CIF).</p>
#2744	<p>PCI 100 Mbps Token Ring Adapter</p> <p>The PCI 100 Mbps Token Ring IOA provides a single attachment to a 100 Mbps, 16 Mbps, or 4 Mbps IBM Token Ring Network. The feature consists of an IOA card, internal code which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions. The 100, 16, and 4 Mbps Token Ring IOAs are capable of operating in half or full duplex mode. A 2.44 meter (8 ft) Token Ring cable is included with this feature. As an alternative, the customer can attach a separately priced twisted pair cable to the RJ-45 connection on the IOA. IBM Cabling System patch cables, included with this feature, can increase the length as required. If #2744 is selected to run on the #2890 Integrated Netfinity Server or #2891 Integrated xSeries Server, specify code #0223 is required for each #2744 selected to run on the #2890/#2891.</p> <p>This is a Customer Install Feature (CIF).</p>
#4723	<p>PCI 10 Mbps Ethernet Adapter</p> <p>The PCI Ethernet IOA provides single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. The feature consists of an adapter card and internal code, which supplies Ethernet version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. The #4723 has an RJ-45 connector and a 15 pin D-Shell connector for attachment to customer supplied cabling. A vendor AUI Ethernet cable or RJ-45 twisted pair cable must be ordered separately.</p> <p>Restrictions: The #4723 is not supported by the #2890 Integrated Netfinity Server or #2891 Integrated xSeries Server.</p> <p>This is a Customer Install Feature (CIF).</p>
#4745	<p>PCI 2-Line WAN Adapter</p> <p>The #4745 supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20-ft PCI cable #0349 V.24/EIA232 50-ft PCI cable #0353 V.35 20-ft PCI cable #0354 V.35 50-ft PCI cable #0355 V.35 80-ft PCI cable #0356 V.36 20-ft PCI cable #0358 V.36 150-ft PCI cable #0359 X.21 20-ft PCI cable #0360 X.21 50-ft PCI cable #0365 V.24/EIA232 80-ft PCI cable #0367 Operations Console Cable <p>When the #4745 is selected to support ECS, one of the following cables must be specified:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20 ft PCI cable (Default) #0349 V.24/EIA232 50-ft PCI cable #0365 V.24/EIA232 80-ft PCI cable <p>This is a Customer Install Feature (CIF).</p> <p>There are some restrictions on communications using #4745. For communication restrictions, see 5.5, "Soft Rules: IOA Requirements" on page 110.</p>
#4750	<p>PCI ISDN BRI U Adapter (only available in the United States and Canada)</p> <p>The #4750 is a four-port (8 channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #4750 is the "U"-bus (2 wire) version of the ISDN BRI PCI card. The #4750 feature supports the following protocols:</p> <ul style="list-style-type: none"> PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #4750 feature. For configuration purposes, each #4750 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex.</p> <p>Requirements: This feature requires country certification or homologation.</p> <p>Full sized PCI card slot.</p> <p>Maximum: One per IOP.</p> <p>This is a Customer Install Feature (CIF).</p>

#4751	<p>PCI ISDN BRI S/T Adapter</p> <p>The #4751 is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #4751 is the "S/T"-bus (four wire) version of the ISDN BRI PCI card.</p> <p>Note: This requires a Network Terminating device in the circuit. In the United States and Canada, this must be provided by the customer. In other countries, it is most likely provided by the telephone company.</p> <p>The #4751 feature supports the following protocols:</p> <ul style="list-style-type: none"> PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #4751 feature. For configuration purposes, each #4751 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex.</p> <p>Requirements: This feature requires country certification or homologation.</p> <p>Full sized PCI card slot.</p> <p>Maximum: One per IOP.</p> <p>This is a Customer Install Feature (CIF).</p>
#4761	<p>#4761 Integrated Analog Modem</p> <p>The #4761 allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). The #4761 runs the following protocols without the need for an external modem:</p> <ul style="list-style-type: none"> SLIP/PPP uses V.90, so max line speed is 56K bps SDLC uses V.34, so max line speed is 33.6K bps Fax uses V.17 to achieve a 14.4K bps max line speed <p>An asynchronous line description is required for Fax and can only be used for Fax. ECS line not supported. Eight 30-foot (9.3 m) phone cables are shipped with each #4761. To the iSeries or AS/400e server, the #4761 appears like a single IOA with eight individual resources available. For configuration purposes, each #4761 counts as eight communications lines. Supports full duplex.</p> <p>Requirements: This feature requires country certification or homologation.</p> <p>Full sized PCI card slot.</p> <p>Maximum: One per IOP</p> <p>This is a Customer Install Feature (CIF).</p>
#4801	<p>PCI Cryptographic Coprocessor</p> <p>The #4801 is a hardware cryptography solution. The #4801 is a half-length PC form-factor PCI card, which offers rich cryptography function, secure storage of cryptographic keys, and 12 MB/s performance (at the card level) for bulk data encryption and triple DES capability. The #4801 is available worldwide. The level of cryptographic function is determined by the Cryptographic Access Provider licensed program, which is downloaded to the adapter.</p> <p>Note: On new shipments from the plant, the #4801 is shipped with the system, but due to temperature requirements (card must not drop below 5 F (-15 C)), it is not installed.</p> <p>This is a Customer Install Feature (CIF).</p>
#4815	<p>PCI 155 Mbps UTP OC3 ATM</p> <p>The #4815 is a 155 Mbps Asynchronous Transfer Mode (ATM) PCI card that allows the iSeries or AS/400e server to be attached to an ATM network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #4815 is typically used where 155 Mbps speeds are required over distances of less than 100 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>This is a Customer Install Feature (CIF).</p>
#4816	<p>PCI 155 Mbps MMF ATM</p> <p>The #4816 is a 155 Mbps Asynchronous Transfer Mode (ATM) PCI card that allows the iSeries or AS/400e to be attached into an ATM network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #4816 is typically used where 155 Mbps speeds are required over distances of less than 2 km. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>This is a Customer Install Feature (CIF).</p>
#4818	<p>PCI 155 Mbps SMF ATM</p> <p>The #4818 is a 155 Mbps Asynchronous Transfer Mode (ATM) PCI card that allows the iSeries or AS/400e to be attached into an ATM network using the Single-Mode Fiber (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment. The #4818 is typically used where 155 Mbps speeds are required over distances of from 16 to 40 km. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>This is a Customer Install Feature (CIF).</p>

#4838	<p>PCI 100/10 Mbps Ethernet IOA</p> <p>The PCI 100/10 Mbps Ethernet IOA feature allows the iSeries or AS/400e server to attach to standardized 100 Mbps high speed Ethernet LANs and also allow attachment to existing 10 Mbps Ethernet LANs. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media. Cabling for 10 Mbps must be CAT-3 or CAT-5, and cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. Maximum cable length is 100 meters. This ethernet IEEE 802.3 IOA is capable of operating in half or duplex mode. If the #4838 is selected to run on the #2890 Integrated Netfinity Server or #2891 Integrated xSeries Server, then specify code #0224 is required for each #4838 selected to run on the #2890/#2891.</p> <p>This is a Customer Install Feature (CIF).</p>
#9771	<p>Base PCI 2-Line WAN w/Modem</p> <p>#9771 is a 2-line WAN adapter. One port supports V.90 56K Async Data on PPP via an internal modem. The second port supports multiple protocol communications. Connection to the V.90 port is via telephone cable. Connection to the communication port is through one of the following cables:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20-ft PCI cable #0349 V.24/EIA232 50-ft PCI cable #0353 V.35 20-ft PCI cable #0354 V.35 50-ft PCI cable #0355 V.35 80-ft PCI cable #0356 V.36 20-ft PCI cable #0358 V.36 150-ft PCI cable #0359 X.21 20-ft PCI cable #0360 X.21 50-ft PCI cable #0365 V.24/EIA232 80-ft PCI cable <p>The ability to run Electronic Customer Support (ECS) on the telephone cable (RJ11) port over TCP/IP was made available on 17 November 2000, with PTF SF64124 (5769-SS1). Download and install V4R5 Client Access Express Service Pack 2 or later to obtain Wizard (5769-XE1 SF64217). Then use Operational Navigator to configure this Universal Connection per cover letter of SF64124. This Universal Connection operates using the integrated high-speed V.90. This includes electronic fix retrieval and problem reporting. For additional information, see: http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm</p> <p>Fax is not supported on the V.90 port at this time. IBM intends to support Fax on the V.90 port in a future release of OS/400 and with a Group PTF for V4R5.</p> <p>ECS operates on the WAN port of the #9771 by changing the *RSRCNAME parameter of the QESLINE and QTILINE line descriptions to that of the WAN port on the #9771 card.</p> <p>When the #9771 is selected to support ECS, one of the following cables must be specified and connects to the WAN port:</p> <ul style="list-style-type: none"> • #0348 V.24/EIA232 20-ft PCI cable (Default) • #0349 V.24/EIA232 50-ft PCI cable • #0365 V.24/EIA232 80-ft PCI cable <p>The #9771 does not support the #5544 Operations Console as the Systems Console.</p> <p>There are some restrictions on communications using the #9771. For communication restrictions, see 5.5, "Soft Rules: IOA Requirements" on page 110.</p>
DISK UNITS	
#4314	<p>8.58 GB Disk Unit Ultra SCSI</p> <p>Provides a 3 ½-inch single disk unit with 8.58 GB capacity for a additional disk storage (7200 RPM). This is a Customer Install Feature (CIF).</p>
#4317	<p>8.58 GB Disk Unit 10k RPM (Ultra2 SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 8.58 GB capacity for a additional disk storage. This is a Customer Install Feature (CIF).</p>
#4318	<p>17.54 GB Disk Unit 10k RPM (Ultra2 SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 17.54 GB capacity for a additional disk storage. This is a Customer Install Feature (CIF).</p>
#4324	<p>17.54 GB Disk Unit (Ultra SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 17.54 GB capacity for a additional disk storage (7200 RPM). This is a Customer Install Feature (CIF).</p>

#4331	<p>1.6 GB Read Cache Device This feature provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the disk controller #4748.</p> <p>Note: Because the #4331 is 1.6-inches wide, the following placement rules apply. The #4331 cannot be placed in disk unit slot D01 of the Model 270 and the #5075 PCI Expansion Tower. It cannot be placed in disk unit slots D14 or D20 of the #7104. The #4331 can be placed in disk unit slots D02 through D06 of the Model 270 and the #5075 PCI Expansion Tower. However, the #4331 takes up the disk unit slot in which it is installed and also takes up the adjacent disk unit slot to its left. For example, if the #4331 is installed in disk unit slot D02, it takes up disk unit slot D02 and disk unit slot D01. For the #5074, #5079, #9074, and #9079, the #4331 is installed in the left most slot of each five-pack partition and only takes up one disk unit position. Maximum: One per #4748 IOP. This is a Customer Install Feature (CIF).</p>
#6717 #6718 #6817 #6818	<p>8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) 17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) 8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) 17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Supported through RPQ 847102.</p>
RPC 857102	<p>RPQ 857102 ships the disk mounting hardware and instructions required to convert Feature #6717/6817 to Feature #4317 and Feature #6718/6818 to Feature #4318. Order one RPQ for each disk unit to be converted. Confirm that there is disk space available in an existing or on-order PCI Storage Tower #5065 or #5066. This RPQ can also be used to move a disk to an iSeries 270, 8xx, 270/8xx 5075, 5074/9074, and 5079/9079 PCI Towers.</p> <p>Ensure the required number of disk unit controllers (#2748, 8xx #4748/9748) are available. Also, ensure there are sufficient "slots" to receive the disk or disks. For example, you may need the #5101 30-Disk Expansion feature to have slots available for all the disk units to be moved into a #5704, #9704, or 9709.</p> <p>After the conversion, an RPO change must be processed to add the appropriate number of Features #4317 and #4318 and remove the appropriate number of Features #6717/6817 and #6718/6818.</p>
INTERNAL TAPE UNITS AND CD-ROM	
#4525	<p>CD-ROM Feature The #4525 is a feature CD-ROM device that can be mounted in the system unit of the 270 models. The #4525 can be used for Alternate IPL (IBM distributed CD-ROM media only) and program distribution. A CD-ROM is required. This is a Customer Install Feature (CIF).</p>
#4582	<p>4 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. #4582 can be mounted in the system unit of Models 270. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).</p>
#4583	<p>16 GB ¼-Inch Cartridge Tape Unit With a data rate of 1.5 Mbps and capacity of 16 GB per cartridge (3 MB/sec and 32 GB per cartridge with data compaction), the #4583 provides a growth path for the large number of iSeries and AS/400e servers that use QIC tape technology for save/restore. The #4583 provides read/write compatibility with the following formats:</p> <ul style="list-style-type: none"> • 16 GB (up to 32 GB with compression in QIC5010 format) with IBM MLR-116 GB Data Cartridge • 13 GB (up to 26 GB with compression in QIC5010 format) with IBM DC5010 Data Cartridge. <p>The #4583 provides read compatibility with the following formats:</p> <ul style="list-style-type: none"> • 8 GB (QIC4DC compressed format) with SLR5-4 GB Data Cartridge • 5 GB (QIC2DC compressed format) with IBM DC9250 Data Cartridge • 4 GB (QIC4GB format) with SLR5-4 GB Data Cartridge • 2.5 GB (QIC2GB format) with IBM DC9250 Data Cartridge <p>The #4583 can be mounted in the system unit of the 270 models This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).</p>

#4586	<p>25 GB ¼-inch Cartridge Tape Unit</p> <p>With a data rate of 2 Mbpsec and capacity of 25 GB per cartridge (4 MB/sec and 50 GB per cartridge with data compaction), the #4586 provides a growth path for the large number of iSeries or AS/400e models that use QIC tape technology for save/restore.</p> <p>The #4586 provides read/write compatibility with the following formats:</p> <ul style="list-style-type: none"> • 25 GB (up to 50 GB with compression in MLR3 compacted format) with MLR-3 Data Cartridge • 16 GB (up to 32 GB with compression in QIC5010 format) with IBM MLR-116 GB Data Cartridge • 13 GB (up to 26 GB with compression in QIC5010 format) with IBM DC5010 Data Cartridge <p>The #4586 provides read compatibility with the following formats:</p> <ul style="list-style-type: none"> • 8 GB (QIC4DC compressed format) with SLR5-4 GB Data Cartridge • 5 GB (QIC2DC compressed format) with IBM DC9250 Data Cartridge • 4 GB (QIC4GB format) with SLR5-4 GB Data Cartridge • 2.5 GB (QIC2GB format) with IBM DC9250 Data Cartridge <p>The #4586 can be mounted in the system unit of Models 270.</p> <p>This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>This is a Customer Install Feature (CIF).</p>
MAGNETIC MEDIA CONTROLLERS	
#2749	<p>PCI Ultra Magnetic Media Controller</p> <p>The #2749 is an Ultra SCSI IOA that provides attachment capability for external tape devices and external optical devices. The #2749 can attach one tape drive <i>or</i> one optical drive.</p> <p>The following tape devices can be attached:</p> <ul style="list-style-type: none"> • 3490E E01/E11 ½-inch Cartridge Tape Subsystem • 3490 F00/F01/F11/F1A ½-inch Cartridge Tape Subsystem • 3490E C11/C22/C1A/C2A with feature #5040 • 3494 Tape Library Dataserver <ul style="list-style-type: none"> L10 Library Control Unit Frame 1 3490E C1A/C2A with #5040 or 1-2 3490E F1A L12 Library Control Unit Frame 1-2 3590 B1A D10 Device Frame 1 3490E C1A/C2A with #5040 or 1-2 3490E F1A, 300 cartridges D12 Device Frame 1-6 3590 B1A, 300 cartridges HA1 (High Availability)—2 L1X and 2 D1X for redundancy • 3570 0.31-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> Model Bxx (standalone) Model Cxx (standalone) • 3575 0.31-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> Model Lxx • 358X-HXX/LXX/DXX Tape Cartridge Subsystem • 3590 ½-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> Model E11/B11 (mounts into 9309 rack) Model E1A/B1A (mounts into 3494 library) • 3995-Cxx Optical Library Dataserver • 7208-012 5.0 GB 8mm Cartridge Tape Unit • 7208-222 7.0 GB 8mm Cartridge Tape Unit • 7208-232 8MM Dual 5.0 GB Cartridge Tape Subsystem <ul style="list-style-type: none"> #0501 counts as one 7208 #0502 counts as two 7208s • 7208-234 8 MM Dual 7.0 GB Cartridge Tape Subsystem <ul style="list-style-type: none"> Counts as two 7208s • 7208-342 20.0 GB 8mm Cartridge Tape Bridge Box • 9348-00x ½-inch Reel Tape Unit—Rack Mount • 9427-2108 8mm Library Attach <p>This is a Customer Install Feature (CIF).</p>
#2763	<p>PCI RAID Disk Unit Controller—10 MB</p> <p>The #2763 is an Ultra2 SCSI controller with a 10 MB write-cache that provides RAID-5 protection for internal disk units and also supports up to two removable media devices (internal tape units and CD-ROM units).</p> <p>In addition to providing RAID-5 protection for disks, #2763 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. The #2763 controller supports a maximum of 12 disk units. A minimum of four disk units of the same capacity are needed for a valid RAID 5 configuration. A maximum of three arrays are allowed per controller, with a maximum of ten disk units allowed per one array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to ten. The #2763 does not support hardware disk compression. The #2763 does not support the #4331 Read Cache Device. Allowed combinations in the CEC for disk controllers are one #9767 and one #2763 if the #0041 is not selected or two #2763s and the #9767 is not allowed.</p> <p>Restrictions: Requires long PCI card slot.</p> <p>This is a Customer Install Feature (CIF).</p>

#2768	<p>PCI Magnetic Media Controller</p> <p>The #2768 provides Ultra SCSI attachment capability for an external tape or an external CD-ROM device that has a Single Ended SCSI interface. The #2768 supports the following devices:</p> <ul style="list-style-type: none"> • 7207-122 QIC-SLR Tape Bridge Box • 7210-020 CD-ROM Bridge Box <p>The #2768 supports one 7207-122 or one 7210-020 or one 7207-122 and one 7210-020. When both the 7207-122 and the 7210-020 are attached, the two devices must be “daisy chained” with the 7207-122 physically connected first. This is a Customer Install Feature (CIF).</p>
#4748	<p>PCI RAID Disk Unit Controller—26 MB Cache</p> <p>The #4748 is an Ultra2 SCSI controller with a 26 MB write-cache that provides RAID-5 protection and compression for internal disk units and also supports internal tape units and CD-ROM units. The #4748 supports both compression and non-compression modes. The mode of operation is determined by a hardware jumper. The #4748 is shipped in non-compression mode. By moving the hardware jumper, the controller functions in compression mode. In addition to providing RAID-5 protection for disks, the #4748 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. The #4748 also supports #4331 1.6 GB Read Cache Device, which provides increased performance. Read Cache Device (#4331) is supported only when the #4748/#9748 is <i>not</i> in compression mode.</p> <p>The #4748 controller supports a maximum of 18 disk units in the Model 270.</p> <p>A minimum of four disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of four arrays are allowed per controller, with a maximum of 10 disk units allowed per array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to seven disk units. Parity can be spread across either four or eight disk units for arrays of 8 to 10 disk units. For systems started with 8 to 10 disk units in an array, the parity for that array will be spread across eight disk units. For systems that are started with less than eight disk units in an array and later MESed to 8, 9, or 10 disk units, the RAID function must be stopped and then started before the parity will be spread across eight disk units.</p> <p>The #4748 controls up to two removable media devices (internal tape or CD-ROM). Restrictions: Requires long PCI card slot. Only one allowed in CEC and is mutually exclusive with #9767 This is a Customer Install Feature (CIF).</p>
#9767	<p>PCI Disk Unit Controller</p> <p>The #9767 is disk unit and removable media device controller that provides Ultra2 SCSI attachment capability. The #9767 does not support RAID. The #9767 is the default controller in the Model 270 and controls up to six disk units and up to two removable media devices (internal tape or CD-ROM). If RAID-5 is required or more than six drives, the #4748 or #2763 disk controller is required.</p>

2.4 270 Upgrades

Upgrades are not allowed into or out of the Model 270 range. Upgrades are supported within the Model 270 range.

Model 270								
To		2248	2250		2252		2253	
From		1517	1516	1518	1516	1519	1516	1520
2248	1517			X		XM		XM
2250	1516			X	XM	XM	XM	XM
	1518					XM		XM
2252	1516					X	X	X
	1519							X
2253	1516							X
	1520							

Model 270 Dedicated Domino Processors			
To	2422	2423	2424
From			
2422		XM	XM
2423			X
2424			

Note: XM represents Manufactured MES (Roll-in/Roll-out).

Chapter 3. 9406 8xx Models

This chapter identifies the features associated with each 8xx system, such as the processor features, power and packaging, main storage, workstation controllers, and communications—including LANs, disk units, internal tape units, CD-ROM, and magnetic media controllers. Upgrade options to the 8xx servers are represented.

8xx models support migration of existing system units and expansion towers from 7xx, 6xx, and Sxx models. This is achieved by converting the existing System Tower into either a Migration Tower I (#5033, #5034, or #5035) or Migration Tower II (#5077). This chapter only describes the features supported in the new 8xx hardware. For details of hardware supported via the migration towers, see Chapter 8, “9406 7xx Models” on page 157, Chapter 9, “9406 6xx Models” on page 211, or Chapter 10, “9406 Sxx Models” on page 275.

The 8xx models provide more flexibility in the placement of IOPs and IOAs. This results in more efficient use of card slots, which potentially results in a lower cost of implementation. Increased flexibility of configuration also adds, in certain cases, an increased requirement to understand the detailed configuration rules. See Chapter 5, “PCI Card Placement Rules” on page 101, for a more complete understanding of these rules. OS/400 V4R5 is required to support the 8xx systems.

3.1 9406 820 Model Overview

The iSeries Model 820 systems are Customer Setup (CSU).

Model	820			
Processor Feature	#2395	#2396	#2397	#2398
Relative System Performance (Note 1)				
Processor CPW	370	950	2000	3200
Interactive CPW				
#1521	35	35	35	35
#1522	70	70	70	70
#1523	120	120	120	120
#1524	240	240	240	240
#1525	-	560	560	560
#1526	-	-	1050	1050
#1527	-	-	-	2000
Number of Processors/Type	1/Pulsar	1/Pulsar	2/IStar	4/IStar
L2 Cache (MB)/Processor	0	2	4	4
Main Storage (MB Min/Max)	256-4096	256-8192	256-16384	256-16384
Main Storage DIMMs or Cards	2/8	2/16	2/32	2/32
Processor Group (Note 10)	P10-P20	P20-P30	P20-P30	P30-P40

Model	820 Dedicated Server for Domino		
Processor Feature	#2425	#2426	#2427
Relative System Performance (Note 1)			
Processor CPW	100	200	300
Interactive CPW (Note 8)	0	0	0
Simple Mail Users	3860	8420	14840
Mail and Calendaring Users	2570	5610	9890
Number of Processors/Type	1/Pulsar	2/IStar	4/IStar
L2 Cache (MB)/Processor	2	4	4
Main Storage (MB Min/Max)	256-8192	256-16384	256-16384
Main Storage DIMMs or Cards	2/16	2/32	2/32
Processor Group	P05	P10	P10

Numbers are for all processor features	Base System	PCI Expansion Tower #5075	PCI Expansion Tower #5074	Migrated Total with #503x (Note 5,7)	New System maximum (Note 6)
Disk Storage Base (GB)	8.58				
Maximum Internal (GB)	210.5	105.2	789.7	1625.9	4159.1
Maximum External (GB)	0	0	0	1595.3	0
Total Maximum (GB)	210.5	105.2	789.7	1625.9	4159.1
DASD Arms Maximum	12	6	45	210	237
Diskette (8 or 5.25 inch)	0	0	0	2	0
Communication Lines (Note 3)	44	34	52	128	160
Twinax Workstation Controllers	7	7	11	66	62
Twinaxial Devices	280	280	440	2628	2480
CD-ROM / Internal Tape (Note 4)	2	0	2	18 (Note 9)	12
External Tape	6	7	8	8	8
Tape Libraries Maximum (Note 2)	6	7	8	8	8
Optical libraries	6	7	14	14	14
Cryptographic Processor	3	3	3	3	3
Physical Packaging					
External HSL Ports	2	-	-	-	2
External HSL Loops	1	-	-	-	1
#5074 and/or #5075 Towers Supported	5	-	-	-	5
SPD Towers supported	-	-	-	4	-
Embedded IOPs	1	1	0	1	6
PCI Adapter Card slots	12	8	14	86	82
Maximum PCI IOA Cards	9	7	11	70	63
LAN Ports Maximum	6	5	8	24	30
Integrated Netfinity Server Maximum	2	2	2	16	12

Note 1:	<p>Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application running determine what performance is achievable. With the introduction of the Dedicated Servers for Domino, Simple Mail Users is added as a performance measurement.</p> <p>Processor performance represents the relative performance (maximum capacity) of a processor feature running CPW in a client/server environment. Processor capacity is achievable when the commercial workload is not constrained by main storage and DASD. Interactive Performance represents the relative performance available to perform host-centric workloads. The amount of interactive capacity consumed reduces the available processor capacity by the same amount.</p> <p>On the Dedicated Servers for Domino, the Processor CPW is an approximate value reflecting the maximum amount of non-Domino workload (10 to 15% of CPU) that can be supported.</p>
Note 2:	Total number of tape drives does not increase.
Note 3:	One line is used for Operations Console if selected.
Note 4:	There must be one CD-ROM per system.
Note 5:	Includes the #503x Migration Tower and all SPD bus towers attached to the #503x.
Note 6:	New systems only. Does not apply to migrated systems.
Note 7:	This column does not apply to Dedicated Domino Servers

Note 8:	This interactive CPW value of 0 represents the amount of 5250 processing capability available for customer applications. CPW=0 supports system administration functions performed by: <ul style="list-style-type: none">• A single interactive job• Operations Navigator• Any job submitted to batch Multiple system administrators performing simultaneous tasks is not supported.			
Note 9:	Includes a base CD-ROM in Migration tower (no feature code).			
Note 10:	Processor Group is determined by a combination of the Processor and Interactive Feature. The following table provides a cross reference.			
	Processor	Interactive Feature	Processor Feature	Processor Group
	#2395	#1521	#23A1	P10
		#1522	#23A2	P20
		#1523	#23A3	P20
		#1524	#23A4	P20
	#2396	#1521	#23A9	P20
		#1522	#23AA	P30
		#1523	#23AB	P30
		#1524	#23AC	P30
		#1525	#23AD	P30
	#2397	#1521	#23B1	P20
		#1522	#23B2	P30
		#1523	#23B3	P30
		#1524	#23B4	P30
		#1525	#23B5	P30
		#1526	#23B6	P30
	#2398	#1521	#23B8	P30
		#1522	#23B9	P40
		#1523	#23BA	P40
#1524		#23BB	P40	
#1525		#23BC	P40	
#1526		#23BD	P40	
#1527		#23BE	P40	

General note: Capacities shown may require prerequisites. Some combinations of features may not be valid.

3.2 9406 830 Model Overview

Model	830		
Processor Feature	#2400	#2402	#2403
Relative System Performance (Note 1)			
Processor CPW	1850	4200	7350
Interactive CPW			
#1531 (Base)	70	70	70
#1532	120	120	120
#1533	240	240	240
#1534	560	560	560
#1535	1050	1050	1050
#1536	-	2000	2000
#1537	-	-	4550
Number of Processors/Type	2/IStar	4/IStar	8/IStar
L2 Cache (MB) / Processor	2	4	4
Main Storage (GB Min/Max)	1-32	1-32	1-32
Main Storage DIMMs or Cards (Min/Max)	8/64	8/64	8/64
Processor Group (Note 9)	P20-P30	P30-P40	P40-P50

Numbers are for all processor features	Base System #9074	PCI Expansion Tower #5074	Migrated Total with #503x (Note 5)	Migrated Total with #5077 (Note 6)	New System maximum (Note 7)
Disk Storage Base (GB)	8.58	-	-	-	-
Maximum Internal (GB)	789.7	789.7	1625.9	2499.6	11055.8
Maximum External (GB)	0	0	1595.3	2473.9	0
Total Maximum (GB)	789.7	789.7	1625.9	2499.6	11055.8
DASD Arms Max	45	45	210	596	630
Diskette (8 or 5.25 inch)	0	0	2	2	0
Communication Lines (Note 4)	40	52	128	250	300
Twinax Workstation Controllers	9	11	66	175	152
Twinaxial Devices	360	440	2628	7000	6080
CD-ROM (Note 3)	2	2	18 (Note 8)	18 (Note 8)	18
Internal Tape	1	2	17	17	17
External Tape (Max/System)	8	10	8	10	10
Tape Libraries Maximum (Note 2)	8	10	8	10	10
Optical libraries	8	11	14	22	22
Cryptographic Processor	3	3	3	3	3
Physical Packaging					
External HSL Ports	8	-	-	-	8
External HSL Loops	4	-	-	-	4
#5074 Towers Supported	13	-	-	-	13
SPD Towers Supported	-	-	4	18	-
Embedded IOPs	-	-	2	-	0
PCI Adapter Card slots	14	14	86	270	196
Maximum PCI IOA Cards	11	11	70	216	154
LAN Ports Maximum	6	8	24	48	72
Integrated Netfinity Server Maximum	2	2	16	16	16

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application running determine what performance is achievable. With the introduction of the Dedicated Servers for Domino, Simple Mail Users is added as a performance measurement.			
Note 2:	The total number of tape drives does not increase.			
Note 3:	There must be one CD-ROM per system.			
Note 4:	One line is used by Operations Console if selected.			
Note 5:	Includes the #503x tower and all the SPD bus towers attached to the #503x.			
Note 6:	Includes the #5077 tower and all the SPD bus towers attached to the #5077.			
Note 7:	New systems only, does not apply to migrated towers.			
Note 8:	Includes a base CD-ROM in Migration tower (no feature code).			
Note 9:	Processor Group is determined by a combination of the Processor and Interactive Feature. The following table provides a cross reference.			
	Processor	Interactive Feature	Processor Feature	Processor Group
	#2400	#1531	#23C1	P20
		#1532	#23C2	P30
		#1533	#23C3	P30
		#1534	#23C4	P30
		#1535	#23C5	P30
	#2402	#1531	#23D1	P30
		#1532	#23D2	P40
		#1533	#23D3	P40
		#1534	#23D4	P40
		#1535	#23D5	P40
		#1536	#23D6	P40
	#2403	#1531	#23D8	P40
		#1532	#23D9	P50
		#1533	#23DA	P50
		#1534	#23DB	P50
		#1535	#23DC	P50
		#1536	#23DD	P50
#1537		#23DE	P50	

General note: Capacities shown may require prerequisites. Some combinations of features may not be valid.

3.3 9406 840 Model Overview

Model	840				
Processor Feature	#2416	#2417	#2418	#2419	#2420
Relative System Performance (Notes 1 and 2)	7800/10000	10000/13200	10000	13200/16500	16500
Processor CPW					
Interactive CPW					
#1540 (Base)	120	120	120	120	120
#1541	240	240	240	240	240
#1542	560	560	560	560	560
#1543	1050	1050	1050	1050	1050
#1544	2000	2000	2000	2000	2000
#1545	4550	4550	4550	4550	4550
#1546	10000	10000	10000	10000	10000
#1547	-	-	-	16500	16500
Number of Processors/Type	8/12/IStar	12/18/IStar	12/IStar	18/24/IStar	24/IStar
L2 Cache (MB) / Processor	8	8	8	8	8
Main Storage (GB Min/Max)	4/96	4/96	4/96	4/96	4/96
Main Storage DIMMs or Cards (Min/Max)	4/16	4/16	4/16	4/16	4/16
Processor Group (Note 8)	P40-P50	P40-P50	P40-P50	P40-P50	P40-P50

Numbers are for All Processor Features	Base System #9079	PCI Expansion Tower #5074	Migrated Total with #5077 (Note 5)	New System maximum (Note 6)
Disk Storage Base (GB)	8.58	-	-	
Maximum Internal (GB)	789.7	789.7	4294.9	18952.9
Maximum External (GB)	0	0	4260.6	4260.6
Total Maximum (GB)	789.7	789.7	4294.9	18952.9
DASD Arms Max	45	45	596	1080
Diskette (8 or 5.25 inch)	0	0	2	0
Communication Lines (Note 4)	40	52	300	400
Twinax Workstation Controllers	9	11	175	175
Twinaxial Devices	360	440	7000	7000
CD-ROM (Note 3)	2	2	18 (Note 7)	24
Internal Tape	1	2	17	26
External Tape (Max/System)	8	11	14	26
Tape Libraries Maximum (Note 2)	8	11	14	26
Optical libraries	8	11	22	26
Cryptographic Processor	3	3	3	3
Physical Packaging				
External HSL Ports	16	-	-	16
External HSL Loops	8	-	-	8
#5074 Towers Supported	23	-	-	23
SPD Towers Supported	-	-	18	-
Embedded IOPs	-	-	-	-
PCI Adapter Card slots	14	14	270	336
Maximum PCI IOA Cards	11	11	216	264
LAN Ports Maximum	6	8	72	72
Integrated Netfinity Server Maximum	2	2	16	16

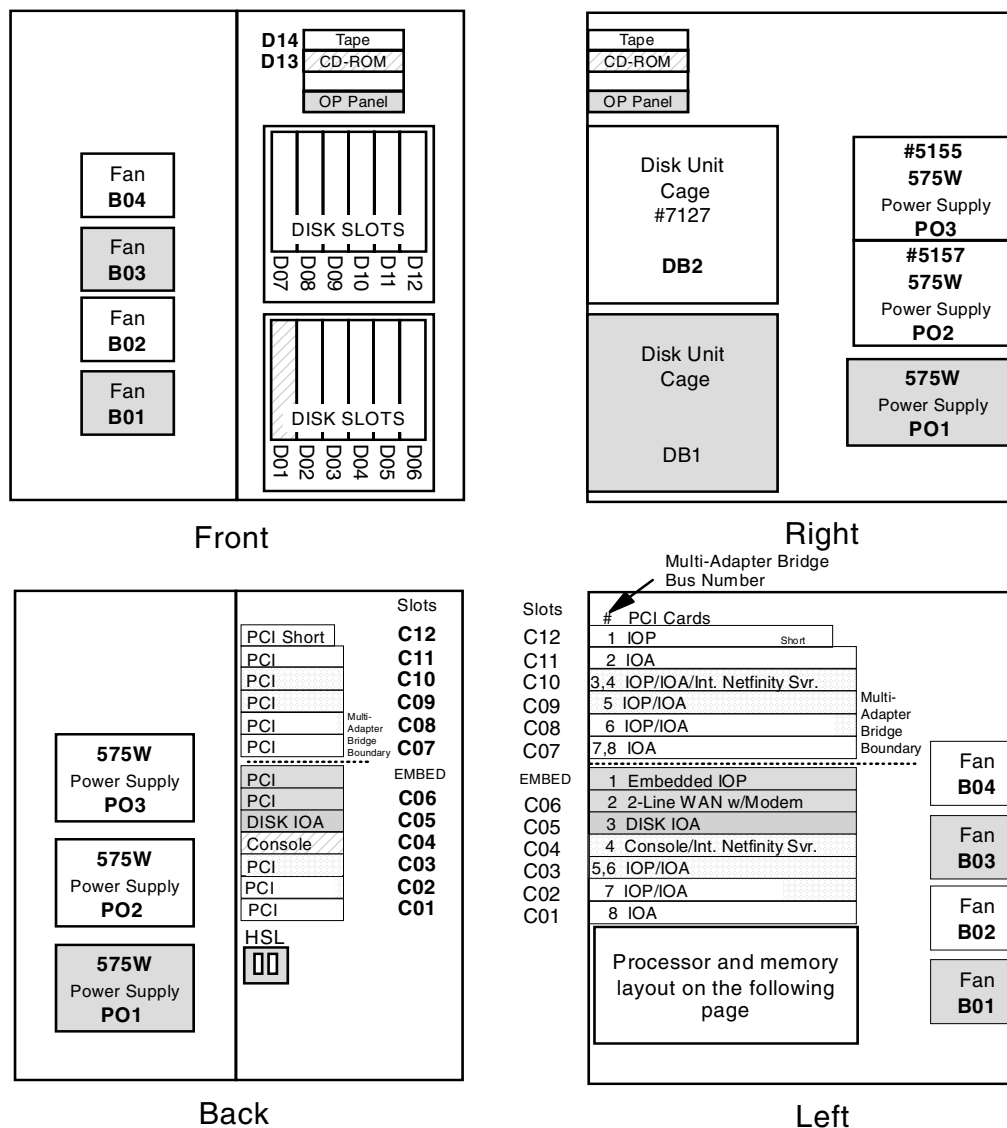
Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application running determine what performance is achievable. With the introduction of the Dedicated Servers for Domino, Simple Mail Users is added as a performance measurement.
Note 2:	The total number of tape drives does not increase.
Note 3:	There must be one CD-ROM per system.
Note 4:	One line is used by Operations Console if selected.
Note 5:	Includes the #5077 and all the SPD Bus towers attached to the #5077.
Note 6:	New systems only. Does not apply to migrated system.
Note 7:	Includes a base CD-ROM in Migration tower (no feature code)

Note 8: Processor Group is determined by a combination of the Processor and Interactive Feature. The following table provides a cross reference.

Processor	Interactive Feature	Processor Feature	Processor Group
#2416	#1540	#24C0	P40
	#1541	#24C1	P50
	#1542	#24C2	P50
	#1543	#24C3	P50
	#1544	#24C4	P50
	#1545	#24C5	P50
	#1546	#24C6	P50
#2417	#1540	#24C8	P40
	#1541	#24C9	P50
	#1542	#24CA	P50
	#1543	#24CB	P50
	#1544	#24CC	P50
	#1545	#24CD	P50
	#1546	#24CE	P50
#2418	#1540	#23E8	P40
	#1541	#23E9	P50
	#1542	#23EA	P50
	#1543	#23EB	P50
	#1544	#23EC	P50
	#1545	#23ED	P50
	#1546	#23EE	P50
#2419	#1540	#24D0	P40
	#1541	#24D1	P50
	#1542	#24D2	P50
	#1543	#24D3	P50
	#1544	#24D4	P50
	#1545	#24D5	P50
	#1546	#24D6	P50
	#1547	#24D7	P50
#2420	#1540	#23F8	P40
	#1541	#23F9	P50
	#1542	#23FA	P50
	#1543	#23FB	P50
	#1544	#23FC	P50
	#1545	#23FD	P50
	#1546	#23FE	P50
	#1547	#23FF	P50

3.4 9406 Model 820 System Unit

Model 820 System Unit



Note 1: Position of cards may change depending on the console and other features selected.

Legend

Base Feature
Required Feature
Unavailable if Integrated Netfinity Server is installed

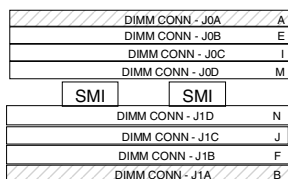
Note 1: If C10 has an Integrated Netfinity Server, slot C09 is unavailable, and slot C08 is available only as a short slot.

Note 2: If C04 has an Integrated Netfinity Server, slot C03 is not available, and slot C02 is available only as a short slot.

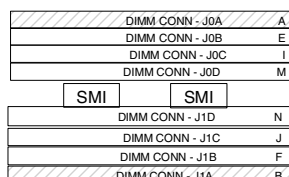
Note 3: Position of the cards may change depending on the console and other features selected. A console is a required feature.

Model 820 Processor and Memory

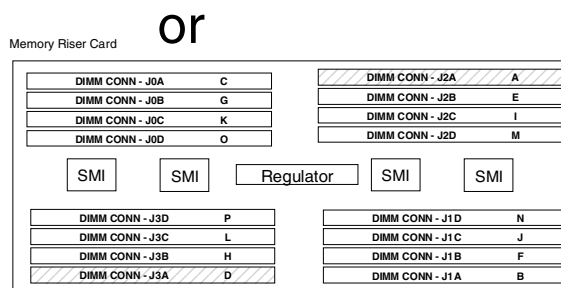
#2395



#2396, #2425

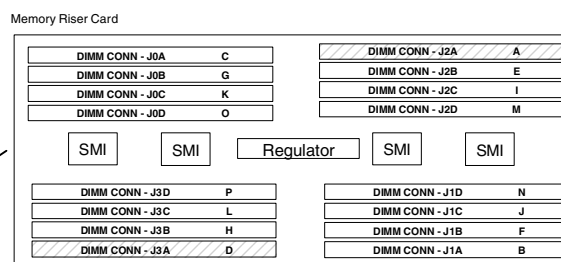
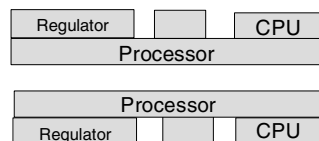


M02 Memory Riser Card

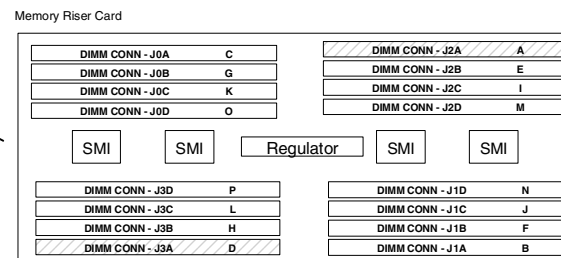
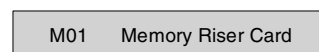


Note: All memory on the motherboard, once a riser card is installed, is moved to the riser card.

#2397, #2398, #2426, #2427

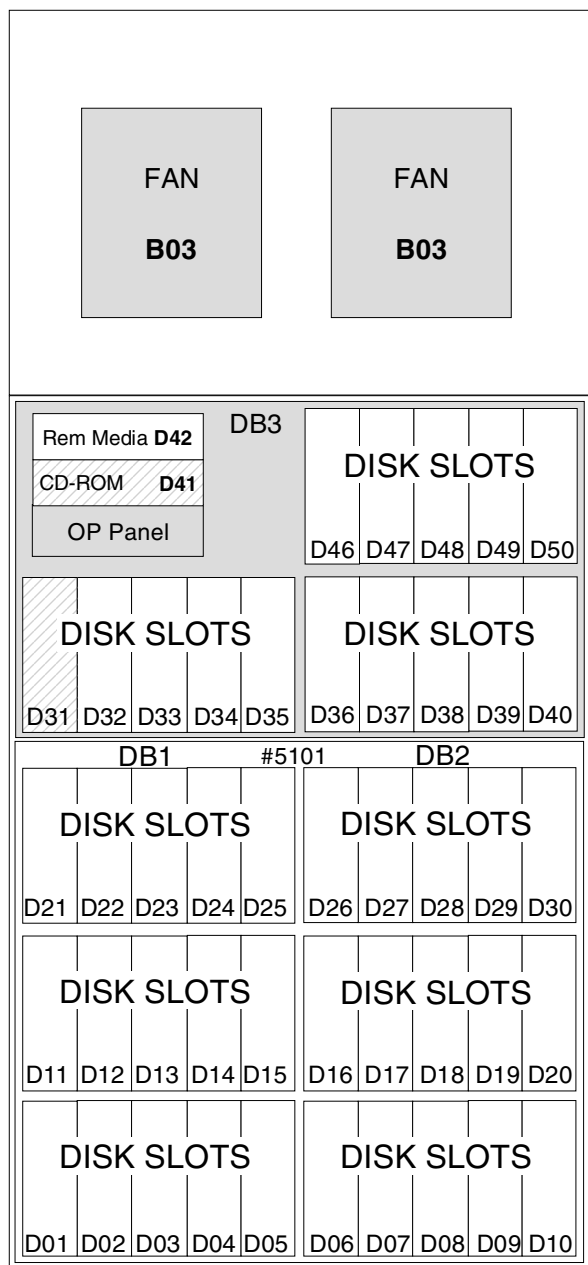


M02 Memory Riser Card

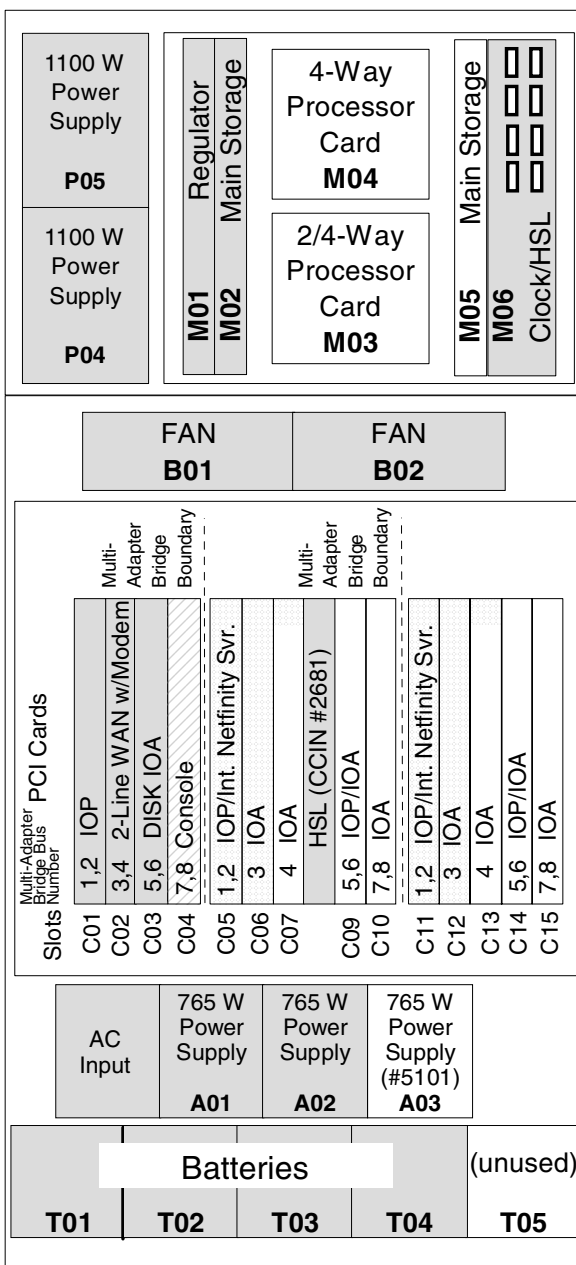


Model 830 System Unit (n - Way)

#2400, #2402, #2403 Processors

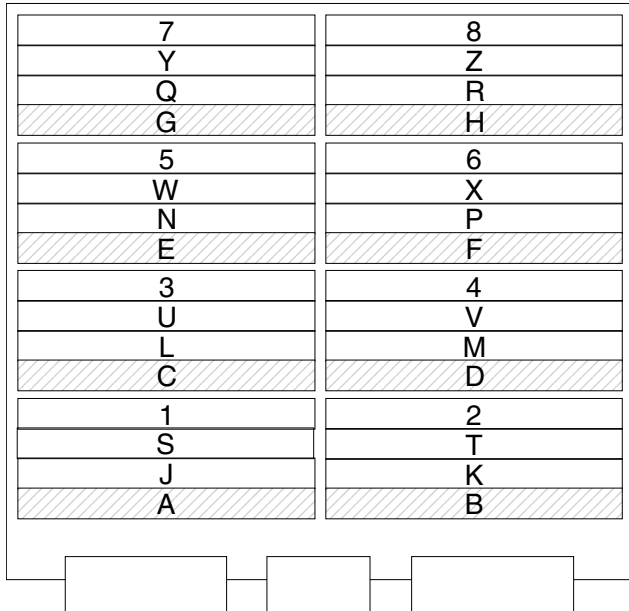


Front



Back

Model 830 Main Storage Card (CCIN 2881)



Legend

Base Feature

Required Feature

Unavailable if
Integrated Netfinity
Server is installed

Note 1: If C05 has an Integrated Netfinity Server, slot C06 is unavailable, and slot C07 is available only as a short slot.

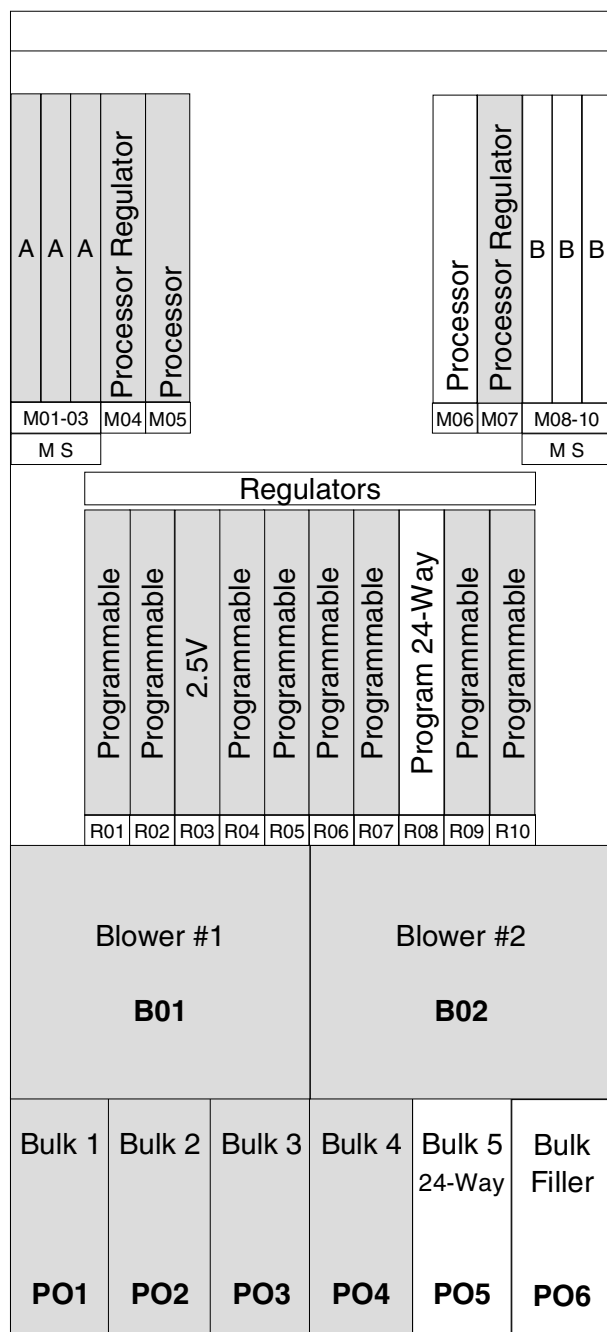
Note 2: If C11 has an Integrated Netfinity Server, slot C12 is not available, and slot C13 is available only as a short slot.

Note 3: The position of the cards may change depending on the console and other features selected.

3.6 Model 840 System Unit

Model 840 System Unit (n - Way)

#2416, #2417, #2418, #2419, #2420 Processors

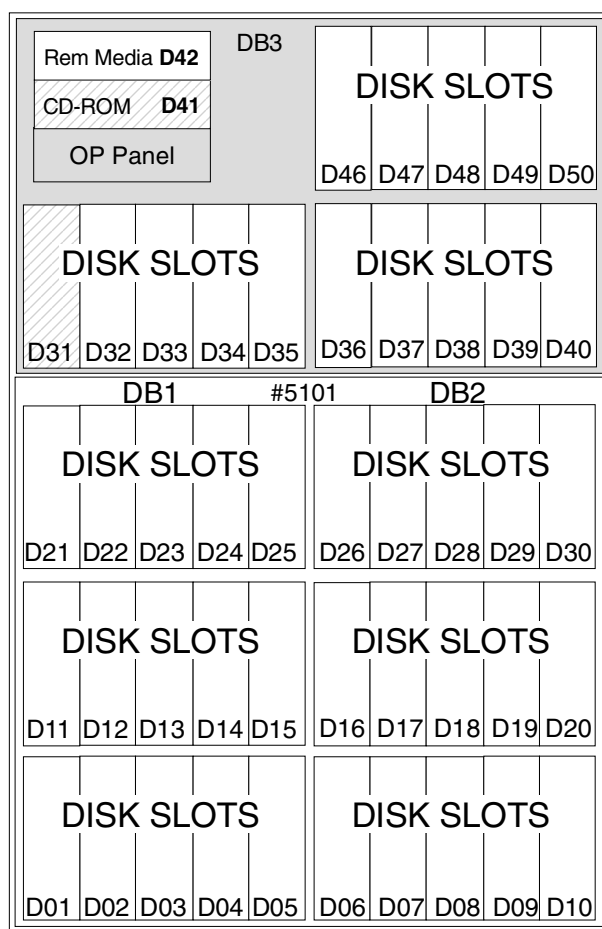


Legend

Base Feature

Required Feature

Unavailable if
Integrated Netfinity
Server is installed



Front

Model 840 System Unit (n - Way)

#2416, #2417, #2418, #2419, #2420 Processors

Legend

Base Feature

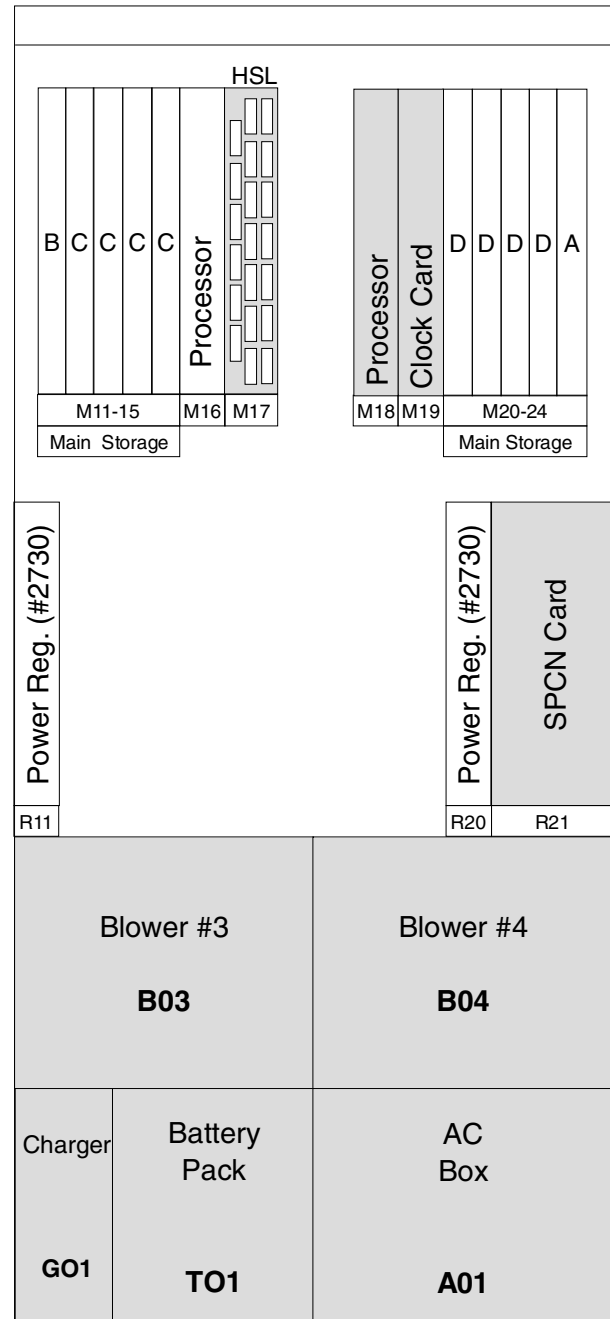
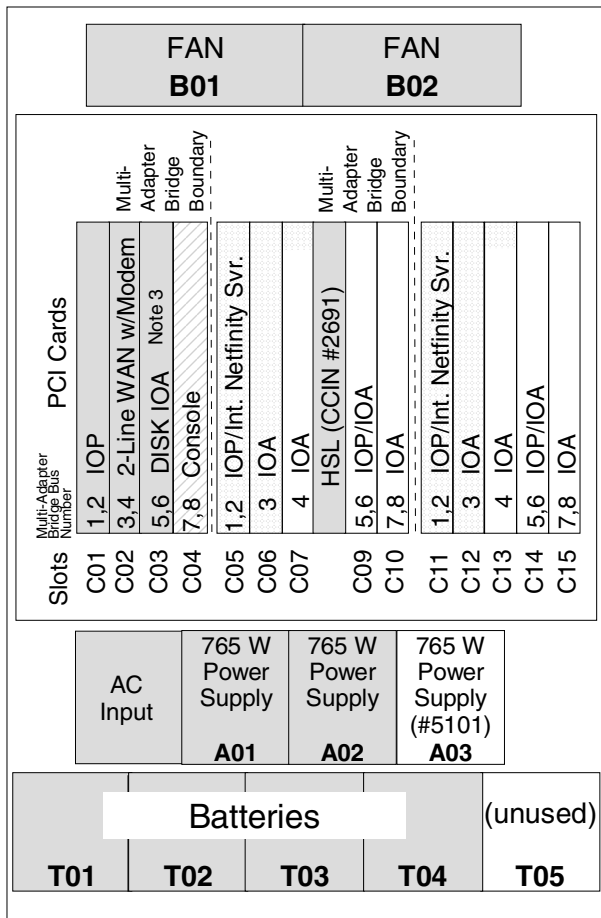
Required Feature

Unavailable if
Integrated Netfinity
Server is installed

Note 1: If C05 has an Integrated Netfinity Server, slot C06 is not available, and slot C07 is available only as a short slot.

Note 2: If C11 has an Integrated Netfinity Server, slot C12 is unavailable, and slot C13 is available only as a short slot.

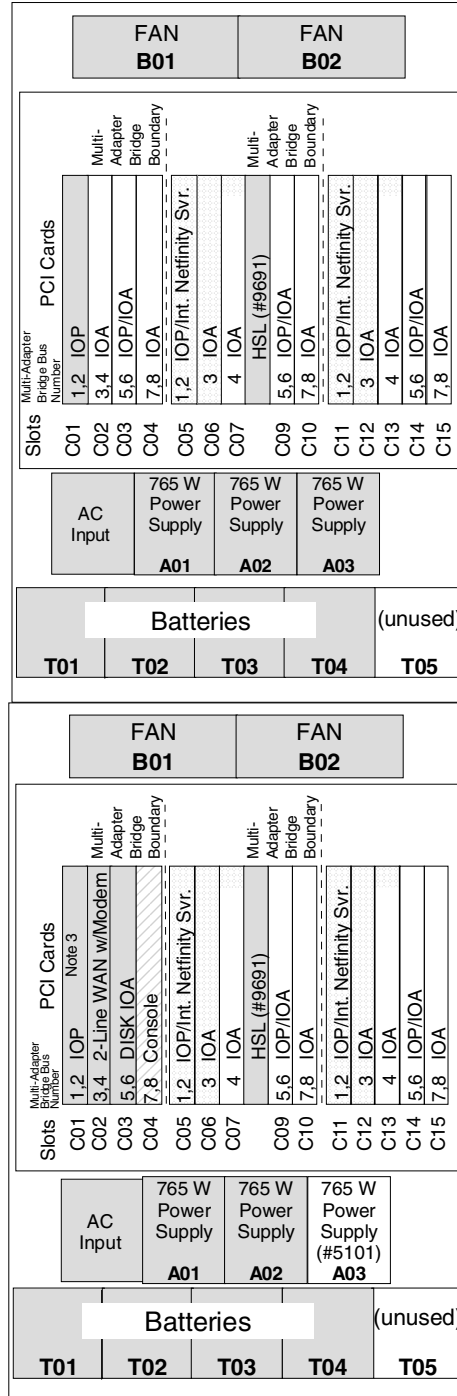
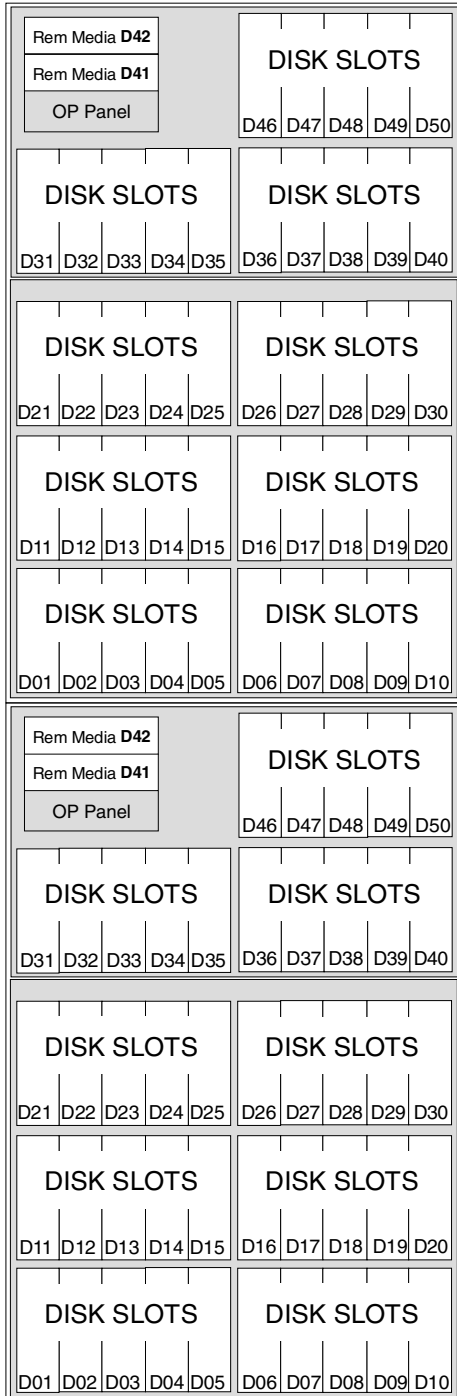
Note 3: The position of the cards may change depending on the console and other features selected.



Back

#8079 Optional Base Rack

Note: The total of number of disk bays is 2 x 45.



Legend

Base Feature

Required Feature

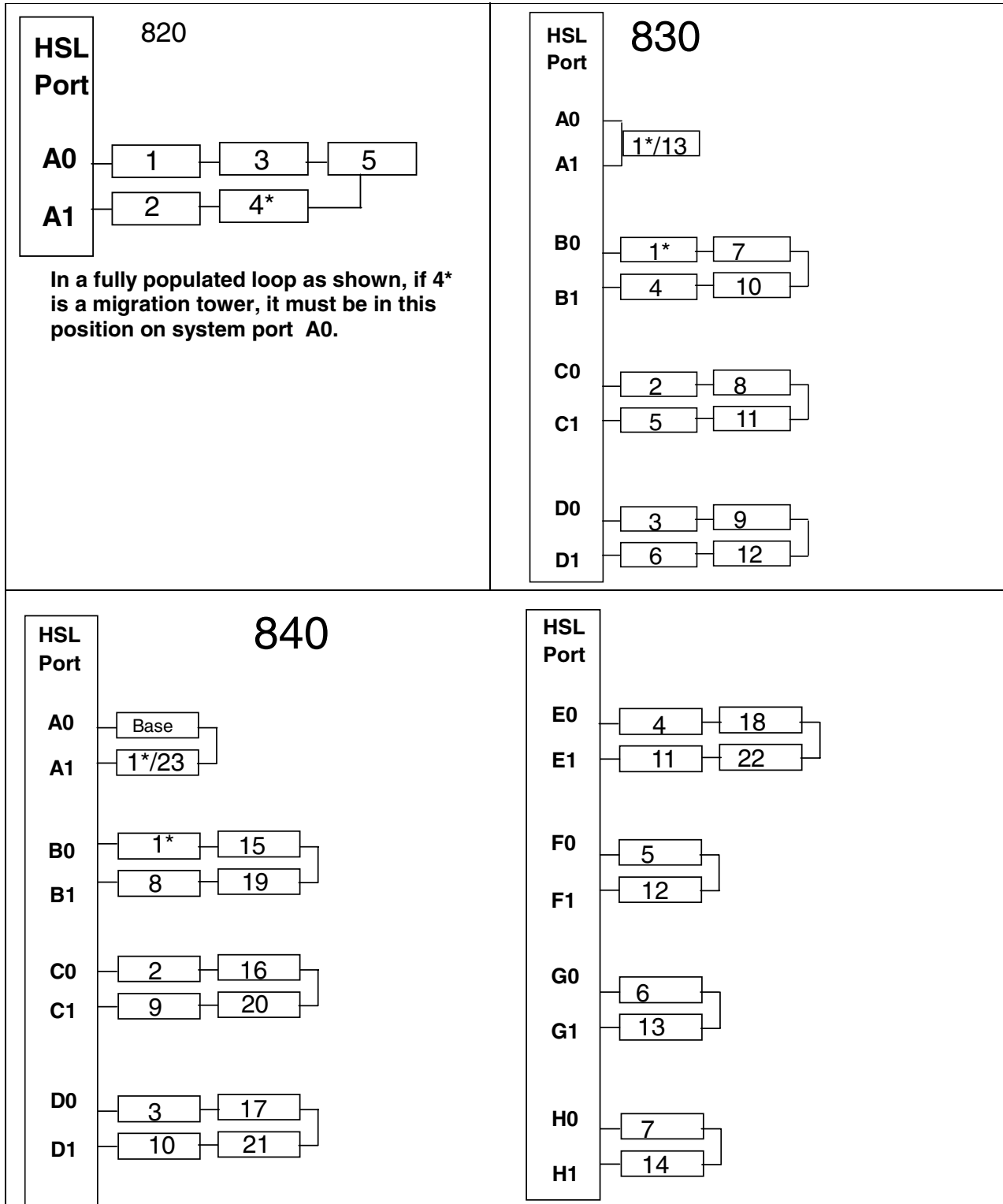
Unavailable if Integrated Netfinity Server is installed

Note 1: If C05 has an Integrated Netfinity Server, slot C06 is unavailable, and slot C07 is available only as a short slot.

Note 2: If C11 has an Integrated Netfinity Server, slot C12 is not available, and slot C13 is available only as a short slot.

Note 3: The position of the cards may change depending on the console and other features selected.

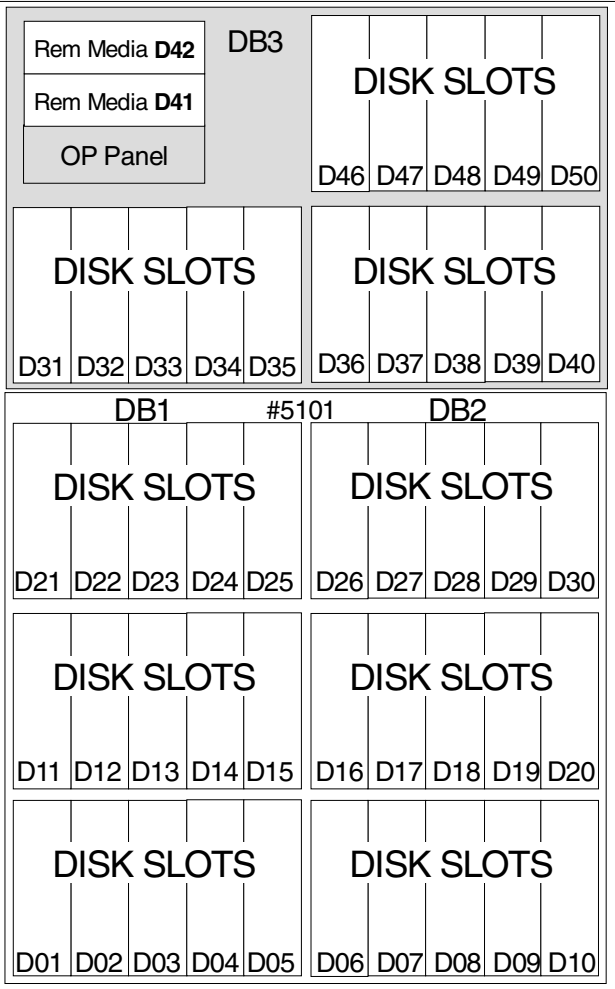
3.7 Models 820, 830, and 840 High Speed Link Tower Placement



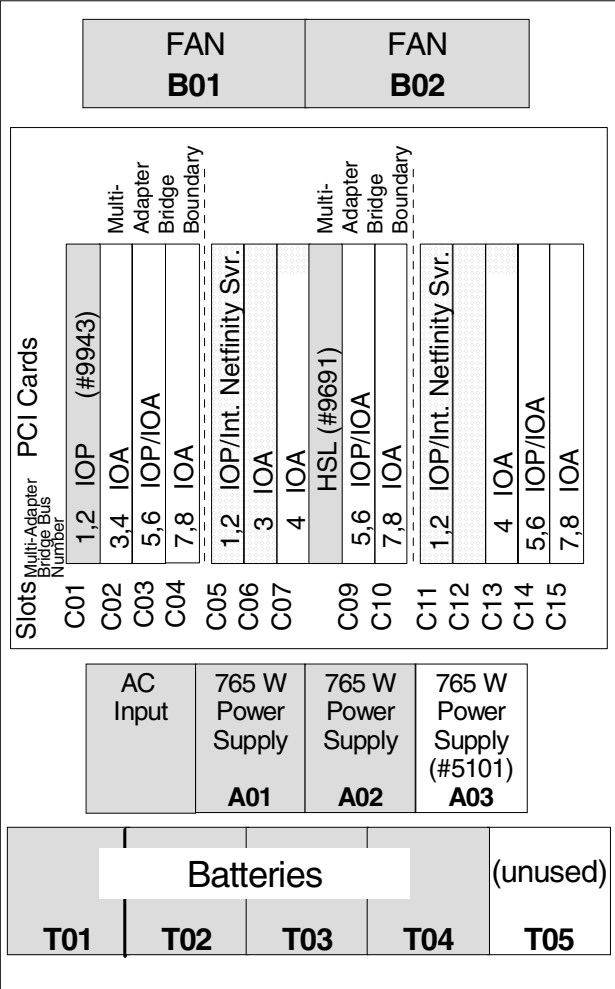
Note: On Models 830 or 840, if 1* is a Migration Tower I or II, it must be attached to Loop A. If 1* is an Expansion Tower, it should be attached to Loop B leaving Loop A available for a migration tower in the future, or the 13th (on Model 830) or the 23rd (on Model 840) expansion tower.

#5074 PCI Expansion Tower

Note: The total number of disk bays is 45.



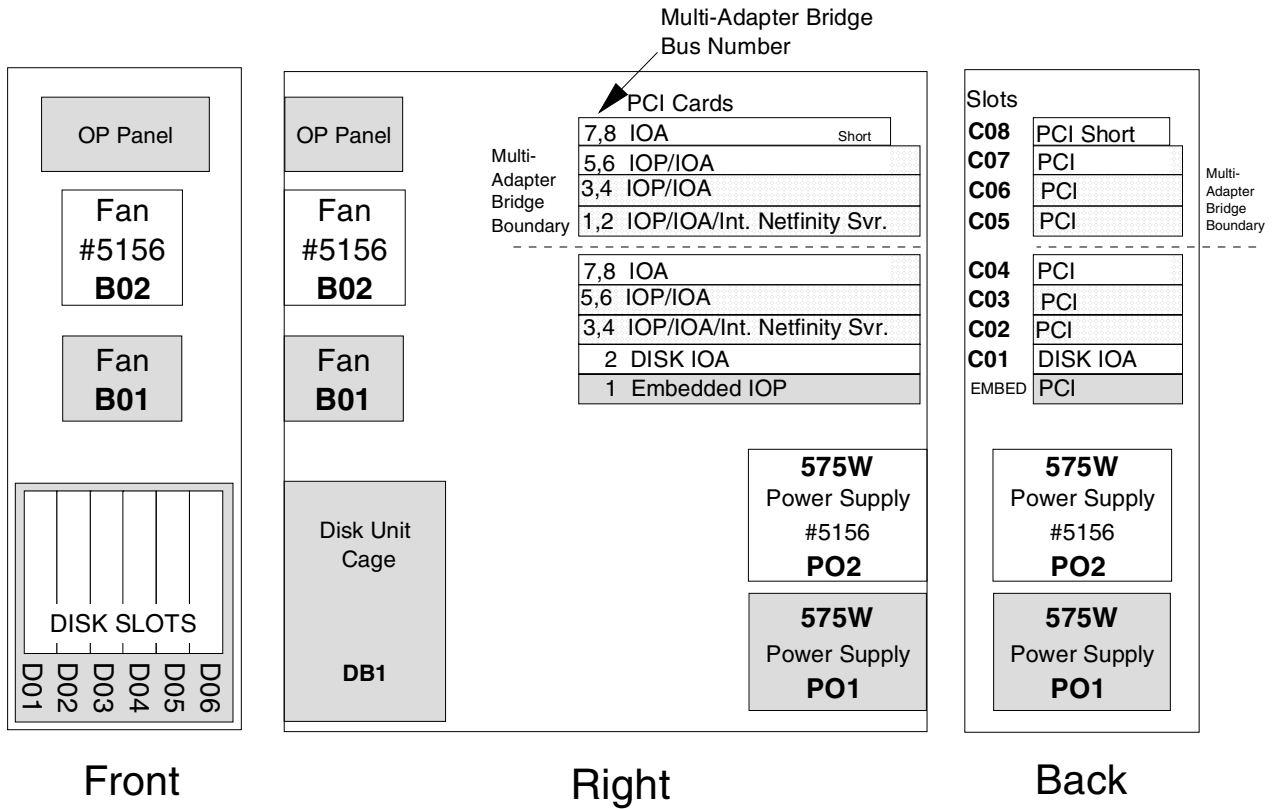
Front



Back

8xx Models

#5075 PCI Expansion Tower



Legend

Base Feature

Required Feature

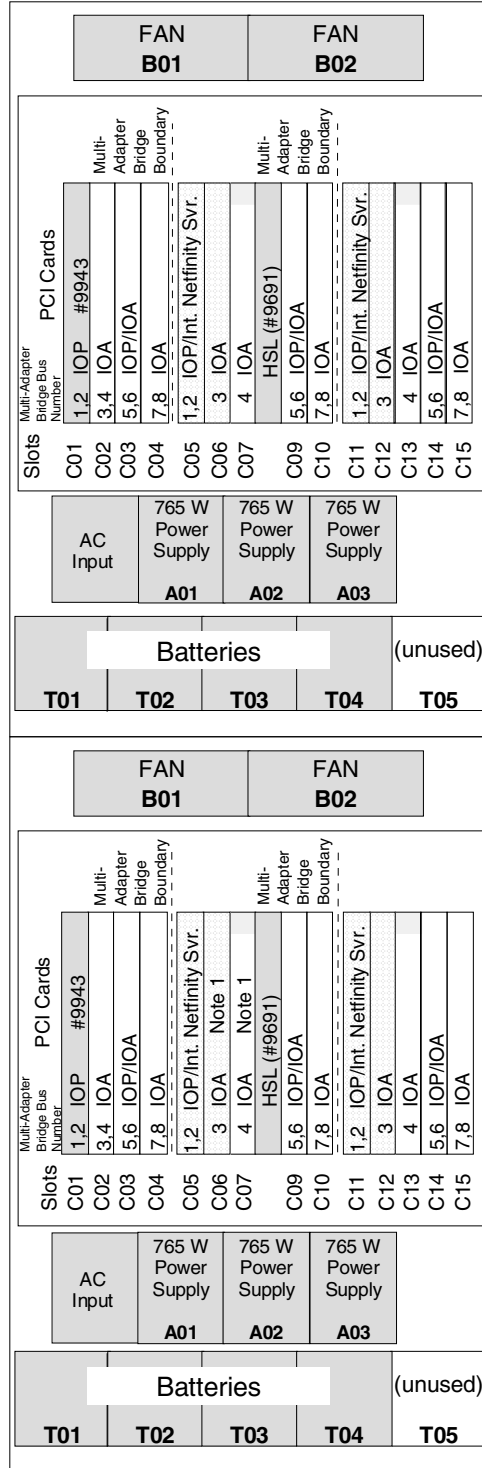
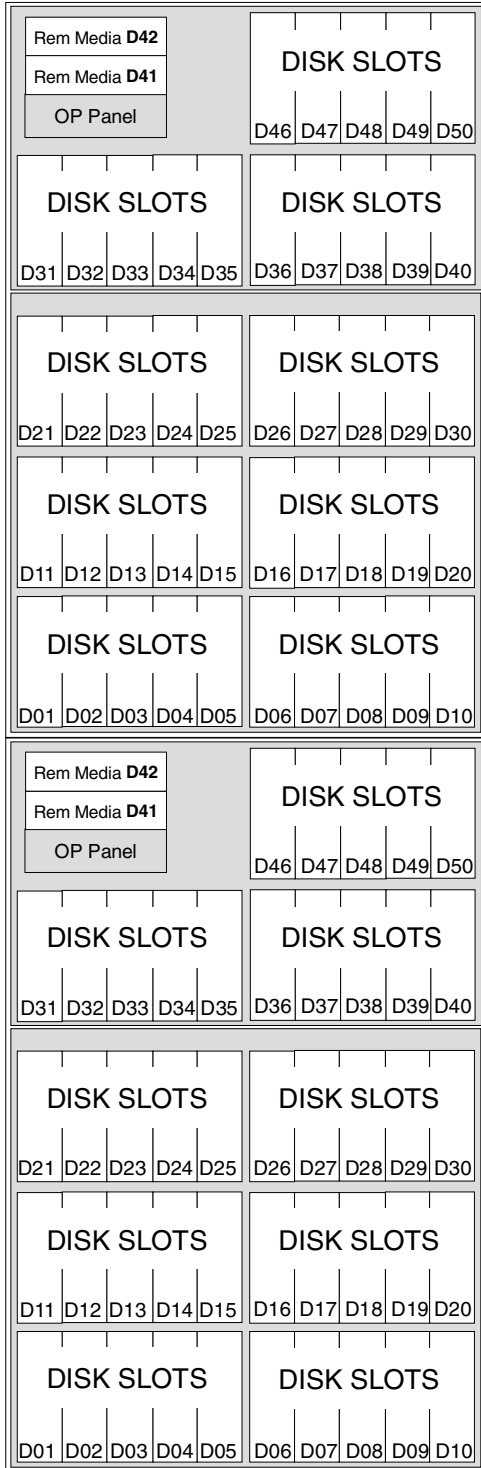
Unavailable if
Integrated Netfinity
Server is installed

Note 1: If C05 has an Integrated Netfinity Server, slot C06 is unavailable, and slot C07 is available only as a short slot.

Note 2: If C02 has an Integrated Netfinity Server, slot C03 is not available and slot C04 is available only as a short slot.

#5079 PCI Expansion Tower

Note: The total of number of disk bays is 2 x 45.



Legend

Base Feature

Required Feature

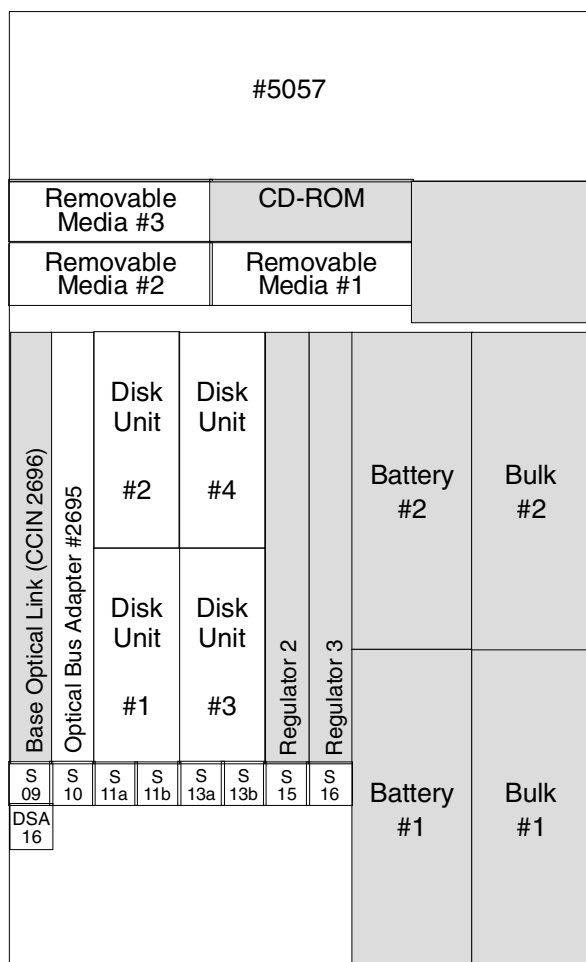
Unavailable if Integrated Netfinity Server is installed

Note 1: If C05 has an Integrated Netfinity Server, slot C06 is unavailable, and slot C07 is available only as a short slot.

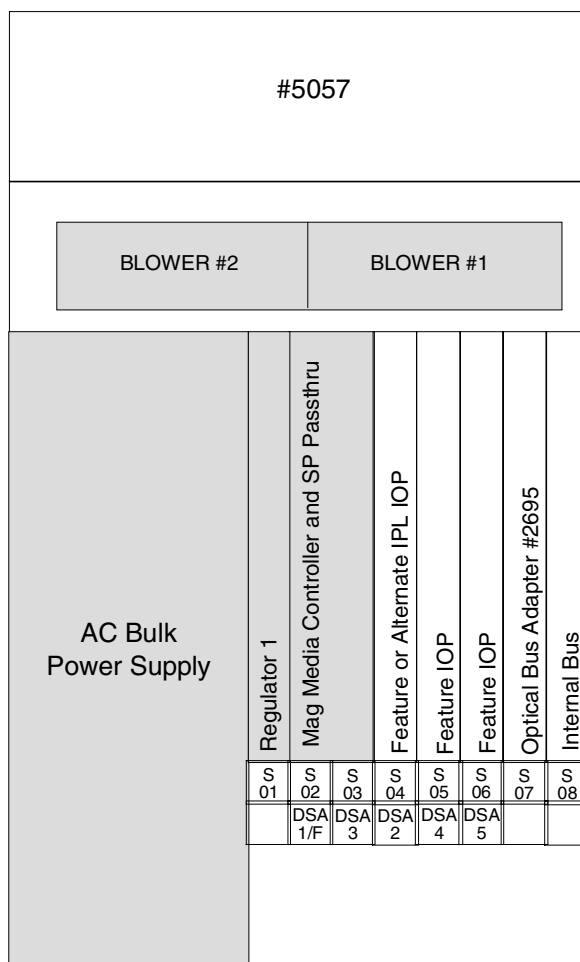
Note 2: If C11 has an Integrated Netfinity Server, slot C12 is not available, and slot C13 is available only as a short slot.

3.9 Migration Towers

#5077 Migration Tower II



Front



Back

Legend

Base Feature

Note: The #5033, #5034, and #5035 Migration Tower I units are not shown in this publication. The layout of the #5033 is equivalent to the Model 600 system unit without processor cards. The layout of the #5034 and #5035 is equivalent to the Model 720 system unit without processor cards. Refer to 8.4, “9406 Model 720 System Unit (for processor #2061)” on page 161, 8.5, “9406 Model 720 System Unit (for processors #2062, #2063, #2064)” on page 162, and Chapter 9, “9406 6xx Models” on page 211, for equivalent system drawings.

3.10 9406 Models 8xx

820 PROCESSORS		
#2395	Interactive Feature	370 CPW 1-Way Processor in Client/Server Environment. Required Minimum Memory 256 MB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. <ul style="list-style-type: none"> Includes eight DIMM memory positions (which plug directly onto the backplane - Direct Attach). Includes Base I/O Backplane and embedded base IOP (CCIN 284C) with Common Service Processor (CSP) (CCIN 282D). Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots.
	1521	Base 35 CPW in Interactive Environment. The #2395-1521 is represented by Processor Feature Code 23A1. Processor Group P10.
	1522	Optional 70 CPW in Interactive Environment. The #2395-1522 is represented by Processor Feature Code 23A2. Processor Group P20.
	1523	Optional 120 CPW in Interactive Environment. The #2395-1523 is represented by Processor Feature Code 23A3. Processor Group P20.
	1524	Optional 240 CPW in Interactive Environment. The #2395-1524 is represented by Processor Feature Code 23A4. Processor Group P20.
#2396	Interactive Feature	950 CPW 1-Way Processor in Client/Server Environment. Required Minimum Memory 256 MB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. <ul style="list-style-type: none"> Includes eight DIMM memory positions (which plug directly onto the backplane - Direct Attach). If more than eight DIMMs total are required, a #2884 Main Storage Expansion Card must be used and all DIMMs must then reside on the #2884. Includes Base I/O Backplane and embedded base IOP (CCIN 284C) with Common Service Processor (CSP) (CCIN 282D). Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots.
	1521	Base 35 CPW in Interactive Environment. The #2396-1521 is represented by Processor Feature Code 23A9. Processor Group P20.
	1522	Optional 70 CPW in Interactive Environment. The #2396-1522 is represented by Processor Feature Code 23AA. Processor Group P30.
	1523	Optional 120 CPW in Interactive Environment. The #2396-1523 is represented by Processor Feature Code 23AB. Processor Group P30.
	1524	Optional 240 CPW in Interactive Environment. The #2062-1524 is represented by Processor Feature Code 23AC. Processor Group P30.
	1525	Optional 560 CPW in Interactive Environment. The #2062-1525 is represented by Processor Feature Code 23AD. Processor Group P30.
#2397	Interactive Feature	2000 CPW 2-Way Processor in Client/Server Environment. Required Minimum Memory 256 MB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. <ul style="list-style-type: none"> Includes 16 DIMM memory positions with the base main storage expansion card (CCIN 2884). Includes Base I/O Backplane and embedded base IOP (CCIN 284C) with Common Service Processor (CSP) (CCIN 282D). Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots.
	1521	Base 35 CPW in Interactive Environment. The #2397-1521 is represented by Processor Feature Code 23B1. Processor Group P20.
	1522	Optional 70 CPW in Interactive Environment. The #2397-1522 is represented by Processor Feature Code 23B2 Processor Group P30.
	1523	Optional 120 CPW in Interactive Environment. The #2397-1523 is represented by Processor Feature Code 23B3. Processor Group P30.
	1524	Optional 240 CPW in Interactive Environment. The #2397-1524 is represented by Processor Feature Code 23B4. Processor Group P30.
	1525	Optional 560 CPW in Interactive Environment. The #2397-1525 is represented by Processor Feature Code 23B5. Processor Group P30.
	1526	Optional 1050 CPW in Interactive Environment. The #2397-1526 is represented by Processor Feature Code 23B6. Processor Group P30.

#2398	Interactive Feature	3200 CPW 4-Way Processor in Client/Server Environment. Required Minimum Memory 256 MB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. <ul style="list-style-type: none"> Includes 16 DIMM memory positions via the base main storage expansion card (CCIN 2884). Includes Base I/O Backplane and embedded base IOP (CCIN 284C) with Common Service Processor (CSP) (CCIN 282D). Provides support for the Service Processor, nine 32-bit and three 32- or 64-bit PCI slots.
	1521	Base 35 CPW in Interactive Environment. The #2398-1521 is represented by Processor Feature Code 23B8. Processor Group P30.
	1522	Optional 70 CPW in Interactive Environment. The #2398-1522 is represented by Processor Feature Code 23B9. Processor Group P40.
	1523	Optional 120 CPW in Interactive Environment. The #2398-1523 is represented by Processor Feature Code 23BA. Processor Group P40.
	1524	Optional 240 CPW in Interactive Environment. The #2398-1524 is represented by Processor Feature Code 23BB. Processor Group P40.
	1525	Optional 560 CPW in Interactive Environment. The #2398-1525 is represented by Processor Feature Code 23BC. Processor Group P40.
	1526	Optional 1050 CPW in Interactive Environment. The #2398-1526 is represented by Processor Feature Code 23BD. Processor Group P40.
	1527	Optional 2000 CPW in Interactive Environment. The #2398-1527 is represented by Processor Feature Code 23BE. Processor Group P40.
#2425	Dedicated Domino Processor	Dedicated Domino Processor 1-Way, 4250 Simple Mail Users, 2620 Mail and Calendaring Users. 100 CPW (Non-Domino Workload), 0 CPW (Interactive Environment). Required Minimum Memory 256 MB. <ul style="list-style-type: none"> Includes eight DIMM memory positions (which plug directly onto the processor—direct attach). Includes Base I/O backplane (CCIN 282D) and embedded base IOP (CCIN 284C). Includes Common Service Processor. 2425 is represented by Processor Feature Code 2425. Processor Group P05.
#2426	Dedicated Domino Processor	Dedicated Domino Processor 2-Way, 8000 Simple Mail Users, 4950 Mail and Calendaring Users. 200 CPW (Non-Domino Workload), 0 CPW (Interactive Environment). Required Minimum Memory 256 MB. <ul style="list-style-type: none"> Includes 16 DIMM memory positions via the base main storage expansion card (CCIN 2884). Includes Base I/O backplane (CCIN 282D) and embedded base IOP (CCIN 284C). Includes Common service Processor Includes internal flex cable for HSL enablement The #2426 is represented by Processor Feature Code 2426. Processor Group P10.
#2427	Dedicated Domino Processor	Dedicated Domino Processor 4-Way, 14400 Simple Mail Users, 8910 Mail and Calendaring Users. 300 CPW (Non-Domino Workload), 0 CPW (Interactive Environment). Required Minimum Memory 256 MB. <ul style="list-style-type: none"> Includes 16 DIMM memory positions via the base main storage expansion card (CCIN 2884). Includes Base I/O backplane (CCIN 282D) and embedded base IOP (CCIN 284C). Includes Common service Processor. The #2427 is represented by Processor Feature Code 2427. Processor Group P10.
830 PROCESSORS		
#2400	Interactive Feature	1850 CPW 2-Way Processor in Client/Server Environment. Required Minimum Memory 1 GB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. Base Features include: <ul style="list-style-type: none"> Main Storage Expansion Card (Slot M02) (CCIN 2881) #9732 Bus Expansion/Clock Card—Eight HSL Ports (CCIN 25AB) Specify with processor #2400 #9733 Bus Expansion/Clock Card—Eight HSL Ports (CCIN 25AD) Specify with processors #2402 and #2403 PCI and CSP Card (CCIN 28AA) Bus Adapter (CCIN 2681) Operator Panel (CCIN 247A) Processor Capacity Card (CCIN 2400) Processor 0 (CCIN 245C)
	1531	Base 70 CPW in Interactive Environment. The #2400-1531 is represented by Processor Feature Code 23C1. Processor Group P20.
	1532	Optional 120 CPW in Interactive Environment. The #2400-1532 is represented by Processor Feature Code 23C2. Processor Group P30.

	1533	Optional 240 CPW in Interactive Environment. The #2400-1533 is represented by Processor Feature Code 23C3. Processor Group P30.
	1534	Optional 560 CPW in Interactive Environment. The #2400-1534 is represented by Processor Feature Code 23C4. Processor Group P30.
	1535	Optional 1050 CPW in Interactive Environment. The #2400-1535 is represented by Processor Feature Code 23C5. Processor Group P30.
#2402	Interactive Feature	4200 CPW 4-Way Processor in Client/Server Environment. Required Minimum Memory 1 GB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. Base Features include: <ul style="list-style-type: none"> • Main Storage Expansion Card (Slot M02) (CCIN 2881) • #9732 Bus Expansion/Clock Card—Eight HSL Ports (CCIN 25AB) Specify with processor #2400 • #9733 Bus Expansion/Clock Card—Eight HSL Ports (CCIN 25AD) Specify with processors #2402 and #2403 • PCI and CSP Card (CCIN 28AA) • Bus Adapter (CCIN 2681) • Operator Panel (CCIN 247A) • Processor Capacity Card (CCIN 2402) • Processor 0 (CCIN 245D)
	1531	Base 70 CPW in Interactive Environment. The #2402-1531 is represented by Processor Feature Code 23D1. Processor Group P30.
	1532	Optional 120 CPW in Interactive Environment. The #2402-1532 is represented by Processor Feature Code 23D2. Processor Group P40.
	1533	Optional 240 CPW in Interactive Environment. The #2402-1533 is represented by Processor Feature Code 23D3. Processor Group P40.
	1534	Optional 560 CPW in Interactive Environment. The #2402-1534 is represented by Processor Feature Code 23D4. Processor Group P40.
	1535	Optional 1050 CPW in Interactive Environment. The #2402-1535 is represented by Processor Feature Code 23D5. Processor Group P40.
	1536	Optional 2000 CPW in Interactive Environment. The #2402-1536 is represented by Processor Feature Code 23D6. Processor Group P40.
#2403	Interactive Feature	7350 CPW 8-Way Processor in Client/Server Environment. Required Minimum Memory 1 GB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. Base Features include: <ul style="list-style-type: none"> • Main Storage Expansion Card (Slot M02) (CCIN 2881) • #9732 Bus Expansion/Clock Card—Eight HSL Ports (CCIN 25AB) Specify with processor #2400 • #9733 Bus Expansion/Clock Card—Eight HSL Ports (CCIN 25AD) Specify with processors #2402 and #2403 • PCI and CSP Card (CCIN 28AA) • Bus Adapter (CCIN 2681) • Operator Panel (CCIN 247A) • Processor Capacity Card (CCIN 2403) • Processor 0 (CCIN 245D) • Processor 1 (CCIN 245D)
	1531	Base 70 CPW in Interactive Environment. The #2403-1531 is represented by Processor Feature Code 23D8. Processor Group P40.
	1532	Optional 120 CPW in Interactive Environment. The #2403-1532 is represented by Processor Feature Code 23D9. Processor Group P50.
	1533	Optional 240 CPW in Interactive Environment. The #2403-1533 is represented by Processor Feature Code 23DA. Processor Group P50.
	1534	Optional 560 CPW in Interactive Environment. The #2403-1534 is represented by Processor Feature Code 23DB. Processor Group P50.
	1535	Optional 1050 CPW in Interactive Environment. The #2403-1535 is represented by Processor Feature Code 23DC. Processor Group P50.
	1536	Optional 2000 CPW in Interactive Environment. The #2403-1536 is represented by Processor Feature Code 23DD. Processor Group P50.
	1537	Optional 4550 CPW in Interactive Environment. The #2403-1536 is represented by Processor Feature Code 23DE. Processor Group P50.

840 PROCESSORS		
#2416	Interactive Features	7800/10000 CPW 8/12-Way POD Processor in Client/Server Environment. Required Minimum Memory 4GB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. The standard features include: <ul style="list-style-type: none"> • Clock Card (CCIN 25AA) • Clock Daughter Card (CCIN 25AF) • Terminator/Filler Card (CCIN 246C) (Two on the processor #2416) • PCI and CSP Card (CCIN 28AA) • Operator Panel (CCIN 247C) • Bus Adapter (CCIN 2691) • Processor Capacity Card (CCIN 2416) • Processor 0 (CCIN 245F) • Processor 1 (CCIN 245E)
	1540	Optional 120 CPW in Interactive Environment. The #2416-1540 is represented by Processor Feature Code 24C0. Processor Group P40.
	1541	Optional 240 CPW in Interactive Environment. The #2416-1541 is represented by Processor Feature Code 24C1. Processor Group P50.
	1542	Optional 560 CPW in Interactive Environment. The #2416-1542 is represented by Processor Feature Code 24C2. Processor Group P50.
	1543	Optional 1050 CPW in Interactive Environment. The #2416-1543 is represented by Processor Feature Code 24C3. Processor Group P50.
	1544	Optional 2000 CPW in Interactive Environment. The #2416-1544 is represented by Processor Feature Code 24C4. Processor Group P50.
	1545	Optional 4550 CPW in Interactive Environment. The #2416-1545 is represented by Processor Feature Code 24C5. Processor Group P50.
	1546	Optional 10000 CPW in Interactive Environment. The #2416-1546 is represented by Processor Feature Code 24C6 Processor Group P50. Restrictions: Cannot be fully utilized on 2416 unless all processors are activated.
#2417	Interactive Features	10000/13200 CPW 12/18-Way POD Processor in Client/Server Environment. Required Minimum Memory 4 GB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. The standard features include: <ul style="list-style-type: none"> • Clock Card (CCIN 25AA) • Clock Daughter Card (CCIN 25AF) • Terminator/Filler Card (CCIN 246C) (One on the processor #2417) • PCI and CSP Card (CCIN 28AA) • Operator Panel (CCIN 247C) • Bus Adapter (CCIN 2691) • Processor Capacity Card (CCIN 2417) • Processor 0 (CCIN 245F) • Processor 1 (CCIN 245E) • Processor 2 (CCIN 245E)
	1540	Optional 120 CPW in Interactive Environment. The #2416-1540 is represented by Processor Feature Code 24C8. Processor Group P40.
	1541	Optional 240 CPW in Interactive Environment. The #2416-1541 is represented by Processor Feature Code 24C9. Processor Group P50.
	1542	Optional 560 CPW in Interactive Environment. The #2416-1542 is represented by Processor Feature Code 24CA. Processor Group P50.
	1543	Optional 1050 CPW in Interactive Environment. The #2416-1543 is represented by Processor Feature Code 24CB. Processor Group P50.
	1544	Optional 2000 CPW in Interactive Environment. The #2416-1544 is represented by Processor Feature Code 24CC. Processor Group P50.
	1545	Optional 4550 CPW in Interactive Environment. The #2416-1545 is represented by Processor Feature Code 24CD. Processor Group P50.
	1546	Optional 10000 CPW in Interactive Environment. The #2416-1546 is represented by Processor Feature Code 24CE Processor Group P50.

#2418	Interactive Feature	10000 CPW12-Way Processor in Client/Server Environment. Required Minimum Memory 4GB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. Standard features include: <ul style="list-style-type: none"> • Clock Card (CCIN 25AA) • Clock Daughter Card (CCIN 25AF) • Terminator/Filler Card (CCIN 246C) (Two on the processor #2418) • PCI and CSP Card (CCIN 28AA) • Operator Panel (CCIN 247C) • Bus Adapter (CCIN 2691) • Processor Capacity Card (CCIN 2418) • Processor 0 (CCIN 245F) • Processor 1 (CCIN 245E)
	1540	Optional 120 CPW in Interactive Environment. The #2418-1540 is represented by Processor Feature Code 23E8. Processor Group P40.
	1541	Optional 240 CPW in Interactive Environment. The #2418-1541 is represented by Processor Feature Code 23E9. Processor Group P50.
	1542	Optional 560 CPW in Interactive Environment. The #2418-1542 is represented by Processor Feature Code 23EA. Processor Group P50.
	1543	Optional 1050 CPW in Interactive Environment. The #2418-1543 is represented by Processor Feature Code 23EB. Processor Group P50.
	1544	Optional 2000 CPW in Interactive Environment. The #2418-1544 is represented by Processor Feature Code 23EC. Processor Group P50.
	1545	Optional 4550 CPW in Interactive Environment. The #2418-1545 is represented by Processor Feature Code 23ED. Processor Group P50.
	1546	Optional 10000 CPW in Interactive Environment. The #2418-1546 is represented by Processor Feature Code 23EE. Processor Group P50.
#2419	Interactive Features	13200/16500 CPW 18/24-Way POD Processor in Client/Server Environment. Required Minimum Memory 4 GB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. The standard features include: <ul style="list-style-type: none"> • Clock Card (CCIN 25AA) • Clock Daughter Card (CCIN 25AF) • PCI and CSP Card (CCIN 28AA) • Operator Panel (CCIN 247C) • Bus Adapter (CCIN 2691) • Processor Capacity Card (CCIN 2419) • Processor 0 (CCIN 245F) • Processor 1 (CCIN 245E) • Processor 2 (CCIN 245E) • Processor 3 (CCIN 245E)
	1540	Optional 120 CPW in Interactive Environment. The #2418-1540 is represented by Processor Feature Code 24D0. Processor Group P40.
	1541	Optional 240 CPW in Interactive Environment. The #2418-1541 is represented by Processor Feature Code 24D1. Processor Group P50.
	1542	Optional 560 CPW in Interactive Environment. The #2418-1542 is represented by Processor Feature Code 24D2. Processor Group P50.
	1543	Optional 1050 CPW in Interactive Environment. The #2418-1543 is represented by Processor Feature Code 24D3. Processor Group P50.
	1544	Optional 2000 CPW in Interactive Environment. The #2418-1544 is represented by Processor Feature Code 24D4. Processor Group P50.
	1545	Optional 4550 CPW in Interactive Environment. The #2418-1545 is represented by Processor Feature Code 24D5. Processor Group P50.
	1546	Optional 10000 CPW in Interactive Environment. The #2418-1546 is represented by Processor Feature Code 24D6. Processor Group P50.
	1547	Optional 16500 CPW in Interactive Environment. The #2420-1547 is represented by Processor Feature Code 24D7. Processor Group P50. Restrictions: Cannot be fully utilized on #2419 unless all processors are activated.

#2420	Interactive Feature	16500 CPW 24-Way Processor in Client/Server Environment. Required Minimum Memory 4 GB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. The standard features include: <ul style="list-style-type: none"> • Clock Card (CCIN 25AA) • Clock Daughter Card (CCIN 25AF) • PCI and CSP Card (CCIN 28AA) • Operator Panel (CCIN 247C) • Bus Adapter (CCIN 2691) • Processor Capacity Card (CCIN 2420) • Processor 0 (CCIN 245F) • Processor 1 (CCIN 245E) • Processor 2 (CCIN 245E) • Processor 3 (CCIN 245E)
	1540	Optional 120 CPW in Interactive Environment. The #2420-1540 is represented by Processor Feature Code 23F8. Processor Group P40.
	1541	Optional 240 CPW in Interactive Environment. The #2420-1541 is represented by Processor Feature Code 23F9. Processor Group P50.
	1542	Optional 560 CPW in Interactive Environment. The #2420-1542 is represented by Processor Feature Code 23FA. Processor Group P50.
	1543	Optional 1050 CPW in Interactive Environment. The #2420-1543 is represented by Processor Feature Code 23FB. Processor Group P50.
	1544	Optional 2000 CPW in Interactive Environment. The #2420-1544 is represented by Processor Feature Code 23FC. Processor Group P50.
	1545	Optional 4550 CPW in Interactive Environment. The #2420-1545 is represented by Processor Feature Code 23FD. Processor Group P50.
	1546	Optional 10000 CPW in Interactive Environment. The #2420-1546 is represented by Processor Feature Code 23FE. Processor Group P50.
	1547	Optional 16500 CPW in Interactive Environment. The #2420-1547 is represented by Processor Feature Code 23FF. Processor Group P50.

POWER AND PACKAGING

#0382	Remote Control Panel Cable If you are connecting the remote control panel cable to the iSeries servers 270, 820, 830, or 840, you need an available parallel port (LPT) instead of a COM port on your PC. The parallel port must be configured to use Enhanced Parallel Port (EPP) support which may require a change in the PC's Basic Input/Output Services (BIOS). Check with your PC manufacturer for any assistance, if needed. Some PCs may not support this function due to BIOS or hardware incompatibilities. This is a Customer Install Feature (CIF).
#0550	830 Rack The #0550 is a 1.8 m rack enclosure for the Model 830 system. When the 830 is ordered with the #0550, it must contain one #5101 30 Disk Expansion Unit. The 830 installs in the bottom of the rack and ten EIA units remain as space available at the top of the rack. The 1.8 m rack does not have a power distribution unit. The 830 CEC requires standard power cord feature. This is a plant install feature only.
#2730	The #2730 Programmable Regulator is required if the #3196 8 GB Main Storage Card is installed in the Model 840. Two are required.

#5033	<p>Migration Tower I</p> <p>The #5033 is a converted 600/S10 system tower used for migration of PCI cards, disk units, and removable media devices. See 600/S10 sections for supported cards and devices. Additional features may be ordered to use vacant card/device slots in this tower.</p> <p>The #5033 can only attach to Models 820 and 830.</p> <p>The #5033 is mutually exclusive with #5034, #5035, and #5077.</p> <p>Select two of the following (any combination) HSL cable features for this tower:</p> <ul style="list-style-type: none"> #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable #1462 - 15m Copper HSL Cable <p>Select one of the following SPCN cables:</p> <ul style="list-style-type: none"> #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #1466 - 30m SPCN Cable <p>One JTAG-E cable (6m) is included with the #5033.</p> <p>One #14xx power cord must be specified (geography dependent).</p> <p>Maximum: One #5033 on a Model 820 or 830.</p>
#5034	<p>Migration Tower I</p> <p>The #5034 is a converted 620/S20/720 system tower with 10 possible disk positions and any #9364/#5064 expansion unit. It is used for migration of PCI and SPD cards, disk units, and removable media devices along with any attached PCI/SPD towers. See 620/S20/720 sections for supported cards and devices. Additional features may be ordered to utilize vacant card/device slots in this tower.</p> <p>The #5034 can only attach to Models 820 and 830.</p> <p>The #5034 is mutually exclusive with #5033, #5035, and #5077.</p> <p>Select two of the following (any combination) HSL cable features for this tower:</p> <ul style="list-style-type: none"> #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable #1462 - 15m Copper HSL Cable <p>Select one of the following SPCN cables:</p> <ul style="list-style-type: none"> #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #1466 - 30m SPCN Cable <p>One JTAG-E cable (6m) is included with the #5034.</p> <p>One #14xx power cord must be specified (geography dependent).</p> <p>Maximum: One #5034 on a Model 820 or 830.</p>
#5035	<p>Migration Tower I</p> <p>#5035 is a converted 620/S20/720 system tower with fifteen possible disk positions and any #9364/#5064 expansion unit. It is used for migration of PCI and SPD cards, disk units, and removable media devices along with any attached PCI/SPD towers. See the 620/S20/720 sections for supported cards and devices. Additional features may be ordered to use vacant card/device slots in this tower.</p> <p>The #5034 can only attach to Models 820 and 830.</p> <p>The #5035 is mutually exclusive with #5033, #5034, and #5077.</p> <p>Select two of the following (any combination) HSL cable features for this tower:</p> <ul style="list-style-type: none"> #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable #1462 - 15m Copper HSL Cable <p>Select one of the following SPCN cables:</p> <ul style="list-style-type: none"> #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #1466 - 30m SPCN Cable <p>One JTAG-E cable (6m) is included with the #5035.</p> <p>One #14xx power cord must be specified (geography dependent).</p> <p>Maximum: One #5035 on a Model 820 or 830.</p> <p>The #5035 is mutually exclusive with #5033, #5034, and #5077.</p>
#5057	<p>Storage Expansion Unit (Ultra SCSI)</p> <p>The #5057 provides space for up to sixteen disk units on the #5077 Migration Tower II. The #5057 is shipped on all new order #5077s when migrating from a Model 640/S30/730 which do not have a #5055. When migrating from a Model 640, S30, and 730, which have a #5055, the #5055 is converted to a #5057.</p>

#5074	<p>PCI Expansion Tower</p> <p>The #5074 is attached to Models 820, 830, and 840 for adding up to 45 disk units (fifteen are “base”, 30 additional with #5101), up to eleven PCI IOAs and up to two removable media units. The #5074 includes #9691 bus adapter to provide the HSL interface to the system, a #9943 Base PCI IOP, space for two removable media devices, one battery backup, and redundant/hot swap power supplies.</p> <p>The #5074 is capable of controlling Ultra2 SCSI disk units.</p> <p>Select two (any combination) of the following HSL cables for the first tower on an HSL loop. For additional towers on an HSL loop, select one HSL cable per tower:</p> <ul style="list-style-type: none"> #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable #1462 - 15m Copper HSL Cable <p>The #1462 is not allowed to attach the #5074 directly to system port A1 on the Model 820.</p> <p>When a #5074 is present, one #1460 or #1461 must be selected.</p> <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #1466 - 30m SPCN Cable <p>One #14xx power cord must be specified (geography dependent).</p> <p>Maximum: Five on the Model 820. Thirteen on the 830 model. Twenty three on the 840 models.</p> <p>This is a Customer Install Feature (CIF).</p>
#5075	<p>PCI Expansion Tower</p> <p>Model 820 only.</p> <p>The #5075 is attached to Models 820 for adding up to six disk units and up to seven PCI IOAs. The #5075 includes a 32 MB PCI IOP embedded in the tower. The seven PCI IOAs are supported (driven) by an embedded 32 MB PCI IOP and by feature #2843 PCI IOPs, feature #2790 Integrated Netfinity Servers or feature #2791 Integrated xSeries Server.</p> <p>The #5156 may be added to provide a redundant power supply and cooling fan.</p> <p>Select two (any combination) of the following HSL cables for the first tower on the Model 820. For additional towers, select one HSL cable per tower:</p> <ul style="list-style-type: none"> #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable #1462 - 15m Copper HSL Cable <p>The #1462 is not allowed to attach the #5075 directly to system port A1 on the Model 820.</p> <p>When a #5075 is present, one #1460 or #1461 must be selected.</p> <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #1466 - 30m SPCN Cable <p>The #5075 is capable of controlling Ultra2 SCSI disk units.</p> <p>One #14xx power cord must be specified (geography dependent).</p> <p>Maximum: Five.</p> <p>This is a Customer Install Feature (CIF).</p>

#5077	<p>Migration Tower II</p> <p>The #5077 is a feature I/O tower that supports SPD I/O cards and attaches SPD Expansion Towers and #5065/#5066 PCI Expansion Towers. The #5077 is supported on Models 830 and 840.</p> <p>When upgrading from a Model 640, S30, or 730 to a Model 830 or 840, the #5077 is a manufactured unit, and is shipped without a “base” CD-ROM and without a base optical link card (CCIN 2696). The CD-ROM and optical link cards are migrated. If Upgrading from a Model 640, S30 or 730 without a #5055 8 Disk Unit Storage Expansion Unit installed, by default, the #5077 is shipped with a #5057 16 Disk Unit Storage Expansion Unit. The #5057 may be removed from the order. If Upgrading from a Model 640, S30, or 730 with #5055 installed, a #5055 to #5057 conversion is performed.</p> <p>When upgrading from a Model 650, S40, or 740, the #9251 Base I/O Tower on these models is converted to the #5077. When upgrading from a Model 820 or 830 with #503X Migration Tower I, which has SPD cards or SPD towers attached, the #5077 is a manufactured unit and is shipped with a “base” CD-ROM and with a base optical link card, (CCIN 2696). The #5077 may also be ordered to support clustering on the Models 830, 840. In this case, the #5077 is shipped as a manufactured unit shipped with a “base” CD-ROM and with a base optical link card (CCIN 2696). See the 640, 650, S30, S40, 730, and 740 sections for supported cards and devices.</p> <p>One or two feature #2695 Optical Bus Adapters may be ordered for the #5077. Select one of the following HSL cables if the #5077 has just the base optical link card installed. Select one or two (any combination) of the following HSL cables if the #5077 has one or two #2695 Optical Bus Adapters installed:</p> <ul style="list-style-type: none"> #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable #1462 - 15m Copper HSL Cable <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #1466 - 30m SPCN Cable <p>One JTAG-E cable (6m) is included with the #5077.</p> <p>One #14xx power cord must be specified (geography dependent).</p> <p>Maximum: One #5077 on Models 830 and 840.</p> <p>The #5077 is mutually exclusive with #5033, #5034, and #5035.</p>
#5079	<p>1.8m I/O Tower</p> <p>The #5079 is attached to Models 820, 830, and 840 for adding up to 90 disk units, up to 22 PCI IOAs and up to four removable media units. The #5079 includes two #9691 bus adapter to provide the HSL interface to the system. The #5079 is essentially two #5074 PCI Expansion Towers, stacked in a single 1.8m tower.</p> <p>Note: Each ordered #5079 counts as two #5074s toward the system model maximums.</p> <p>The #5079 is capable of controlling Ultra2 SCSI disk units.</p> <p>Select two, three, or four (any combination) of the following HSL cables for each tower:</p> <ul style="list-style-type: none"> #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable #1462 - 15m Copper HSL Cable <p>The #1462 is not allowed to attach the #5079 directly to system port A1 on the model 820.</p> <p>When a #5079 is present, one #1460 or #1461 must be selected.</p> <p>Select two of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #1466 - 30m SPCN Cable <p>Two #14xx power cords must be specified (geography dependent).</p> <p>Maximum towers: Two on the Model 820. Six on the Model 830. Eleven on the Model 840.</p> <p>Note: Each 5079 counts as two towers.</p> <p>This is a Customer Install Feature (CIF).</p>
#5101	<p>30 Disk Expansion</p> <p>The #5101 is a disk unit expansion enclosure feature for the #5074 Expansion Tower, the #9074 Base I/O Enclosure and the #9074/#9079 Base I/O Tower. The #5101 includes two fifteen disk unit enclosures, one 765 watt power supply, backplanes and cables. One #2748 PCI RAID Disk Unit Controller is required to support the fifteen disk units in each of the two disk unit enclosures included with #5101.</p>
#5150	<p>Battery Backup (external)</p> <p>Models 840 and SB3 only.</p> <p>The #5150 is an external battery backup that when used in conjunction with the internal battery backup is capable of extending the battery backup time.</p>

#5155	Redundant Power and Cooling Model 820 only. The #5155 adds an additional 575 watt power supply for redundancy and additional cooling fans. Prerequisite: #5157 Feature Power Supply This is a Customer Install Feature (CIF).
#5156	Redundant Power and Cooling Model 820 only. The #5156 adds an additional 575 watt power supply for redundancy and additional cooling fan to the #5075 expansion tower. This is a Customer Install Feature (CIF).
#5157	Feature Power Supply Model 820 only. The #5157 adds an additional 575 watt power supply to the Model 820. The #5157 is required when a #7127 Disk Unit Cage is added to a Model 820 and is required when a #5155 Redundant Power and Cooling feature is added to a Model 820. For Model 820 processors #2397, #2398, #2426 and #2427, a #5157 Feature Power Supply must be present or ordered when a feature #2884 Main Storage Expansion is added or ordered. This is a Customer Install Feature (CIF).
#7127	DASD Expansion Unit The #7127 is a concurrent maintenance DASD six position expansion feature, which may be ordered to support an additional six disk units (for a total of twelve) in the Model 820 system unit. Prerequisite: One #2763 or #4748 disk unit controller in the 820 system tower and the #5157 Feature Power Supply. This is a Customer Install Feature (CIF).
#8079	Optional Base I/O Rack The #8079 is a optional base I/O rack shipped on the Model 840 instead of the #9079 Base I/O Tower. The #8079 supports up to 90 disk units, up to 22 PCI IOAs, and up to four removable media units. A #8079 is a #9079 Base I/O tower with a #5074 (#0574 specify code) tower package in a rack. Select three or four (any combination) of the following HSL cables: #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable #1462 - 15m Copper HSL Cable The #1462 15m Copper HSL cable can be used on any HSL port of the Model 840. If a #5077 migration tower is included in the configuration then four HSL cables have to be ordered for the #8079 Optional Base I/O Rack. Select two of the following SPCN cables per tower: #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #1466 - 30m SPCN Cable Specify two line cord for the #8079 Optional Base I/O Rack. Some countries offer fewer choices of line cords and some countries are shipped a default line cord type. The #8079 has a #9943 Base PCI IOP and a #9748 PCI RAID Disk Unit Controller. It has PCI slots for up 22 PCI IOAs, space for up to 90 disk units (#5101 is installed in both the bottom and top unit), space for four removable media devices, two battery backup, and redundant/hot swap power supplies. The #8079 is capable of controlling Ultra2 SCSI disk units. The 22 PCI IOAs are supported (driven) by two base #9943 PCI IOP and feature #2843 PCI IOPs, feature #2790 Integrated Netfinity Servers, or feature #2791 Integrated xSeries Server. The #8079 also supports up to four removable media devices (internal tape or CD-ROM). These removable media devices are supported by one #9748 and a feature #4748 PCI RAID Disk Unit Controller. If the top enclosure is to be attached to a different system than initially ordered, the #0574 specify code has to RPO removed from the initially ordered machine and added to the target machine.
#9057	If Upgrading from a model 640, S30 or 730 without a #5055 8 Disk Unit Storage Expansion Unit installed, by default the #5077 is shipped with a #9057 16 Disk Unit Storage Expansion Unit. (The #9057 may be removed from the order). If upgrading from a model 640, S30, or 730 with #5055 installed, a #5055 to #9057 conversion is performed.

#9074	<p>Base I/O Tower</p> <p>The #9074 is the “base” I/O tower shipped on Models 830 and SB3. The #9074 supports up to 45 disk units, 15 are “base”, 30 additional with #5101 up to eleven PCI IOAs, up to two removable media units, one battery backup and redundant/hot swap power supplies. The #9074 has a #9943 Base PCI IOP and a #9748 PCI RAID Disk Unit Controller. The eleven PCI IOAs are supported (driven) by the base #9943 PCI IOP and by feature #2843 PCI IOPs. The #2790 Integrated Netfinity Servers or the #2791 Integrated xSeries Server can also support selected LAN cards.</p> <p>Select one of the following HSL cables:</p> <ul style="list-style-type: none"> #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable #1462 - 15m Copper HSL Cable <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #1466 - 30m SPCN Cable <p>One #14xx power cord must be specified (geography dependent).</p> <p>The #9074 is capable of controlling Ultra2 SCSI disk units.</p> <p>The two removable media devices (internal tape or CD-ROM) are supported by the #9748.</p>
#9079	<p>Base I/O Tower</p> <p>The #9079 is the “base” I/O tower shipped on Models 840 and SB3. The #9079 supports up to 45 disk units, 15 are “base”, 30 additional with #5101 up to eleven PCI IOAs, up to two removable media units, one battery backup and redundant/hot swap power supplies. The #9079 has a #9943 Base PCI IOP and a #9748 PCI RAID Disk Unit Controller. The eleven PCI IOAs are supported (driven) by the base #9943 PCI IOP and by feature #2843 PCI IOPs. The #2790 Integrated Netfinity Servers or the #2791 Integrated xSeries Server can also support selected LAN cards.</p> <p>Select two (any combination) of the following HSL cables:</p> <ul style="list-style-type: none"> #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable #1462 - 15m Copper HSL Cable <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #1466 - 30m SPCN Cable <p>One #14xx power cord must be specified (geography dependent).</p> <p>The #9079 is capable of controlling Ultra2 SCSI disk units.</p> <p>The two removable media devices (internal tape or CD-ROM) are supported by the #9748.</p>
#9732	<p>Bus Expansion—8 HSL Ports</p> <p>The #9732 is a bus expansion card which installs in the system unit of the Model 830. The #9732 has eight HSL ports. Maximum: One.</p> <p>Only supported for Processor #2400.</p>
#9733	<p>Bus Expansion—8 HSL Ports</p> <p>The #9733 is a bus expansion card which installs in the system unit of the Model 830. The #9732 has eight HSL ports. Maximum: One.</p> <p>Only supported for Processors #2402 and #2403.</p>
#9737	<p>Bus Expansion—16 HSL Ports</p> <p>The #9737 is a bus expansion card which installs in the system unit of the Model 840 processor. The #9737 has 16 HSL ports. Maximum: One.</p>
MAIN STORAGE	
Base	There is no base memory on 8xx models.

Model 820 Main Memory rules	<p>All main storage cards must be added in <i>pairs</i> when directly attached to the processor or <i>quads</i> when attached to the main storage riser (#2884). The pair or quad set must be of the same feature code. There are eight slots available in the base system for main storage cards that plug directly on to the processor (direct attach) and do not require a Main Storage Expansion Card.</p> <p>For Processors #2396/#2425, when more than eight total cards are required, a Main Storage Expansion Riser Card (#2884) must be ordered as a separate priced feature and ALL memory cards must plug into the #2884 Memory riser card. When #2884 is used, direct attach of memory cards to the processor is not allowed. For processors #2397, #2426, #2398, and #2427, a #2884 Main Storage Expansion Riser Card is included in the base system and does not need to be ordered. Processors (#2396, #2425, #2397, #2398, #2426, and #2427) using the #2884 Memory Expansion Feature must install memory cards, in sets of four (quads). A single pair of cards is allowed on the initial order if they are the only two cards on the system. Any memory cards added beyond the initial pair must be placed in quads and the initial DIMM pair must also be completed to a quad. There are 16 slots available in the system using #2884 Main Storage Expansion Riser Card for placement of main storage. Note that #3006 can not be mixed with #3005 for pairing or quading.</p> <p>See the tower diagrams for details of memory placement.</p>
Model 830 and 840 Memory rules	<p>All main storage cards must be added in sets of eight on the 830 (octals) and sets of four (quads) on the 840. All memory sets must be of the same feature code.</p> <p>There are a total of 64 slots on the 830, 32 in base and an additional 32 when the priced feature #2881 Main Storage Expansion) is installed.</p> <p>There are a total of 16 slots available on the 840.</p> <p>See the tower diagrams for details of memory placement.</p>
#2881	<p>Main Storage Expansion Model 830 only. Provides an additional 32 slots. Included as base on the #2403 processor. Maximum: One on processors #2403/#2402.</p>
#2884	<p>Main Storage Expansion Riser Card Model 820 only. The #2884 mounts additional main storage cards. It contains 16 sockets for placement of 128 MB, 256 MB, or 512 MB cards. For placement, an initial pair of memory cards is allowed (in Slot A and Slot B) without quads. Before any further memory upgrade, this pair must be completed to a quad. After that, all cards must be plugged in quads starting from the outer four corners going toward the center (A, B, C, D, then E, F, G, H, etc.). Use of the same feature code number within a quad is required. See the tower diagrams for details of memory placement. Mixing of quad "groups" on the same riser card is also allowed. Maximum: One on the #2396/#2425 processors. Two on the #2397/#2398/#2426/#2427 processors (one shipped as "base"). <i>Not supported</i> on the #2395 processor. For Model 820 processors #2397, #2398, #2426 and #2427, a #5157 Feature Power Supply must be present or ordered when a feature #2884 Main Storage Expansion is added or ordered. This is a Customer Install Feature (CIF).</p>
#3000	<p>128 MB Main Storage DIMM The #3000 represents the base memory for Models 620, S20, and 720 migrated to the 820 and 830. No associated feature number on source system. Supported for migration only. Plugs directly into the CPU or #2884. Supported in quads with #3002 on the Model 820. Supported in octals with #3062 on the Model 830. Reports as CCIN 3002. See "Model 820 Main Memory rules" and "Model 830 and 840 Memory rules" . Maximum: Two</p>
#3002	<p>128 MB Main Storage DIMM Model 820 only. 64 Mb technology. See the Model 820 Main Memory Rules. Maximum: Eight (physically) on the #2395 processor; sixteen DIMMS on the #2396 and #2425 processors; thirty-two on #2397, #2426, #2398, and #2427. This is a Customer Install Feature (CIF).</p>

#3004	256 MB Main Storage DIMM Model 820 only. 128 Mb technology. Plugs directly into the CPU or #2884. See the Model 820 Main Memory Rules. Maximum: Eight (physically) on the #2395 processor; sixteen DIMMS on the #2396 and #2425 processors; thirty-two on #2397, #2426, #2398, and #2427. This is a Customer Install Feature (CIF).
#3005	512 MB Main Storage DIMM Model 820 only. 128 Mb technology Plugs directly into the CPU or #2884. See the Model 820 Main Memory Rules. Maximum: Eight (physically) on the #2395 processor; sixteen DIMMS on the #2396 and #2425 processors; thirty-two on #2397, #2426, #2398, and #2427. This is a Customer Install Feature (CIF). #3006 can not be mixed with #3005 for pairing or quading.
#3006	512 MB Main Storage DIMM Model 820 only. 256 Mb technology Plugs directly into the CPU or #2884. See the Model 820 Main Memory Rules. Maximum: Eight (physically) on the #2395 processor; sixteen DIMMS on the #2396 and #2425 processors; thirty-two on #2397, #2426, #2398, and #2427. This is a Customer Install Feature (CIF). #3006 can not be mixed with #3005 for pairing or quading.
#3062	128 MB Main Storage DIMM Model 830 only. 64 Mb technology. See the Model 830/840 Main Memory Rules. Maximum: 64.
#3064	256 MB Main Storage DIMM Model 830 only. 128 Mb technology. See the Model 830/840 Main Memory Rules. Maximum: 64.
#3065	512 MB Main Storage DIMM Model 830 only. 128 Mb technology. See the Model 830/840 Main Memory Rules. Maximum: 64.
#3066	512 MB Main Storage DIMM Model 830 only. 256 Mb technology. See the Model 830/840 Main Memory Rules. Replaces the #3065 512 MB Main Storage DIMM. Maximum: 64.
#3195	4096 MB Main Storage Card Model 840 only. 64 Mb technology. See the Model 830/840 Main Memory Rules. Maximum: 16.
#3196	8192 MB Main Storage Card Model 840 only. 256 Mb technology. See the Model 830/840 Main Memory Rules. May be selected only to achieve 81920 MB and 98304 MB main storage increments. Prerequisite: #2730 Programmable regulator. Maximum: 8.
#3197	1024 MB Main Storage Card Model 840 only. 64 Mb technology. See the Model 830/840 Main Memory Rules. Maximum: 16.
#3198	2048 MB Main Storage Card Model 840 only. 64 Mb technology. See the Model 830/840 Main Memory Rules. Maximum: 16.

#3612	1024 MB Main Storage Card Model 840 only. 256 Mb technology. See the Model 830/840 Main Memory Rules. Replaces #3197 1024 MB Main Storage Card. Maximum: 16.
#3613	2048 MB Main Storage Card Model 840 only. 256 Mb technology. See the Model 830/840 Main Memory Rules. Replaces #3198 2048 MB Main Storage Card. Maximum: 16.
#3614	4096 MB Main Storage Card Model 840 only. 256 Mb technology. See the Model 830/840 Main Memory Rules. Replaces #3195 4096 MB Main Storage Card. Maximum: 16.
PCI IOP CONTROLLERS	
Embedded IOP	Embedded 32MB BASE PCI IOP (CCIN 284C) The embedded IOP is standard on every System 820 system tower and the #5075 expansion tower. This IOP is embedded and therefore does not require a PCI card slot. Provides support for maximum of up to four IOAs, including the SCSI IOA #9767 Base PCI Disk Unit Controller, the #9771 base 2-line WAN with modem and either the #5540 System Console on twinax or the #5544 System Console on Operations Console. See #2843 for list of other cards supported.
#9943 Base IOP	Base IOP The #9943 (CCIN 2843) is included as the base IOP for Models 830 and 840 and #5074 and #5079 towers. The #5079 includes two base IOPs. See #2843 for details and the cards that are supported.
#2790 or #2791	Integrated Netfinity Server or Integrated xSeries Server The #2790 Integrated Netfinity Server contains a 700MHz processor and the #2791 contains a 850MHz processor. Both processors contain four main storage slots. The #2790/#2791 is supported in the system tower of Models 820, 830, 840, SB2 and SB3, in the #5074 PCI Expansion Tower, in the #5079 1.8m I/O Tower and in the #5075 PCI Expansion Tower when it is attached to the Model 820. Each main storage slot can contain either a 128 MB main storage card, a 256 MB main storage card or a 1024 MB main storage card providing a total main storage capacity ranging from 128MB to 4096 MB (4 GB). When the maximum memory is installed, only 3712 MB is addressable. At least one main storage card is required. The feature numbers of the main storage cards are as follows: #2795 - 128 MB Netfinity IOP Memory #2796 - 256 MB Netfinity IOP Memory #2797 - 1 GB Netfinity IOP Memory The #2790/#2791 can support PCI 100/16/4 Mbps Token Ring IOAs or a PCI 100/10 Mbps Ethernet IOAs in any combination. At least one LAN IOA is required. The features for the LAN IOAs are as follows: #4838 PCI 100/10 Mbps Ethernet IOA #2744 PCI 100 Mbps Token Ring IOA When a #2790/#2791 is on the order, if #4838 is selected, specify code #0224 is required for each #4838 selected to run on the #2790/#2791. If the #2744 is selected, specify code #0223 is required for each #2744 selected to run on the #2790/#2791. Up to three IOA LAN features can be supported by the #2790/#2791, depending on which PCI card position the #2790/#2791 is placed. The #2790/#2791 does not require a #2843 or #9943, but placement is limited to specific slots within the various system units and expansion towers. Pre-requisite: The #2790/#2791 requires three PCI card slots on the system/expansion tower backplane; two slots are consumed by the #2790/#2791 and the third slot is reduced to a short card slot (which is used by the first LAN IOA card). The #2790/#2791 supports only the Window NT and Windows 2000 operating systems, the following points apply: #0325 (IPCS Extension Cable for Windows) default (but may be removed). #1700 (IPCS Keyboard/Mouse for Windows) is the default (in those countries offering it). A display must be connected to the Integrated Netfinity Server to support Windows. For non-US keyboard/mouse and display, see: http://www.ibm.com/eserver/series/windowsintegration/ The #2790/#2791 is shipped with a keyboard/mouse splitter cable. Restrictions: Native OS/400 functions are <i>not</i> supported. The #2790/#2791 does not support external host LAN. Requirements: #2790 requires R450 #2791 requires R450 and CUM C1005450

#2843	<p>PCI IOP</p> <p>#2843 is a PCI I/O processor with 64 MB of memory that drives PCI IOA adapters on Models 820, 830, 840, SB2, and SB3, on the #5075 PCI Expansion Tower when attached to the Model 820, the #5074 PCI Expansion Tower, and the #5079 1.8m I/O Tower. The #2843 can drive up to four IOAs. The following IOAs are supported (driven) by the #2843/#9943 PCI IOP:</p> <ul style="list-style-type: none"> #2743 - PCI 1 Gbps Ethernet IOA #2744 - PCI 100 Mbps Token Ring #2763 - PCI RAID Disk Unit Controller (Model 820 only) #2749 - PCI Ultra Mag Media Controller #2768 - PCI Magnetic Media Controller #4723 - PCI 10 Mbps IOA #4745 - PCI WAN IOA #4746 - PCI Twinaxial IOA #4748 - PCI RAID Disk Unit Controller #4750 - PCI ISDN BRI U IOA #4751 - PCI ISDN BRI S/T IOA #4761 - PCI Integrated Analog Modem #4801 - PCI Cryptographic Coprocessor #4815 - PCI ATM 155 Mbps UTP OC3 #4816 - PCI ATM 155 Mbps MMF #4818 - PCI ATM 155 Mbps SMF OC3 #4838 - PCI 100/10 Mbps Ethernet IOA #9771 - Base PCI 2-Line WAN w/Modem <p>Note: PCI cards are subject to plugging rules. See Chapter 5, "PCI Card Placement Rules" on page 101, for details. Maximum: Five in the 820 system tower. Four in Model 830 and 840. Three in a #5075 Expansion Tower, when attached to a Model 820. Six in a #5074 Expansion Tower. Twelve in a #5079 expansion Tower.</p> <p>Note: Base #9943 not counted in these maximums. This is a Customer Install Feature (CIF).</p>
WORKSTATION CONTROLLERS	
#4746	<p>PCI Twinaxial Workstation IOA</p> <p>The Twinaxial Workstation IOA provides support for up to 40 active twinaxial displays and printers addresses or up to 120 active shared sessions. A 20-foot (6.2 m) cable with an eight-port expansion (breakout) box is included with this adapter. Each port supports seven attached devices, allowing for 56 total attached devices, of which only 40 can be active. This is a Customer Install Feature (CIF).</p>
#5540	<p>System Console Attached to Twinaxial Adapter</p> <p>A system console specify code must be selected on each new order, either #5540 or #5544. When the #5540 is on the order, the system console is driven by a twinaxial adapter. The following adapters are added to the order:</p> <ul style="list-style-type: none"> #4746 PCI Twinaxial IOA (Console) #9771 Base PCI 2-Line WAN w/Modem <p>The #9771 is plugged under the embedded IOP (Model 820) and under the Base IOP (Models 830 and 840). The #4746 is controlled by the first or second Multi-Adapter Bridge Boundary on Models 820, 830, and 840.</p>
#5544	<p>System Console Attached to WAN Adapter</p> <p>A system console specify code must be selected on each new order, either #5540 or #5544. When the #5544 is on the order, the system console is driven by an Operations Console via a WAN adapter. The following adapters and cable are added to the order:</p> <ul style="list-style-type: none"> #4745 PCI Two-Line WAN IOA (Console) #0367 Operations Console PCI Cable #9771 Base PCI 2-Line WAN w/Modem <p>The #9771 is plugged under the embedded IOP (Models 820) or the Base IOP (Models 830 and 840). The #4745 is plugged under the first or second Multi-Adapter Bridge on Models 820, 830, and 840.</p>

LAN/WAN ADAPTERS	
#2743	<p>PCI 1 Gbps Ethernet Adapter</p> <p>The #2743 PCI 1 Gbps Ethernet IOA feature allows the iSeries or AS/400e server to attach to IEEE standard 802.3Z high speed Ethernet LANs (1 Gbps). It can also be used to connect to existing 100 Mbps Ethernet LANs using switches with 10/100/1000 Mbps ports. The adapter supports multi-mode fiber media attachment to customer supplied cabling.</p> <p>Restrictions: The #2743 requires a gigabit-capable switch with at least one port that supports a 1000BASE-SX interface with IEEE 802.3z and 802.3u compliance. It supports only a multi-mode fiber optic cable connection from the adapter to the switch. The #2743 supports 1000MBps (1Gbps) full duplex interface only. Cannot negotiate down to a lower speed. Stations on the 10 Mb and 1000 Mb switched LANs can communicate with the #2743 through a switch that is capable of handling all these speeds. In this case, the switch handles the speeds.</p> <p>The #2743 is not supported by the #2790 Integrated Netfinity Server or the or the #2791 Integrated xSeries Server.</p> <p>Requires a 64-bit card slot.</p> <p>Protocols supported: TCP/IP only. SNA and IPX connections are not supported.</p> <p>Maximum: One per Multi-Adapter Bridge boundary.</p> <p>This is a Customer Install Feature (CIF).</p>
#2744	<p>PCI 100 Mbps Token Ring Adapter</p> <p>The PCI 100/16/4 Mbps Token Ring IOA provides a single attachment to a 100 Mbps, 16 Mbps, or 4 Mbps IBM Token Ring Network. The feature consists of an IOA card, internal code which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions. The 100/16/4 Token Ring IOA is capable of operating in half or full duplex mode. A 2.44 meter (8 ft) Token Ring Type 1 cable is included with this feature. As an alternative, the customer can attach a separately priced twisted pair cable to the RJ45 connection on the IOA. IBM Cabling System patch cables, included with this feature, can increase the length as required. If the #2744 is selected to run on the #2790 Integrated Netfinity Server or the #2791 Integrated xSeries Server, specify code #0223 is required for each #2744 selected to run on the #2790/ or the #2791.</p> <p>This is a Customer Install Feature (CIF).</p>
#4723	<p>PCI 10 Mbps Ethernet Adapter</p> <p>The PCI Ethernet IOA provides single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. The feature consists of an adapter card and internal code which supplies Ethernet version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. The #4723 has an RJ45 connector and a 15 pin D-Shell connector for attachment to customer supplied cabling. A vendor AUI Ethernet cable or RJ45 twisted pair cable must be ordered separately.</p> <p>Restrictions: The #4723 is not supported by the #2790 Integrated Netfinity Server or the #2791 Integrated xSeries Server.</p> <p>This is a Customer Install Feature (CIF).</p>
#4745	<p>PCI 2-Line WAN Adapter</p> <p>The #4745 supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20 ft PCI cable #0349 V.24/EIA232 50-ft PCI cable #0353 V.35 20 ft PCI cable #0354 V.35 50-ft PCI cable #0355 V.35 80-ft PCI cable #0356 V.36 20 ft PCI cable #0358 V.36 150-ft PCI cable #0359 X.21 20 ft PCI cable #0360 X.21 50-ft PCI cable #0365 V.24/EIA232 80-ft PCI cable #0367 Operations Console Cable <p>Multiple #0367s can be ordered (but only one allowed per #4745) to serve as consoles for secondary partitions when Logical Partitioning (#0140) is specified. When the #4745 is selected to support ECS, one of the following cables must be specified:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20 ft PCI cable (Default) #0349 V.24/EIA232 50-ft PCI cable #0365 V.24/EIA232 80-ft PCI cable <p>This is a Customer Install Feature (CIF).</p>

#4750	<p>PCI ISDN BRI U Adapter (only available in the United States and Canada)</p> <p>The #4750 is a four-port (8 channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #4750 is the "U"-bus (2 wire) version of the ISDN BRI PCI card. The #4750 feature supports the following protocols:</p> <ul style="list-style-type: none"> PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #4750 feature. For configuration purposes, each #4750 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex.</p> <p>Requirements: This feature requires country certification or homologation.</p> <p>Full sized PCI card slot.</p> <p>Maximum: One per IOP.</p> <p>This is a Customer Install Feature (CIF).</p>
#4751	<p>PCI ISDN BRI S/T Adapter</p> <p>The #4751 is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #4751 is the "S/T"-bus (four wire) version of the ISDN BRI PCI card.</p> <p>Note: This requires a Network Terminating device in the circuit. In the United States and Canada, this must be provided by the customer. In other countries it is most likely provided by the telephone company.</p> <p>The #4751 feature supports the following protocols:</p> <ul style="list-style-type: none"> PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #4751 feature. For configuration purposes, each #4751 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex.</p> <p>Requirements: This feature requires country certification or homologation.</p> <p>Full sized PCI card slot.</p> <p>Maximum: One per IOP.</p> <p>This is a Customer Install Feature (CIF).</p>
#4761	<p>#4761 Integrated Analog Modem</p> <p>The #4761 allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). The #4761 runs the following protocols without the need for an external modem:</p> <ul style="list-style-type: none"> SLIP/PPP uses V.90, so max line speed is 56K bps SDLC uses V.34, so max line speed is 33.6K bps Fax uses V.17 to achieve a 14.4K bps max line speed <p>An asynchronous line description is required for Fax and can only be used for Fax. ECS line not supported. Eight 30-foot (9.3 m) phone cables are shipped with each #4761. To the iSeries or AS/400e server, the #4761 appears like a single IOA with eight individual resources available. For configuration purposes, each #4761 counts as eight communications lines. Supports full duplex.</p> <p>Requirements: This feature requires country certification or homologation.</p> <p>Full sized PCI card slot.</p> <p>Maximum: One per IOP</p> <p>This is a Customer Install Feature (CIF).</p>
#4801	<p>PCI Cryptographic Coprocessor</p> <p>The #4801 is a hardware cryptography solution. The #4801 is a half-length PC form-factor PCI card that offers rich cryptography function, secure storage of cryptographic keys, and 12 MB/s performance (at the card level) for bulk data encryption and triple DES capability. The #4801 is available worldwide. The level of cryptographic function is determined by the Cryptographic Access Provider licensed program which is downloaded to the adapter.</p> <p>Note: On new shipments from the plant, the #4801 is shipped with the system, but due to temperature requirements (the card must not drop below 5 F (-15 C)), it is not installed.</p> <p>This is a Customer Install Feature (CIF).</p>
#4815	<p>PCI 155 Mbps UTP OC3 ATM</p> <p>The #4815 is a 155 Mbps Asynchronous Transfer Mode (ATM) PCI card that allows the iSeries or AS/400e server to be attached to an ATM network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #4815 is typically used where 155 Mbps speeds are required over distances of less than 100 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>This is a Customer Install Feature (CIF).</p>

#4816	<p>PCI 155 Mbps MMF ATM</p> <p>The #4816 is a 155 Mbps Asynchronous Transfer Mode (ATM) PCI card that allows the iSeries or AS/400e server to be attached into an ATM network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #4816 is typically used where 155 Mbps speeds are required over distances of less than 2 km. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>This is a Customer Install Feature (CIF).</p>
#4818	<p>PCI 155 Mbps SMF ATM</p> <p>The #4818 is a 155 Mbps Asynchronous Transfer Mode (ATM) PCI card that allows the iSeries or AS/400e server to be attached to an ATM network using the Single-Mode Fiber (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment. The #4818 is typically used where 155 Mbps speeds are required over distances of from 16 to 40 km. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>This is a Customer Install Feature (CIF).</p>
#4838	<p>PCI 100/10 Mbps Ethernet IOA</p> <p>The PCI 100/10 Mbps Ethernet IOA feature allows the iSeries or AS/400e server to attach to standardized 100 Mbps high speed Ethernet LANs and also allow attachment to existing 10 Mbps Ethernet LANs. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media. Cabling for 10 Mbps must be CAT-3 or CAT-5, cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. Maximum cable length is 100 meters.</p> <p>If #4838 is selected to run on #2790 Integrated Netfinity Server or #2791 Integrated xSeries Server, then specify code #0224 is required for each #4838 selected to run on the #2790 or the #2791.</p> <p>This is a Customer Install Feature (CIF).</p>
#9771	<p>Base PCI 2-Line WAN w/Modem</p> <p>The #9771 is a 2-line WAN adapter. One port supports V.90 56K Async Data on PPP via an internal modem. The second port supports multiple protocol communications. Connection to the V.90 port is via telephone cable. Connection to the communication port is through one of the following cables:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20-ft PCI cable #0349 V.24/EIA232 50-ft PCI cable #0353 V.35 20-ft PCI cable #0354 V.35 50-ft PCI cable #0355 V.35 80-ft/24m PCI cable #0356 V.36 20-ft PCI cable #0358 V.36 150-ft/45m PCI cable #0359 X.21 20-ft PCI cable #0360 X.21 50-ft PCI cable #0365 V.24/EIA232 80-ft PCI cable <p>The ability to run Electronic Customer Support (ECS) on the telephone cable (RJ11) port over TCP/IP was made available on 17 November 2000, with PTF SF64124 (5769-SS1). Download and install V4R5 Client Access Express Service Pack 2 or later to obtain Wizard (5769-XE1 SF64217), then use Operational Navigator to configure this Universal Connection per cover letter of SF64124. This Universal Connection operates using the integrated high-speed V.90. This includes electronic fix retrieval and problem reporting. For additional information, see http://www.iseries.ibm.com/tstudio/planning/esa/esa.htm</p> <p>Fax is not supported on the V.90 port at this time. IBM intends to support Fax on the V.90 port in a future release of OS/400 and with a Group PTF for V4R5.</p> <p>ECS operates on the WAN port of the #9771 by changing the *RSRCNAME parameter of the QESLINE and QTILINE line descriptions to that of the WAN port on the #9771 card.</p> <p>When the #9771 is selected to support ECS, one of the following cables must be specified and connect to the WAN port:</p> <ul style="list-style-type: none"> • #0348 V.24/EIA232 20 ft PCI cable (default) • #0349 V.24/EIA232 50-ft PCI cable • #0365 V.24/EIA232 80-ft PCI cable <p>The #9771 does not support the #5544 Operations Console as the Systems Console. Restrictions apply. Refer to Chapter 5, "PCI Card Placement Rules" on page 101.</p>
DISK UNITS	
#4314	<p>8.58 GB Disk Unit Ultra SCSI</p> <p>Provides a 3 ½-inch single disk unit with 8.58 GB capacity for a additional disk storage (7200 RPM).</p> <p>This is a Customer Install Feature (CIF).</p>

#4317	8.58 GB Disk Unit 10k RPM (Ultra2 SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity for a additional disk storage. This is a Customer Install Feature (CIF).
#4318	17.54 GB Disk Unit 10k RPM (Ultra2 SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for a additional disk storage. This is a Customer Install Feature (CIF).
#4324	17.54 GB Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for a additional disk storage (7200 RPM). This is a Customer Install Feature (CIF).
#4331	1.6 GB Read Cache Device This feature provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the disk controller #4748 PCI RAID Disk Unit Controller. Note: Because the #4331 is 1.6-inches wide, the following placement rules apply. #4331 cannot be placed in disk unit slot D01 of the #5075 PCI Expansion Tower. It cannot be placed in disk unit slots D14 or D20 of the #7104 and cannot be placed in disk unit slots D01 or D07 of the Model 820. The #4331 can be placed in disk unit slots D02 through D06 of the #5075 PCI Expansion Tower and can be placed in disk unit slots D02 through D07 and D08 through D12 of Model 820. However, the #4331 takes up the disk unit slot in which it is installed and also takes up the adjacent disk unit slot to its left. For example, if the #4331 is installed in disk unit slot D02, it takes up disk unit slot D02 and disk unit slot D01. For the #5074, #5079, #9074, and #9079, the #4331 is installed in the left most slot of each five-pack and only takes up one disk unit position. Maximum: One per #4748 IOP. This is a Customer Install Feature (CIF).
#6717 #6718 #6817 #6818	8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) 17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) 8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) 17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Supported through RPQ 847102.
RPC 857102	RPQ 857102 ships the disk mounting hardware and instructions required to convert Feature #6717/6817 to Feature #4317 and Feature #6718/6818 to Feature #4318. Order one RPQ for each disk unit to be converted. Confirm that there is disk space available in an existing or on-order PCI Storage Tower #5065 or #5066. This RPQ can also be used to move a disk to an iSeries 270, 8xx, 270/8xx 5075, 5074/9074, and 5079/9079 PCI Towers. Ensure the required number of disk unit controllers (#2748, 8xx #4748/9748) are available. Also, ensure there are sufficient "slots" to receive the disk(s). For example, you may need the #5101 30-Disk Expansion feature to have slots available for all the disk units to be moved into a #5704, #9704, or 9709. After the conversion, an RPO change must be processed to add the appropriate number of Features #4317 and #4318 and remove the appropriate number of Features #6717/6817 and #6718/6818.
INTERNAL TAPE UNITS AND CD-ROM	
#4425 #4525	CD-ROM Feature The #4425 is a feature CD-ROM device that can be mounted in the system unit of Models 830, 840, SB2 and SB3 and in the #5074/#5079 PCI Expansion Towers. The #4525 is a feature CD-ROM device that can be mounted in the system unit of Models 820. The #4425/#4525 can be used for Alternate IPL (IBM distributed CD-ROM media only) and program distribution. A CD-ROM is required. This is a Customer Install Feature (CIF).
#4482 #4582	4 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. The #4482 is a 4 GB ¼-inch Cartridge Tape Unit that can be mounted in the system unit of Models 830, 840, SB2, and SB3 and in the #5074/#5079 PCI Expansion Towers. The #4582 can be mounted in the system unit of Models 820. This is a Customer Install Feature (CIF).

#4483 #4583	<p>16 GB ¼-inch Cartridge Tape Unit</p> <p>With a data rate of 1.5 Mbps and capacity of 16 GB per cartridge (3 MB/sec and 32 GB per cartridge with data compaction), the #4483/#4583 provides a growth path for the large number of iSeries or AS/400e servers that use QIC tape technology for save/restore. Can be used for save/restore, Alternate IPL, migration.</p> <p>The #4483/#4583 provides read/write compatibility with the following formats:</p> <ul style="list-style-type: none"> • 16 GB (up to 32 GB with compression in QIC5010 format) with IBM MLR1-16GB Data Cartridge • 13 GB (up to 26 GB with compression in QIC5010 format) with IBM DC5010 Data Cartridge • 2 GB (up to 4 GB with compression in QIC5010 format) with IBM MLR1-2GB Data Cartridge <p>The #4483/#4583 provides read compatibility with the following formats:</p> <ul style="list-style-type: none"> • 8 GB (QIC4DC compressed format) with SLR5-4GB Data Cartridge • 5 GB (QIC2DC compressed format) with IBM DC9250 Data Cartridge • 4 GB (QIC4GB format) with SLR5-4GB Data Cartridge • 2.5 GB (QIC2GB format) with IBM DC9250 Data Cartridge <p>This tape unit is not compatible with System/36 ¼-inch cartridge tape units.</p> <p>The #4483 tape unit can be mounted in the system unit of Models 830, 840, SB2, and SB3 and in the #5074/#5079 PCI Expansion Towers.</p> <p>The #4583 can be mounted in the system unit of Models 270 and 820.</p> <p>This is a Customer Install Feature (CIF).</p>
#4486 #4586	<p>25 GB ¼-inch Cartridge Tape Unit</p> <p>With a data rate of 2 Mbps and capacity of 25 GB per cartridge (4 MB/sec and 50 GB per cartridge with data compaction), the #4486/#4586 provides a growth path for iSeries or AS/400e servers that use QIC tape technology for save/restore, alternate IPL and migration.</p> <p>The #4486/#4586 provides read/write compatibility with the following formats:</p> <ul style="list-style-type: none"> • 25 GB (up to 50 GB with compression in MLR3 format) with IBM MLR3-25GB Data Cartridge • 16 GB (up to 32 GB with compression in QIC5010 format) with IBM MLR1-16GB Data Cartridge • 13 GB (up to 26 GB with compression in QIC5010 format) with IBM DC5010 Data Cartridge • 2 GB (up to 4GB with compression in QIC5010 format) with IBM MLR1 2GB Data Cartridge. <p>The #4486/#4586 provides read compatibility with the following formats:</p> <ul style="list-style-type: none"> • 8 GB (QIC4DC compressed format) with SLR5-4GB Data Cartridge • 5 GB (QIC2DC compressed format) with IBM DC9250 Data Cartridge • 4 GB (QIC4GB format) with SLR5-4GB Data Cartridge <p>2.5 GB (QIC2GB format) with IBM DC9250 Data Cartridge</p> <p>The #4486 is a 25 GB ¼-inch Cartridge Tape Unit that can be mounted in the system unit of Models 830, 840, SB2, and SB3 and in the #5074/#5079 PCI Expansion Towers.</p> <p>The #4586 can be mounted in the system unit of the Model 270 and 820.</p> <p>This is a Customer Install Feature (CIF).</p>
MAGNETIC MEDIA CONTROLLERS	
#2749	<p>PCI Ultra Magnetic Media Controller</p> <p>#2749 is an Ultra SCSI IOA that provides attachment capability for external tape devices and external optical devices. The #2749 can attach one tape drive or one optical drive.</p> <p>The following tape devices can be attached:</p> <ul style="list-style-type: none"> • 3490E E01/E11 ½-inch Cartridge Tape Subsystem • 3490 F00/F01/F11/F1A ½-inch Cartridge Tape Subsystem • 3490E C11/C22/C1A/C2A with feature #5040 • 3494 Tape Library Dataserver <ul style="list-style-type: none"> L10 Library Control Unit Frame 1 3490E C1A/C2A with #5040 or 1-2 3490E F1A L12 Library Control Unit Frame 1-2 3590 B1A D10 Device Frame 1 3490E C1A/C2A with #5040 or 1-2 3490E F1A, 300 cartridges D12 Device Frame 1-6 3590 B1A, 300 cartridges HA1 (High Availability) - two L1X and two D1X for redundancy

#2749 <i>continued</i>	<ul style="list-style-type: none"> • 3570 0.31 inch Cartridge Tape Subsystem <ul style="list-style-type: none"> Model B00 (standalone) Model B01 (standalone) Model B02 (standalone) Model B11 (rack mount) Model B12 (rack mount) Model B1A (mounts in 3575) Model C00 (standalone) Model C01 (standalone) Model C02 (standalone) Model C11 (rack mount) Model C12 (rack mount) Model C1A (mounts in 3575) • 3575 0.31 inch Cartridge Tape Subsystem <ul style="list-style-type: none"> Model Lxx • 358X-Hxx/Lxx/Dxx Tape Cartridge Subsystem • 3590 ½-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> Model B11 (mounts into 9309 rack) Model B1A (mounts into 3494 library) Model E11 (mounts into 9309 rack) Model E1A (mounts into 3494 library) • 3995-Cxx Optical Library Dataserver • 7208-012 5.0GB 8mm Cartridge Tape Unit • 7208-222 7.0GB 8mm Cartridge Tape Unit • 7208-232 8MM Dual 5.0GB Cartridge Tape Subsystem <ul style="list-style-type: none"> #0501 counts as one 7208 #0502 counts as two 7208s • 7208-234 8MM Dual 7.0GB Cartridge Tape Subsystem <ul style="list-style-type: none"> Counts as two 7208s • 7208-342 20.0GB 8mm Cartridge Tape Bridge Box • 9348-00x ½-inch Reel Tape Unit - Rack Mount • 9427-2108mm Library Attach <p>This is a Customer Install Feature (CIF).</p>
#2763	<p>PCI RAID Disk Unit Controller—10MB Model 820 only.</p> <p>The #2763 is an Ultra2 SCSI controller with a 10 MB write-cache that provides RAID-5 protection for internal disk units and also supports up to two removable media devices (internal tape units or CD-ROM units).</p> <p>In addition to providing RAID-5 protection for disks, the #2763 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. The #2763 controller supports a maximum of 12 disk units and is only available on the Model 820 and #5075 System Expansion Tower.</p> <p>A minimum of four disk units of the same capacity are needed for a valid RAID 5 configuration. A maximum of three arrays are allowed per controller, with a maximum of ten disk units allowed per one array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to ten. The #2763 does not support hardware disk compression. The #2763 does not support the #4331 Read Cache Device.</p> <p>Restrictions: Requires long PCI card slot.</p> <p>This is a Customer Install Feature (CIF).</p>
#2768	<p>PCI Magnetic Media Controller</p> <p>The #2768 provides Ultra SCSI attachment capability for an external tape or an external CD-ROM device that has a Single Ended SCSI interface. The #2768 supports the following devices:</p> <ul style="list-style-type: none"> • 7207-122 QIC-SLR Tape Bridge Box • 7210-020 CD-ROM Bridge Box <p>The #2768 supports one 7207-122, one 7210-020, or one 7207-122 and one 7210-020. When both the 7207-122 and the 7210-020 are attached, the two devices must be "daisy chained" with the 7207-122 physically connected first.</p> <p>This is a Customer Install Feature (CIF).</p>

#4748 #9748	<p>PCI RAID Disk Unit Controller—26 MB Cache</p> <p>The #4748/#9748 is an Ultra2 SCSI controller with a 26 MB write-cache that provides RAID-5 protection and compression for internal disk units and also supports internal tape units and CD-ROM units. The #4748/#9748 supports both compression and non-compression modes. The mode of operation is determined by a hardware jumper. The #4748/#9748 is shipped in non-compression mode. By moving the hardware jumper, the controller functions in compression mode. In addition to providing RAID-5 protection for disks, the #4748/#9748 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. The #4748 also supports #4331 1.6 Gb Read Cache Device, which provides increased performance. Read Cache Device (#4331) is supported only when #4748/#9748 is <i>not</i> in compression mode.</p> <p>The #4748 controller supports a maximum of 15 disk units.</p> <p>The #9748 is the base disk controller for 830, 840, SB2, and SB3.</p> <p>A minimum of four disk units of the same capacity are needed for a valid RAID 5 configuration. A maximum of four arrays are allowed per controller, with a maximum of 10 disk units allowed per array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to seven disk units. Parity can be spread across either four or eight disk units for arrays of 8 to 10 disk units. For systems started with 8 to 10 disk units in an array, the parity for that array will be spread across eight disk units. For systems that are started with less than eight disk units in an array and later MESed to 8, 9, or 10 disk units, the RAID function must be stopped and then started before the parity is spread across eight disk units.</p> <p>The #4748/#9748 controls up to two removable media devices (internal tape or CD-ROM).</p> <p>Restrictions: Requires long PCI card slot.</p> <p>This is a Customer Install Feature (CIF).</p>
#9767	<p>PCI Disk Unit Controller</p> <p>Model 820 only.</p> <p>The #9767 is disk unit and removable media device controller that provides Ultra2 SCSI attachment capability.</p> <p>The #9767 does not support RAID. The #9767 is the default controller in the Model 820 when RAID and controls up to six disk units and up to two removable media devices (internal tape or CD-ROM). If RAID-5 is required or more than six drives, the #2748 or #2763 disk controller is required.</p>

3.11 Upgrades to 8xx

AS/400e 6xx, 7xx, and Sxx servers (excluding the SB1) can be upgraded to the iSeries 8xx servers. CISC models and RISC systems prior to 6xx models cannot be upgraded to the 8xx servers.

The relationship between CPWs of the from and to systems varies depending on the ratio of batch to interactive workload. To determine the appropriate upgrade path, use the BEST/1 tool, which is available as part of the AS/400 Performance Tools (5769-PT1). For the 8xx and 7xx models, the Interactive to Batch workload is defined by the interactive feature card.

No upgrades are offered to the Model 270 from any earlier models, nor can the Model 270 be upgraded into the 8xx servers. The redbook *AS/400e to iSeries Migration: A Guide to System Upgrades at V4R5*, SG24-6055, provides guidance for upgrading to the iSeries Model 8xx.

For software considerations, refer to the Software Migration and Upgrade Paths section in the *iSeries Handbook*, GA19-5486.

3.11.1 Interactive Performance Reduction Option for 7xx Servers

In some cases, a supported upgrade path involves a reduction in Interactive CPW ratings. 7xx customers who do not want to keep their current interactive card may reduce their interactive capacity by one level when upgrading to a new 8xx server. This can lower the price paid for the upgrade.

For example, a customer with 1050 Interactive CPW (Interactive Feature #1510) upgrading to an 8xx server can choose a model with a lower Interactive CPW level (for example, 560). Customers choosing this reduction option is required to repurchase (at full price) any additional Interactive CPW in the future.

Customers are encouraged to review current Interactive CPW utilization with PM/400, Management Central, and other AS/400 Performance Tools reports prior to exercising this interactive performance reduction option.

The Interactive Performance Reduction Option is available beginning third quarter 2000 for 7xx to 8xx server upgrades.

3.11.2 Upgrade to 820

Model 820																							
To		2395				2396					2397						2398						
From		1521	1522	1523	1524	1521	1522	1523	1524	1525	1521	1522	1523	1524	1525	1526	1521	1522	1523	1524	1525	1526	1527
600	2129	X	X	X	X																		
	2134	X	X	X	X																		
	2135		X	X	X		X	X	X	X													
	2136		X	X	X		X	X	X	X													
620	2175		X	X	X		X	X	X	X													
	2179			X	X			X	X	X			X	X	X								
	2180			X	X			X	X	X			X	X	X	X							
	2181				X				X	X				X	X	X				X	X	X	X
	2182									X					X	X					X	X	X
S10	2118	X	X	X																			
	2119	X	X	X	X	X	X	X	X														
S20																							
2161		X	X	X	X	X	X	X	X														
2163		X	X	X	X	X	X	X	X		X	X	X	X									
2165						X	X	X	X	X	X	X	X	X			X	X	X	X	X		
2166											X	X	X	X	X		X	X	X	X	X		
2170	1490						X	X	X	X		X	X	X	X			X	X	X	X		
2177	1491												X	X	X	X			X	X	X	X	
2178	1492													X	X	X				X	X	X	X
720																							
2061	1500	X	X	X	X	X	X	X	X		X	X	X	X			X	X	X	X			
	1501	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		
	1502		X	X	X		X	X	X	X		X	X	X	X	X		X	X	X	X	X	

Model 820																							
To		2395				2396					2397						2398						
From		1521	1522	1523	1524	1521	1522	1523	1524	1525	1521	1522	1523	1524	1525	1526	1521	1522	1523	1524	1525	1526	1527
2062	1500					X	X	X	X		X	X	X	X			X	X	X	X			
	1501					X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		
	1502						X	X	X	X		X	X	X	X	X		X	X	X	X	X	
	1503							X	X	X				X	X	X	X			X	X	X	X
2063	1500										X	X	X	X			X	X	X	X			
	1502											X	X	X	X	X		X	X	X	X	X	
	1503												X	X	X	X			X	X	X	X	X
	1504													X	X	X				X	X	X	X
2064	1500																X	X	X	X			
	1502																	X	X	X	X	X	
	1503																		X	X	X	X	X
	1504																			X	X	X	X
	1505																				X	X	X

3.11.3 820 Upgrade to 820

Model 820																						
To		2395			2396					2397						2398						
From		1522	1523	1524	1521	1522	1523	1524	1525	1521	1522	1523	1524	1525	1526	1521	1522	1523	1524	1525	1526	1527
2395	1521	X	X	X	X	X	X	X		X	X	X	X			X	X	X	X			
	1522		X	X		X	X	X	X		X	X	X	X			X	X	X	X		
	1523			X			X	X	X			X	X	X	X			X	X	X	X	
	1524							X	X				X	X	X				X	X	X	X
2396	1521					X	X	X		X	X	X	X			X	X	X	X			
	1522						X	X	X		X	X	X	X			X	X	X	X		
	1523							X	X			X	X	X	X			X	X	X	X	
	1524								X				X	X	X				X	X	X	X
	1525													X	X					X	X	X

Model 820																						
To		2395			2396					2397						2398						
From		1522	1523	1524	1521	1522	1523	1524	1525	1521	1522	1523	1524	1525	1526	1521	1522	1523	1524	1525	1526	1527
2397	1521										X	X	X				X	X	X	X		
	1522											X	X	X				X	X	X		
	1523												X	X	X			X	X	X	X	
	1524													X	X				X	X	X	X
	1525														X					X	X	X
	1526															X					X	X
2398	1521																	X	X	X		
	1522																		X	X		
	1523																		X	X	X	
	1524																			X	X	X
	1525																			X	X	X
	1526																				X	X

3.11.4 Upgrade to 830

Model 830																			
To		2400					2402						2403						
From		1531	1532	1533	1534	1535	1531	1532	1533	1534	1535	1536	1531	1532	1533	1534	1535	1536	1537
620	2175	X	X	X	X														
	2179		X	X	X														
	2180		X	X	X	X													
	2181			X	X	X													
	2182				X	X				X	X	X				X	X	X	X
640	2237				X	X			X	X	X					X	X	X	
	2238				X	X			X	X	X					X	X	X	X
	2239					X				X	X						X	X	X
650	2188																		X
	2189																		X
	2240																	X	X
	2243																		X
S20																			
2161		X	X	X															
2163		X	X	X															
2165		X	X	X	X		X	X	X	X									
2166		X	X	X	X		X	X	X	X			X	X	X	X			
2170	1490	X	X	X	X		X	X	X	X									
2177	1491		X	X	X	X		X	X	X	X			X	X	X	X		
2178	1492			X	X	X			X	X	X	X			X	X	X	X	
S30																			
2257		X	X	X	X		X	X	X	X			X	X	X	X			
2258		X	X	X	X		X	X	X	X			X	X	X	X			
2259		X	X	X	X		X	X	X	X			X	X	X	X			
2260							X	X	X	X			X	X	X	X			
2320	1492			X	X	X			X	X	X	X			X	X	X	X	

Model 830																			
To		2400					2402						2403						
From		1531	1532	1533	1534	1535	1531	1532	1533	1534	1535	1536	1531	1532	1533	1534	1535	1536	1537
2321	1493									X	X	X				X	X	X	X
2322	1494									X	X	X				X	X	X	X
S40																			
2207														X	X	X	X		
2208														X	X	X	X		
2340	1495																X	X	X
2341	1496																	X	X
720																			
2061	1500	X	X	X			X	X	X				X	X	X				
	1501	X	X	X	X		X	X	X	X			X	X	X	X			
	1502	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		
2062	1500	X	X	X			X	X	X				X	X	X				
	1501	X	X	X	X		X	X	X	X			X	X	X	X			
	1502	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		
	1503		X	X	X	X		X	X	X	X	X		X	X	X	X	X	
2063	1500	X	X	X			X	X	X				X	X	X				
	1502	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		
	1503		X	X	X	X		X	X	X	X	X		X	X	X	X	X	
	1504			X	X	X			X	X	X	X			X	X	X	X	X
2064	1500						X	X	X				X	X	X				
	1502						X	X	X	X	X		X	X	X	X	X		
	1503							X	X	X	X	X		X	X	X	X	X	
	1504								X	X	X	X			X	X	X	X	X
	1505									X	X	X				X	X	X	X

Model 830																			
To		2400					2402						2403						
From		1531	1532	1533	1534	1535	1531	1532	1533	1534	1535	1536	1531	1532	1533	1534	1535	1536	1537
730																			
2065	1506	X	X	X	X		X	X	X	X			X	X	X	X			
	1507	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		
	1508		X	X	X	X		X	X	X	X	X		X	X	X	X	X	
	1509			X	X	X			X	X	X	X			X	X	X	X	X
2066	1506	X	X	X	X		X	X	X	X			X	X	X	X			
	1507	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		
	1508		X	X	X	X		X	X	X	X	X		X	X	X	X	X	
	1509			X	X	X			X	X	X	X			X	X	X	X	X
	1510				X	X				X	X	X				X	X	X	X
2067	1506						X	X	X	X			X	X	X	X			
	1508							X	X	X	X	X		X	X	X	X	X	
	1509								X	X	X	X			X	X	X	X	X
	1510									X	X	X				X	X	X	X
	1511										X	X					X	X	X
2068	1506						X	X	X	X			X	X	X	X			
	1508							X	X	X	X	X		X	X	X	X	X	
	1509								X	X	X	X			X	X	X	X	X
	1510									X	X	X				X	X	X	X
	1511										X	X					X	X	X
740																			
2069	1514												X	X	X	X	X		
	1510															X	X	X	X
	1511																X	X	X
	1512																	X	X

Model 830																			
To		2400					2402						2403						
From		1531	1532	1533	1534	1535	1531	1532	1533	1534	1535	1536	1531	1532	1533	1534	1535	1536	1537
2070	1514												X	X	X	X	X		
	1510															X	X	X	X
	1511																X	X	X
	1512																	X	X
	1513																	X	X

3.11.5 8xx Upgrade to 830

Model 830																			
To		2400					2402						2403						
From		1531	1532	1533	1534	1535	1531	1532	1533	1534	1535	1536	1531	1532	1533	1534	1535	1536	1537
2395	1521	X	X	X			X	X	X										
	1522	X	X	X	X		X	X	X	X									
	1523		X	X	X	X		X	X	X	X								
	1524			X	X	X			X	X	X	X							
2396	1521	X	X	X			X	X	X				X	X	X				
	1522	X	X	X	X		X	X	X	X			X	X	X	X			
	1523		X	X	X	X		X	X	X	X			X	X	X	X		
	1524			X	X	X			X	X	X	X			X	X	X	X	
	1525				X	X				X	X	X				X	X	X	X
2397	1521						X	X	X				X	X	X				
	1522						X	X	X	X			X	X	X	X			
	1523							X	X	X	X			X	X	X	X		
	1524								X	X	X	X			X	X	X	X	
	1525									X	X	X				X	X	X	X
	1526										X	X					X	X	X

Model 830																			
To		2400					2402						2403						
From		1531	1532	1533	1534	1535	1531	1532	1533	1534	1535	1536	1531	1532	1533	1534	1535	1536	1537
2398	1521												X	X	X				
	1522												X	X	X	X			
	1523													X	X	X	X		
	1524														X	X	X	X	
	1525															X	X	X	X
	1526																X	X	X
	1527																	X	X
830																			
2400	1531		X	X	X		X	X	X	X			X	X	X	X			
	1532			X	X	X		X	X	X	X			X	X	X	X		
	1533				X	X			X	X	X	X			X	X	X	X	
	1534					X				X	X	X				X	X	X	X
	1535										X	X					X	X	X
2402	1531							X	X	X			X	X	X	X			
	1532								X	X	X			X	X	X	X		
	1533									X	X	X			X	X	X	X	
	1534										X	X				X	X	X	X
	1535											X					X	X	X
	1536																	X	X
2403	1531													X	X	X			
	1532														X	X	X		
	1533															X	X	X	
	1534																X	X	X
	1535																	X	X
	1536																		X
	1537																		

3.11.6 Upgrade to 840

Model 840																						
To		2416						2417						2418								
From		1540	1541	1542	1543	1544	1545	1546	1540	1541	1542	1543	1544	1545	1546	1540	1541	1542	1543	1544	1545	1546
640	2237																	X	X	X		
	2238																		X	X	X	
	2239																			X	X	X
650	2240																			X	X	X
	2243																				X	X
	2288																				X	X
	2289																				X	X
S30																						
2257																X	X	X				
2258																X	X	X				
2259																X	X	X				
2260																X	X	X				
2320	1492																X	X	X	X		
2321	1493																	X	X	X	X	
2322	1494																	X	X	X	X	
S40																						
2256																X	X	X				
2261																X	X	X				
2207																X	X	X	X			
2208																X	X	X	X			
2340	1495																		X	X	X	X
2341	1496																			X	X	X

Model 840																						
To		2416						2417						2418								
From		1540	1541	1542	1543	1544	1545	1546	1540	1541	1542	1543	1544	1545	1546	1540	1541	1542	1543	1544	1545	1546
730																						
2065	1506																X	X	X			
	1507																X	X	X	X		
	1508																X	X	X	X	X	
	1509																	X	X	X	X	X
2066	1506																X	X	X			
	1507																X	X	X	X		
	1508																X	X	X	X	X	
	1509																	X	X	X	X	X
	1510																		X	X	X	X
2067	1506																X	X	X			
	1508																X	X	X	X	X	
	1509																	X	X	X	X	X
	1510																		X	X	X	X
	1511																			X	X	X
2068	1506	X	X	X													X	X	X			
	1508	X	X	X	X	X											X	X	X	X	X	
	1509		X	X	X	X	X											X	X	X	X	X
	1510			X	X	X	X	X											X	X	X	X
	151				X	X	X	X												X	X	X
740																						
2069	1514	X	X	X	X				X	X	X	X					X	X	X	X		
	1510			X	X	X	X	X			X	X	X	X	X				X	X	X	X
	1511				X	X	X	X				X	X	X	X					X	X	X
	1512					X	X	X					X	X	X						X	X

Model 840																						
To		2416						2417						2418								
From		1540	1541	1542	1543	1544	1545	1546	1540	1541	1542	1543	1544	1545	1546	1540	1541	1542	1543	1544	1545	1546
2070	1514								X	X	X	X				X	X	X	X			
	1510										X	X	X	X	X			X	X	X	X	X
	1511											X	X	X	X				X	X	X	X
	1512												X	X	X					X	X	X
	1513													X	X	X					X	X

Model 840																	
To		2419								2420							
From		1540	1541	1542	1543	1544	1545	1546	1547	1540	1541	1542	1543	1544	1545	1546	1547
640	2237																
	2238																
	2239																
650	2240													X	X	X	X
	2243														X	X	X
	2288														X	X	X
	2289														X	X	X
S30																	
2257																	
2258																	
2259																	
2260										X	X	X					
2320	1492																
2321	1493											X	X	X	X		
2322	1494											X	X	X	X		
S40																	
2256										X	X	X					
2261										X	X	X					

Model 840																	
To		2419								2420							
From		1540	1541	1542	1543	1544	1545	1546	1547	1540	1541	1542	1543	1544	1545	1546	1547
2207										X	X	X	X				
2208										X	X	X	X				
2340	1495												X	X	X	X	X
2341	1496													X	X	X	X
730																	
2065	1506									X	X	X					
	1507									X	X	X	X				
	1508									X	X	X	X	X			
	1509										X	X	X	X	X		
2066	1506									X	X	X					
	1507									X	X	X	X				
	1508									X	X	X	X	X			
	1509										X	X	X	X	X		
	1510											X	X	X	X	X	X
2067	1506									X	X	X					
	1508									X	X	X	X	X			
	1509										X	X	X	X	X		
	1510											X	X	X	X	X	X
	1511												X	X	X	X	X
2068	1506									X	X	X					
	1508									X	X	X	X	X			
	1509										X	X	X	X	X		
	1510											X	X	X	X	X	X
	151												X	X	X	X	X

Model 840																	
To		2419								2420							
From		1540	1541	1542	1543	1544	1545	1546	1547	1540	1541	1542	1543	1544	1545	1546	1547
740																	
2069	1514									X	X	X	X				
	1510											X	X	X	X	X	X
	1511												X	X	X	X	X
	1512													X	X	X	X
2070	1514	X	X	X	X					X	X	X	X				
	1510			X	X	X	X	X	X			X	X	X	X	X	X
	1511				X	X	X	X	X				X	X	X	X	X
	1512					X	X	X	X					X	X	X	X
	1513					X	X	X	X					X	X	X	X

3.11.7 8xx Upgrade to 840

Model 840																	
To		2418								2420							
From		1540	1541	1542	1543	1544	1545	1546	1547	1540	1541	1542	1543	1544	1545	1246	1547
820																	
2397	1521	X	X							X	X						
	1522	X	X	X						X	X	X					
	1523	X	X	X	X					X	X	X	X				
	1524		X	X	X	X					X	X	X	X			
	1525			X	X	X	X					X	X	X	X		
	1526				X	X	X	X					X	X	X	X	X
2398	1521	X	X							X	X						
	1522	X	X	X						X	X	X					
	1523	X	X	X	X					X	X	X	X				
	1524		X	X	X	X					X	X	X	X			
	1525			X	X	X	X					X	X	X	X		

Model 840																
To		2418							2420							
From		1540	1541	1542	1543	1544	1545	1546	1540	1541	1542	1543	1544	1545	1246	1547
	1526				X	X	X	X				X	X	X	X	X
	1527					X	X	X					X	X	X	X
830																
2400	1531	X	X	X					X	X	X					
	1532	X	X	X	X				X	X	X	X				
	1533		X	X	X	X				X	X	X	X			
	1534			X	X	X	X				X	X	X	X		
	1535				X	X	X	X				X	X	X	X	X
2402	1531	X	X	X					X	X	X					
	1532	X	X	X	X				X	X	X	X				
	1533		X	X	X	X				X	X	X	X			
	1534			X	X	X	X				X	X	X	X		
	1535				X	X	X	X				X	X	X	X	X
	1536					X	X	X					X	X	X	X
2403	1531	X	X	X					X	X	X					
	1532	X	X	X	X				X	X	X	X				
	1533		X	X	X	X				X	X	X	X			
	1534			X	X	X	X				X	X	X	X		
	1535				X	X	X	X				X	X	X	X	X
	1536					X	X	X					X	X	X	X
	1537						X	X						X	X	X

Model 840								
To From		2417						
		1540	1541	1542	1543	1544	1545	1546
840								
2416	1540	X	X	X	X			
	1541		X	X	X	X		
	1542			X	X	X	X	
	1543				X	X	X	X
	1544					X	X	X
	1545						X	X
	1546							X

Model 840																	
To From		2419								2420							
		1540	1541	1542	1543	1544	1545	1546	1547	1540	1541	1542	1543	1544	1545	1546	1547
2416	1540	X	X	X	X					X	X	X	X				
	1541		X	X	X	X					X	X	X	X			
	1542			X	X	X	X					X	X	X	X		
	1543				X	X	X	X	X				X	X	X	X	X
	1544					X	X	X	X					X	X	X	X
	1545						X	X	X						X	X	X
	1546							X	X							X	X
2417	1540	X	X	X	X					X	X	X	X				
	1541		X	X	X	X					X	X	X	X			
	1542			X	X	X	X					X	X	X	X		
	1543				X	X	X	X	X				X	X	X	X	X
	1544					X	X	X	X					X	X	X	X
	1545						X	X	X						X	X	X
	1546							X	X							X	X
2418	1540									X	X	X	X				
	1541										X	X	X	X			
	1542											X	X	X	X		
	1543												X	X	X	X	X
	1544													X	X	X	X
	1545														X	X	X
	1546															X	X
2419	1540		X	X	X												
	1541			X	X	X											

Model 840																	
To		2419								2420							
From		1540	1541	1542	1543	1544	1545	1546	1547	1540	1541	1542	1543	1544	1545	1546	1547
	1542				X	X	X										
	1543					X	X	X	X								
	1544						X	X	X								
	1545							X	X								
	1546								X								
	1547																
2420	1540										X	X	X				
	1541											X	X	X			
	1542												X	X	X		
	1543													X	X	X	X
	1544														X	X	X
	1545															X	X
	1546																X
	1547																

RISC to RISC Data Migration (#0205): This specify code is used when a customer orders a new (RISC) AS/400e server to replace an existing (RISC) AS/400e. The #0205 is orderable on any initial order AS/400e server 170 model or 7xx model. Preload of Licensed Programs, by manufacturing, is not allowed with #0205. Manufacturing only loads SLIC up through QSYS of OS/400 when #0205 is ordered.

The #0205 and #5000 are mutually exclusive.

Chapter 4. 9406 SB2 and SB3 Models

This chapter identifies the features associated with each SBx system, such as the processor features, power and packaging, main storage, workstation controllers, and communications—including LANs and ATM, disk units, internal tape units, CD-ROM, and magnetic media controllers.

The Model SB2 and SB3 product family provides more flexibility in the placement of IOPs and IOAs. This results in more efficient use of card slots, potentially resulting in a lower cost of implementation. Increased flexibility of configuration also adds, in certain cases, an increased requirement to understand the detailed configuration rules. See Chapter 5, “PCI Card Placement Rules” on page 101, for a complete understanding of these rules.

OS/400 V4R5 is required to support SB2 and SB3 systems.

4.1 9406 SB2 and SB3 Model Overview

Model	SB2	SB3	
Processor Feature	#2315	#2316	#2318
Relative System Performance (Note 1)			
Processor CPW	7350	10000	16500
Interactive CPW	N/A	N/A	N/A
Number of Processors/Type	8/IStar	12/IStar	24/IStar
L2 Cache (MB)	8x4	8x4	8x4
Main Storage (GB)	12	16	24
Main Storage DIMMs or Cards (Min/Max)	48/48	8/8	12/12
Processor Group	P30	P40	P40
DASD Storage			
DASD Arms Maximum	4	6	8
Physical Minimum (GB)	34.3	34.3	34.3
Physical Maximum	70.1	105.2	140.3
Logical Maximum (Raid-5 Protection)	52.6	87.7	122.7

	SB2 Base #9074	SB3 Base #9079	Migration Tower II #5077	SB2 Total	SB3 Total
Diskette (8 or 5.25 inch)	0	0	2	2	2
Communication Lines (Note 3)	32	32	12	32	32
Twinax Workstation Controllers	1	1	1	1	1
Twinaxial Devices	28	28	28	28	28
CD-ROM/Internal Tape (Note 4)	2	2	3	3	3
External Tape	5	7	4	5	7
Tape Libraries Maximum (Note 2)	4	4	4	4	4
Optical libraries	2	2	2	2	2
Physical Packaging					
External HSL Ports (Note 5)	4	8	-	4	8
External HSL Loops (Note 5)	2	4	-	2	4
#5077 Migration Tower II Supported	1	1	-	1	1
Max SPD cards/PCI IOPs	3	3	2	3	3
PCI Adapter Card slots (usable)	14	14	-	14	14
Maximum PCI IOA Cards (usable)	11	11	-	11	11
LAN Ports Maximum	6	6	4	6	6
Integrated Netfinity Server Maximum	2	2	2	2	2

4.2 9406 SB2 and SB3 Models

The SB2 System Tower is packaged in a Model 830. The SB3 System Tower is packaged in a Model 840.

For the system diagrams, see 3.5, “Model 830 System Unit” on page 43, and 3.6, “Model 840 System Unit” on page 45.

SB2 AND SB3 PROCESSORS	
#2315	SB2 7350 CPW 8-Way Processor in Client/Server Environment. Base Memory 12 GB. Base Features include: <ul style="list-style-type: none"> • Main Storage Expansion Card (2X) (CCIN 2881) • 48 Main Storage DIMMs (CCIN 300F) • #9733 Bus Expansion/Clock Card—Eight HSL Ports (CCIN 25AD) • PCI and Common Service Processor Card (CCIN 28AA) • Bus Adapter (CCIN 2681) • Processor Capacity Card (CCIN 2315) • Processor 0 (CCIN 245D) • Processor 1 (CCIN 245D)
#2316	SB3 10000 CPW 12-Way Processor in Client/Server Environment. Base Memory 16 GB. Base Features include: <ul style="list-style-type: none"> • Terminator/Filler Card (CCIN 246C) (2X) • 8X 2048MB Main Storage Cards (CCIN 319A) installed (16384 MB total) • PCI and Common Service Processor Card (CCIN 28AA) • Bus Adapter (CCIN 2681) • Processor Regulators (CCIN 2714) (2X) • SPCN Card (CCIN 285B) (1X) • Processor Capacity Card (CCIN 2316) • Processor 0 (CCIN 245F) • Processor 1 (CCIN 245E)
#2318	SB3 16500 CPW 24-Way Processor in Client/Server Environment. Base Memory 24 GB. Base Features include: <ul style="list-style-type: none"> • 12X 2048MB Main Storage Cards (CCIN 319A1) installed (24576 MB total) • PCI and Common Service Processor Card (CCIN 28AA) • Bus Adapter (CCIN 2681) • Processor Regulators (CCIN 2714) (2X) • SPCN Card (CCIN 285B) (1X) • Processor Capacity Card (CCIN 2318) • Processor 0 (CCIN 245F) • Processor 1 (CCIN 245E) • Processor 2 (CCIN 245E) • Processor 3 (CCIN 245E)
POWER AND PACKAGING	
#0382	Remote Control Panel Cable If you are connecting the remote control panel cable to the iSeries servers 270, 820, 830, or 840, you need an available parallel port (LPT) instead of a COM port on your PC. The parallel port must be configured to use Enhanced Parallel Port (EPP) support, which may require a change in the PCs Basic Input/Output Services (BIOS). Check with your PC manufacturer for any assistance, if needed. Some PCs may not support this function due to BIOS or hardware incompatibilities. This is a Customer Install Feature (CIF).

#5077	<p>Migration Tower II</p> <p>The #5077 is a feature I/O tower that supports two SPD I/O cards. The #5077 may be ordered to support clustering on the Models SB2 and SB3. In this case the #5077 is shipped as a new tower and is supplied with a base optical link card (CCIN 2696) and base CD-ROM. One or two feature #2695 Optical Bus Adapters may be ordered for the #5077. Up to two SPD cards may be ordered. The #5077 supports up to three internal tape/CD devices.</p> <p>See the 640, 650, S30, S40, 730, and 740 sections for supported cards and devices.</p> <p>Select one of the following HSL cables if the #5077 has just the base optical link card installed. Select two (any combination) of the following HSL cables if the #5077 has one or two #2695 Optical Bus Adapters installed:</p> <ul style="list-style-type: none"> #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable #1462 - 15m Copper HSL Cable <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #1466 - 30m SPCN Cable <p>One JTAG-C cable (6m) is included with the #5077.</p> <p>One #14xx power cord must be specified (geography dependent).</p> <p>Restrictions: Disks may not be installed in the #5077 when attached to SB2 or SB3.</p> <p>Maximum: One</p>
#5150	<p>Battery Backup (external)</p> <p>Models SB3 only.</p> <p>The #5150 is an external battery backup that, when used in conjunction with the internal battery backup, is capable of extending the battery backup time.</p>
#9074	<p>Base I/O Tower</p> <p>The #9074 is the “base” I/O tower shipped on Models SB2. The #9074 supports up to four disk units, when installed in the SB2, up to two removable media units, one battery backup, and redundant/hot swap power supplies. The #9074 has a #9943 Base PCI IOP and a #9748 PCI RAID Disk Unit Controller. The eleven PCI IOAs are supported (driven) by the base #9943 PCI IOP and by feature #2843 PCI IOPs. The #2790 Integrated Netfinity Servers and #2791 Integrated xSeries Servers can also support selected LAN cards.</p> <p>Select two (any combination) of the following HSL cables:</p> <ul style="list-style-type: none"> #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable #1462 - 15m Copper HSL Cable <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #1466 - 30m SPCN Cable <p>One JTAG-C cable (6m) is included with the #5077.</p> <p>One #14xx power cord must be specified (geography dependant).</p> <p>The #9074 is capable of controlling Ultra2 SCSI disk units.</p> <p>The two removable media devices (internal tape or CD-ROM) are supported by the #9748.</p>
#9079	<p>Base I/O Tower</p> <p>The #9079 is the “base” I/O tower shipped on SB3 models. The #9079 supports up to six disk units when installed in the #2316 SB3 processor and eight on the #2318 SB3 processor, up to two removable media units, one battery backup, and redundant/hot swap power supplies. The #9079 has a #9943 Base PCI IOP and a #9748 PCI RAID Disk Unit Controller. The eleven PCI IOAs are supported (driven) by the base #9943 PCI IOP and by feature #2843 PCI IOPs. The #2790 Integrated Netfinity Servers and or #2791 Integrated xSeries Server can also support selected LAN cards.</p> <p>Select two (any combination) of the following HSL cables:</p> <ul style="list-style-type: none"> #1460 - 3m Copper HSL Cable #1461 - 6m Copper HSL Cable #1462 - 15m Copper HSL Cable <p>Select one of the following SPCN cables per tower:</p> <ul style="list-style-type: none"> #1463 - 2m SPCN Cable #1464 - 6m SPCN Cable #1465 - 15m SPCN Cable #1466 - 30m SPCN Cable <p>One #14xx power cord must be specified (geography dependent).</p> <p>#9079 is capable of controlling Ultra2 SCSI disk units.</p> <p>The two removable media devices (internal tape or CD-ROM) are supported by the #9748.</p>

#9733	Bus Expansion—8 HSL Ports #9733 is a base bus expansion card, which installs in the SB2 System Unit. The #9733 has eight HSL ports.
#9737	Bus Expansion—16 HSL Ports #9737 is a base bus expansion card, which installs in the SB3 System Unit. The #9737 has 16 HSL ports.
MAIN STORAGE	
	There are no memory features on Models SB2 and SB3 Models.
PCI IOP CONTROLLERS	
#9943 Base IOP	Base IOP The #9943 (CCIN 2843) is included as the base IOP for Models SB2 and SB3. See the #2843 for details and cards supported.
#2790 or #2791	Integrated Netfinity Server or Integrated xSeries Server The #2790 Integrated Netfinity Server contains a 700 MHz processor and the #2791 contains a 850MHz processor. Both processors contain four main storage slots. The #2790/#2791 is supported in the system tower. Each main storage slot can contain either a 128 MB main storage card, a 256 MB main storage card, or a 1024 MB main storage card providing a total main storage capacity ranging from 128 MB to 4196 MB (4 GB). When the maximum memory is installed, only 3712 MB is addressable. At least one main storage card is required. The feature numbers of the main storage cards are as follows: #2795 - 128 MB Netfinity IOP Memory #2796 - 256 MB Netfinity IOP Memory #2797 - 1 GB Netfinity IOP Memory #2797 - 1 GB Netfinity IOP Memory The #2790/#2791 can support PCI 100/16/4 Mbps Token Ring IOAs or a PCI 100/10 Mbps Ethernet IOAs in any combination. At least one LAN IOA is required. The features for the LAN IOAs are as follows: #4838 PCI 100/10 Mbps Ethernet IOA #2744 PCI 100 Mbps Token Ring IOA #2744 PCI 100 Mbps Token Ring IOA When a #2790/#2791 is on the order, if the #4838 is selected, specify code #0224 is required for each #4838 selected to run on the #2790/#2791. If #2744 is selected, specify code #0223 is required for each #2744 selected to run on the #2790/#2791. Up to three IOA LAN features can be supported by the #2790/#2791, depending on which PCI card position the #2790/#2791 is placed. The #2790/#2791 does not require a #2843 or #9943, but placement is limited to specific slots within the various CECs and expansion towers. Prerequisite: R450 for #2790 and #2791 also requires CUM C1005450. The #2790/#2791 requires three PCI card slots on the system/expansion tower backplane; two slots are consumed by the #2790/#2791, and the third slot is reduced to a short card slot (which will be used by the first LAN IOA card). The #2790/#2791 supports only the Window NT and Windows 2000 operating systems. The following points apply: #0325 (IPCS Extension Cable for Windows) default (but may be removed). #1700 (IPCS Keyboard/Mouse for Windows) is default (in those countries offering it). A display must be connected to the Integrated Netfinity Server to support Windows. For non-US keyboard/mouse and display, see http://www.ibm.com/eserver/series/windowsintegration/ The #2790/#2791 ships with a keyboard/mouse splitter cable. Restrictions: Native OS/400 functions are <i>not</i> supported. The #2790/#2791 does not support external host LAN. Maximum: Two.

#2843 #9943	<p>PCI IOP</p> <p>#2843 is a PCI I/O processor with 64 MB of memory which drives PCI IOA adapters. The #2843 can drive up to four IOAs. The following IOAs are supported (driven) by the #2843/#9943 PCI IOP:</p> <ul style="list-style-type: none"> #2743 - PCI 1 Gbps Ethernet IOA #2744 - PCI 100 Mbps Token Ring #2763 - PCI RAID Disk Unit Controller (Model 820 only) #2749 - PCI Ultra Mag Media Controller #2768 - PCI Magnetic Media Controller #4723 - PCI 10 Mbps Ethernet IOA #4745 - PCI WAN IOA #4746 - PCI Twinaxial IOA #4748 - PCI RAID Disk Unit Controller #4750 - PCI ISDN BRI U IOA #4751 - PCI ISDN BRI S/T IOA #4761 - PCI Integrated Analog Modem #4801 - PCI Cryptographic Coprocessor #4815 - PCI ATM 155 Mbps UTP OC3 #4816 - PCI ATM 155 Mbps MMF #4818 - PCI ATM 155 Mbps SMF OC3 #4838 - PCI 100/10 Mbps Ethernet IOA #9771 - Base PCI 2-Line WAN with Modem <p>Note: PCI cards are subject to plugging rules. See Chapter 5, "PCI Card Placement Rules" on page 101, for details. Maximum: Two in #9074 or #9079. Note: Base #9943 not counted in these maximums. This is a Customer Install Feature (CIF).</p>
WORKSTATION CONTROLLERS	
#4746	<p>PCI Twinaxial Workstation IOA</p> <p>The Twinaxial Workstation IOA provides support for up to 40 twinaxial displays and printers. A 20-foot cable with an eight-port expansion (breakout) box is included with this adapter. Each port supports seven attached devices, allowing for 56 total attached devices, of which only 40 can be active. Maximum: One. This is a Customer Install Feature (CIF).</p>
#5540	<p>System Console Attached to Twinaxial Adapter</p> <p>A system console specify code must be selected on each new order, either #5540 or #5544. When #5540 is on the order, the system console is driven by a twinaxial adapter. The following adapters are added to the order:</p> <ul style="list-style-type: none"> #4746 PCI Twinaxial IOA (Console) #9771 Base PCI 2-Line WAN with Modem <p>#9771 is plugged under the Base IOP. The #4746 is controlled by the first or second Multi-Adapter Bridge.</p>
#5544	<p>System Console Attached to WAN Adapter</p> <p>A system console specify code must be selected on each new order, either #5540 or #5544. When #5544 is on the order, the system console is driven by an Operations console via a WAN adapter. The following adapters and cable are added to the order:</p> <ul style="list-style-type: none"> #4745 PCI Two-Line WAN IOA (Console) #0367 Operations Console PCI Cable #9771 Base PCI 2-Line WAN w/Modem <p>#9771 is plugged under Base IOP. The #4745 is plugged under the first or second Multi-Adapter Bridge.</p>
LAN/WAN ADAPTERS	
#2743	<p>PCI 1 Gbps Ethernet Adapter</p> <p>The #2743 PCI 1 Gbps Ethernet IOA feature allows the iSeries or AS/400e server to attach to IEEE standard 802.3Z high speed Ethernet LANs (1 Gbps). It can also be used to connect to existing 100 Mbps Ethernet LANs using switches with 10/100/1000 Mbps ports. The adapter supports multi-mode fiber media attachment to customer supplied cabling. Restrictions: The #2743 requires a gigabit-capable switch with at least one port that supports a 1000BASE-SX interface with IEEE 802.3z and 802.3u compliance. It supports only a multi-mode fiber optic cable connection from the adapter to the switch. The #2743 supports 1000 Mbps (1Gbps) full duplex interface only. Cannot negotiate down to a lower speed. Stations on the 10 Mb and 1000 Mb switched LANs can communicate with the #2743 through a switch that is capable of handling all these speeds. In this case, the switch handles the speeds. The #2743 is not supported by the #2790 Integrated Netfinity Server or #2791 Integrated xSeries Server. Requires a 64-bit card slot. Protocols supported: TCP/IP only. SNA and IPX connections are not supported. Maximum: One per Multi-Adapter Bridge boundary. This is a Customer Install Feature (CIF).</p>

#2744	<p>PCI 100 Mbps Token Ring Adapter</p> <p>The PCI 100 Mbps Token Ring IOA provides a single attachment to a 100 Mbps, 16 Mbps, or 4 Mbps IBM Token Ring Network. The feature consists of an IOA card, internal code which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions. The 100/16/4 Token Ring IOA is capable of operating in half or full duplex mode. A 2.44 meter (8 ft) Token Ring cable is included with this feature. As an alternative, the customer can attach a separately priced twisted pair cable to the RJ45 connection on the IOA. IBM Cabling System patch cables, included with this feature, can increase the length as required. If the #2744 is selected to run on the #2790 Integrated Netfinity Server or #2791 Integrated xSeries Server, specify code #0223 is required for each #2744 selected to run on the #2790/#2791. This is a Customer Install Feature (CIF).</p>
#4723	<p>PCI 10 Mbps Ethernet Adapter</p> <p>The PCI Ethernet IOA provides single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. The feature consists of an adapter card and internal code which supplies Ethernet version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. The #4723 has an RJ45 connector and a 15 pin D-Shell connector for attachment to customer supplied cabling. A vendor AUI Ethernet cable or RJ45 twisted pair cable must be ordered separately.</p> <p>Restrictions: #4723 is not supported by #2790 Integrated Netfinity Server or #2791 Integrated xSeries Server. This is a Customer Install Feature (CIF).</p>
#4745	<p>PCI 2-Line WAN Adapter</p> <p>The #4745 supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20 ft PCI cable #0349 V.24/EIA232 50-ft PCI cable #0353 V.35 20 ft PCI cable #0354 V.35 50-ft PCI cable #0355 V.35 80-ft PCI cable #0356 V.36 20 ft PCI cable #0358 V.36 150-ft PCI cable #0359 X.21 20 ft PCI cable #0360 X.21 50-ft PCI cable #0365 V.24/EIA232 80-ft PCI cable #0367 Operations Console Cable <p>Multiple #0367s can be ordered (but only one allowed per #4745) to serve as consoles for secondary partitions when logical partitioning (#0140) is specified. When the #4745 is selected to support ECS, one of the following cables must be specified:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20 ft PCI cable (Default) #0349 V.24/EIA232 50-ft PCI cable #0365 V.24/EIA232 80-ft PCI cable <p>This is a Customer Install Feature (CIF).</p>
#4750	<p>PCI ISDN BRI U Adapter</p> <p>The #4750 is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #4750 is the "U"-bus (2 wire) version of the ISDN BRI PCI card. The #4750 feature supports the following protocols:</p> <ul style="list-style-type: none"> SLIP/PPP IDLC Fax <p>Four 30-foot RJ-45 to RJ-45 network cables are shipped with each #4750 feature.</p> <p>This counts as eight lines towards the system communication maximums.</p> <p>Restrictions: Requires long PCI card slot.</p> <p>This is a Customer Install Feature (CIF).</p>
#4751	<p>PCI ISDN BRI S/T Adapter</p> <p>The #4750 is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #4751 is the "S/T"-bus (4 wire) version of the ISDN BRI PCI card. The #4751 feature supports the following protocols:</p> <ul style="list-style-type: none"> SLIP/PPP IDLC Fax <p>Four 30-foot RJ-45 to RJ-45 network cables are shipped with each #4751 feature.</p> <p>This counts as eight lines towards the system communication maximums.</p> <p>Restrictions: Requires long PCI card slot.</p> <p>This is a Customer Install Feature (CIF).</p>

#4761	<p>#4761 Integrated Analog Modem</p> <p>The #4761 is based on the latest Digital Signal Processor (DSP) technology. The #4761 allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). The #4761 feature supports the following protocols without the need for a external modem:</p> <ul style="list-style-type: none"> SLIP/PPP SDLC Fax <p>An ASYNC line description is required for Fax and can only be used for Fax. To the iSeries or AS/400e server, the #4761 appears like a single IOA with eight individual line resources available. 30-foot (8m) phone cables are shipped with each #4761 feature.</p> <p>This counts as eight lines towards the system communication maximums.</p> <p>Restrictions: Requires long PCI card slot.</p> <p>This is a Customer Install Feature (CIF).</p>
#4801	<p>PCI Cryptographic Coprocessor</p> <p>The #4801 is a hardware cryptography solution. The #4801 is a half-length PC form-factor PCI card that offers a rich cryptography function, secure storage of cryptographic keys, and 12 MB/s performance (at the card level) for bulk data encryption and triple DES capability. The #4801 is available worldwide. The level of cryptographic function is determined by the Cryptographic Access Provider licensed program which is downloaded to the adapter.</p> <p>Note: On new shipments from the plant, the #4801 ships with the system, but not installed.</p> <p>This is a Customer Install Feature (CIF).</p>
#4815	<p>PCI 155 Mbps UTP OC3 ATM</p> <p>The #4815 is a 155 Mbps Asynchronous Transfer Mode (ATM) PCI card that allows the iSeries or AS/400e server to be attached to an ATM network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #4815 is typically used where 155 Mbps speeds are required over distances of less than 100 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>This is a Customer Install Feature (CIF).</p>
#4816	<p>PCI 155 Mbps MMF ATM</p> <p>The #4816 is a 155 Mbps Asynchronous Transfer Mode (ATM) PCI card that allows the iSeries or AS/400e server to be attached to an ATM network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #4816 is typically used where 155 Mbps speeds are required over distances of less than 2 Km. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>This is a Customer Install Feature (CIF).</p>
#4818	<p>PCI 155 Mbps SMF ATM</p> <p>The #4818 is a 155 Mbps Asynchronous Transfer Mode (ATM) PCI card that allows the iSeries or AS/400e server to be attached into an ATM network using the Single-Mode Fiber (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment. The #4818 is typically used where 155 Mbps speeds are required over distances of from 16 to 40 Km. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>This is a Customer Install Feature (CIF).</p>
#4838	<p>PCI 100/10 Mbps Ethernet IOA</p> <p>The PCI 100/10 Mbps Ethernet IOA feature allows the iSeries or AS/400e server to attach to standardized 100 Mbps high speed Ethernet LANs and also allow attachment to existing 10 Mbps Ethernet LANs. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media. Cabling for 10 Mbps must be CAT-3 or CAT-5, and cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. Maximum cable length is 100 m.</p> <p>If #4838 is selected to run on the #2790 Integrated Netfinity Server or #2791 Integrated xSeries Server, then specify code #0224 is required for each #4838 selected to run on the #2790/#2791.</p> <p>This is a Customer Install Feature (CIF).</p>

#9771	<p>Base PCI 2-Line WAN w/Modem</p> <p>The #9771 is a 2-line WAN adapter. One port supports V.90 56K Async Data on PPP via an internal modem. The second port supports multiple protocol communications. Connection to the V.90 port is via telephone cable. Connection to the communication port is through one of the following cables:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20-ft PCI cable #0349 V.24/EIA232 50-ft PCI cable #0353 V.35 20-ft PCI cable #0354 V.35 50-ft PCI cable #0355 V.35 80-ft/24m PCI cable #0356 V.36 20-ft PCI cable #0358 V.36 150-ft/45m PCI cable #0359 X.21 20-ft PCI cable #0360 X.21 50-ft PCI cable #0365 V.24/EIA232 80-ft PCI cable <p>ECS and Fax are not supported on the V.90 port at this time. IBM intends to support ECS on the V.90 port in a future release of OS/400 and with a Group PTF for V4R5.</p> <p>ECS operates on the WAN port of the #9771 by changing the *RSRCNAME parameter of the QESLINE and QTILINE line descriptions to that of the WAN port on the #9771 card.</p> <p>ECS operates on the WAN port of the #9771 by changing the *RSRCNAME parameter of the QESLINE and QTILINE line descriptions to that of the WAN port on the #9771 card.</p> <p>When the #9771 is selected to support ECS, one of the following cables must be specified and connects to the WAN port:</p> <ul style="list-style-type: none"> • #0348 V.24/EIA232 20-ft PCI cable (Default) • #0349 V.24/EIA232 50-ft PCI cable • #0365 V.24/EIA232 80-ft PCI cable <p>The #9771 does not support the #5544 Operations Console as the Systems Console.</p> <p>Communications restrictions apply. Refer to Chapter 5, "PCI Card Placement Rules" on page 101.</p>
DISK UNITS	
#4314	<p>8.58 GB Disk Unit Ultra SCSI</p> <p>Provides a 3 ½-inch single disk unit with 8.58 GB capacity for a additional disk storage. This is a Customer Install Feature (CIF). Maximum: Four on SB2. Six on SB3 #2316. Eight on SB3 #2618.</p>
#4317	<p>8.58 GB Disk Unit 10k RPM (Ultra2 SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 8.58 GB capacity for a additional disk storage. Maximum: Four on SB2. Six on SB3 #2316. Eight on SB3 #2618 This is a Customer Install Feature (CIF).</p>
#4318	<p>17.54 GB Disk Unit 10k RPM (Ultra2 SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 17.54 GB capacity for a additional disk storage. Maximum: Four on SB2. Six on SB3 #2316. Eight on SB3 #2618. This is a Customer Install Feature (CIF).</p>
#4324	<p>17.54 GB Disk Unit (Ultra SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 17.54 GB capacity for a additional disk storage. Maximum: Four on SB2. Six on SB3 #2316. Eight on SB3 #2618. This is a Customer Install Feature (CIF).</p>
#4331	<p>1.6 Gb Read Cache Device</p> <p>This feature provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the disk controller #4748.</p> <p>Note: The #4331 is installed in the left most slot of each five-pack partition and only takes one slot.</p> <p>Maximum: One per #4748 IOP. This is a Customer Install Feature (CIF).</p>

INTERNAL TAPE UNITS AND CD-ROM	
#4425	CD-ROM Feature The #4425 is a feature CD-ROM device that can be mounted in the system unit. The #4425 can be used for Alternate IPL (IBM distributed CD-ROM media only) and program distribution. A CD-ROM is required. This is a Customer Install Feature (CIF).
#4482	4 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. The #4482 is a 4 GB ¼-inch Cartridge Tape Unit that can be mounted in the system unit. This is a Customer Install Feature (CIF).
#4483	16 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. The #4483 is a 4 GB ¼-inch Cartridge Tape Unit that can be mounted in the system unit. This is a Customer Install Feature (CIF).
#4486	25 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. The #4486 is a 4 GB ¼-inch Cartridge Tape Unit that can be mounted in the system unit. This is a Customer Install Feature (CIF).
MAGNETIC MEDIA CONTROLLERS	
#2749	PCI Ultra Magnetic Media Controller The #2749 is an Ultra SCSI IOA that provides attachment capability for external tape devices and external optical devices. The #2749 can attach one tape drive OR one optical drive. The following tape devices can be attached: <ul style="list-style-type: none"> • 3490E E01/E11 ½-inch Cartridge Tape Subsystem • 3490 F00/F01/F11/F1A ½-inch Cartridge Tape Subsystem • 3490E C11/C22/C1A/C2A with feature #5040 • 3494 Tape Library Dataserver <ul style="list-style-type: none"> L10 Library Control Unit Frame 1 3490E C1A/C2A with #5040 or 1-2 3490E F1A L12 Library Control Unit Frame 1-2 3590 B1A D10 Device Frame 1 3490E C1A/C2A with #5040 or 1-2 3490E F1A, 300 cartridges D12 Device Frame 1-6 3590 B1A, 300 cartridges HA1 (High Availability)—2 L1X and 2 D1X for redundancy • 3570 0.31 inch Cartridge Tape Subsystem <ul style="list-style-type: none"> Model B00 (standalone) Model B01 (standalone) Model B02 (standalone) Model B11 (rack mount) Model B12 (rack mount) Model B1A (mounts in 3575) Model C00 (standalone) Model C01 (standalone) Model C02 (standalone) Model C11 (rack mount) Model C12 (rack mount) Model C1A (mounts in 3575) • 3575 0.31-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> Model Lxx • 358X-Hxx/Lxx/Dxx Tape Cartridge Subsystem • 3590 ½-inch Cartridge Tape Subsystem <ul style="list-style-type: none"> Model B11 (mounts into 9309 rack) Model B1A (mounts into 3494 library) Model E11 (mounts into 9309 rack) Model E1A (mounts into 3494 library) • 3995-Cxx Optical Library Dataserver • 7208-012 5.0 GB 8mm Cartridge Tape Unit)

#2749 <i>continued</i>	<ul style="list-style-type: none"> 7208-222 7.0 GB 8mm Cartridge Tape Unit 7208-232 8MM Dual 5.0 GB Cartridge Tape Subsystem <ul style="list-style-type: none"> #0501 counts as one 7208 #0502 counts as two 7208s 7208-234 8 MM Dual 7.0 GB Cartridge Tape Subsystem <ul style="list-style-type: none"> Counts as 2 7208s 7208-342 20.0 GB 8 mm Cartridge Tape Bridge Box 9348-00x ½-inch Reel Tape Unit - Rack Mount 9427-2108 8 mm Library Attach <p>This is a Customer Install Feature (CIF).</p>
#2768	<p>PCI Magnetic Media Controller</p> <p>The #2768 provides Ultra SCSI attachment capability for an external tape or an external CD-ROM device that has a Single Ended SCSI interface. The #2768 supports the following devices:</p> <ul style="list-style-type: none"> 7207-122 QIC-SLR Tape Bridge Box 7210-020 CD-ROM Bridge Box <p>The 2768 supports one 7207-122 or one 7210-020 or one 7207-122 and one 7210-020. When both the 7207-122 and the 7210-020 are attached, the two devices must be “daisy chained” with the 7207-122 physically connected first.</p> <p>This is a Customer Install Feature (CIF).</p>
#9748	<p>PCI RAID Disk Unit Controller—26 MB Cache</p> <p>The #4748/#9748 is an Ultra2 SCSI controller with a 26 MB write-cache that provides RAID-5 protection and compression for internal disk units and also supports internal tape units and CD-ROM units. The #4748/#9748 supports both compression and non-compression modes. The mode of operation is determined by a hardware jumper. The #4748/#9748 is shipped in non-compression mode. By moving the hardware jumper, the controller functions in compression mode. In addition to providing RAID-5 protection for disks, the #4748/#9748 is also designed to work as a high performance controller for disks protected by system mirroring or disks with no protection. The #4748 also supports the #4331 1.6Gb Read Cache Device, which provides increased performance. Read Cache Device (#4331) is supported only when the #4748/#9748 is <i>not</i> in compression mode.</p> <p>The #4748 controller supports a maximum of eight disk units on the SB3 and four on the SB2.</p> <p>The #9748 is the base disk controller for SB2 and SB3.</p> <p>A minimum of four disk units of the same capacity are needed for a valid RAID 5 configuration. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to seven disk units. Parity can be spread across either four or eight disk units. For systems started with 8 to 10 disk units in an array the parity, for that array, will be spread across eight disk units. For systems that are started with less than eight disk units in an array and later MESed to eight, the RAID function must be stopped and then started before the parity will be spread across eight disk units.</p> <p>The #4748/#9748 controls up to two removable media devices (internal tape or CD-ROM).</p> <p>This is a Customer Install Feature (CIF).</p>

4.3 Upgrades

The #2216 can be upgraded to the #2218. Upgrades from SB1 to SB2 or SB3 are not supported. Upgrades from SB2 to SB3 are not supported.

RISC to RISC Data Migration (#0205): This specify code is used when a customer orders a new (RISC) AS/400e server to replace an existing (RISC) AS/400e. The #0205 is orderable on any initial order AS/400e server 170 model or 7xx model. Preload of Licensed Programs, by manufacturing, is not allowed with #0205. Manufacturing only loads SLIC up through QSYS of OS/400 when #0205 is ordered.

The #0205 and #5000 are mutually exclusive.

Chapter 5. PCI Card Placement Rules

The implementation of new PCI technologies in the 9406 Model 270 and 8xx servers changes the configuration rules associated with the various features of the iSeries and AS/400e servers. Prior models required input/output processors (IOPs) to be in specific slots in the system and expansion towers.

The iSeries Model 270 and 8xx product families provide more flexibility in the placement of IOPs and IOAs. This can result in more efficient use of card slots, potentially resulting in a lower cost of implementation. For example, a specific PCI IOP may be able to support two high-performance IOAs, or four slower IOAs, but may not have the capacity to support one high-performance IOA and two slower IOAs.

Increased flexibility of the configuration also adds, in certain cases, an increased requirement to understand the detailed configuration rules. This chapter helps you understand when to add IOPs to avoid saturation of a present configuration. This information applies to 270 and 8xx systems only. For communications restrictions for other systems, refer to the appropriate chapter in this publication.

The following sections describe the configuration and card placement rules that must be understood to develop valid configurations.

Note: This chapter identifies basic communications restrictions when using #2842, #2843, #284B, #284C, #284D, #284E, #2790/#2890 IOPs and #2743, #2744, #4745, #4746, #4750, #4751, #4761, #4838, #9771 features, and other communications functions. For more complete information, refer to the *AS/400 Performance Capabilities Reference V4R5* on the Web Site

<http://publib.boulder.ibm.com/pubs/html/as400/online/chgfrm.htm>

The *Performance Capabilities Reference* also has performance information for other I/O throughput, such as disk and tape.

5.1 Configuration Rules

There are a series of “hard” and “soft” rules that define the combinations of IOPs and IOAs supported in an iSeries or AS/400e server. What is meant by hard and soft rules?

- **Hard rules** are rules and restrictions automatically enforced by the iSeries or AS/400e Marketing Configurators. The hard rules are documented in 5.4.4, “Hard Rules: IOA Capabilities” on page 106, as well as with the individual feature descriptions later in this document.
- **Soft rules** are rules and restrictions on combinations of IOAs that are allowed under a single IOP based on how the IOAs are used. Since these rules are entirely usage dependent, the iSeries and AS/400e Marketing Configurators cannot enforce them. The soft rules are documented in 5.5, “Soft Rules: IOA Requirements” on page 110. There are only certain situations where the soft rules need to be used. Those situations are:
 - **High Speed Lines:** On the Two-Line WAN IOA (#4745) or the Two-Line WAN IOA with Modem (#9771) running synchronous PPP, SDLC, Frame Relay, or X.25 where the line speed will be greater than 64 Kbps.
 - **X.25:** On the Two-Line WAN IOA (#4745) or the Two-Line WAN IOA with Modem (#9771) if more than 64 Virtual Circuits are required per IOA.
 - **Frame Relay:** The Two-Line WAN IOA (#4745) or the Two-Line WAN IOA with Modem (#9771) are to be used for Frame Relay.
 - **SDLC:** If more than 64 controllers are to be attached per line on the Two-Line WAN IOA (#4745) or the Two-Line WAN IOA with Modem (#9771).

- **IPX:** If IPX protocol is to be used on the Two-Line WAN IOA (#4745), the Two-Line WAN IOA with Modem (#9771), or any LAN IOA.
- **LAN:** For best performance recommendations for the high speed LAN IOAs (#4838, #2744, or #2743).
- **ATM:** For best performance recommendations or if there is a need to run multiple emulated LANs on an ATM IOA (#4815, 4816, or #4818).
- The **Integrated Netfinity Server** has a unique set of rules that are separate and distinct from the rules for the other IOPs and IOAs. These rules are described in 5.6, “Integrated Netfinity Server IOP Rules” on page 112. These rules are automatically enforced by the configurator.

Note

If the configuration rules and restrictions are not fully understood and followed, it is possible to create a hardware configuration that will not work, marginally works, or quits working when a system is upgraded to future software releases.

The intent of this chapter is to provide guidance in configuring IOAs and IOPs so that the system is sized to meet customer expectations. Section 5.4, “Configuration Validation Procedure” on page 105, describes a simple method of determining whether the IOAs selected and their usage will overburden a specific IOP.

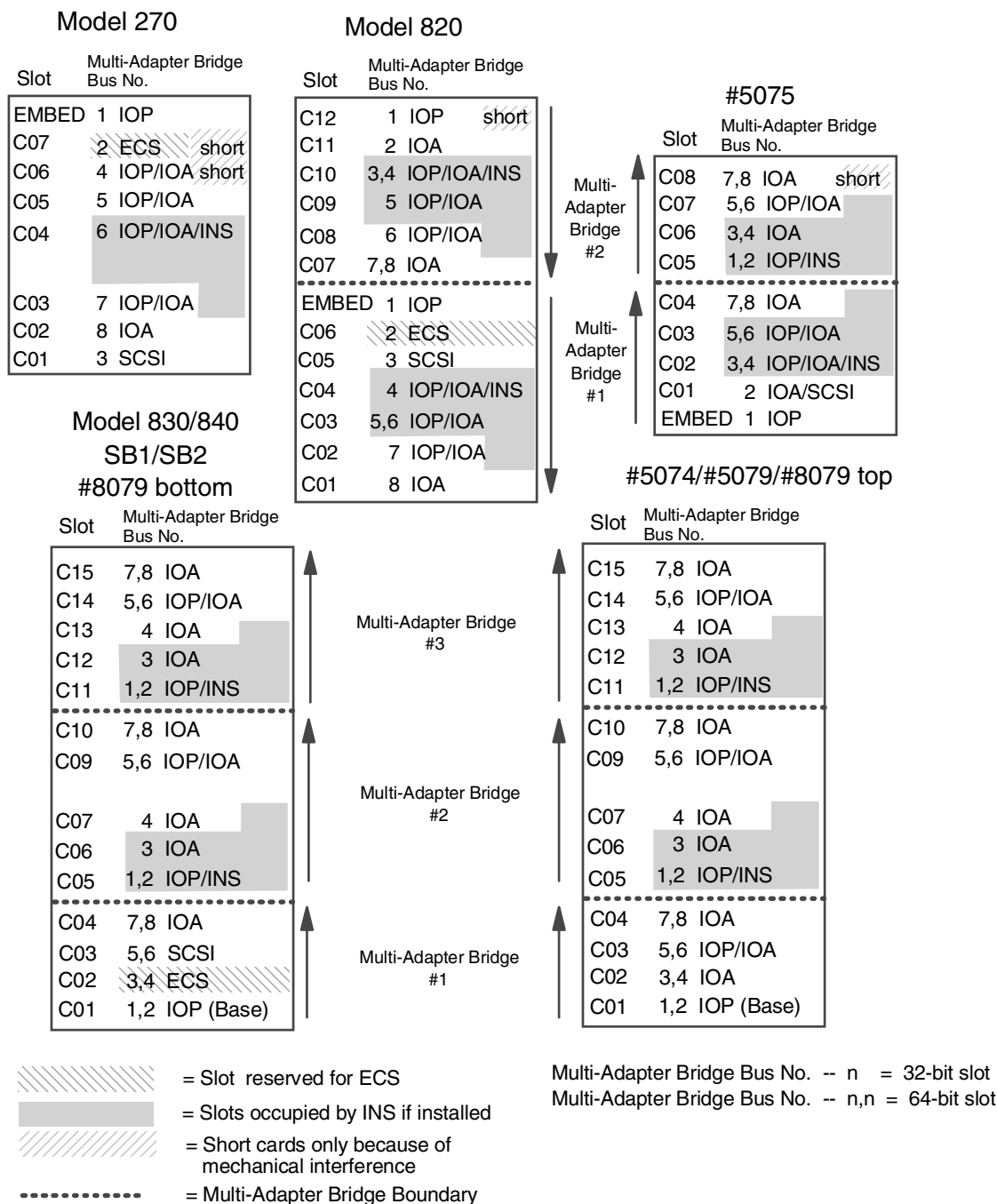
It should also be noted that this section does not cover the migration towers that can be attached to the Model 8xx server. For configuration rules related to migrated hardware, see the description of the affected features to be migrated.

5.2 Card Enclosure Layout

This section describes the layout of the card enclosures for the various system and expansion towers. For information on the Migration Towers (#5033, #5034, #5035, and #5077), see “POWER AND PACKAGING” on page 58.

There are several new concepts in the 270 and 8xx systems, such as Multi-Adapter Bridge, Multi-Adapter Bridge Boundaries, and Multi-Adapter Bridge Bus Number. These terms are defined later in this section. Knowledge of these new concepts is required to understand the card rules defined later in this chapter. All the discussions in this section refer to the following diagram containing the layouts of the various card enclosures.

5.2.1 Card Enclosure Diagrams



5.3 PCI and Card Enclosure Concepts

There are several concepts in the PCI implementation that are new to the iSeries and AS/400e environment. These concepts need to be understood to create and install valid configurations.

For the purpose of this chapter, the term *Multi-Adapter Bridge Bus Number* is used to facilitate the explanation of PCI card plugging rules.

A Multi-Adapter Bridge defines a logical grouping of card slots in the card enclosure. Each Multi-Adapter Bridge contains eight Multi-Adapter Bridge Buses numbered 1 to 8. The sequence does not necessarily correspond with the sequence of card slots in the card enclosure. For example, in the Model 270 diagram on page 103, the embedded IOP is Multi-Adapter Bridge Bus 1, slot C07 is Multi-Adapter Bridge Bus 2, slot C01 is Multi-Adapter Bridge Bus 3, and slot C06 is Multi-Adapter Bridge Bus 4. An IOP addresses the IOAs in sequence by the Multi-Adapter Bridge Bus number, not the slot number. Using the previous example, the Model 270 Embedded IOP would control the IOAs installed in slots C07 and C01 and could control an IOA installed in slot C06 and C05. PCI card installation instructions refer to the slot number and not to the Multi-Adapter Bridge Bus number.

All card enclosures except the Model 270 contain more than one Multi-Adapter Bridge. The divide between these Multi-Adapter Bridges is called a *Multi-Adapter Bridge Boundary*. An IOP may control a maximum of four IOAs installed in higher number Multi-Adapter Bridge Buses, up to another IOP or a Multi-Adapter Bridge Boundary. An IOP must be installed in Multi-Adapter Bridge Bus 1 of a Multi-Adapter Bridge. The Model 270, Model 820, and #5075 Expansion Unit have an IOP embedded on the backplane of the card enclosure that occupies Multi-Adapter Bridge Bus 1 of the first, and in the case of the Model 270 only, Multi-Adapter Bridge.

On all card enclosures except the Model 270, some slots are 32-bit and other slots are 64-bit. The Model 270 supports 32-bit slots only. When planning for the installation of IOPs and IOAs in the card enclosure, it is required that 64-bit cards only be installed in 64-bit slots with the exception of the Model 270. At the time this edition was published, the #2743 was the only 64-bit IOA offered for the iSeries or AS/400e server. In the Card Enclosure diagrams on page 103, any card slots that have a single Multi-Adapter Bridge Bus number are 32-bit slots. Card slots that have dual Multi-Adapter Bridge Bus numbers are 64-bit slots.

Certain slots on the Model 270, Model 820, and #5075 Expansion Unit card enclosures on page 103 are labeled “short”. These slots have part of the card slot blocked in the card enclosure. Therefore, only short cards may be installed in these positions. An example is slot C07 in the Model 270 card enclosure. See 5.4.4, “Hard Rules: IOA Capabilities” on page 106, for information on which cards are “long” cards and may not be installed in the “short” positions.

When an Integrated Netfinity Server is installed, it occupies two and a half slots except on the Model 270 where it occupies one and a half slots. This means that the card slot immediately following the Integrated Netfinity Server in Multi-Adapter Bridge Bus Number order only accepts “short” cards when the Integrated Netfinity Server is installed. The shortened slot will contain the first LAN IOA controlled by the Integrated Netfinity Server. For example, slot C07 in the Model 830 card enclosure supports “long” cards except when the Integrated Netfinity Server is installed.

One slot in each base model card enclosure shown on page 103 is reserved for an ECS connection. For example, in the Model 830 and 840 slot C02 is the ECS slot. This slot is always controlled by the embedded or base IOP. By default, a #9771 Two-Line WAN with Modem IOA will be installed in the ECS location. A #4745 will be installed in the ECS slot if feature #5544 System Console Attached to the WAN adapter is specified. The #9771 will be moved to another slot.

The RS232/V.24 Port (port 1) of the #9771 can be used for ECS. An appropriate modem and cable must be ordered. The RSRNAME parameter of the QESLINE and QTILINE line descriptions may need to be manually changed to the resource name assigned to the WAN port of the #9771.

If a #4745 Two-Line WAN IOA is ordered for ECS usage, a modem and cable for ECS must also be ordered. If the #4745 is installed in the ECS slot, the #9771 will be moved to another slot.

One slot in each system card enclosure shown on page 103 is labeled SCSI. The first or only Disk Unit Controller will be installed in this slot and supports the Load Source Disk Unit, base internal tape (if installed), and base CD-ROM. The SCSI card slot is controlled by the embedded or base IOP in a system

card enclosure. The Model 270 can, in certain cases, support a second disk unit controller when the #7104 System Unit Expansion is installed. In the #5075, the disk unit controller must be in C01. In the #5074/#5079, the first disk unit controllers must be in slot C02, C03, or C04. There are no restrictions on the placement of further disk unit controllers.

5.4 Configuration Validation Procedure

Each IOP and IOA available for the iSeries or AS/400e server has a set capacity. The utilization of the IOP is affected by the line speed, number of lines, protocol, and various other factors of the selected IOAs it controls. To define a configuration for an IOP to service multiple IOAs, the demand placed on the IOP by the IOA must be accounted for to generate a valid configuration. The Marketing Configurators generate valid configurations that follow all the “hard” rules. When the “soft” rules need to be used due to line speed or protocol, the procedure defined in the following section allows for validation of the proposed customer configurations that have been created using the Marketing Configurators. This allows the configuration to be adjusted to make allowances for the “soft” rules prior to placing an order. To completely understand this procedure, review the examples provided in 5.8, “Configuration Validation Examples” on page 112.

5.4.1 Generating a Valid Configuration

To determine whether a specific IOP is capable of supporting the IOAs considered for attachment, use the following procedures to complete the table in 5.4.2, “Configuration Validation Form” on page 106:

1. Identify the IOP being considered.
2. Determine the capacity values for the selected IOP using the “IOP Capacity Table” on page 106. Enter the values on line 6 of the Configuration Validation Form.
3. Identify the IOAs to be controlled by the selected IOP.
4. Determine the capacity requirements of the selected IOAs using the “Hard Rules: IOA Capabilities” on page 106. Enter the values in the form in 5.4.2, “Configuration Validation Form” on page 106, on lines 1 through 4, one IOA per line. Remember that an IOP supports a maximum of four IOAs.
5. Review 5.5, “Soft Rules: IOA Requirements” on page 110. If any of the restrictions described apply to the selected IOAs, use the values from the table to replace the values in the Configuration Validation Form unless the value in a particular column is less than the default value for the IOA. When determining the values to use, be sure to account for both lines if you selected the #4745 and #9771.
6. Add the IOA values in each column. Place the totals on line 5.
7. Compare the totals in line 5 with the IOP Capability in line 6.
 - If any number in line 5 is greater than the corresponding value in line 6, the selected IOAs exceed the capacity of the selected IOP. Add one or more IOPs to the configuration to support the selected IOAs.
 - If all the numbers in line 5 are less than or equal to the corresponding values in line 6, the configuration is valid as long as all card rules from 5.4.4, “Hard Rules: IOA Capabilities” on page 106, and 5.5, “Soft Rules: IOA Requirements” on page 110, have been followed.

5.4.2 Configuration Validation Form

Line #	Item	Memory	Performance
1	IOA #1		
2	IOA #2		
3	IOA #3		
4	IOA #4		
5	Total		
6	IOP Capability		

5.4.3 IOP Capacity Table

IOP	Memory Capacity	Performance Capacity
#2843/#9943 PCI IOP Model 820, 830, 840, #5074, #5075 when attached to Model 820. See Note 1.	211	100
#2842 PCI IOP Model 270 and #5075 when attached to Model 270 Embedded IOP Model 270 (CCINs 284D and 284E) Embedded IOP Model 820 (CCIN 284C) Embedded IOP #5075 PCI Expansion Tower (CCIN 284B) See Note 1.	100	100

Notes:

- By processor, the #2842 and #2843 may not be installed in the following slots:
 - Model 270:** C02, C07
 - Model 820:** C01, C05, C06, C07, C11
 - Model 830 and 840:** C02, C03, C04, C06, C07, C10, C12, C13, C15
 - #5074 PCI Expansion Tower:** C02, C04, C06, C07, C10, C12, C13, C15
 - #5075 PCI Expansion Tower:** C01, C04, C06, C08
- A maximum of four IOAs are allowed on any IOP.

5.4.4 Hard Rules: IOA Capabilities

IOA	Card Length ⁸	Memory	Performance
#2743 PCI 1Gbps Ethernet IOA ¹	Short	2	26
#2744 PCI 100 Mbps Token Ring IOA ²	Short	25	36
#2749 PCI Ultra Magnetic Media Controller ⁹	Short	22	25
#2763 PCI Raid Disk Unit Controller ^{4, 10, 12, 14}	Long	29	21
#2768 PCI Magnetic Media Controller ⁹	Short	22	25
#4723 PCI 10Mbps Ethernet IOA	Short	25	12
#4745 PCI WAN IOA ¹⁵	Short	15	14
#4746 PCI Twinaxial Workstation IOA ^{15, 16}	Short	10	6

IOA	Card Length ⁸	Memory	Performance
#4748/#9748 PCI Raid Disk Unit Controller ^{4, 10, 11, 14}	Long	29	21
#4750/#4751 PCI ISDN IOA ^{6, 17}	Long	25	7
#4761 Integrated Analog Modem ^{6, 18}	Long	22	7
#4801 PCI Cryptographic Coprocessor ⁵	Short	11	18
#4815/#4816/#4818 PCI 155Mbps ATM IOA ^{2, 3, 14}	Short	35	47
#4838 PCI 100/10Mbps Ethernet ²	Short	25	36
#9767 PCI Disk Unit Controller (CCIN 2767) ^{10, 13}	Short	29	21
#9771 Base PCI Two-Line WAN with Modem ^{7, 15}	Short	15	14

Notes:

- The #2743 PCI 1 Gbps Ethernet IOA must be placed in a 64-bit slot except on the Model 270 system unit where it is supported in a 32-bit slot. The #2743 may only be combined with a maximum of one other IOA on an IOP. TCP/IP protocol only. IPX protocol is not supported on the #2743. There may be only one #2743 per Multi-Adapter Bridge.
- A maximum of two of these IOAs (#2744 or #4838) is allowed per IOP. Not more than one #2744 or #4838 is allowed per IOP when this IOP also drives any ATM IOA (#4815, #4816, or #4818).
- A maximum of one of these IOAs (#4815, #4816, #4818) is allowed per IOP.
- A maximum of three of these IOAs (#4748, #9748, #2763) is allowed per IOP.
- The #4801 is not allowed to be controlled by the embedded IOP on the Model 270 and 820 or the Base IOP on Model 830, 840, SB2, and SB3.
- A maximum of one of these IOAs (#4750, #4751, #4761) is allowed per IOP. A maximum of three active communication traces is allowed at one time on these IOAs.
- Only one #9771 is allowed per system.
 - On Model 270, #9771 must be placed in the ECS slot (C07) or slot C06.
 - On Model 820, #9771 must be placed in the ECS slot (C06) or slot C04.
 - On Model 830/840, #9771 must be placed in the ECS slot (C02) or slot C04.
- "Long" cards may only be installed in the following slots:
 - Model 270:** Long slots are C01, C02, C03, C04, and C05. If an Integrated Netfinity Server is installed, slots C03 and C04 are not available.
 - Model 820:** Long slots are C01, C02, C03, C04, C07, C08, C09, C10 and C11. If Integrated Netfinity Servers are installed, slots C02, C03, and C04, or slots C08, C09, and C10 are not available. Slots C05 and C06 are also long slots but are dedicated to the ECS IOA and Disk Unit Controller IOA.
 - Model 830 and 840:** Long slots are C04, C05, C06, C07, C09, C10, C11, C12, C13, C14, and C15. If Integrated Netfinity Servers are installed, slots C06 and C07, or slots C12 and C13 are not available. Slots C01, C02, and C03 are also long slots but are dedicated to the Base MFIOP, ECS IOA, and Disk Unit Controller IOA.
 - #5075 PCI Expansion Tower:** Long slots are C01, C02, C03, C04, C06, and C07. If Integrated Netfinity Servers are installed, slots C02, C03, and C04, or slots C06 and C07 are not available.
 - #5074 PCI Expansion Tower:** Long slots are C02, C03, C04, C06, C07, C09, C10, C12, C13, C14, and C15. If Integrated Netfinity Servers are installed, slots C06 and C07, or slots C12 and C13 are not available. Slot C01 is also a long slot but it is dedicated to the Base MFIOP.

9. If an external tape device is to be used as an Alternate-IPL device and the #2749 or #2768 is not controlled by the embedded or base IOP on the system, the Dedicated Service Tools (DST) must be used to select the device as an alternate installation device.

10. Maximum disk unit controllers per tower:

- **Model 270:** One disk unit controller is allowed in the system card enclosure except when a #7104 Disk Enclosure is installed. When the #7104 is installed, two disk unit controllers are allowed in the system unit card enclosure. The first disk unit controller will be in slot C01. Supported controllers are #9767, #2763, and #4748. The number of disk units ordered and RAID protection requirements will determine which controller is the default. Allowed combinations are shown in the following table.

#9767	#2763	#4748	Total in card enclosure
1	0	0	1
1	1	0	2
0	1	0	1
0	2	0	2
0	0	1	1

- **Model 820:** One disk unit controller is allowed in the card enclosure slot C05. The supported controllers are #9767, #2763, and #4748.
- **Model 830 and 840:** #9748 Base Disk Unit Controller is automatically included in the card enclosure slot C03. Two additional #4748s are allowed in the card enclosure.
- **Model SB2/SB3:** One disk unit controller (#9748) required in the system unit slot C03. No other disk unit controllers allowed in the system unit.
- **#5075 PCI Expansion Tower:** One #2763 or #4748 is allowed. It must go in the card enclosure slot C01.
- **#5074 PCI Expansion Tower:** Three #4748s are allowed in the card enclosure. The first #4748 must be in slot C02, C03, or C04.
- **#5079 1.8 m I/O Tower:** Functions as two #5074s.
- **#8079 1.8 m Optional Base I/O Tower:** Functions as one #5074 on top and one #9079 on bottom

11. A maximum of 18 disk units are supported by the #4748. Based on hardware configuration, only the Model 270 allows 18 installed disk units. All other models/towers restrict the number of attached disk units to 15 or less. A maximum of two removable media devices (internal tape or CD-ROM) are supported.

12. Available on Models 270 and 820 only. A maximum of twelve disk units and two removable media devices (internal tape or CD-ROM) are supported.

13. Available on Models 270 and 820 only. Does not support RAID. A maximum of six disk units and two removable media devices (internal tape and CD-ROM) are supported.

14. Not more than one #2763, #4748, or #9748, allowed per IOP when this IOP is also driving any ATM IOAs (#4815, #4816 or #4818).

15. A system console must be selected for each Model 270 and 8xx system unit. There are two options:

- #5540 System Console Attached to Twinaxial Adapter
- #5544 System Console Attached to WAN Adapter

When #5540 is specified, the console function is provided by a twinaxial device attached to port 0 address 0 on the first #4746 encountered in the first or (if available) second Multi-Adapter Bridge in the card enclosure. The #9771 may be used for ECS. However, the #9771 is not selected by default and requires manual configuration to change the RSRNAME parameter on the QESLINE and QTILINE line descriptions.

When #5544 is specified, the console function requires a PC running Operations Console attached to the #4745 in the ECS slot.

The placement of the adapters to support the system console function is defined in the following table.

Note: The #9771 is a required feature and must be controlled by the embedded or base IOP.

Model	#5540	#5544
270	#9771 C07	#4745 C07
	#4746 C06	#9771 C06
820	#9771 C06	#4745 C06
	#4746 C04, C03 or C11	#9771 C04
830/840	#9771 C02	#4745 C02
	#4746 C04, C06, or C10	#9771 C04

16. Workstations attached to the #4746 are limited to a maximum of 40 unique device addresses per IOA. In addition, the number of active workstation sessions is limited to 120 per IOA.

17. Protocols supported on the #4750 and #4751 remote access ISDN IOAs are:

- PPP
- Fax
- IDLC

18. Protocols supported on the #4761 remote access integrated modem IOA are:

- SLIP/PPP
- SDLC (limited to one station per port)
- Fax

5.5 Soft Rules: IOA Requirements

Using any information from this table requires configuration validation.

IOA	Capability/Comment	Memory (per port)	Performance (per port)
#4745 PCI Two-Line WAN IOA #9771 Base PCI Two-Line WAN with Modem ⁸	Async up to 115.2Kbps	3	7
	Async-PPP up to 230.4Kbps ¹	3	7
	Bisync up to 64Kbps	1	7
	Synchronous PPP up to 64Kbps	3	7
	Synchronous PPP up to 2048Kbps ¹	3	11
#4745 PCI Two-Line WAN IOA #9771 Base PCI Two-Line WAN with Modem ⁸	SDLC up to 32 stations and line speed up to 64Kbps	3	7
	SDLC up to 64 stations and line speed up to 64Kbps	4	7
	SDLC up to 254 stations and line speed up to 64Kbps ¹²	7	7
	SDLC up to 32 stations and line speed up to 2048Kbps ¹	3	13
	SDLC up to 64 stations and line speed up to 2048Kbps ¹	4	13
	SDLC up to 254 stations and line speed up to 2048Kbps ^{1, 12}	7	13
#4745 PCI Two-Line WAN IOA #9771 Base PCI Two-Line WAN with Modem ⁸	Frame Relay line speed up to 64 Kbps ^{3, 4}	11	7
	Frame Relay line speed up to 64 Kbps with IPX ^{3, 4, 5}	17	7
	Frame Relay line speed up to 2048 Kbps ^{1, 3, 4}	11	13
	Frame Relay line speed up to 2048 Kbps with IPX ^{1, 3, 4, 5}	17	13
#4745 PCI Two-Line WAN IOA #9771 Base PCI Two-Line WAN with Modem ⁸	X.25 up to 32 virtual circuits and line speed up to 64 Kbps ^{2, 3}	8	7
	X.25 up to 64 virtual circuits and line speed up to 64 Kbps ^{2, 3}	11	7
	X.25 up to 32 virtual circuits and line speed up to 640 Kbps ^{1, 2, 3}	8	15
	X.25 up to 64 virtual circuits and line speed up to 640 Kbps ^{1, 2, 3}	12	15
	X.25 up to 256 virtual circuits and line speed up to 640 Kbps ^{1, 2, 3}	35	15
#2743 PCI 1Gbps Ethernet IOA ^{7, 11}	IPX Not Supported ¹⁰	-	-
#2744 PCI 100Mbps Token Ring IOA ⁷	IPX ⁵	31	72
#4723 PCI 10Mbps Ethernet IOA	IPX ⁵	31	24

IOA	Capability/Comment	Memory (per port)	Performance (per port)
#4746 PCI Twinaxial Workstation IOA ¹¹	Maximum Addresses and sessions ⁹	-	-
#4838 PCI 100/10Mbps Ethernet IOA ⁷	IPX ⁵	31	72
#4815/#4816/#4818 PCI 155Mbps ATM IOA ^{7, 10}	Up to two emulated LANs ⁶	89	47

Notes:

1. One High Speed Line is allowed per IOP. If there is a need to support more than one high speed line, the “Configuration Validation Procedure” on page 105 should be used to determine if enough memory and performance capacity is available on the IOP to support more lines. The following are defined as High Speed Lines:

- Synchronous PPP above 64 Kbps to 2048 Kbps
- SDLC above 64 Kbps to 2048 Kbps
- Frame Relay above 64 Kbps to 2048 Kbps
- X.25 above 64 Kbps to 640 Kbps

Line speeds greater than 64 Kbps have the following restrictions:

- Electrical interfaces X.21, V.35, or EIA-449/V.36 must be used
- 20-foot (6-meter) cables must be used for the X.21 and V.35 interfaces
- “Looped” clocking is required on EIA/449/V.36 cables longer than 20-feet (6-meters)
- “Looped” or “inverted” clocking may be required for line speeds faster than 512 Kbps

Note: The following protocols have limits as noted and are always considered low speed lines:

- Bisync limited to maximum of 64 Kbps
- Async limited to maximum of 115.2 Kbps
- Async/PPP limited to maximum of 230.4 Kbps

When Async-PPP is used at speeds above 115.2Kbps, a high-speed cable must be used.

2. When using the X.25 protocol, a maximum of 64 Virtual Circuits are allowed per IOA unless the “Configuration Validation Procedure” on page 105 indicates that enough memory and performance capacity is available on the IOP to support a higher number of virtual circuits.
3. Frame Relay and X.25 are not allowed on the same IOA unless the “Configuration Validation Procedure” on page 105 indicates that enough memory and performance capacity is available on the IOP to support both protocols on the IOP.
4. Frame Relay protocol has the following restrictions.
 - EIA-232/V.24 connection is not supported
 - The line speed must be 56 Kbps or greater
 - One line of Frame Relay is allowed per IOA. If there is a requirement for Frame Relay on both ports, the “Configuration Validation Procedure” on page 105 can be used to determine if enough memory and performance capacity is available on the IOP to support more lines.
5. A maximum of 1400 routes and 1400 services are allowed per line.
6. The “emulated LAN” support for ATM adapters has the following restrictions:
 - A maximum of two “emulated LANs” are supported per IOA.
 - When running two “emulated LANs”, the LANs must be of a different type such as one Token Ring and one Ethernet.
7. In general, to provide best performance, we recommend that these IOAs have a dedicated IOP regardless of protocol.

8. The #9771 V.90 port supports Async-PPP protocol only.
9. Workstations attached to the #4746 are limited to a maximum of 40 unique device addresses per IOA. In addition, the number of active workstation sessions is limited to 120 per IOA.
10. IPX is not supported on the ATM IOAs (#4815, #4816, and #4818) or #2743 PCI 1 Gbps Ethernet IOA.
11. Use the Hard Rules values from 5.4.4, “Hard Rules: IOA Capabilities” on page 106.
12. When using the SDLC protocol, a maximum of 64 controllers per line is allowed, unless the “Configuration Validation Procedure” on page 105 indicates that enough memory and performance capacity is available on this IOP to support more.

5.6 Integrated Netfinity Server IOP Rules

The #2790/2890 Integrated Netfinity Server IOP does not follow the rules for other IOPs and does not provide the same IOA attachment capabilities. The Integrated Netfinity Server has specific slot assignments as shown in 5.2.1, “Card Enclosure Diagrams” on page 103.

When the Integrated Netfinity Server is installed, it can control up to three IOAs installed in the next three higher Multi-Adapter Bridge Bus numbers up to the next installed IOP or up to the Multi-Adapter Bridge boundary. The only IOAs supported by the Integrated Netfinity Server are:

- #2744 PCI 100 Mbps Token Ring IOA
- #4838 PCI 100/10Mbps Ethernet IOA

The supported IOAs may be installed in any combination up to a maximum of three. At least one IOA is required. However, referring to 5.2.1, “Card Enclosure Diagrams” on page 103, there are limits to the supported IOAs based on the position of the Integrated Netfinity Server in the Multi-Adapter Bridge. For example, in the Model 270 card enclosure, the Integrated Netfinity Server is installed in slot C04. It can control slots C03 and C02 only since those slots have a higher Multi-Adapter Bridge Bus Number. Thus the Integrated Netfinity Server is limited to controlling two IOAs in the Model 270 card enclosure. Similar situations exist in the Model 820 and #5075 Card Enclosures. See 5.2, “Card Enclosure Layout” on page 102, for specific locations.

5.7 Concurrent Maintenance Load Source Movement

If the load source disk unit is mirrored and the load source function is moved to a different IOP, leaving the original load source IOP without the load source function, the original IOP must be reset (reloaded) if additional functions are to be added or run on the IOP.

5.8 Configuration Validation Examples

The following examples may be used to more fully understand the Configuration Validation Procedure and the use of the hard and soft rules. Any card positions referenced are for demonstration purposes only. Systems shipped from manufacturing may have different card combinations than those that are shown in these examples.

5.8.1 Example 1: Model 270

In this example, the customer has requested a Model 270 with the following capabilities:

- Six disk arms with RAID-5 Disk Protection
- Electronic Customer Support (ECS)
- Attachment to a 100 Mbps Ethernet at the fastest possible throughput
- Twinax Console #5540

To provide these capabilities, the following IOP and IOA features are required:

- Embedded IOP
- #2842 PCI IOP
- #9771 Base PCI Two-Line WAN with Modem IOA (ECS will be manually configured)
- #4746 PCI Twinax Workstation IOA (provides Twinax Console)
- #2763 PCI RAID Disk Unit Controller (provides RAID-5 Disk Protection)
- #4838 PCI 100/10Mbps Ethernet (provides attachment to 100Mbps Ethernet)

Once the IOPs and IOAs are identified, you can validate the configuration using the procedure from 5.4.1, “Generating a Valid Configuration” on page 105, as shown here. The Embedded MFIOP is examined first:

1. Identify the IOP being considered.

The Embedded MFIOP is to be used.

2. Determine the capacity values for the selected IOP using the “IOP Capacity Table” on page 106. Enter the values on line 6 of the Configuration Validation Form.

The Embedded MFIOP has a memory capacity value of 100 and a performance capacity value of 100. Those values are entered on line 6.

3. Identify the IOAs to be controlled by the selected IOP.

Because there is a soft rule specifying to place the #4838 on a separate IOP for best performance, the #9771, #4746, and #2763 will be controlled by the Embedded MFIOP.

4. Determine the capacity requirements of the selected IOAs using the “Hard Rules: IOA Capabilities” on page 106. Enter the values in the form on lines 1 through 4, one IOA per line. Remember that an IOP supports a maximum of four IOAs.

The appropriate values were entered on lines 1 through 4. The slots that the cards will occupy have also been entered.

5. Review 5.5, “Soft Rules: IOA Requirements” on page 110. If any of the restrictions described apply to the selected IOAs, use the values from the table to replace the values in the Configuration Validation Form unless the value in a particular column is less than the default value for the IOA. When determining the values to use, be sure to account for both lines if you have selected the #4745 and #9771.

ECS will be the only protocol used on the #9771. None of the soft rules apply.

6. Add the IOA values in each column. Place the totals on line 5.

7. Compare the totals in line 5 with the IOP Capacity in line 6.

All the numbers in line 5 are less than or equal to the corresponding values in line 6. Therefore, the configuration is valid.

Line #	Item		Memory	Performance
1	IOA #1	#2763 PCI RAID Disk Unit Controller (Slot C01)	29	21
2	IOA #2	#9771 Base PCI Two-Line WAN with Modem IOA (Slot C07)	15	14
3	IOA #3	#4746 PCI Twinax Workstation IOA (Slot C06)	10	6
4	IOA #4			
5	Total		54	41
6	IOP Capability	Embedded MFIOP	100	100

Now that the validity of the embedded IOP and its associated IOAs has been determined, the second IOP, a #2842, and its associated IOAs have to be checked:

1. Identify the IOP being considered.

The #2842 PCI IOP is to be used.

2. Determine the capacity values for the selected IOP using "IOP Capacity Table" on page 106. Enter the values on line 6 of the Configuration Validation Form.

The #2842 PCI IOP has a memory capacity value of 100 and a performance capacity value of 100. Those values are entered on line 6.

3. Identify the IOAs to be controlled by the selected IOP.

The #4838 PCI 100/10Mbps Ethernet will be controlled by the #2842.

4. Determine the capacity requirements of the selected IOAs using the "Hard Rules: IOA Capabilities" on page 106. Enter the values in the form on lines 1 through 4, one IOA per line. Remember that an IOP supports a maximum of four IOAs.

The appropriate values were entered on lines 1 through 4. The slots that the cards will occupy have also been entered.

5. Review 5.5, "Soft Rules: IOA Requirements" on page 110. If any of the restrictions described apply to the selected IOAs, use the values from the table to replace the values in the Configuration Validation Form unless the value in a particular column is less than the default value for the IOA. When determining the values to use, be sure to account for both lines if you have selected the #4745 and #9771.

There are no soft rules that apply other than placing the #4838 on a separate IOP for best performance. This rule has been met.

6. Add the IOA values in each column. Place the totals on line 5.

7. Compare the totals in line 5 with the IOP Capacity in line 6.

All the numbers in line 5 are less than or equal to the corresponding values in line 6, and all hard rules have been followed. Therefore, the configuration is valid.

Line #	Item	Memory	Performance
1	IOA #1 #4838 PCI 100/10Mbps Ethernet (Slot C03)	25	36
2	IOA #2		
3	IOA #3		
4	IOA #4		
5	Total	25	36
6	IOP Capability #2842 PCI IOP (Slot C04)	100	100

The cards chosen for this example result in a card enclosure populated as shown in the following figure. Note that card slot C02 is empty. An IOA could be placed in that slot later. The table above shows ample memory and performance capability on the IOP. However, doing so would violate the soft rule concerning best performance on a #4838 100/10 Mbps Ethernet IOA.

Model 270

Multi-Adapter
Bridge
Slot Bus No.

EMBED	1	IOP
C07	2	#9771
C06	4	#4746
C05	5	
C04	6	#2842
C03	7	#4838
C02	8	
C01	3	#2763

5.8.2 Example 2: Model 820 with #5074 PCI Expansion Tower

In this example, the customer has requested a Model 820 with the following capabilities:

- 120 GB usable with RAID-5 Disk Protection
- Electronic Customer Support (ECS)
- Attachment to two 100 Mbps Ethernet segments (one segment requires best performance)
- Twinax Console #5540
- Support for 240 Twinax Addresses
- Connection to a Frame Relay network using V.35 interface 512 Kbps
- Attachment to two 7208-342 devices, one as the Alternate IPL (Alt-IPL) device
- Connection to SDLC at less than 64 Kbps with 16 stations

To provide these capabilities, the following features are required:

- Model 820 Card Enclosure with embedded IOP
- #5074 PCI Expansion Tower with base #9943 IOP (to hold cards above those supported by the 820 Card Enclosure)
- #9771 Base PCI Two-Line WAN with Modem IOA (for ECS use): It will be manually configured
- #4745 PCI Two-Line WAN IOA Frame Relay and SDLC attachment
- Six #4746 PCI Twinax Workstation IOAs (provides attachment for 240 Twinax device addresses, including Twinax Console)
- Two #4748 PCI RAID Disk Unit Controllers (provides attachment of sixteen 8.58 GB Disk Units and RAID-5 capability)
- Two #4838 PCI 100/10 Mbps Ethernet IOAs (provides attachment to 100 Mbps Ethernet segments)
- Two #2749 Ultra Magnetic Media IOAs (provides attachment of the 7208-342 tape units and the Alt-IPL device)

After reviewing the above list and counting the IOAs (there are fourteen), we can see that at least two additional IOPs are required since an IOP can only support a maximum of four IOAs. The two additional IOPs, when combined with the embedded and base IOPs, will support a theoretical maximum of sixteen IOAs. Looking at the configuration a little closer shows that there are two #4838 100/10 Mbps Ethernet Adapters included. There is a soft rule on page 111 that recommends a separate IOP for each #4838 to achieve best performance. Since we want one #4838 at best performance, we add one more IOP to the

order. If three #2843 IOPs are added instead of two, giving a total of five IOPs when combined with the embedded and base IOPs, an even distribution of the IOAs is accomplished at a minimal cost.

Once we have the IOPs and IOAs identified, we can validate the configuration using the procedure from page 105 as shown here. The Embedded MFIOP in the Model 820 is examined first:

1. Identify the IOP being considered.

The Embedded MFIOP is to be used.

2. Determine the capacity values for the selected IOP using "IOP Capacity Table" on page 106. Enter the values on line 6 of the Configuration Validation Form.

The Embedded MFIOP has a memory capacity value of 100 and a performance capacity value of 100. Those values are entered on line 6.

3. Identify the IOAs to be controlled by the selected IOP.

The #9771, #4745, #4748, and #2749 will be controlled by the Embedded MFIOP. This is due to the rule concerning card placement when a Twinaxial Console is requested (#18 on page 108) and the requirement for placement of the Alternate-IPL device (#13 on page 108).

4. Determine the capacity requirements of the selected IOAs using the "Hard Rules: IOA Capabilities" on page 106. Enter the values in the form on lines 1 through 4, one IOA per line. Remember that an IOP supports a maximum of four IOAs.

The appropriate values were entered on lines 1 through 4. The slots that the cards will occupy have also been entered.

5. Review 5.5, "Soft Rules: IOA Requirements" on page 110. If any of the restrictions described apply to the selected IOAs, use the values from the table to replace the values in the Configuration Validation Form unless the value in a particular column is less than the default value for the IOA. When determining the values to use, be sure to account for both lines if you selected the #4745 and #9771.

Since Frame Relay will be used on the #4745, the detailed values for the synchronous under 64 Kbps and Frame Relay under 2048 Kbps need to be used to account for the usage on the #4745.

Synchronous under 64 Kbps has a memory requirement of 3 and a performance requirement of 7.

Frame Relay under 2048 Kbps has a memory requirement of 11 and a performance requirement of 13. Since the memory requirement for the two protocols is less than the memory requirement for the card under the hard rules (11+3 or 14 versus 15), the Hard Rules value is left in the table. The combined performance requirement (7+13 or 20) is greater than the hard rules performance requirement of 14 so those values are entered in the table.

6. Add the IOA values in each column. Place the totals on line 5.

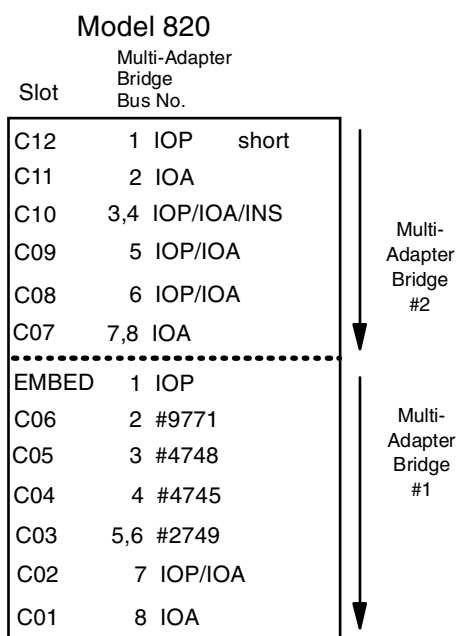
7. Compare the totals in line 5 with the IOP Capacity in line 6.

All the numbers in line 5 are less than or equal to the corresponding values in line 6. Therefore, the configuration is valid.

Line #	Item	Memory	Performance
1	IOA #1 #4748 PCI RAID Disk Unit Controller (Slot C05)	29	21
2	IOA #2 #9771 Base PCI Two-Line WAN with Modem IOA (Slot C06) Port 1 - ECS	15	14
3	IOA #3 #2749 PCI Ultra Magnetic Media Controller (Slot C03)	22	25

Line #	Item	Memory	Performance
4	IOA #4 #4745 PCI Two-Line WAN IOA (Slot C04) <ul style="list-style-type: none"> • Port 0 - SDLC • Port 1 - Frame Relay 512Kbps 	15	7 13
5	Total	81	80
6	IOP Capability Embedded MFIOF	100	100

Once the IOAs specified for the embedded IOP are installed, the Model 820 Card Enclosure will appear as shown in the following figure.



The following features still need to be added to the system:

- Three #2843 PCI IOPs
- #5074 PCI Expansion Tower with base #9943 IOP
- Six #4746 PCI Twinax Workstation IOAs (provides attachment for 240 Twinax device addresses, including the twinax console)
- One #4748 PCI RAID Disk Unit Controllers (provides attachment Disk Units and RAID-5 capability)
- Two #4838 PCI 100/10 Mbps Ethernet IOAs (provides attachment to 100 Mbps Ethernet segments)
- One #2749 Ultra Magnetic Media IOAs (provides attachment of the remaining 7208-342 tape unit)

Examining the card enclosure shown above, slots C02 and C01 are empty. This is a perfect place for a #4838 and the IOP to control it. The procedure doesn't need to be used because a simple examination of the entries for the #2843 in 5.4.3, "IOP Capacity Table" on page 106, and the #4838 in 5.4.4, "Hard Rules: IOA Capabilities" on page 106, shows there is ample capacity in the #2843 to support the #4838. After installing the #2843 and #4838, the Model 820 card enclosure will appear as shown in the following figure.

Model 820

Slot	Multi-Adapter Bridge Bus No.	
C12	1 IOP	short
C11	2 IOA	
C10	3,4 IOP/IOA/INS	
C09	5 IOP/IOA	
C08	6 IOP/IOA	
C07	7,8 IOA	
<hr/>		
EMBED	1 IOP	
C06	2 #9771	
C05	3 #4748	
C04	4 #4745	
C03	5,6 #2749	
C02	7 #2843	
C01	8 #4838	

Multi-Adapter
Bridge
#2

Multi-Adapter
Bridge
#1

Now the following features need to be added to the system:

- Two #2843 PCI IOPs
- #5074 PCI Expansion Tower with base #9943 IOP
- Six #4746 PCI Twinax Workstation IOAs (provides attachment for 240 Twinax device addresses, including Twinax Console)
- One #4748 PCI RAID Disk Unit Controllers (provides attachment of Disk Units and RAID-5 capability)
- One #4838 PCI 100/10 Mbps Ethernet IOAs (provides attachment to 100 Mbps Ethernet segments)
- One #2749 Ultra Magnetic Media IOAs (provides attachment of the remaining 7208-342 tape unit)

Examination of the card enclosure shows that slots C07 through C12 are empty. At this point, the choice of cards and their placement is very flexible. We chose to place three of the #4746s and a #2749 in the remaining slots in the Model 820 card enclosure. The validation of the IOP capabilities is listed here:

1. Identify the IOP being considered.

A #2843 IOP will be used.

2. Determine the capacity values for the selected IOP using the "IOP Capacity Table" on page 106. Enter the values on line 6 of the Configuration Validation Form.

The #2843 IOP has a memory capacity value of 211 and a performance capacity value of 100. Those values are entered on line 6.

3. Identify the IOAs to be controlled by the selected IOP.

Three #4746s and a #2749 will be controlled by the #2843.

4. Determine the capacity requirements of the selected IOAs using 5.4.4, "Hard Rules: IOA Capabilities" on page 106. Enter the values in the form on lines 1 through 4, one IOA per line. Remember that an IOP supports a maximum of four IOAs.

The appropriate values were entered on lines 1 through 4. The slots that the cards will occupy have also been entered.

5. Review 5.5, "Soft Rules: IOA Requirements" on page 110. If any of the restrictions described apply to the selected IOAs, use the values from the table to replace the values in the Configuration Validation Form unless the value in a particular column is less than the default value for the IOA. When

determining the values to use, be sure to account for both lines if you have selected the #4745 and #9771.

There are no soft rules that apply to the selected cards.

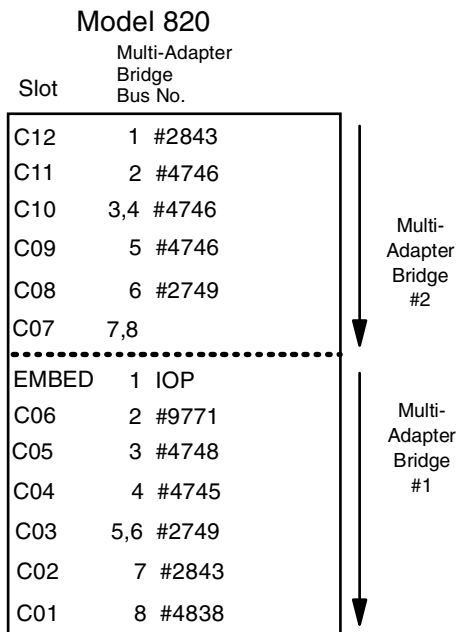
6. Add the IOA values in each column. Place the totals on line 5.

7. Compare the totals in line 5 with the IOP Capacity in line 6.

All the numbers in line 5 are less than or equal to the corresponding values in line 6. Therefore, the configuration is valid.

Line #	Item	Memory	Performance
1	IOA #1 #4746 Twinaxial Workstation IOA (Slot C11)	10	6
2	IOA #2 #4746 Twinaxial Workstation IOA (Slot C10)	10	6
3	IOA #3 #4746 Twinaxial Workstation IOA (Slot C09)	10	6
4	IOA #4 #2749 Ultra Magnetic Media Controller (Slot C07)	22	25
5	Total	52	43
6	IOP Capability #2843 IOP (Slot C12)	211	100

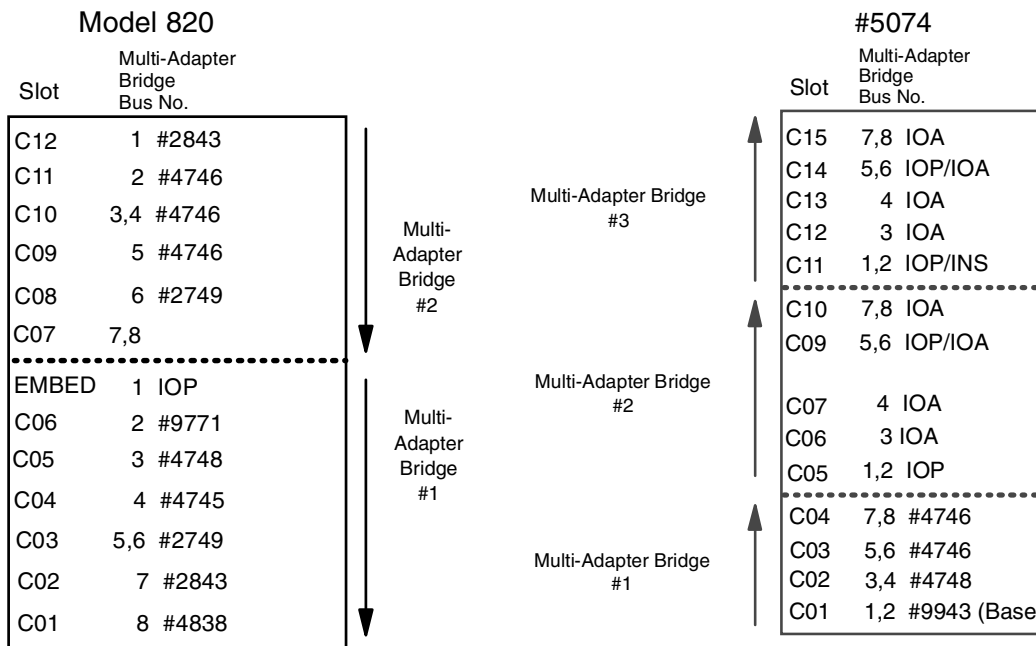
Once the IOAs specified for the embedded IOP are installed, the Model 820 Card Enclosure will appear as shown in the following figure.



The following features still need to be added to the system:

- One #2843 PCI IOPs
- #5074 PCI Expansion Tower with base #9943 IOP
- Three #4746 PCI Twinax Workstation IOAs (provides attachment for Twinax device addresses)
- One #4848 PCI RAID Disk Unit Controllers (provides attachment Disk Units and RAID-5 capability)
- One #4838 PCI 100/10 Mbps Ethernet IOAs (provides attachment to 100 Mbps Ethernet segment)

At this point, the Model 820 processor cannot support any more cards so the remaining cards have to be placed in the #5074 Expansion Tower. Since a separate IOP is needed for the #4838 and there is a limit to the number of IOAs in the first Multi-Adapter Bridge in the #5074, the #4838 will be placed on the #9943 Base IOP in the #5074. As demonstrated earlier, there is more than enough capacity on the #2843/#9943 for the #4838, the complete validation procedure will not be used. After installation, the configuration will appear as shown in the following figure.



The following features still need to be added to the system:

- One #2843 PCI IOP
- One #4746 PCI Twinax Workstation IOA (provides attachment for Twinax device addresses)
- One #4838 PCI 100/10 Mbps Ethernet IOA

The remaining IOA features will be controlled by the #2843 IOP on in the #5074. The verification that the Base IOP has the capability to support the chosen cards is shown here:

1. Identify the IOP being considered.

The #2843 Base IOP will be used.

2. Determine the capacity values for the selected IOP using the "IOP Capacity Table" on page 106. Enter the values on line 6 of the Configuration Validation Form.

The #2843 IOP has a memory capacity value of 211 and a performance capacity value of 100. Those values are entered on line 6.

3. Identify the IOAs to be controlled by the selected IOP.

One #4746 and one #4838 will be controlled by the #2843 (since one #4838 does not require best performance, it can also be controlled by this #2843).

4. Determine the capacity requirements of the selected IOAs using 5.4.4, "Hard Rules: IOA Capabilities" on page 106. Enter the values in the form on lines 1 through 4, one IOA per line. Remember that an IOP supports a maximum of four IOAs.

The appropriate values were entered on lines 1 through 4. The slots that the cards will occupy have also been entered.

5. Review 5.5, “Soft Rules: IOA Requirements” on page 110. If any of the restrictions described apply to the selected IOAs, use the values from the table to replace the values in the Configuration Validation Form unless the value in a particular column is less than the default value for the IOA. When determining the values to use, be sure to account for both lines if you have selected the #4745 and #9771.

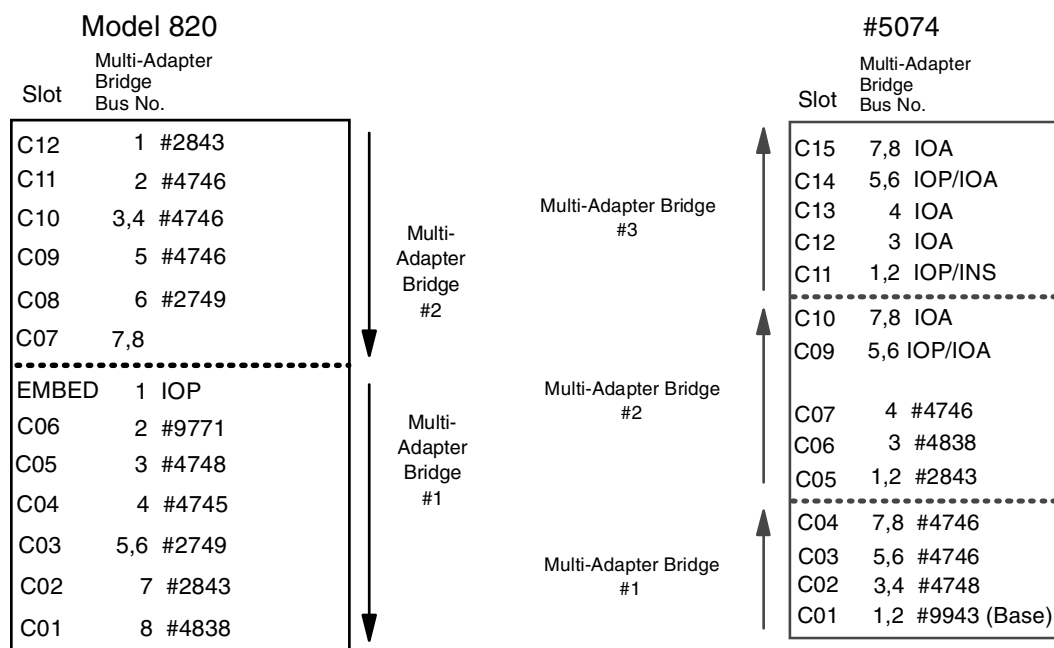
There are no soft rules that apply to the selected cards.

6. Add the IOA values in each column. Place the totals on line 5.
7. Compare the totals in line 5 with the IOP Capacity in line 6.

All the numbers in line 5 are less than or equal to the corresponding values in line 6. Therefore, the configuration is valid.

Line #	Item	Memory	Performance
1	IOA #1 #4746 Twinaxial Workstation IOA (Slot C06)	10	6
2	IOA #2 #4838 100/10 Mbps Ethernet IOA (Slot C07)	25	36
3	IOA #3		
4	IOA #4		
5	Total	35	42
6	IOP Capacity #2843 PCI IOP (Slot C05)	211	100

Once the IOAs specified for the embedded IOP are installed, the Model 820 Card Enclosure appears as shown in the following figure.



At this point, all the selected features have been added to the system.

Chapter 6. 9401 Model 150

6.1 9401 150 Overview

Package	Twinax Entry #0181	Twinax Growth #0182	Server Entry #0183	Server Growth #0184	Twinax Entry #0191	Twinax Growth #0192	Server Entry #0193	Server Growth #0194
Minimum Software Release	V3R7	V3R7	V3R7	V3R7	V4R1	V4R1	V4R1	V4R1
Relative System Performance (CPW-V3R7)								
Constrained (See Note 1)	10.9/10.9	10.9/10.9	10.9/10.9	10.9/10.9	N/A	N/A	N/A	N/A
Unconstrained (See Note 1)	13.8/27.0	20.6/33.3	13.8/27.0	20.6/33.3	N/A	N/A	N/A	N/A
Relative System Performance (CPW-V4R1 and V4R2/R3)								
Constrained (See Note 1)	13.8/20.2	20.2/20.2	13.8/20.2	20.2/20.2	13.8/20.2	20.2/20.2	13.8/20.2	20.2/20.2
Unconstrained (See Note 1)	13.8/27.0	20.6/35.0	13.8/27.0	20.6/35.0	13.8/27.0	20.6/35.0	13.8/27.0	20.6/35.0
Main Storage (V3R7) (MB)	32-96	64-96	32-96	64-96	N/A	N/A	N/A	N/A
Main Storage (V4R1/R2/R3) (MB)	64-192	64-192	64-192	64-192	64-192	128-192	64-192	128-192
Disk Storage (V3R7/V4R1) (GB)	4.19-16.77	4.19-16.77	4.19-16.77	4.19-16.77	4.19-16.77	4.19-16.77	4.19-16.77	4.19-16.77
Disk Storage (V4R2/V4R3) (GB)	4.19-29.9	4.19-29.9	4.19-29.9	4.19-29.9	4.19-29.9	4.19-29.9	4.19-29.9	4.19-29.9
Maximum Feature Card Slots ²	5	5	5	5	5	5	5	5
Communication Lines	1-5	1-5	1-5	1-5	1-5	1-5	1-5 ³	1-5 ³
LAN IOAs	0-2	0-2	1-2	1-2	0-2	0-2	1-2	1-2
Integrated PC Server LANs (Max)	2	2	2	2	2	2	2	2
MFIOF LANs (Max)	1	1	1	1	1	1	1	1
Workstation Controllers								
Twinaxial	1	1	0-1	0-1	1	1	0-1	0-1
ASCII	0	0	0	0	0	0	0	0
Workstations								
Twinax (V3R7 and V4R1)	1-7	1-14	0-7	0-14	1-7	1-14	0-7	0-14
Twinax (V4R2/R3)	1-7	1-28	0-7	0-28	1-7	1-28	0-7	0-28
ASCII	0	0	0	0	0	0	0	0
¼-inch Cartridge Tape (2.5 GB)	1	1	1	1	1	1	1	1
½-inch Reel Tape	0	0	0	0	0	0	0	0
½-inch Cartridge Tape	0	0	0	0	0	0	0	0
8mm Cartridge Tape	0	0	0	0	0	0	0	0
Tape Libraries	0	0	0	0	0	0	0	0
Optical Libraries	0	0	0	0	0	0	0	0
Diskettes	0	0	0	0	0	0	0	0
Fax Adapters	0	0	0	0	0	0	0	0
Cryptographic Processors	0	0	0	0	0	0	0	0
System I/O Buses	0	0	0	0	0	0	0	0

Note 1: Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.

The Constrained figures are for the 9401 Model 150 with its maximum configuration. The Unconstrained figures show what the performance would be if the processor was not limited by the maximum main storage and DASD of the Model 150. In ease case, the first figure is for Interactive workload, and the second is for client/server.

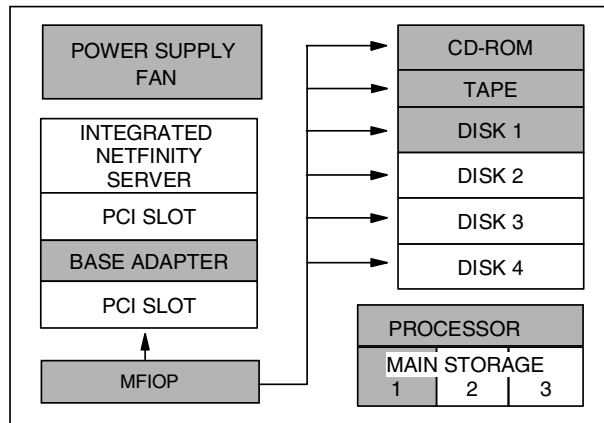
Note 2: Two of these slots are reserved for the Integrated PC Server. Three are driven by the MFIOF.

Note 3: Six lines are supported, but one is dedicated to Client Access Console.

Package	Twinax Entry #0291/#0391 #0591	Twinax Growth #0292/#0392 #0592	Server Entry #0293/#0393 #0593	Server Growth #0294/#0394 #0594
Minimum Software Release (see Note 4)	V4R2/V4R3 V4R4	V4R2/V4R3 V4R4	V4R2/V4R3 V4R4	V4R2/V4R3 V4R4
Relative System Performance (CPW)				
Constrained (See Note 1)	13.8/20.2	20.2/20.2	13.8/20.2	20.2/20.2
Unconstrained (See Note 1)	13.8/27.0	20.6/35.0	13.8/27.0	20.6/35.0
Main Storage (MB)	64-192	128-192	64-192	128-192
Disk Storage (GB)	4.19-29.9	4.19-29.9	4.19-29.9	4.19-29.9
Maximum Feature Card Slots (see Notes 2 and 3)	5	5	5	5
Communications Lines (See note 3)	1-5	1-5	1-5 ³	1-5 ³
LAN IOAs	0-2	0-2	1-2	1-2
Integrated Netfinity Server LANs (Max)	0-2	0-2	0-2	1-2
MFIO LANs (Max)	1	1	1	1
Workstation Controllers				
Twinaxial	1	1	0-1	0-1
ASCII	0	0	0	0
LocalTalk	0	0	0	0
Workstations				
Twinax	1-7	1-28	0-7	0-28
ASCII	0	0	0	0
LocalTalk	0	0	0	0
¼-inch Cartridge Tape (4.0 GB)	1	1	1	1
½-inch Reel Tape	0	0	0	0
½-inch Cartridge Tape	0	0	0	0
8mm Cartridge Tape	0	0	0	0
Tape Libraries	0	0	0	0
Optical Libraries	0	0	0	0
Diskettes	0	0	0	0
Fax Adapters	0	0	0	0
Cryptographic Processors	0	0	0	0
System I/O Buses	0	0	0	0

Note 1:	<p>Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.</p> <p>The Constrained figures are for the 9401 Model 150 with its maximum configuration. The Unconstrained figures show what the performance would be if the processor was not limited by the maximum main storage and DASD of the Model 150. In ease case, the first figure is for Interactive workload, and the second is for client/server.</p>
Note 2:	<p>Three are driven by the MFIO.</p> <p>Two of these slots are reserved for the Integrated PC Server.</p>
Note 3:	Six lines are supported, but one is dedicated to Client Access Console (#029x Packages) or Operation Console (#039x and #059x Packages).
Note 4:	#029x Packages are shipped with V4R2. The #039x packages are shipped with V4R3. The #059x Packages are shipped with V4R4.

6.2 9401 150 System Unit



6.3 9401 150 Optional Features

POWER AND PACKAGING	
MFIOP	<p>Multifunction I/O Processor</p> <p>The MFIOP ships as standard (with no feature required) on all 9401 150 packages. It supports the following adapters:</p> <ul style="list-style-type: none"> Base Workstation/Comm Adapter Base Multi Protocol/Comm Adapter #2720 Workstation/Comm Adapter #2721 Multi Protocol Comm Adapter #2723/#9723 Ethernet/IEEE 802.3 Adapter #2724/#9724 16/4 Mbps Token Ring Adapter <p>The MFIOP supports one base adapter plus two feature adapters. If an Integrated PC Server or Integrated Netfinity Server is installed, no LAN Adapter can be installed on the MFIOP.</p>
#0185	<p>Performance Enhancement</p> <p>This feature upgrades the 9401 Model 150 processor and also increases the number of twinaxial workstations and printers supported from 7 to 14 V4R1 and earlier. It can be ordered on Packages #0181, #0183, #0191, or #0193 only.</p>
#0295	<p>Performance Enhancement/28 Workstations</p> <p>This feature upgrades the 9401 Model 150 processor and increases the number of twinaxial workstations and printers supported to 28. It can be ordered on packages #0181, #0183, #xx91, and #xx93 only. Requires V4R2 or higher.</p>
#0399	<p>4-Port Twinaxial Expansion</p> <p>This feature consists of a 4-port Twinaxial expansion cable and drop box. It is not allowed with packages #xx92, or with the #0295 Performance Enhancement feature.</p>
MAIN STORAGE	
#3110	<p>64MB Main Storage</p> <p>Plugs directly onto the CPU.</p> <p>Maximum: One on #0182, #0184, #xx92, and #xx94. Two on #0181, #0183, #xx91, and #xx93 packages. If base memory on #018x Packages is removed, three can be installed.</p> <p>Prerequisite: V4R1 or higher</p> <p>This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.</p>
#3182	<p>32MB Main Storage</p> <p>Plugs directly onto the CPU.</p> <p>Maximum: One on #0182, #0184, #xx92, and #xx94 packages. Two on #0181, #0183, #xx91, and #xx93 packages.</p> <p>This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.</p>

WORKSTATION CONTROLLERS	
#0059	Transition Data Link Offers a twinaxial data transfer between IBM systems.
#2720	Workstation/Comm Adapter Attaches to the MFIOP. This adapter combines being a workstation controller and supporting one communications line. A two port twinaxial attachment cable comes with the adapter that supports seven attached devices on #0181, #0183, #xx91, and #xx93 packages. Supports 14 attached devices when the preceding packages have #0185 installed or on #0182, #0184, #0192 and #0194 packages. A four port twinaxial attachment cable comes with the adapter that supports 28 devices on #xx92, and #xx94 packages or if #0295 or #0399 has been ordered and V4R2 or higher installed. The #2720 is shipped as standard with no feature code on #0181, #0182, #xx91, and #xx92 packages. Maximum: One This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.
Note	All optional features are customer installable except processor upgrades.
COMMUNICATIONS	
#0032	High Speed Modem Required for Electronic Customer Support
#2720	Workstation/Comm Adapter Attaches to the MFIOP. This adapter combines being a workstation controller and supporting one communications line. This adapter ships as standard (with no feature required) on #0181, #0182, #xx91, and #xx92 packages. The #2720 is available as a feature on #0183, #0184, #xx93, and #xx94 packages. Provides one communications line. One of the following cables must be specified: #0348 V.24/EIA232 20ft (6m) PCI Cable #0350 V.24/EIA232 20ft (6m) Enhanced PCI Cable #0353 V.35 20ft (6m) PCI Cable #0356 V.36/EIA449 20ft (6m) PCI Cable #0359 X.21 20ft (6m) PCI Cable Maximum: One This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.
#2721	Multiprotocol Comm Adapter Attaches to the MFIOP. Provides one or two communications lines. This adapter ships as standard (with no feature required) on #0183, #0184, #xx93, and #xx94 packages. One or two cable features must be specified (see Cable Features for #2720). One additional cable feature can be specified on #0181, #0182, #xx91, and #xx92 packages: #0367 Operations Console Cable 20ft (6M) PCI Cable (If #0367 is ordered then #0381 Remote Control Panel Cable may also be specified) #0362 Client Access Console 20ft (6M) PCI Cable Feature #0362 may be specified on packages #0181, #0182, #0191, #0192, #0291, #0292, #0391, #0392. Feature #0362 is shipped as standard on #0183, #0184, #0193, #0194. Feature #0367 may be specified on packages #0291, #0292, #0391, or #0392. Feature #0367 is shipped as standard on #0293, #0294, #0393, and #0394. One #0367 or #0362 may be specified per system for PC Console support. #0367 and #0381 require V4R3. This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.
LANs	
#2723 #9723	Ethernet/IEEE 802.3 Adapter This adapter supports attachment to an Ethernet LAN. AUI and RJ45 wrap connectors and an RJ45 filter cable are included with this feature. A 3 meter AUI Ethernet Cable or RJ45 Cable must be separately ordered. No LAN can be attached to the MFIOP if an Integrated PC Server or Integrated Netfinity Server is installed. The #9723 is the base Ethernet adapter on packages #0183, #0184, #xx93, and #xx94. Maximum: Two Prerequisite: Unused slot on MFIOP, on #2850, #2852 or #2868, or on Integrated PC Server or Integrated Netfinity Server shipped with package #0184, or #xx94. This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.

#2724 #9724	16/4 Mbps Token Ring Adapter This adapter supports attachment to a Token Ring LAN. AUI and RJ45 wrap connectors and a 2.4 meter Token Ring Cable are included with this feature. If the customer chooses to use RJ45 cabling, this must be separately ordered. No LAN can be attached to the MFIOP if an Integrated PC Server or Integrated Netfinity Server is installed. The #9724 is the base Token Ring adapter on packages #0183, #0184, #xx93, #xx94. Maximum: Two Prerequisite: Unused slot on MFIOP, on #2850, #2852 or #2868, or on Integrated PC Server or Integrated Netfinity shipped with package #0184, or #xx94. This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.
#2838 #9738	PCI 100/10 Mbps Ethernet Adapter This adapter supports attachment to a standardized 100 Mbps high speed Ethernet LAN and also allows attachment to existing 10 Mbps Ethernet LANs. The adapter comes with an RJ45 connector for attachment to UTP-5 media. The #9738 is the base 100/10 Mbps Ethernet Adapter on packages #xx93, or #xx94. Requires V4R2. Maximum: One Prerequisite: Unused slot on #2852 Integrated PC Server or #2868 Integrated Netfinity Server shipped with package #0184 or #xx94. This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.
Note	All optional features are customer installable except processor upgrades
#2850	Integrated PC Server Contains a 133 MHz Intel Pentium Processor, four Main Storage slots, and two LAN IOA slots for high performance serving to LAN attached PCs. The #2850 comes with 32MB of Main Storage and supports up to three of the following features, giving a maximum of 128MB. #2860 16MB Integrated PC Server Memory #2861 32MB Integrated PC Server Memory Either one or two of the following LAN IOAs are supported: #2723/#9723 Ethernet/IEEE 802.3 IOA #2724/#9724 16/4 Mbps Token Ring IOA #9723 or #9724 would be the base LAN IOA on #0183, #0184, #0193, or #0194 packages. The #2850 ships as standard with #0184 and #0194 packages (with no feature required). The #2850 is available as an option on all other packages except #0294, or #0394. The #2850 is not supported on the #059x packages. Maximum: One This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.
#2852	Integrated PC Server Contains a 200 MHz Pentium Processor, four main storage slots and two LAN IOA slots for high performance serving to LAN attached PCs. The #2852 comes with two 32MB Main Storage cards as standard. Up to two of the following additional Main Storage features may also be ordered. If the two base storage features are removed, four Main Storage features can be ordered giving a maximum of 512MB. #2861 32MB Integrated PC Server Memory #2862 128MB Integrated PC Server Memory Either one or two of the following LAN IOAs are supported: #2723/#9723 Ethernet/IEEE 802.3 IOA #2724/#9724 16/4 Mbps Token Ring IOA #2838/#9738 100/10 Mbps Ethernet IOA #9723, #9724, or #9738 would be the base LAN on #xx93 or #xx94 packages. Only one of the LANs can be #2838/#9738. The #2852 also comes with a special cable which provides industry standard keyboard, mouse, serial, and parallel connections. If running Windows NT on the #2852, then: #0325 Integrated PC Server Extension Cable for NT is required. #1700 Integrated PC Server Keyboard or Mouse for NT is the default in the USA. A display must be connected for NT on the IPCS. For other country-specific keyboard or mouse and display support, refer to the Web site at: http://www-1.ibm.com/servers/eserver/series/ The #2852 ships as standard with #0294, or #0394 package (with no feature required). The #2852 is available as an option on all other packages, except #0184 and #0194.

#2852 <i>continued</i>	<p>When running OS/2 on the #2852, then #0325 and #1700 are not allowed.</p> <p>When running Novell Netware on the #2852, then #0325 and #1700 are not allowed and a maximum of 256 MB IOP memory is supported.</p> <p>Requires V4R2 or higher.</p> <p>Maximum: One</p> <p>This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.</p>
Note	All optional features are customer installable except processor upgrades
#2868	<p>Integrated Netfinity Server for AS/400 (PCI)</p> <p>Requires V4R2 with CUM C8342420 or V4R3 with CUM C9349430.</p> <p>Contains a 333 MHz Pentium Processor, four main storage slots, and two LAN IOA slots for high performance serving to LAN-attached PCs. Comes with 64 MB as base IOP memory. Two additional main storage slots can each contain one of the following features, giving a maximum of 578 MB on initial order. However, base #2861s can be removed in the field and replaced by two of the following memory features, thus bringing the maximum IOP memory to 1024 MB.</p> <p>#2861 32MB Integrated PC Server Memory</p> <p>#2862 128MB Integrated PC Server Memory</p> <p>#2867 256MB Integrated PC Server Memory</p> <p>Up to two of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of one LAN IOA can be a #2838/#9738.</p> <p>#2723 PCI Ethernet IOA</p> <p>#2724 PCI Token Ring IOA</p> <p>#2838 PCI 100/10 Mbps Ethernet IOA</p> <p>Only one of the following Base LAN IOAs is supported:</p> <p>#9723 PCI Ethernet IOA</p> <p>#9724 PCI Token Ring IOA</p> <p>#9738 PCI 100/10 Mbps Ethernet IOA</p> <p>The #2868 ships as standard with #0594 package (with no feature required). The #2868 is available as an option on all other packages.</p> <p>If running Windows NT on the #2868, then:</p> <p>#0325 Integrated PC Server Extension Cable for NT is required.</p> <p>#1700 Integrated PC Server Keyboard or Mouse for NT. Default in the USA.</p> <p>A display is required to support NT on the Integrated Netfinity Server.</p> <p>For country-specific keyboard or mouse and display support, refer to the Web site at: http://www-1.ibm.com/servers/eserver/series/</p> <p>When running OS/2 on the #2868, then #0325 and #1700 are not allowed and a maximum of 512 MB IOP memory is supported.</p> <p>When running Novell Netware on the #2868, then #0325 and #1700 are not allowed and a maximum of 256 MB IOP memory is supported.</p> <p>Maximum: One.</p> <p>This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.</p>
DISK UNITS	
#6607	<p>4.19GB Additional Two-byte Disk Unit</p> <p>All 9401 Model 150 packages come with one 4.19 GB disk as standard (with no feature required). Three #6607s may be added giving a maximum of four 4.19 GB disks.</p> <p>This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.</p>
#6713	<p>8.58GB Additional Two-Byte Disk Unit</p> <p>Up to three #6713s may be added to all packages giving a maximum of 29.9GB if the base 4.19 GB disk is included.</p> <p>Requires V4R2 or higher.</p> <p>This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.</p>
INTERNAL TAPE UNITS	
#6381	<p>2.5GB ¼-inch Cartridge Tape Unit</p> <p>Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. Also supports the QIC-24 format used in S/36 ¼-inch units. This tape can be ordered to replace the 4.0GB ¼-inch cartridge tape unit included as standard with all #029x packages if S/36 compatibility is required. A 2.5GB ¼-inch cartridge tape unit ships as standard with all #018x and #019x packages with no feature required.</p> <p>This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.</p>

#6382	4GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This unit does not support QIC 24 format used in S/36 ¼-inch cartridge tape units. The #6382 is orderable on all #018x and #19x packages to replace the 2.5 GB ¼-inch cartridge tape unit that shipped as standard with those packages. A 4.0 GB ¼-inch cartridge tape unit ships as standard with all #029x or #039x packages with no feature required. This is a Customer Setup Feature (CSU) on a Model 150 for an MES that only includes CSU features.
Note	All optional features are customer installable except processor upgrades

6.4 9401 Model 150 Software

6.4.1 9401 150 Software V3R7

Please note that the following pages show those AS/400e products most commonly ordered. It is not intended to be a definitive list of all the iSeries or AS/400e software products now available.

Product Name	WDFM	Product Identifier	AS/400 Equivalent Product Identifier
Advanced Entry Model 150 BasePak V3R7	✓	5649-EP1	N/A
PSF/400 20-45 IPM Feature	✓	5649-SB1	5716-SS1 Feature
Enhanced Integration for Novell NetWare	✓	5649-SC1	5716-SS1 Feature
Enhanced Integration for Lotus Notes	✓	5649-SD1	5716-EPK
<ul style="list-style-type: none"> DataPropagator ADSTAR Distributed Storage (ADSM) Lotus Notes 			
Advanced Function Print Utility for AS/400	✓	5649-AF1	5716-AF1
Advanced DBCS Printer Support	✓	5649-AP1	5716-AP1
Integrated Language Environment COBOL for AS/400	✓	5649-CB1	5716-CB1
Point-of-Sale Communications Utility for AS/400	✓	5649-CF1	5716-CF1
Application Development ToolSet Client Server (ADTS C/S) for AS/400	✓	5649-CL3	5716-CL3
<ul style="list-style-type: none"> CODE/400 for OS/2 VRPG for OS/2 CODE for Windows VRPG for Windows 			
Current PTF CUM Kit		5649-CUM	N/A
Integrated Language Environment C for AS/400	✓	5649-CX2	5716-CX2
Language Dictionaries for AS/400		5649-DCT	5716-DCT
Application Program Driver for AS/400	✓	5649-PD1	5716-PD1
Application Development ToolSet for AS/400	✓	5649-PW1	5716-PW1
Application Dictionary Services for OS/400	✓	5649-PWA	5716-PW1 Feature
Application Development Manager for OS/400	✓	5649-PWB	5716-PW1 Feature
Integrated Language Environment RPG for AS/400	✓	5649-RG1	5716-RG1
Report/Data Archive and Retrieval System for AS/400	✓	5649-RD1	5716-RD1
IBM Connection Program for OS/400 for UNIX Environments	✓	5649-TBE	5798-TBE
OfficeVision for AS/400	✓	5649-WP1	5716-WP1
Secondary Languages for 5649-XXX licensed programs	✓	5649-NLV	N/A
IBM Network Station Manager for AS/400	✓	5649-A07	5648-B07
IBM Network Station Browser	✓	5649-A08	5648-B08

Note 1:	These products are available under IBM International Program License Agreement Terms, for use on 9401 Model 150 only.
Note 2:	5649-EP1 BasePak is provided preloaded on 9401 Model 150 only. It comprises OS/400, Client Access, Query, SQL Development Kit, Facsimile Support, Performance Management, PSF Fax Support, PSF 1-19 ipm support, and TCP/IP Communication Utilities. Advanced Function Printing DBCS Fonts are preloaded onto all DBCS systems. No separate product identifier is required for these products. 5649-EP1 cannot be ordered separately.

6.4.2 9401 150 Software V4R1

Please note that the following pages show those AS/400e software products most commonly ordered. It is not intended to be a definitive list of all the AS/400e or iSeries software products now available.

Product Name	WDFM	Product Identifier	AS/400 Equivalent Product Identifier
Advanced Entry Model 150 BasePack V4R1	✓	5649-EP2	N/A
PSF/400 20-45 Printer Support	✓	5649-SB2	5769-SS1 Feature
PSF/400 46+ IBM Printer Support	✓	5649-SB3	5769-SS1 Feature
NetWare Enhanced Integration	✓	5649-SC2	5769-SS1 Feature
Enhanced Integration for Lotus Notes	✓	5649-SD1*	5769-EPK
• DataPropagato			
• ADSTAR Distributed Storage Manager (ADSM)			
• Lotus Notes	✓	5649-AF1*	5716-AF1
Advanced Function Print Utility for AS/400	✓	5649-AP1*††	5716-AP1
Advanced DBCS Printer Support	✓	5649-CB1*	5716-CB1
Integrated Language Environment COBOL for AS/400		5649-CF1*	5716-CF1
Point-of-Sale Communications Utility for AS/400	✓	5649-CL3*	5716-CL3
Application Development ToolSet/Client Server			
• CODE/400 for OS/2			
• VRPG for OS/2			
• CODE for Windows			
• VRPG for Windows			
Current PTF CUM Kit	✓	5649-CU1	N/A
Integrated Language Environment C for AS/400		5649-CX2*	5716-CX2
Language Dictionaries for AS/400	✓	5649-DCT*	5716-DCT
Firewall for AS/400	✓	5649-FW1	5769-FW1
Internet Connection Secure Server for AS/400†	✓	5649-NC1†	5769-NC1
Internet Connection Secure Server for AS/400	✓	5649-NCE	5769-NCE
Secondary Languages for 5649 Licensed Programs	✓	5649-NL2	N/A
Application Program Driver for AS/400	✓	5649-PD1*	5716-PD1
Performance Tools for AS/400	✓	5649-PT1@	5716-PT1
Application Development ToolSet for AS/400	✓	5649-PW1*	5716-PW1
Application Dictionary Services for OS/400	✓	5649-PWA*	5716-PW1 Feature
Application Development Manager for OS/400	✓	5649-PWB*	5716-PW1 Feature
Report/Data Archive and Retrieval System for AS/400	✓	5649-RD1*	5716-RD1
Integrated Language Environment RPG for AS/400	✓	5649-RG1*	5716-RG1
IBM Connection Program for OS/400 for UNIX Environments	✓	5649-TBE*	5798-TBE
Wireless Connection for AS/400	✓	5649-TBW@	5798-TBW
OfficeVision for AS/400	2/2000	5649-WP2	5769-WP1
AS/400 Client Access Family	Note 8	5649-XY1	5769-XY1
OS/2 Warp Server for AS/400		5649-XZ1	5769-XZ1
IBM Network Station Manager for AS/400	✓	5649-A07*	5648-B07
IBM Network Station Browser	✓	5649-A08*	5648-B08
Navio NC Navigator for IBM Network Station (40 bit encryption)		5648-B10	5648-B10
Navio NC Navigator for IBM Network Station (128 bit encryption)†		5648-B20†	5648-B20†
IBM Network Station Browser (128 bit encryption)†		5648-B18	5648-B18
IBM AFP FONT Collection for IBM Operating Systems		5648-113	5648-113

Note 1:

These products are available under IBM International Program License Agreement terms, for use on 9401 Model 150 only.

Note 2:

***** in any column indicates data that was not available at time this edition was printed.

Note 3:

† These products are available in U.S.A. and Canada only.

Note 4:	†† This product is available in Asia Pacific countries only.
Note 5:	5649-EP2 BasePak V4R1 is provided preloaded on 9401 Model 150 only. It comprises OS/400, Client Access Family for Windows, Query, SQL Development Kit, Facsimile support, Performance Manager, and a selection of OS/400 features (PSF Fax Support, PSF 1-19 ipm Printer Support, CPA Tool Kit, Integration Services for IPCS, Integration for Novell Netware, Integration for Lotus Notes and TCP/IP Connectivity Utilities). No separate product indefinites are required for these products. Advanced Function Printing DBCS Fonts are preloaded onto all DBCS systems. 5649-EP2 BasePak V4R1 may be ordered as an upgrade to existing 9401 Model 150 systems using V3R7.
Note 6:	* These V3R7 products are available for use on V4R1 systems (as skip ship). For example, if you already have licenses for the product at V3R7, you do not need to reorder them.
Note 7:	@ These products are new with V4R1, but will also run on V3R7. They can only be configured using a V4R1 configurator.
Note 8:	Customers running OS/2 Warp Server for AS/400 IPCS are supported with their current capabilities until January 31, 2001. However, these products will not be functionally enhanced.

6.4.3 9401 150 Software V4R2

Please note that the following pages show those AS/400e software products most commonly ordered. It is not intended to be a definitive list of all the AS/400e or iSeries software products now available.

Product Name	WDFM	Product Identifier	AS/400 Equivalent Product Identifier
Advanced Entry Model 150 BasePack V4R2	✓	5649-EP3	N/A
PSF/400 20-45 Printer Support		5649-SB4	5769-SS1 Feature
PSF/400 46+ IBM Printer Support		5649-SB5	5769-SS1 Feature
NetWare Enhanced Integration		5649-SC3	5769-SS1 Feature
Advanced Function Print Utility for AS/400		5649-AF2	5769-AF1
Advanced DBCS Printer Support		5649-AP2††	5769-AP1
Integrated Language Environment COBOL for AS/400	✓	5649-CB2	5769-CB1
Point-of-Sale Communications Utility for AS/400	✓	5649-CF2	5769-CF1
Application Development ToolSet/Client Server	✓	5649-CL4	5769-CL3
• CODE/400 for OS/2	✓		
• VRPG for OS/2	✓		
• CODE for Windows	✓		
• VRPG for Windows	✓		
Current PTF CUM Kit	✓	5649-CU2	N/A
Integrated Language Environment C for AS/400	✓	5649-CX3	5769-CX2
Language Dictionaries for AS/400	✓	5649-DCT*	5716-DCT
Firewall for AS/400	✓	5649-FW2	5769-FW1
Internet Connection Secure Server for AS/400†	✓	5649-NC4	5769-NC1
Internet Connection Secure Server for AS/400	✓	5649-NCF	5769-NCE
Secondary Languages for 5649 Licensed Programs	✓	5649-NL3	N/A
Application Program Driver for AS/400	✓	5649-PD2	5769-PD1
Performance Tools for AS/400	✓	5649-PT2	5769-PT1
Application Development ToolSet for AS/400	✓	5649-PW2	5769-PW1
Application Dictionary Services for OS/400	✓	5649-PWC	5769-PW1 Feature
Application Development Manager for OS/400	✓	5649-PWD	5769-PW1 Feature
OnDemand for AS/400	✓	5649-RD2	5769-RD1
Integrated Language Environment RPG for AS/400	✓	5649-RG2	5769-RG1
Wireless Connection for AS/400	✓	5649-TBX	5798-TBW
OfficeVision for AS/400	✓	5649-WP3	5769-WP1
AS/400 Client Access Family	✓	5649-XY1*	5769-XY1
OS/2 Warp Server for AS/400	✓	5649-XZ1*	5769-XZ1
IBM Network Station Manager for AS/400	✓	5648-B07	5648-B07
Navio NC Navigator for IBM Network Station (40 bit encryption)	✓	5648-B10*	5648-B10
Navio NC Navigator for IBM Network Station (128 bit encryption)†	✓	5648-B20†*	5648-B20†
IBM AFP Font Collection for IBM Operating Systems	✓	5648-113*	5648-113
	Note 6		

Note 1:	These products are available under IBM International Program License Agreement terms, for use on 9401 Model 150 only.
Note 2:	† These products are available in U.S.A. and Canada only.
Note 3:	† † This product is available in Asia Pacific countries only.

Note 4:	5649-EP3 BasePak V4R2 is provided preloaded on 9401 Model 150 only. It comprises OS/400 Client Access Family for Windows, Query, SQL Development Kit, Facsimile support, Performance Manager, and a selection of OS/400 features (PSF Fax support, PSF 1-19 ipm Printer Support, CPA Tool Kit, Integration Services for IPCS, Integration for Novell Netware, Integration for Lotus Notes and TCP/IP Connectivity Utilities). In addition, V4R2 also includes support for Lotus Domino, support for Java application development, TCP/IP enhancements, enhanced facsimile, and enablement for AS/400 integration for Windows NT Server. No separate product identifiers are required for these products. Advanced Function Printing DBCS Fonts are preloaded onto all DBCS systems. 5649-EP3 BasePak V4R2 may be ordered as an upgrade to existing 9401 Model 150 systems using V3R7 or V4R1.
Note 5:	* These prior release products are available for use on V4R2 systems (skip ship). For example, if you already have licenses for them, you do not need to reorder them.
Note 6:	Customers running OS/2 Warp Server for AS/400 on the AS/400 IPCS will be supported with their capabilities until January 31, 2001. However, these products will not be functionally enhanced.

6.4.4 9401 150 Software V4R3

Note that the following pages show the AS/400e software products that are most commonly ordered. It is not intended to be a definitive list of all the AS/400e or iSeries software products that are now available.

Product Name	WDFM	Product Identifier	AS/400 Equivalent Product Identifier
Advanced Entry Model 150 BasePack V4R3	12/2000	5649-EP4	N/A
PSF/400 20-45 Printer Support		5649-SB6	5769-SS1 Feature
PSF/400 46+ IBM Printer Support		5649-SB7	5769-SS1 Feature
NetWare Enhanced Integration		5649-SC4	5769-SS1 Feature
Cryptographic Access Provider 40-bit for AS/400		5649-AC1	5769-AC1
Cryptographic Access Provider 56-bit for AS/400		5649-AC2	5769-AC2
Cryptographic Access Provider 128-bit for AS/400		5649-AC3+	5769-AC3+
Advanced Function Print Utility for AS/400		5649-AF2	5769-AF1
Advanced DBCS Printer Support		5649-AP2††	5769-AP1
Integrated Language Environment COBOL for AS/400		5649-CB2	5769-CB1
Point-of-Sale Communications Utility for AS/400		5649-CF2	5769-CF1
Application Development ToolSet/Client Server		5649-CL4	5769-CL3
• CODE/400 for OS/2			
• VRPG for OS/2			
• CODE for Windows			
• VRPG for Windows			
Current PTF CUM Kit		5649-CU3	N/A
Integrated Language Environment C for AS/400		5649-CX4	5769-CX2
Language Dictionaries for AS/400		5649-DCT*	5716-DCT
Firewall for AS/400	12/2000	5649-FW3	5769-FW1
Secondary Languages for 5649 Licensed Programs	12/2000	5649-NL4	N/A
Application Program Driver for AS/400	12/2000	5649-PD3	5769-PD1
Performance Tools for AS/400	12/2000	5649-PT2*	5769-PT1
Application Development ToolSet for AS/400	12/2000	5649-PW2*	5769-PW1
Application Dictionary Services for OS/400	12/2000	5649-PWC*	5769-PW1 Feature
Application Development Manager for OS/400	12/2000	5649-PWD*	5769-PW1 Feature
OnDemand for AS/400	12/2000	5649-RD3	5769-RD1
Integrated Language Environment RPG for AS/400	12/2000	5649-RG2*	5769-RG1
Wireless Connection for AS/400	12/2000	5649-TBX*	5798-TBW
OfficeVision for AS/400	12/2000	5649-WP3*	5769-WP1
AS/400 Client Access Family	2/2000	5649-XY1*	5769-XY1
OS/2 Warp Server for AS/400	12/2000 Note 6	5649-XZ1*	5769-XZ1
IBM Network Station Manager for AS/400	12/2000	5648-C05	5648-C05
Navio NC Navigator for IBM Network Station (128 bit encryption)†	12/2000	5648-C20†	5648-C20†
IBM AFP Font Collection for IBM Operating Systems	12/2000	5648-113*	5648-113

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Note 2:	† These products are available in U.S.A. and Canada only.
Note 3:	† † This product is available in Asia Pacific countries only.
Note 4:	5649-EP4 BasePak V4R3 is provided preloaded on 9401 Model 150 only. It comprises OS/400 Client Access Family for Windows, Query, SQL Development Kit, Facsimile support, Performance Manager and a selection of OS/400 features (PSF Fax support, PSF 1-19 ipm Printer Support, CPA Tool Kit, Integration Services for IPCS, Integration for Novell Netware, Integration for Lotus Notes and TCP/IP Connectivity Utilities). In addition, V4R3 also includes support for Lotus Domino, support for Java application development, TCP/IP enhancements, enhanced facsimile, and enablement for AS/400 integration for Windows NT Server. No separate product identifiers are required for these products. Advanced Function Printing DBCS Fonts are preloaded onto all DBCS systems. 5649-EP4 BasePak V4R3 may be ordered as an upgrade to existing 9401 Model 150 systems using V3R7 or V4R1.
Note 5:	* These prior release products are available for use on V4R3 systems (skip ship). That is to say, if you already have licenses for them, you do not need to reorder them.
Note 6:	Customers running OS/2 Warp Server for AS/400 on the AS/400 IPCS will be supported with their current capabilities until 31 January 2001. However, these products will not be functionally enhanced.

6.4.5 9401 150 Software V4R4

The following pages show those AS/400e software products that are most commonly ordered. It is not intended to be a definitive list of all the iSeries or AS/400e software products that are now available.

Product Name	WDFM	Product Identifier	AS/400 Equivalent Product Identifier
Advanced Entry Model 150 BasePack V4R3	12/2000	5649-EP5	N/A
PSF/400 20-45 Printer Support		5649-SB8	5769-SS1 Feature
PSF/400 46+ IBM Printer Support		5649-SB9	5769-SS1 Feature
NetWare Enhanced Integration		5649-SC5	5769-SS1 Feature
Cryptographic Access Provider 40-bit for AS/400		5649-AC4	5769-AC1
Cryptographic Access Provider 56-bit for AS/400		5649-AC5	5769-AC2
Cryptographic Access Provider 128-bit for AS/400		5649-AC6 †	5769-AC3 †
Advanced Function Print Utility for AS/400		5649-AF3	5769-AF1
Advanced DBCS Printer Support		5649-AP3††	5769-AP1
Integrated Language Environment COBOL for AS/400		5649-CB3	5769-CB1
AS/400 Client Encryption (40-bit)		5649-CE1	5769-CE1
AS/400 Client Encryption (56-bit)		5649-CE2	5769-CE2
AS/400 Client Encryption (128-bit)		5649-CE3 †	5769-CE3 †
Point-of-Sale Communications Utility for AS/400		5649-CF3	5769-CF1
Application Development ToolSet/Client Server		5649-CL5	5769-CL3
• CODE/400 for OS/2			
• VRPG for OS/2			
• CODE for Windows			
• VRPG for Windows			
Current PTF CUM Kit		5649-CU4	N/A
Integrated Language Environment C for AS/400		5649-CX5	5769-CX2
Language Dictionaries for AS/400		5649-DCT*	5716-DCT
Firewall for AS/400		5649-FW4	5769-FW1
Secondary Languages for 5649 Licensed Programs		5649-NL5	N/A
Application Program Driver for AS/400		5649-PD3*	5769-PD1
Performance Tools for AS/400		5649-PT3	5769-PT1
Application Development ToolSet for AS/400		5649-PW3	5769-PW1
Application Dictionary Services for OS/400		5649-PWE	5769-PW1 Feature
Application Development Manager for OS/400		5649-PWF	5769-PW1 Feature
OnDemand for AS/400		5649-RD4	5769-RD1
Integrated Language Environment RPG for AS/400		5649-RG3	5769-RG1
Wireless Connection for AS/400		5649-TBZ	5798-TBW
OfficeVision for AS/400		5649-WP3*	5769-WP1
AS/400 Client Access Family		5649-XY1*	5769-XY1
OS/2 Warp Server for AS/400		5649-XZ1*	5769-XZ1
IBM Network Station Manager for AS/400	2/2000 Note 6	5648-C05	5648-C05
Navio NC Navigator for IBM Network Station (128 bit encryption)†		5648-C20†	5648-C20†
IBM AFP Font Collection for IBM Operating Systems		5648-113*	5648-113

Note 1:	These products are available under IBM International Program License Agreement terms, for use on 9401 Model 150 only.
Note 2:	† These products are available in U.S.A. and Canada only.
Note 3:	† † This product is available in Asia Pacific countries only.
Note 4:	5649-EP5 BasePak V4R4 is provided preloaded on 9401 Model 150 only. It is comprised of OS/400 Client Access Family for Windows, Query, SQL Development Kit, Facsimile support, Performance Manager and a selection of OS/400 features (PSF Fax support, PSF 1-19 ipm Printer Support, CPA Tool Kit, Integration Services for IPCS, Integration for Novell Netware, Integration for Lotus Notes and TCP/IP Connectivity Utilities). In addition, V4R4 also includes support for Lotus Domino, support for Java application development, TCP/IP enhancements, enhanced facsimile, and enablement for AS/400 integration for Windows NT Server. No separate product identifiers are required for these products. Advanced Function Printing DBCS Fonts are preloaded onto all DBCS systems. 5649-EP5 BasePak V4R4 may be ordered as an upgrade to existing 9401 Model 150 systems using V3R7, V4R1, V4R2 or V4R3.
Note 5:	* These prior release products are available for use on V4R4 systems (skip ship). In other words, if you already have licenses for them, you do not need to reorder them.
Note 6:	Customers running OS/2 Warp Server for AS/400 on the AS/400 IPCS will be supported with their current capabilities until 31 January 2001. However, these products will not be functionally enhanced.

Chapter 7. AS/400e Server 170

7.1 Model 170 Overview

Model	170 (February 1998)				
Processor Feature	#2159	#2160	#2164	#2176	#2183
Relative System Performance (CPW - See Note 1)					
Client/Server Environment	75.0	114.0	210.0	319.0	319.0
Interactive Environment	16.0	23.0	29.0	39.0	65.0
Number of N-Way Multiprocessors	1	1	1	1	1
Main Storage (MB)	64-832	64-832	256-1024	256-1024	256-1024

Model	170 (September 1998 / February 1999)						
Processor Feature	#2289	#2290	#2291	#2292	#2385	#2386	#2388
Relative System Performance (CPW - See Note 2)							
Processor Performance	50	73	115	220	460	460	1090
Interactive Performance	15	20	25	30	50	70	70
Number of N-Way Multiprocessors	1	1	1	1	1	1	2
Main Storage (MB)	64-832	64-832	64-832	256-1024	256-3584	256-3584	256-3584

	Base System for all processors (see Note 5)	System Unit Expansion #7101/#7102 (see Note 5)	Total Maximum (see Note 5)
Disk Storage (GB)			
Minimum Internal	4.19	0	4.19
Maximum Internal (V4R2)	34.32	51.48	85.80
Maximum Internal (V4R3 and later)	70.16	105.24	175.40
System I/O Card Slots			
Low-speed PCI	2	4	6
Low-speed IPCS PCI	2	2	4
High-speed DASD IOA PCI	1	0	1
High-speed Tape IOA PCI	0	1	1
High-speed Ethernet or ATM (See Note 3)	1	2	3
Maximum Communication Lines (see Note 4)	1-12	0-18	30
ATM Adapters (see Note 6)	0-1	0-2	3
Maximum LAN/ATM Adapters (see Note 6)	3	4	7
Non-Integrated Server LAN Low-Speed TR/Ethernet	1	4	5
Non-Integrated Server LAN 100/10 Ethernet	1	2	3
Integrated Server LAN Low-Speed TR/Ethernet	2	2	4
Integrated Server LAN 100/10 Ethernet	1	1	2
Maximum Workstation Controllers			
Twinaxial (only)	3	5	6
Maximum Workstations			
Twinaxial (only)	28/108	200	228
Cryptographic Processors	0	2	2
¼-inch Cartridge Tape (Internal)	0-1	0	1
½-inch Tape (External)			
Reel 9348	0	0-2	2
Reel 2440, 9347	0	0	0
Cartridge 34xx, 35xx	0	0-2	2
8mm ½-inch Cartridge (External)	0	0-2	2
CD-ROM	1	0	1
Optical Libraries	0	0-2	2

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable. With the introduction of the Dedicated Servers for Domino, Simple Mail Users has been added as a performance measurement. The constrained figures are for the 9406 Model 170 with its maximum configuration. The unconstrained figures show what the performance would be if the processor was not limited by the maximum Main Storage and DASD of the Model 170.
Note 2:	Processor performance represents the relative performance (maximum capacity) of a processor feature running CPW in a client/server environment. Processor capacity is achievable when the commercial workload is not constrained by main storage and DASD. Interactive Performance represents the relative performance available to perform host-centric workloads. The amount of interactive capacity consumed reduces the available processor capacity by the same amount.
Note 3:	The Integrated Server is mutually exclusive with the high-speed slot C03 for LAN/ATM/communications in the Base System Unit.
Note 4:	One line is used by the Operations Console or Client Access Console if selected. The total is reduced by one if a Twinaxial Console is selected. To reach the maximum of 18 communication lines using the #2745/#9745 in slot C03, the base LAN adapter needs to be removed.
Note 5:	Base System totals are the maximum for the #2289 processor. The #2289 processor does not support attachment of the #7101 or #7102 System Unit Expansion.
Note 6:	Integrated Server can refer to either Integrated PC Server (IPCS) or Integrated Netfinity Server.

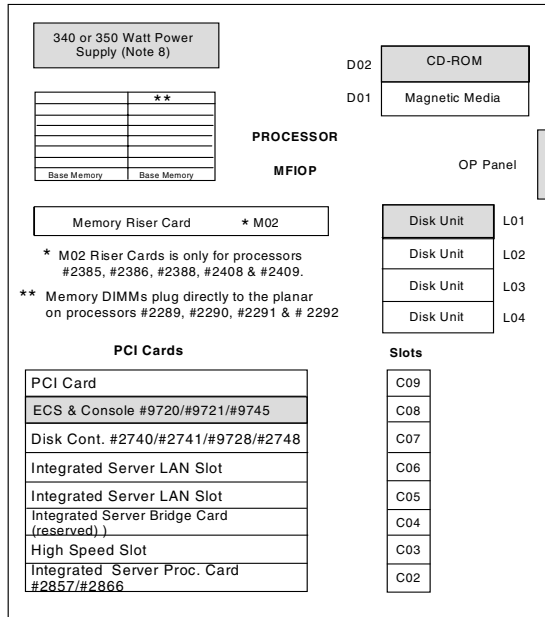
7.2 AS/400e Dedicated Server for Domino

Model	Dedicated Server for Domino (August 1999)		
Processor Feature	#2407	#2408	#2409
Relative System Performance (CPW - See Note 1)			
Client/Server Environment	30	60	120
Interactive Environment	10	15	20
Simple Mail Users	1300	2300	4300
Number of N-Way Multiprocessors	1	1	2
Main Storage (MB)	256-1024	512-4096	512-4096

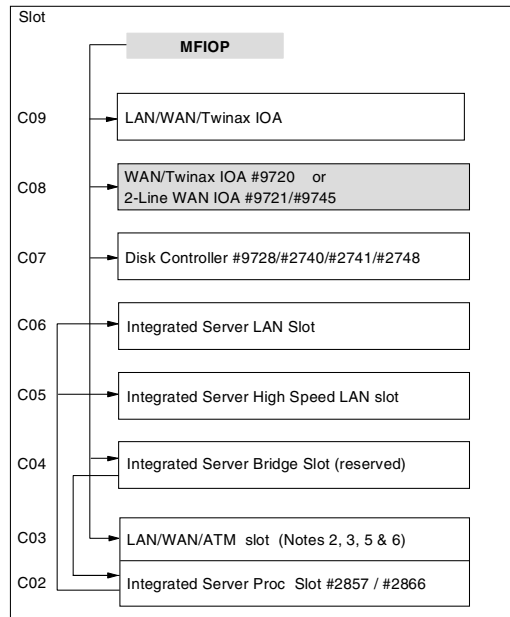
	Base System for all processors (see Note 5)	System Unit Expansion #7102 (see Note 5)	Total Maximum (see Note 5)
Disk Storage (GB)			
Minimum Internal	4.19	0	4.19
Maximum Internal (V4R2)	34.32	51.48	85.80
Maximum Internal (V4R3 and later)	70.16	105.24	175.40
System I/O Card Slots			
Low-speed PCI	2	4	6
Low-speed IPCS PCI	2	2	4
High-speed DASD IOA PCI	1	0	1
High-speed Tape IOA PCI	0	1	1
High-speed Ethernet or ATM (See Note 3)	1	2	3
Maximum Communication Lines (see Note 4)	1-12	0-18	30
ATM Adapters (see Note 6)	0-1	0-2	3
Maximum LAN/ATM Adapters (see Note 6)	3	4	7
Non-Integrated Server LAN Low-Speed TR/Ethernet	1	5	5
Non-Integrated Server LAN 100/10 Ethernet	1	2	3
Integrated Server LAN Low-Speed TR/Ethernet	2	2	4
Integrated Server LAN 100/10 Ethernet	1	1	2
Maximum Workstation Controllers			
Twinaxial (only)	3	5	6
Maximum Workstations			
Twinaxial (only)	28/108	200	228
Cryptographic Processors	0	2	2
¼-inch Cartridge Tape (Internal)	0-1	0	1
½-inch Tape (External)			
Reel 9348	0	0-2	2
Reel 2440, 9347	0	0	0
Cartridge 34xx, 35xx	0	0-2	2
8mm ½-inch Cartridge (External)	0	0-2	2
CD-ROM	1	0	1
Optical Libraries	0	0-2	2

7.3 Model 170 System Unit and System Expansion Unit

9406 Model 170 System Unit



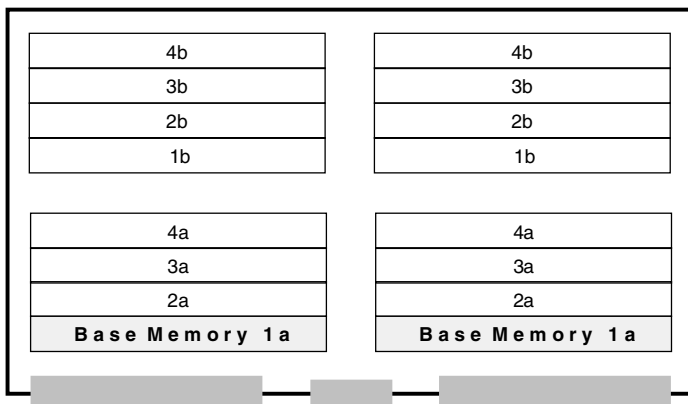
9406 Model 170 System Unit PCI Card Placement



Notes:

1. No high-speed LAN is allowed in Slot C09.
2. If any card is in Slot in C03, then no LAN card is allowed in Slot C09.
3. Communications cards #2750, #2751, and #2761 are *only* allowed in high-speed Slot C03.
4. #2289, #2290, #2291 and #2292 processors include embedded base disk controller. A separate #9728 is not needed.
5. If any IPCS is in Slots C02/C04, C03 must remain empty.
6. In C03, #2811, #2812, #2819, #2745, #2750, #2751, #2761, #2746, #2723, #2724, and #2838 are supported.
7. Integrated Server can refer to either Integrated PC Server (IPCS) or Integrated Netfinity Server.
8. 340W in #2289/#2290/#2291/#2292, 350W in #2385/#2386.

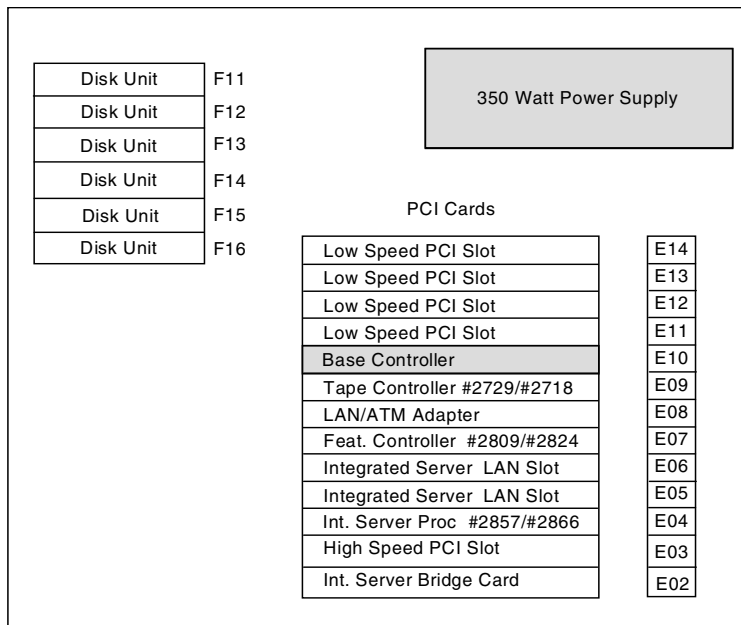
Model 170 Main Storage Riser Card (M02) for Processors #2385, #2386, #2388, #2408, #2409



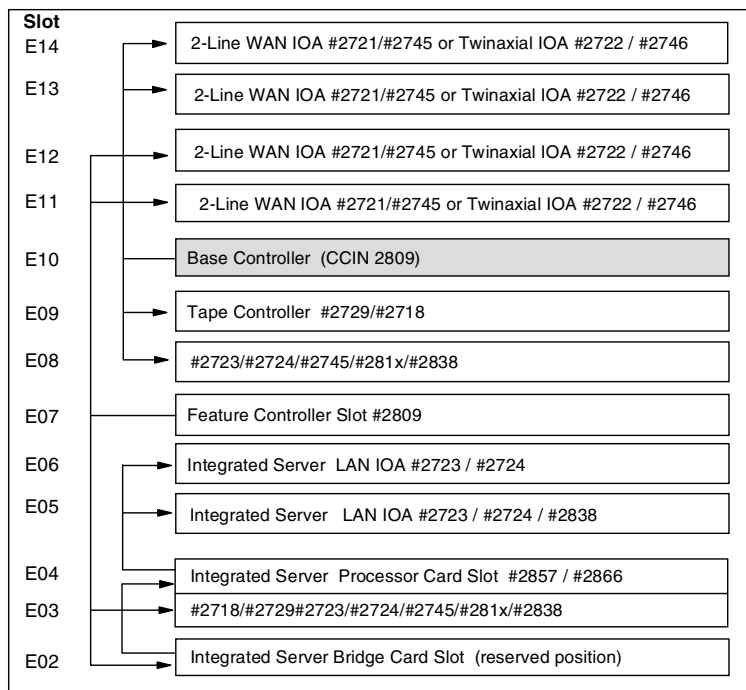
Notes:

1. DIMMS should be plugged in pairs in a sequential order, without leaving a gap.
2. Base memory cannot be upgraded.
3. When the upper half of the riser card is used (slot b), all DIMMS in those slots must match the corresponding bottom (a) slots (that is, quad).

9406 Model 170 #7101/#7102 System Expansion Unit



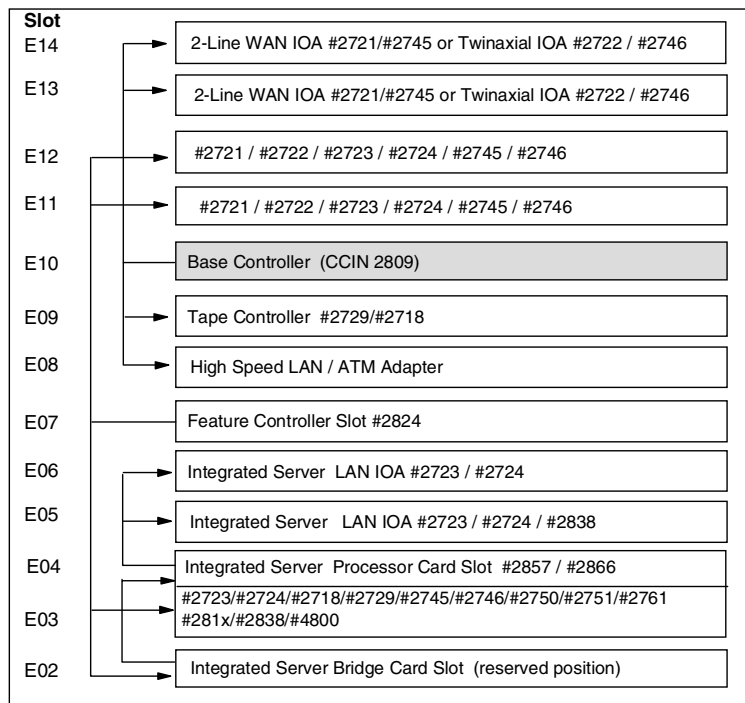
PCI Card Cage for #7101 System Expansion Unit Base CCIN 2809/Feature #2809



Notes:

1. If any ATM is in slot E08, slot E13 must remain empty. Base memory cannot be upgraded.
2. If an Integrated Server is in slots E02/E04, E03 must remain empty.
3. Both high-speed and low-speed ATMs are supported in the System Expansion Unit.
4. The disk units in the expansion unit are covered by the #2740, #9740, #2741, or #2748 disk controller in the System Unit.
5. Integrated Server can refer to Integrated PC Server (IPCS) or Integrated Netfinity Server.

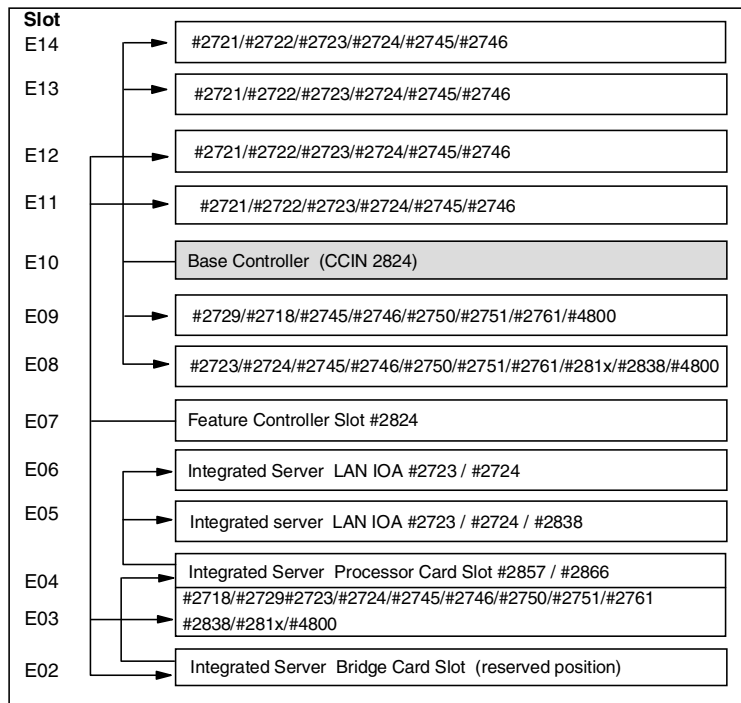
**PCI Card Cage For #7101 System Expansion Unit
Base CCIN 2809/Feature #2824**



Notes:

1. If any ATM is in slot E08, slot E13 must remain empty. Base memory cannot be upgraded.
2. If an Integrated Server is in slot E02/E04, E03 must remain empty.
3. Both high-speed and low-speed ATMs are supported in the System Expansion Unit.
4. The disk units in the expansion unit are covered by the #2740, #9740, #2741, or #2748 disk controller in the system unit.
5. Communications cards #2750, #2751, and #2761 are allowed in slot E03.
6. Cryptographic card #4800 is only allowed in high-speed slot E03.
7. Integrated Server can refer to Integrated PC Server (IPCS) or Integrated Netfinity Server.

**PCI Card Cage For #7102 System Expansion Unit
Base CCIN 2824/Feature #2824**



Notes:

1. If any ATM is in slot E08, slot E13 must remain empty. Base memory cannot be upgraded.
2. If either 100/10 Ethernet or any ATM card is in slot E03 or E08, no other LAN is allowed in slots E11/E12 or E13/E14.
3. If an Integrated Server is in slots E02/E04, E03 must remain empty.
4. Both high-speed and low-speed ATMs are supported in the System Expansion Unit.
5. The disk units in the expansion unit are covered by the Disk controller #2740, #9740, #2741, or #2748 in the System Unit.
6. Communications cards #2750, #2751, and #2761 are allowed in slots E03, E08, and E09 (maximum one per IOP).
7. Cryptographic card #4800 is allowed in high-speed slots E03, E08, or E09 (maximum one per IOP).
8. Integrated Server can refer to Integrated PC Server (IPCS) or Integrated Netfinity Server.

7.4 Model 170 Optional Features

PROCESSORS	
#2159	75.0 RSP CPW Processor in Client/Server Environment (Unconstrained), 16.0 RSP CPW Processor in Interactive Environment (Constrained and Unconstrained). Base Memory 64 MB.
#2160	114.0 RSP CPW Processor in Client/Server Environment (Unconstrained), 23.0 RSP CPW Processor in Interactive Environment (Constrained and Unconstrained). Base Memory 64 MB.
#2164	210.0 RSP CPW Processor in Client/Server Environment (Unconstrained), 29.0 RSP CPW Processor in Interactive Environment (Constrained and Unconstrained). Base Memory 256 MB.
#2176	319.0 RSP CPW Processor in Client/Server Environment (Unconstrained), 39.0 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 256 MB.
#2183	319.0 RSP CPW Processor in Client/Server Environment (Unconstrained), 65.0 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 256 MB.
#2289	50 RSP CPW Processor in Client/Server Environment (Unconstrained), 15 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 64 MB. Requires OS/400 V4R3.
#2290	73 RSP CPW Processor in Client/Server Environment (Unconstrained), 20 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 64 MB. Requires OS/400 V4R3.
#2291	115 RSP CPW Processor in Client/Server Environment (Unconstrained), 25 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 64 MB. Requires OS/400 V4R3.
#2292	220 RSP CPW Processor in Client/Server Environment (Unconstrained), 30 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 256 MB. Requires OS/400 V4R3.
#2385	460 RSP CPW Processor in Client/Server Environment (Unconstrained), 50 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 256 MB. Requires OS/400 V4R3.
#2386	460 RSP CPW Processor in Client/Server Environment (Unconstrained), 70 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 256 MB. Requires OS/400 V4R3.
#2388	1090 RSP CPW 2-Way Processor in Client/Server Environment (Unconstrained), 70 RSP CPW Processor in Interactive Environment (Unconstrained). Base Memory 256 MB. Requires OS/400 V4R3.
#2407	Dedicated Domino Processor, 1300 Simple Mail Users, 30 RSP CPW Processor in Client/Server Environment, 10 RSP CPW in Interactive Environment. Base Memory 256 MB. Requires OS/400 V4R4.
#2408	Dedicated Domino Processor, 2300 Simple Mail Users, 60 RSP CPW Processor in Client/Server Environment, 15 RSP CPW in Interactive Environment. Base Memory 512 MB. Requires OS/400 V4R4.
#2409	Dedicated Domino Processor, 4300 Simple Mail Users, 120 RSP CPW Processor in Client/Server Environment, 20 RSP CPW in Interactive Environment. Base Memory 512 MB. Requires OS/400 V4R4.
POWER AND PACKAGING	
#7101	System Expansion Unit Not available on Processor #2289, #2407, #2408 or #2409 This feature allows the addition of up to nine PCI cards. It includes a Base Controller (CCIN 2809) as standard and can have another added by ordering #2809. The #7101 can also support one #2857 Integrated PC Server or one #2866 Integrated Netfinity Server. The #7101 supports up to six disks (driven by the same disk controller located in the system unit). This feature is mutually exclusive with #7102. Maximum: One per system. Requires one line cord #1402 or #1403.

#7102	<p>System Expansion Unit Not available on Processor #2289 Requires OS/400 V4R4 This feature allows the addition of up to nine PCI cards. It includes a Base Controller (CCIN 2824) with 32 MB of memory as standard and can have another added by ordering #2824. The #7102 can also support one #2857 Integrated PC Server or one #2866 Integrated Netfinity Server. The #7102 additionally supports up to six disks (driven by the same disk controller located in the system unit). This feature is mutually exclusive with #7101. Maximum: One per system. Requires one line cord #1402 or #1403.</p>
#1402	<p>Line cord 9-feet 120 volt Feature #1402 specifies 9-feet long, 15 Amp, and 120 volt (US default). This specify feature provides up to two line cords: one for the system and one for the Expansion Unit. If only the System Unit is ordered, only one line cord is provided.</p>
#1403	<p>Line cord 9-feet 240 volt Feature #1402 specifies 9-feet long, 15 Amp, and 240 volt. This specify provides up to two line cords: one for the system and one for the Expansion Unit. If only the System Unit is ordered, only one line cord is provided.</p>
MAIN STORAGE	
Base	<p>There are no features to specify the base memory of 64 MB on the Model 170 Processors #2159, #2160, #2289, #2290, and #2291. There are also no features to specify for 256 MB on the Model 170 Processors #2164, #2176, #2183, #2292, #2385, #2386, and #2388, for 256 MB on the Dedicated Domino Processor #2407, or for 512 MB on the Dedicated Domino Processors #2408, #2409. Note: For main storage, which must be added in pairs, feature codes must be added in pairs. The same rules apply to quads.</p>
#3001	<p>32 MB Main Storage (DIMM) Plugs directly into the CPU or memory riser card depending on the processor feature. Must be added in pairs. Maximum: Six on all processors, except #2385, #2386 and #2388, which support a maximum of 12, and #2408, #2409, which support a maximum of 12. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#3002	<p>128 MB Main Storage (DIMM) Plugs directly into the CPU or memory riser card depending on the processor feature. Must be added in pairs. Maximum: Six on all processors except #2385, #2386, and #2388, which support a maximum of 14 and Dedicated Domino processors #2408 and #2409 which support a maximum of 12. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#3003	<p>256 MB Main Storage (DIMM) Plugs directly into the CPU or memory riser card depending on the processor feature. Must be added in pairs. Mixing #3003 and #3004 within pairs (or quads on the Processors #2385, #2386, and #2388 when more than eight memory features are installed) is <i>not</i> allowed. Maximum: 12. Processors #2385, #2386, and #2388 only. Requires V4R3. This is a Customer Install Feature (CIF) on a Model 170 for MES that only includes CIF features.</p>
#3004	<p>256 MB Main Storage (DIMM) Plugs directly into the CPU board or memory riser card depending on the processor feature. Must be added in pairs. Mixing of #3003 and #3004 within pairs (or quads on the Processors #2385, #2386 and #2388 when more than eight memory features are installed) is <i>not</i> allowed. Maximum: Two on Processors #2289, #2290, #2291, and #2292 (requires V4R3), and #2407 (requires V4R4). Maximum: 12 on Processors #2385, #2386, and #2388 (requires V4R3). Maximum: 14 on Processors #2408 and #2409 (requires V4R4). This is a Customer Install Feature (CIF) on a Model 170 for MES that only includes CIF features.</p>
WORKSTATION CONTROLLERS	
Base MFIO	<p>Base Multifunction IOP (for processors 2159, 2160, 2164, 2176, 2183, 2385, 2386, 2388, 2408, and 2409) The Base System includes this MFIO (CCIN 6757), which plugs on the processor card, and supports two high-speed PCI card slots C07, C03 and two low-speed PCI card slots C08, C09. The #2408 and #2409 processors include a #9740 Base RAID Disk Unit Controller in slot C07. The slot C07 has a #9728 Base Disk Unit Controller, a #9740 Base RAID Disk Unit Controller, a #2740, #2741, or #2748 PCI RAID-5 Disk Controller. Slots C02/C04 are reserved for one #2857 Integrated PC Server (IPCS) or #2866 PCI Integrated Netfinity Server, but can only be used if there is no card in C03. Slot C03 supports one of #2723/#9723/#2724/#9724/#2838/#9738 PCI LAN IOAs, or <i>low-speed</i> #2811/#2812/#2819 ATMs, or WAN #2745, #2750, #2751 and #2761 PCI IOAs or #2746 Twinax IOA. C08 is reserved for one base ECS/Console IOA #9720/#9721 or #9745. C09 is limited to #2721/#2722/#2745/#2746 PCI IOAs if any card is in C03. If C03 is empty, it also supports one #2723/#9723/#2724/#9724 PCI LAN IOA or #9720 Base PCI WAN/Twinaxial IOA or #2746 Twinax IOA.</p>

Base MFIOP	<p>Base Multifunction IOP (for processors 2289, 2290, 2291, 2292, and 2407)</p> <p>The MFIOP (CCIN 675A) and the processor are combined together on the planar board. It also includes embedded Base Disk Unit Controller (a separate Base Controller #9728 is not required). The #2407 includes a #9740 Base RAID Disk Unit Controller.</p> <p>The MFIOP drives two low-speed slots C08, C09, and two high-speed PCI slots C03 and C07. It supports disk drive controllers #2740/#9740, #2741 or #2748 only, if there are more than four disk drives, and RAID-5 is required. Slots C02/C04 are reserved for one #2857 Integrated PC Server (IPCS) or #2866 PCI Integrated Netfinity Server, and can only be used if there is no card in slot C03.</p> <p>Slot C03 supports one of #2723/#9723/#2724/#9724/#2838/#9738 PCI LAN IOAs, or low-speed #2811/#2812/#2819 ATMs, or WAN #2745, #2750, #2751 and #2761 PCI IOAs or #2746 Twinax IOA.</p> <p>C08 is reserved for one base ECS/Console IOA #9720/#9721 or #9745.</p> <p>C09 is limited to #2721/#2722/#2745/#2746 PCI IOAs if any card is in C03. If C03 is empty, it also supports one of #2723/#9723/#2724/#9724 PCI LAN IOA or #9720 Base PCI WAN/Twinaxial IOA or #2746 Twinax IOA.</p> <p>Note: The #2745 can be in either low or high-speed slot.</p>
Base IOP	<p>Base Controller for 7101 Expansion Unit</p> <p>One LAN/WAN/Workstation IOP (CCIN 2809) is supplied as standard within the #7101 and is installed in slot E10. It provides support for two high-speed PCI card slots E08 and E09, and two low-speed PCI card slots E13 and E14.</p> <ul style="list-style-type: none"> Slot E08 supports one of the following LAN cards: #2838, #2723, #2724 or #281x ATM cards, or #2745 PCI two-line WAN IOA. Slot E09 supports the #2718 or #2729 PCI Magnetic Media Controller. The low-speed slots E13 and E14 support cards #2721/#2745 PCI Two-line WAN IOA and #2722/#2746 PCI Twinaxial Workstation IOA (if any ATM card is in E08, then E13 must be empty).
Base IOP	<p>Base Controller for 7102 Expansion Unit</p> <p>One LAN/WAN/Workstation IOP (CCIN 2824) is supplied as standard within the #7102, and is installed in slot E10. It provides support for two high-speed PCI card slots E08 and E09, and two low-speed PCI card slots E13 and E14.</p> <ul style="list-style-type: none"> Slot E08 supports one of the following LAN cards: #2838, #2723, #2724 or #281x ATM cards or the #2745 PCI two-line WAN IOA or the #2746 Twinax IOA or the #2750/#2751 PCI ISDN IOA, the #2761 Integrated Analog Modem, or the #4800 Crypto Coprocessor. Slot E09 supports the #2718/#2729 PCI Magnetic Media Controller, the #2745 Two-line WAN IOA, the #2746 Twinax IOA, the #2750/#2751 PCI ISDN IOA, the #2761 Integrated Analog Modem, or the #4800 Crypto Coprocessor. The low-speed slots E13 and E14 support cards #2721, #2722, #2723, #2724, #2745 or #2746 (if any ATM card is in E08, E13 must be empty).
#2720 #9720	<p>Base PCI WAN/Twinaxial IOA</p> <p>This combined twinaxial/communications adapter can be included as base in the Model 170. It provides four ports supporting a maximum of 28 Twinaxial devices. It also provides a single communications line to support ECS. It is mutually exclusive with #9721 (See "COMMUNICATIONS" on page 147).</p> <p>PCI slots required: One</p> <p>Maximum: One</p>
#2722	<p>PCI Twinaxial Workstation IOA</p> <p>One eight-port attachment is provided to support 40 twinaxial devices.</p> <p>PCI slots required: One</p> <p>Maximum: Five</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2746	<p>PCI Twinaxial Workstation IOA</p> <p>One eight-port attachment is provided to support 40 twinaxial devices. This feature can be attached both to high- and low-speed slots.</p> <p>Requires V4R4</p> <p>PCI slots required: One</p> <p>Maximum: Five</p> <p>This feature is a replacement for #2722.</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>

#2809	<p>PCI Feature Controller for 7101 Expansion Unit</p> <p>Feature Controller for LAN/WAN/Workstation can be ordered and installed in E07 in the #7101 System Expansion Unit only. One Base controller (2809) LAN/WAN/Workstation IOP is supplied as standard within the #7101 with no feature required (see Base IOP in this section). The Feature Controller #2809 provides support for two low-speed PCI card slots E11 and E12, also one high-speed PCI card slot E03.</p> <ul style="list-style-type: none"> Slot E03 can only be used if no 2857 Integrated PC Server or 2866 Integrated Netfinity Server card is installed in slots E02/E04. Slot E03 supports one of #2718, #2729, #2723, #2724, #2745, #2838 or #281x. Slots E11 and E12 supports #2721/#2745 PCI Two-line WAN IOA and #2722/#2746 PCI Twinaxial Workstation IOA. <p>Maximum: One in #7101 System Expansion Unit This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2824	<p>PCI Feature Controller</p> <p>Feature Controller for LAN/WAN/Workstation #2824 has 32MB of memory and can be ordered and installed in slot E07 in the #7101 and #7102 System Expansion Units.</p> <p>In #7101 System Expansion Unit, one Base controller (2809) LAN/WAN/Workstation IOP is supplied as standard with no feature required (see Base IOP in this section). The Feature Controller #2824 provides support for two low-speed PCI card slots E11 and E12, also one high-speed PCI card slot E03.</p> <ul style="list-style-type: none"> Slot E03 can only be used if no #2857 Integrated PC Server or #2866 Integrated Netfinity Server card is installed in slots E02/E04. Slot E03 supports one of #2718, #2729, #2723, #2724, #2745, #2746, #2750, #2751, #2761, #281x, #2838, or #4800. Slots E11 and E12 supports #2721, #2722, #2723, #2724, #2745, #2746. <p>In #7102 System Expansion Unit, one Base controller (2824) LAN/WAN/Workstation IOP is supplied as standard with no feature required (see Base IOP in this section). The Feature Controller #2824 provides support for two low-speed PCI card slots E11 and E12, also one high-speed PCI card slot E03.</p> <ul style="list-style-type: none"> Slot E03 can only be used if no #2857 IPCS or #2866 Integrated Netfinity Server card is installed in slots E02/E04. Slot E03 supports one of #2718, #2729, #2723, #2724, #2745, #2746, #2750, #2751, #2761, #281x, #2838, or #4800. Slots E11 and E12 supports #2721, #2722, #2723, #2724, #2745, and #2746. <p>Maximum: One in the #7101/#7102 System Expansion Unit. One #2750, #2751, or #2761 per #2824 IOP. Prerequisite: V4R4. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
COMMUNICATIONS	
#2720 #9720	<p>Base PCI WAN/Twinaxial IOA</p> <p>This combined twinax/communication adapter is provided on the base system and supports a single communications line intended for ECS. One cable must be specified: #0348 V.24/EIA232 20ft (6m) PCI cable. This adapter also supports twinax workstations (see "WORKSTATION CONTROLLERS" on page 145). PCI card slots required: One Maximum: One Mutually exclusive with #9721 and #9745.</p>

#2721	<p>PCI Two-Line WAN IOA</p> <p>Supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft/6m PCI cable #0349 V.24/EIA232 50ft/15m PCI cable #0353 V.35 20ft/6m PCI cable #0354 V.35 50ft/6m PCI cable #0355 V.35 80ft/6m PCI cable #0356 V.36 20ft/6m PCI cable #0358 V.36 150ft/45m PCI cable #0359 X.21 20ft/6m PCI cable #0360 X.21 50ft/15m PCI cable #0365 V.24/EIA 232 80ft/24m PCI cable <p>There are some restrictions on communications using #2721. For communication restrictions, see "Comm Restrictions" on page 187. PCI slots required: One (low-speed only) Maximum: Refer to 7.1, "Model 170 Overview" on page 137. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2745	<p>PCI Two-Line WAN IOA</p> <p>Supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft/6m PCI cable #0349 V.24/EIA232 50ft/15m PCI cable #0353 V.35 20ft/6m PCI cable #0354 V.35 50ft/6m PCI cable #0355 V.35 80ft/6m PCI cable #0356 V.36 20ft/6m PCI cable #0358 V.36 150ft/45m PCI cable #0359 X.21 20ft/6m PCI cable #0360 X.21 50ft/15m PCI cable #0365 V.24/EIA 232 80ft/24m PCI cable <p>There are some restrictions on communications using the #2745. For communication restrictions, see "Comm Restrictions" on page 187. PCI slots required: One (low or high-speed) also see note under #9745. Maximum: See Model 170 overview (operating system version, and processor version dependent). This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features. Prerequisite: OS/400 V4R3.</p>
#2750	<p>PCI ISDN BRI U Adapter (only available in the United States and Canada)</p> <p>The #2750 is a four-port (8 channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #2750 is the "U"-bus (2 wire) version of the ISDN BRI PCI card. The #2750 feature supports the following protocols:</p> <ul style="list-style-type: none"> PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2750 feature. For configuration purposes, each #2750 counts as eight lines (two lines per port) towards the system communication maximums. Allowed in high-speed slots C03 (Base Unit), E03, E08, or E09 (System Expansion Unit). Supports full duplex.</p> <p>Software prerequisites: V4R4 with PTF MF22528 (or supersede) or cumulative PTF Package C9313440 or later.</p> <p>Hardware prerequisites: For attachment to a System Expansion Unit, #2824 PCI Feature Controller is required. One #2824 is base in the #7102 System Expansion Unit.</p> <p>Requirements: This feature requires country certification or homologation. Full sized PCI card slot.</p> <p>Maximum: One per IOP.</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>

#2751	<p>PCI ISDN BRI S/T IOA</p> <p>The #2751 is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #2751 is the "S/T"-bus (four wire) version of the ISDN BRI PCI card.</p> <p>Note: This requires a Network Terminating device in the circuit. In the United States and Canada this must be provided by the customer. In other countries it is most likely provided by the telephone company.</p> <p>The #2751 feature supports the following protocols:</p> <ul style="list-style-type: none"> PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2751 feature. For configuration purposes, each #2751 counts as eight lines (two lines per port) towards the system communication maximums. Allowed in high-speed slots C03 (Base Unit), E03, E08, or E09 (System Expansion Unit). Supports full duplex.</p> <p>Software prerequisites: V4R4 with PTF MF22528 (or supersede) or cumulative PTF Package C9313440 or later.</p> <p>Hardware prerequisites: For attachment to a System Expansion Unit, #2824 PCI Feature Controller is required. One #2824 is base in the #7102 System Expansion Unit.</p> <p>Requirements: This feature requires country certification or homologation.</p> <p>Full sized PCI card slot.</p> <p>Maximum: One per IOP.</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2761	<p>Integrated Analog Modem</p> <p>The #2761 allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). The #2761 runs the following protocols without the need for an external modem:</p> <ul style="list-style-type: none"> SLIP/PPP uses V.90, so max line speed is 56K bps SDLC uses V.34, so max line speed is 33.6K bps Fax uses V.17 to achieve a 14.4K bps max line speed <p>An asynchronous line description is required for Fax and can only be used for Fax. ECS line not supported. Eight 30-foot (9.3 m) phone cables are shipped with each #2761. To the iSeries or AS/400e server, the #2761 appears like a single IOA with eight individual resources available. For configuration purposes, each #2761 counts as eight communications lines. Allowed in high-speed slots C03 (Base Unit), E03, E08, or E09 (System Expansion Unit). Supports full duplex.</p> <p>Software prerequisites: V4R4 with PTF MF22528 (or supersede) or cumulative PTF Package C9313440 or later.</p> <p>Hardware prerequisites: For attachment to a System Expansion Unit, #2824 PCI Feature Controller is required. One #2824 is base in the #7102 System Expansion Unit. Supports full duplex.</p> <p>Requirements: This feature requires country certification or homologation.</p> <p>Full sized PCI card slot.</p> <p>Maximum: One per IOP.</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2809	<p>PCI Feature Controller</p> <p>This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details, see the Workstation Controller section. There are some restrictions on communications using #2809. For details, see the section beneath #2699 (highlighted by an asterisk "**") in the Model 640, 650 section on page 257.</p> <p>It does <i>not</i> attach to the #7102 System Expansion Unit</p> <p>Maximum: One in #7101 System Expansion Unit</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2824	<p>PCI Feature Controller</p> <p>This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details, see "WORKSTATION CONTROLLERS" on page 145.</p> <p>Maximum: One per System Expansion Unit</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#4800	<p>PCI Crypto Coprocessor</p> <p>This feature, coupled with OS/400 V4R4, OS/400 Operating System Option 35 and Cryptographic Service Provider APIs, provides rich cryptography function and secure storage of cryptographic keys. The level of cryptographic function is determined by the Cryptographic Access Provider Licensed Program, which is downloaded to the adapter.</p> <p>Due to temperature requirements, the #4800 is shipped separate from the system in a special package.</p> <p>Prerequisite: #7101 System Expansion Unit with IOP #2824, or #7102 System Expansion Unit.</p> <p>Requires OS/400 V4R4.</p> <p>PCI Card Slot required: One</p> <p>Maximum: One per IOP.</p>

#4802	<p>PCI Cryptographic Coprocessor</p> <p>The #4802 is a hardware cryptography solution. The #4802 is a half-length PC form-factor PCI card that offers a rich cryptography function, secure storage of cryptographic keys, and 12 MB/s performance (at the card level) for bulk data encryption and triple DES capability. The #4802 is available worldwide. The level of cryptographic function is determined by the Cryptographic Access Provider licensed program which is downloaded to the adapter.</p> <p>Note: On new shipments from the plant, #4802 is shipped with the system, but not installed. This is a Customer Install Feature (CIF).</p>
#9721	<p>Base PCI Two-Line WAN IOA</p> <p>This two-line communications adapter supports ECS and Operations Console or Client Access Console. The following cable must be specified for ECS:</p> <p>#0348 V.24/EIA232 20ft (6m) PCI Cable</p> <p>The following additional cable must be specified for Client Access Console:</p> <p>#0362 20ft (6m) Client Access Console PCI Cable (optional)</p> <p>Features #0362 and #0367 are mutually exclusive.</p> <p>The following features are used to support the Operations Console function on V4R3:</p> <p>#0367 Operations Console PCI cable. Required and defaulted by the configurator.</p> <p>To support the Remote Control Panel function, the #0381 Remote Control Panel Cable can be ordered as an option. This cable does not attach to a communication port.</p> <p>PCI card slots required: One (low-speed only)</p> <p>Maximum: One</p> <p>Feature #9721 is mutually exclusive with #9720 and #9745.</p> <p>Note: Feature #9721 is replaced by #9745 as the default communication adapter. It has moved to <i>support only</i> status feature.</p>
#9745	<p>Base PCI Two-Line WAN IOA (PCI)</p> <p>This two line communications adapter supports ECS and Client Access Console or Client Access Console. The following cable must be specified for ECS:</p> <p>#0348 V.24/EIA232 20ft/6m PCI cable</p> <p>#0349 V.24/EIA232 50ft/15m PCI cable</p> <p>#0353 V.35 20ft/6m PCI cable</p> <p>#0354 V.35 50ft/6m PCI cable</p> <p>#0355 V.35 80ft/6m PCI cable</p> <p>#0356 V.36 20ft/6m PCI cable</p> <p>#0358 V.36 150ft/45m PCI cable</p> <p>#0359 X.21 20ft/6m PCI cable</p> <p>#0360 X.21 50ft/15m PCI cable</p> <p>#0365 V.24/EIA 232 80ft/24m PCI cable</p> <p>#0367 Operations Console 20 ft (6m) PCI cable*</p> <p>The following feature must be ordered for Client Access Console</p> <p>#0362 20ft (6m) Client Access Console Cable (support only with V4R4)</p> <p>*The following features are used to support the Operations Console functions (default):</p> <p>#0367 Operations Console 20ft (6m) PCI cable. Defaulted by the configurator. Not required if #2746 is ordered.</p> <p>#0362 and #0367 are mutually exclusive.</p> <p>To support the Remote Control Panel function, the #0381 Remote Control Panel Cable can be ordered as an option. This cable does not attach to a communication port.</p> <p>PCI card slots required: One (low or high-speed)</p> <p>When #9745 is installed in slot C03, the Base LAN default #9724 must be removed from the Base System unit and can either be removed from the configuration or ordered or moved into a #7101 System Expansion Unit, except for processor 2289.</p> <p>Feature #9745 is mutually exclusive with #9720 and #9721.</p> <p>Note:</p> <ul style="list-style-type: none"> Feature #9745 replaced #9721 as the default communication adapter by the February 1999 announcement. Feature #9721 has moved to <i>support only</i> feature status. Prerequisite: OS/400 V4R3.
Comm Restrictions	Refer to "Comm Restrictions" on page 187.

LANs AND ATM	
#2723 #9723	<p>PCI Ethernet IOA</p> <p>Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. Has a RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B.</p> <p>The #9723 is a base LAN.</p> <p>If #2723/#9723 PCI Ethernet IOA is selected to be run on #2857/#2866 Integrated PC Server/ Integrated Netfinity Server, then one #0221 Ethernet on IPCS or Integrated Netfinity Server is required for each #2723/#9723 ordered.</p> <p>PCI slots required: One</p> <p>The #2723 is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2724 #9724	<p>PCI 16/4 Mbps Token Ring IOA</p> <p>Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions and an external 8ft (2.4m) cable. Alternatively a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. The #9724 is a base LAN. If the #2724/#9724 PCI Token Ring IOA is selected to be run on a #2857/#2866 Integrated PC Server/Integrated Netfinity Server, then one #0220 (Token Ring on IPCS or Integrated Netfinity Server) is required for each #2724/#9724. The IOA is capable of operating in half or full duplex mode.</p> <p>PCI slots required: One</p> <p>The #2724 is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2809	<p>PCI Feature Controller (LAN/WAN/Workstation) IOP</p> <p>This can be used for attaching additional LAN, WAN, and Workstation IOAs in the #7101 System Expansion Unit. For full details go to Base Controller and Feature Controller #2809 in "WORKSTATION CONTROLLERS" on page 145.</p> <p>Maximum: One in the #7101 System Expansion Unit.</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2824	<p>PCI Feature Controller (LAN/WAN/Workstation) IOP</p> <p>This can be used for attaching additional LAN, WAN, and Workstation IOAs in the #7102 System Expansion Unit. For full details, go to Base Controller and Feature Controller #2824 in "WORKSTATION CONTROLLERS" on page 145.</p> <p>Maximum: One in the #7101/#7102 System Expansion Unit.</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2811	<p>PCI 25 Mbps UTP ATM IOA</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using Unshielded Twisted Pair (UTP) cabling. The #2811 is typically used where 25 Mbps speeds are required over distances of less than 100 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>High-speed PCI slots required: One</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2812	<p>PCI 45 Mbps Coax T3/DS3 ATM IOA</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the T3/DS3 interface. The #2812 is typically used where 45 Mbps speeds are required over distances of less than 1000 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>High-speed PCI slots required: One</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2815	<p>PCI 155 Mbps UTP OC3 ATM IOA</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>The #2815 is typically used where 155 Mbps speeds are required over distances of less than 100 meters.</p> <p>Prerequisite: #7101 or #7102 System Expansion Unit.</p> <p>High-speed PCI slots required: One</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>

#2816	<p>PCI 155 Mbps MMF ATM IOA</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>The #2816 is typically used where 155 Mbps speeds are required over distances of less than 2 kilometers.</p> <p>Prerequisite: #7101 or #7102 System Expansion Unit.</p> <p>High-speed PCI slots required: One</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2818	<p>PCI 155 Mbps SMF OC3 ATM IOA</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Single Mode Fibre (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment, but can be used for local area switches. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>The #2818 is typically used where 155 Mbps speed is required over distances of 16 to 40 kilometers.</p> <p>Prerequisite: #7101 or #7102 System Expansion Unit.</p> <p>High-speed PCI slots required: One</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2819	<p>PCI 34 Mbps Coax E3 ATM IOA</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using coax cabling and the E3 interface. The #2819 is typically used where 34 Mbps speed is required over distances of less than 1000 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com</p> <p>High-speed PCI slots required: One</p> <p>This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2838 #9738	<p>PCI 100/10 Mbps Ethernet IOA</p> <p>Provides attachment to standard 100 Mbps high-speed Ethernet LANs and also allows attachment to existing 10 Mbps Ethernet LANs. The #9738 is a base LAN. If #2838/#9738 PCI 100/10 Mbps Ethernet IOA is selected to be run on a #2857 IPCS or #2866/Integrated Netfinity Server, then one specify #0222 100/10 Mbps Ethernet on IPCS/Integrated Netfinity Server is required. The IOA is capable of operating in half or full duplex mode. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media #9738 is a base LAN. Cabling for 10 Mbps must be CAT-3 or CAT-5, cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. Maximum cable length is 100 meters.</p> <p>High-speed PCI slots required: One</p> <p>#2838 is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2857	<p>PCI Integrated PC Server (IPCS)</p> <p>Contains a 200 MHz Pentium Processor, four main storage slots and two LAN IOA slots for high performance serving to LAN attached PCs. Between one and four of the following main storage features must also be ordered:</p> <ul style="list-style-type: none"> #2861 32MB Integrated PC Server Memory #2862 128MB Integrated PC Server Memory <p>Minimum one and maximum two of any of the following LAN IOAs are supported:</p> <p>Only one of the IOAs can be #2838/#9738.</p> <ul style="list-style-type: none"> #2723 PCI Ethernet IOA Specify #0221 is required for each IOA ordered. #2724 PCI Token Ring IOA Specify #0220 is required for each IOA ordered #2838 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each IOA ordered <p>Only one of the following Base LAN IOAs is supported:</p> <ul style="list-style-type: none"> #9723 PCI Ethernet IOA Specify #0221 is required for each IOA ordered #9724 PCI Token Ring IOA Specify #0220 is required for each IOA ordered #9738 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each IOA ordered <p>#2857 also comes with an external attach cable which provides industry standard keyboard, mouse.</p> <p>This also allows for optional use of serial and parallel ports.</p> <p>If running Windows NT on the #2857, then:</p> <ul style="list-style-type: none"> #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard/Mouse for Windows NT is default in the USA. <p>A display must be connected to the IPCS to support Windows NT.</p> <p>For country-specific keyboard/mouse and display support, access the site at:</p> <p>http://www.ibm.com/eserver/series/windowsintegration/</p> <p>If running OS/2 on the #2857, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed.

#2857 <i>continued</i>	<p>If running Novell Netware on the #2857, then: #0325 and #1700 are not allowed. A maximum of 256 MB IOP memory is supported. PCI slots required: Two in reserved positions in the Base System Unit or in the #7101 System Unit Expansion. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#2866	<p>PCI Integrated Netfinity Server Requires V4R2 with CUM C8342420 or V4R3 with CUM C8349430. The PCI Integrated Netfinity Server contains a 333 MHz Pentium II Processor, two LAN IOA slots for high performance serving to LAN-attached PCs, and four main storage slots. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. No Base main store Memory supplied, at least one main storage feature is required: #2861 32MB Integrated PC Server Memory #2862 128MB Integrated PC Server Memory #2867 256MB Integrated PC Server Memory Minimum one and maximum two of any of the following LAN IOAs are supported: Only one of the IOAs can be #2838/#9738: #2723 PCI Ethernet IOA Specify #0221 is required for each IOA ordered. #2724 PCI Token Ring IOA Specify #0220 is required for each IOA ordered. #2838 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each IOA ordered. Only one of the following Base LAN IOAs is supported: #9723 PCI Ethernet IOA Specify #0221 is required for each IOA ordered. #9724 PCI Token Ring IOA Specify #0220 is required for each IOA ordered. #9738 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each IOA ordered. If running Windows NT on the #2866, then: A minimum of 64MB IOP memory is required. #0325 PCI Integrated Netfinity Server Extension Cable for Windows NT is required. #1700 PCI Integrated Netfinity Server Keyboard/Mouse for Windows NT, the default in the USA. A display unit is required to support Windows NT. For country-specific keyboard/mouse and display support, access the site at: http://www.ibm.com/eserver/series/windowsintegration/ If running OS/2 on the #2866, then: #0325 and #1700 are not allowed. A maximum of 512MB IOP Memory is supported on OS/2. If running Novell Netware on the #2866, then: #0325 and #1700 are not allowed. A maximum of 256MB IOP memory is supported on Novell Netware. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
DISK UNITS	
#6607	<p>4.19 GB Additional Two-byte Disk unit Supported but not orderable. Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk unit. This feature is supported for migration only. Needs the RPQ 843978 and is supported in the 170 System Unit and the #7101 or #7102 System Expansion Units.</p>
#6713	<p>8.58 GB Additional Two-byte Disk unit (Ultra SCSI) Supported but not orderable. Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk unit. This feature is supported for migration only. Needs the RPQ 843978 and is supported in the 170 System Unit and the #7101 or #7102 System Expansion Units.</p>
#6714	<p>17.54 GB Additional Two-byte Disk unit (Ultra SCSI) Supported but not orderable. Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk unit. This feature is supported for migration only. Needs the RPQ 843978 and is supported in the 170 System Unit and the #7101 or #7102 System Expansion Units.</p>
#6807	<p>4.19 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk unit. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#6813	<p>8.58 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk unit. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>
#6817	<p>8.58 GB Additional Two-byte 10k RPM Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB of high-performance (10k RPM) capacity Prerequisite: OS/400 V4R3. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.</p>

#6818	17.54 GB Additional Two-byte 10k RPM Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB of high-performance (10k RPM) capacity Prerequisite: OS/400 V4R4. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.
#6824	17.54 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Requires V4R4. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features. The #6824 supports integrated hardware disk compression at OS/400 V4R4.
6831	1.6 Gb Read Cache Device This feature provides 1.6 Gb of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with the compression function turned off on the disk controller. Mirroring is not supported on this feature. Prerequisites: OS/400 V4R4 and PCI RAID Disk Unit Controller (#2748). One DASD Slot. Maximum: one per #2748 IOP.
#6907	4.19 GB Additional Two-byte Disk unit (Ultra SCSI) Supported but not orderable. Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk unit. This feature is supported for migration only. Needs the RPQ 843978 and is supported in the 170 System Unit and the #7101 or #7102 System Expansion Units.
#8813	8.58 GB Optional Base Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity as the optional Base disk unit in place of #9707.
#8817	8.58 GB Optional Base 10 k RPM Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB of high-performance (10k RPM) capacity Prerequisite: OS/400 V4R3.
#8818	17.54 GB Optional Base 10 k RPM Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB of high-performance (10k RPM) capacity Prerequisite: OS/400 V4R4.
#8824	17.54 GB Optional Base Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity as the optional Base disk unit in place of #9707. Requires V4R4. The #8824 supports integrated hardware disk compression at OS/400 V4R4.
#9707	4.19 GB Base Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 4.19 GB capacity as the Base disk unit.
INTERNAL TAPE UNITS	
#6381	2.5 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. It should be ordered when compatibility with System/36 ¼-inch cartridge tape unit is required. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.
#6382	4 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.
#6383	16 GB ¼-Inch Cartridge Tape Unit Is mounted in the system unit. With a data rate of 1.5 Mbps and capacity of 16 Gb per cartridge (3MB/sec and 32 Gb per cartridge with data compaction), the #6383 provides a growth path for the large number of iSeries and AS/400e servers that use QIC tape technology for save/restore. The #6383 is controlled by the MFIOF. The #6383 provides read/write compatibility with the following formats: <ul style="list-style-type: none"> • 16 GB (up to 32 GB with compression in QIC5010 format) with IBM MLR-116GB Data Cartridge • 13 GB (up to 26 GB with compression in QIC5010 format) with IBM DC5010 Data Cartridge. The #6383 provides read compatibility with the following formats: <ul style="list-style-type: none"> • 8 GB (QIC4DC compressed format) with SLR5-4GB Data Cartridge • 5 GB (QIC2DC compressed format) with IBM DC9250 Data Cartridge • 4 GB (QIC4GB format) with SLR5-4GB Data Cartridge • 2.5 GB (QIC2GB format) with IBM DC9250 Data Cartridge Prerequisite: OS/400 V4R2. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.

#6385	13 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.
#6386	25 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.
MAGNETIC MEDIA CONTROLLERS	
#2718	PCI Magnetic Media Controller The #2718 is an Ultra SCSI Tape IOA that provides attachment capability for the IBM 7207-122 QIC-SLR Tape Bridge Box. The #2718 can attach one tape drive. Prerequisite: OS/400 V4R2. and System Expansion Unit (#7101/#7102) This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.
#2729	PCI Magnetic Media Controller Provides SCSI attachment for one 3490E C11/C22/C1A/C2A with feature #5040, 3490E Exx, 3490E Fxx, 3494 D1x or L1x, 3570, 3590, 7208, 9348 or 9427 Tape Subsystem Models or 3995 C4x Optical Library Dataserver. Prerequisite: #7101/ #7102 High-speed PCI slots required: One Maximum: Two This is a Customer Install Feature (CIF) on a Model 170 for an MES that only includes CIF features.
#2740	PCI RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) Ultra SCSI controller which provides RAID protection and a 4 MB write-cache for up to ten disks installed in the base System Unit and the #7101 System Expansion Unit. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are supported on the #2740. The #2740 also supports one CD-ROM drive (which comes as standard) and one internal tape drive. Supports #6381, #6382, or #6385 tape units. Mutually exclusive with #9728 and #2741. The #2740 does not support integrated hardware disk compression. High-speed PCI slots required: One Maximum: One
#2741	PCI RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) Ultra SCSI controller which provides RAID protection and a 4 MB write-cache for up to ten disks installed in the base System Unit and #7101 System Expansion Unit. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are supported on the #2741. The #2741 also supports one CD-ROM drive (which comes as standard) and one internal tape drive. Supports the #6381, #6382, or #6385 tape units. Mutually exclusive with #9728 and #2740. With OS/400 V4R3, the #2741 supports integrated hardware disk compression except on #6824/#8824 (17.54GB Disk Unit). Integrated disk compression for #6824/#8824 is supported at OS/400 V4R4. High-speed PCI slots required: One Maximum: One This feature is no longer available for new orders. It is still supported as a migrated feature.
#2748	PCI RAID Disk Unit Controller—26 MB Cache (RAID/Mirrored/Unprotected) This SCSI disk and tape controller with a 26 MB write-cache provides RAID-5 protection and DASD compression capability for internal disk units, and also supports internal tape and CD-ROM units. #2748 controls Ultra and Fast Wide SCSI disk units installed in the Base System and the System Expansion Unit (#7101/#7102). In addition to providing RAID-5 and compression, #2748 also works as a high-performance controller for disks protected by system mirroring or disks with no protection. In the RAID-5 configuration, disk unit protection is provided at less cost than mirroring, and with greater performance than checksums. #2748 also supports the 1.6 Gb Extended Adaptive Cache (#6381), which is mutually exclusive with DASD compression. The #2748 supports a maximum of 10 disk units. A minimum of four disk units of the same capacity are needed for a valid RAID-5 configuration. A maximum of two arrays are allowed per controller, with a maximum of ten disk units per array. All disk units in an array must be of the same capacity. Parity is spread across four disk units for arrays of four to seven disk units. For systems started with eight disk units in an array, the parity for that array will be spread across eight disk units. For systems that are started with less than eight disk units in an array and later upgraded to eight, nine, or ten disk units, the RAID function must be stopped and then started before the parity will be spread across eight disk units. #2748 supports one CD-ROM and one internal tape unit, and concurrent DASD maintenance. Prerequisite: OS/400 V4R4. One Disk Controller PCI card slot required Maximum: One

#9728	Base PCI Disk Unit Controller This is the Base IOA for the System Unit. Provides Ultra SCSI attachment for up to four disk units, one CD-ROM drive (standard) and one internal tape drive. Does not support RAID. Supports #6381, #6382, or #6385 tape units. Mutually exclusive with #2740 and #2741. The #9728 does not support integrated hardware disk compression. 9728 is not required for processors 2289, 2290, 2291 and 2292 for up to 4 disk drives. The #9728 has CCIN 2728. See Chapter 16, "CCIN Numbers" on page 441. High-speed PCI slots required: One. Maximum: One
#9740	Base PCI Disk Unit Controller The #9740 Base RAID PCI Disk Unit Controller supports up to 10 Internal Disk Units, one Internal Tape, and one internal CD-ROM. The #9740 is designed to control Ultra, Fast Wide, and Fast Narrow SCSI disk and tape units that are installed in the base system unit and the System Expansion Unit #7102. Feature #2740 is not supported on any Domino Server Processor. Feature #2748 is a High Performance RAID Disk Unit Controller with compression which can be substituted (without credit) for the Base RAID Disk Unit Controller #9740. The #9740 is included with, and only available on, all Domino Server processors #2407, #2408, and #2409. This feature supports Concurrent DASD Add/Maintenance. Pre-requisite: OS/400 V4R4 to support #2748. Maximum: One

7.5 Model 170 Upgrade

TO	V4R2 / V4R3				V4R3/V4R4/V4R5									
FROM	#2160	#2174	#2176	#2183	#2289	#2290	#2291	#2292	#2385	#2386	#2388	#2407	#2408	#2409
170 #2159	X	X	X	X					X	X	X			
170 #2160		X	X	X					X	X	X			
170 #2164			X	X					X	X	X			
170 #2176				X					X	X	X			
170 #2183										X	X			
170 #2289						X	X	X	X	X				
170 #2290							X	X	X	X	X			
170 #2291								X	X	X	X			
170 #2292									X	X	X			
170 #2385										X	X			
170 #2386											X			
170 #2388														
170 #2407													X	X
170 #2408														X
170 #2409														

7.6 AS/400e RISC to RISC Data Migration

The #0205 is used when a customer orders a new (RISC) AS/400e server to replace an existing (RISC) AS/400e server. The #0205 can be ordered on any initial order AS/400e server 170 model. Preload of Licensed Programs, by manufacturing, is not allowed with #0205. Manufacturing only loads SLIC and up through QSYS of OS/400 when #0205 is ordered. The #0205 and #5000 are mutually exclusive.

Chapter 8. 9406 7xx Models

This chapter identifies the features associated with each 7xx system, such as the processor features, power and packaging, main storage, workstation controllers, and communications—including LANs and ATM, disk units, internal tape units, CD-ROM, and magnetic media controllers. Upgrade options from and to the 7xx servers are represented. OS/400 V4R3 is required to support these 7xx systems.

8.1 9406 720 Model Overview

Model	720			
Processor Feature	#2061	#2062	2063	2064
Processor CPW (See Note 1)	240	420	810	1600
Interactive CPW/System Feature Code				
#1500 (Base)	35/206A	35/206D	35/207B	35/207F
#1501	70/206B	70/206E	-	-
#1502	120/206C	120/206F	120/207C	120/208A
#1503	-	240/207A	240/207D	240/208B
#1504	-	-	560/207E	560/208C
#1505	-	-	-	1050/208D
Number of N-Way Multiprocessors	1	1	2	4
Main Storage (MB)	256-2048	256-4096	256-8192	256-8192

Numbers are for all processor features	Base System	SUE #9364 PCI (#9329) PCI (#9330)	SUE #9364 SPD (#9331)	#5065 Stg/PCI Exp Tower	Expansion Tower	System Maximum
Disk Storage Base (GB)	4.194	(Note 4)	(Note 4)			
Maximum Internal (GB)	263.2	263.2	263.2	386.5	561.5	1625.9
Maximum External (GB)	(Note 5)		(Note 2)		(Note 2)	1595.3
Total Maximum (GB)						1625.9
External SPD Bus		4	4		0	4
Maximum Card Slots-SPD	0	0	6	0	13	58
Maximum Card Slots-PCI	8	14	0	12	0	70
Communication Lines (Note 3)	18	0-40	0-36	0-42	0-78	128
LAN/ATM Adapters	1-3	0-6	0-6	0-6	0-13	24
Maximum Workstation Controllers						
Twinaxial (Note 6)	5	11	18	12	39	66
ASCII (Note 6)	0	0	6	0	13	58
Maximum workstations						
Twinaxial	188	440	720	480	1560	2628
ASCII	0	0	108	0	234	1044
¼-inch 8mm Cartridge Tape (int)	1	3	3	3	4	17
CD-ROM	1	0-1	0	0-1	0-1	6
½-inch Tape	1	2	8	3	8	8
Reel 9348	1	2	4	3	4	4
Reel 2440	0	0	4	0	4	4
Reel 9347	0	0	2	0	2	2
Cartridge 34xx, 35xx	1	2	8	3	8	8
Tape Libraries Maximum						
½-inch Cartridge	1	2	8	3	8	8
8mm	1	2	4	3	4	4
8mm Cartridge (External)	1	2	4	3	4	4
Optical Libraries	1	2	12	3	14	14
Diskettes (5 ¼-inch or 8-inch)	0	0	2	0	2	2
LAN Ports Maximum	3	6	12	6	24	24
Wireless IOP Maximum	0	0	3	0	3	3
FSIOP Maximum	0	0	3	0	6	16
FSIOA (IPCS) Maximum	1	1	0	0	0	2
PCI LAN Maximum	3	6	0	6	0	9
Cryptographic Processors	1	3	1	3	1	6
Fax Adapters	0	0	6	0	13	32

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	External DASD can be attached using an SPD card in the Expansion Unit.
Note 3:	One line is used for Client Access Console or Operations Console if selected. Maximum is 17 if Twinaxial Console is selected.
Note 4:	The #9364 must be configured with #9329/#9330 (PCI) or #9331 (SPD). Therefore, these columns are mutually exclusive.
Note 5:	Maximum is 175.4 GB on the #2061 Processor.
Note 6:	Any combination of Twinax or ASCII workstation controllers up to either maximum shown is allowed. Maximums are not additive.

8.2 9406 730 Model Overview

Model	730			
Processor Feature	#2065	#2066	2067	2068
Processor CPW (See Note 1)	560	1050	2000	2890
Interactive CPW/System Feature Code				
#1506 (Base)	70/2A6A	70/2A6E	70/2B6D	70/2C6C
#1507	120/2A6B	120/2A6F	-	-
#1508	240/2A6C	240/2B6A	240/2B6E	240/2C6D
#1509	560/2A6D	560/2B6B	560/2B6F	560/2C6E
#1510	-	1050/2B6C	1050/2C6A	1050/2C6F
#1511	-	-	2000/2C6B	2000/2D6A
Number of N-Way Multiprocessors	1	2	4	8
Main Storage (MB)	512-24576	512-24576	512-24576	1024-24576

Numbers are for all processor features	System Maximum
Disk Storage Base (GB)	4.19
Maximum Internal (GB)	1683.6 / 2499.6 (V4R3/V4R4)
Maximum External (GB)	1649.2 / 2473.9 (V4R3/V4R4)
Total Maximum (GB)	1683.6 / 2499.6 (V4R3/V4R4)
Disk Unit IOPs (Note 2)	1-37
SPD I/O Bus	1-19
SPD I/O card slots	3-235
PCI Storage/Expansion Towers	0-18
PCI Card Slots	0-216
Communication Lines	1-250
Maximum Workstation Controllers	1-175
Maximum Workstations	
Twinaxial	7000
ASCII	3150
¼-inch/8mm Cartridge Tape and CD-ROM (Internal)	1 (Base CD-ROM)—18
½-inch Tape (Note 3)	
Reel 9348	4
Reel 2440	4
Reel 9347	2
Cartridge 34xx, 35xx	8
Tape Libraries Maximum	10
½-inch Cartridge	4
8mm	4
8mm Cartridge (External)	4
Optical Libraries	22
Diskettes (5 ¼-inch or 8-inch)	2
LAN/ATM Ports Maximum	1-48
Wireless IOP Maximum	3
Integrated Netfinity Server	16
Cryptographic Processors	6
Fax IOPs (two lines/IOP)	32

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	This total includes the MFIOP. The combination of internal and external IOPs cannot exceed this number.
Note 3:	Maximum combination of 2440, 7208, or 9348 and Tape Libraries may not exceed four.

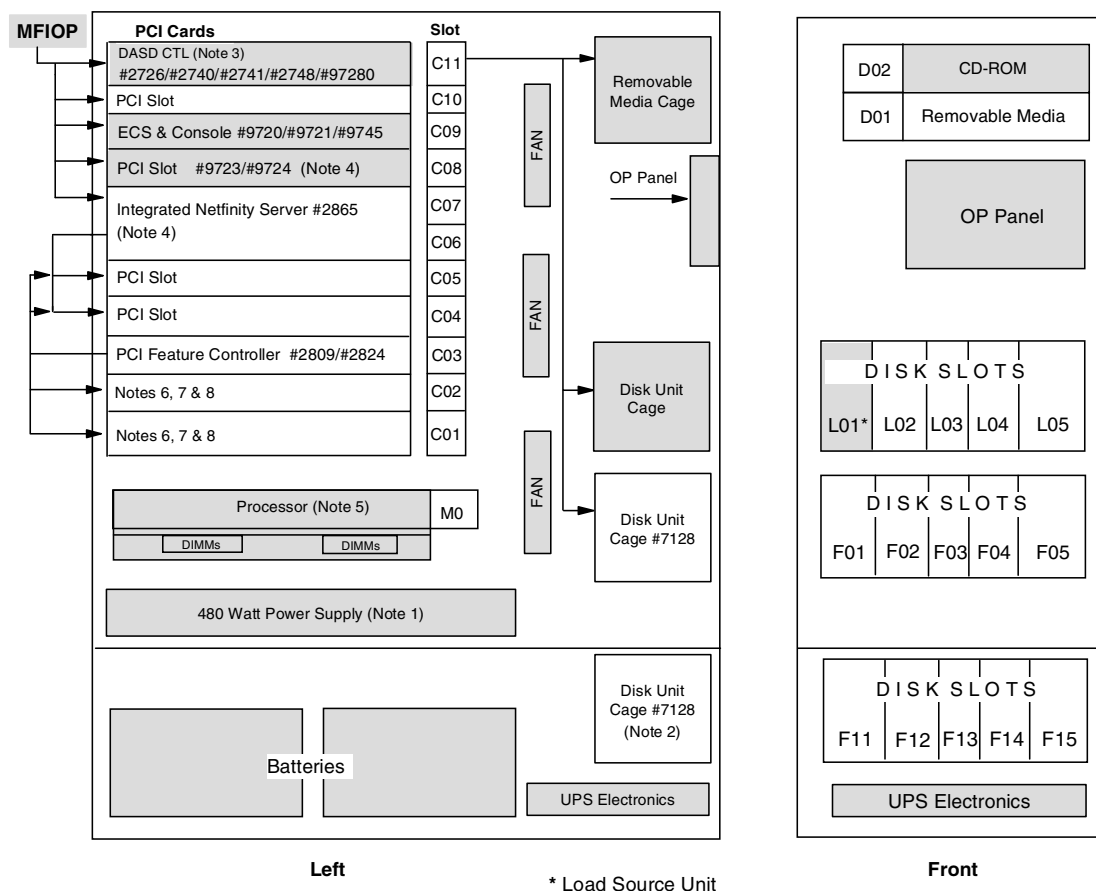
8.3 9406 740 Model Overview

Model	740	
Processor Feature	#2069	#2070
Performance CPW (See Note 1)	3660	4550
Interactive CPW/System Feature Code		
#1514 (Base)	120/2D6B	120/2E6A
#1510	1050/2D6C	1050/2E6B
#1511	2000/2D6D	2000/2E6C
#1512	3660/2D6E	3660/2E6D
#1513	-	4550/2E6E
Number of N-Way Multiprocessors	8	12
Main Storage (MB)	1024-40960	1024-40960

Numbers are for all processor features	System Maximum
Disk Storage Base (GB)	4.19
Maximum Internal (GB)	2095.9 / 4294.9 (V4R3/V4R4)
Maximum External (GB)	2061.3 / 4260.6 (V4R3/V4R4)
Total Maximum (GB)	2095.9 / 4294.9 (V4R3/V4R4)
Disk unit IOPs (Note 2)	1-37
SPD I/O Bus	1-19
I/O card slots	3-237
PCI Storage/Expansion Towers	0-18
PCI Card Slots	0-216
Communication Lines	1-300
Maximum Workstation Controllers	1-175
Maximum workstations	
Twinaxial	7000
ASCII	3150
1/4-inch/8mm Cartridge Tape and CD-ROM (Internal)	1-30
1/2-inch Tape (Note 3)	1 (Base CD-ROM) - 29 feature tape or CD-ROM
Reel 9348	4
Reel 2440	4
Reel 9347	2
Cartridge 34xx, 35xx	8
Tape Libraries Maximum	14
1/2-inch Cartridge	4
8mm	4
8mm Cartridge (External)	4
Optical Libraries	22
Diskettes (5 1/4-inch or 8-inch)	2
LAN/ATM Ports Maximum	1-72
Wireless IOP Maximum	3
Integrated Netfinity Server	16
Cryptographic Processors	6
Fax IOPs (two lines/IOP)	32

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	This total includes the MFIOP. The combination of internal and external IOPs cannot exceed this number.
Note 3:	Maximum combination of 2440, 7208, or 9348 and Tape Libraries may not exceed four.

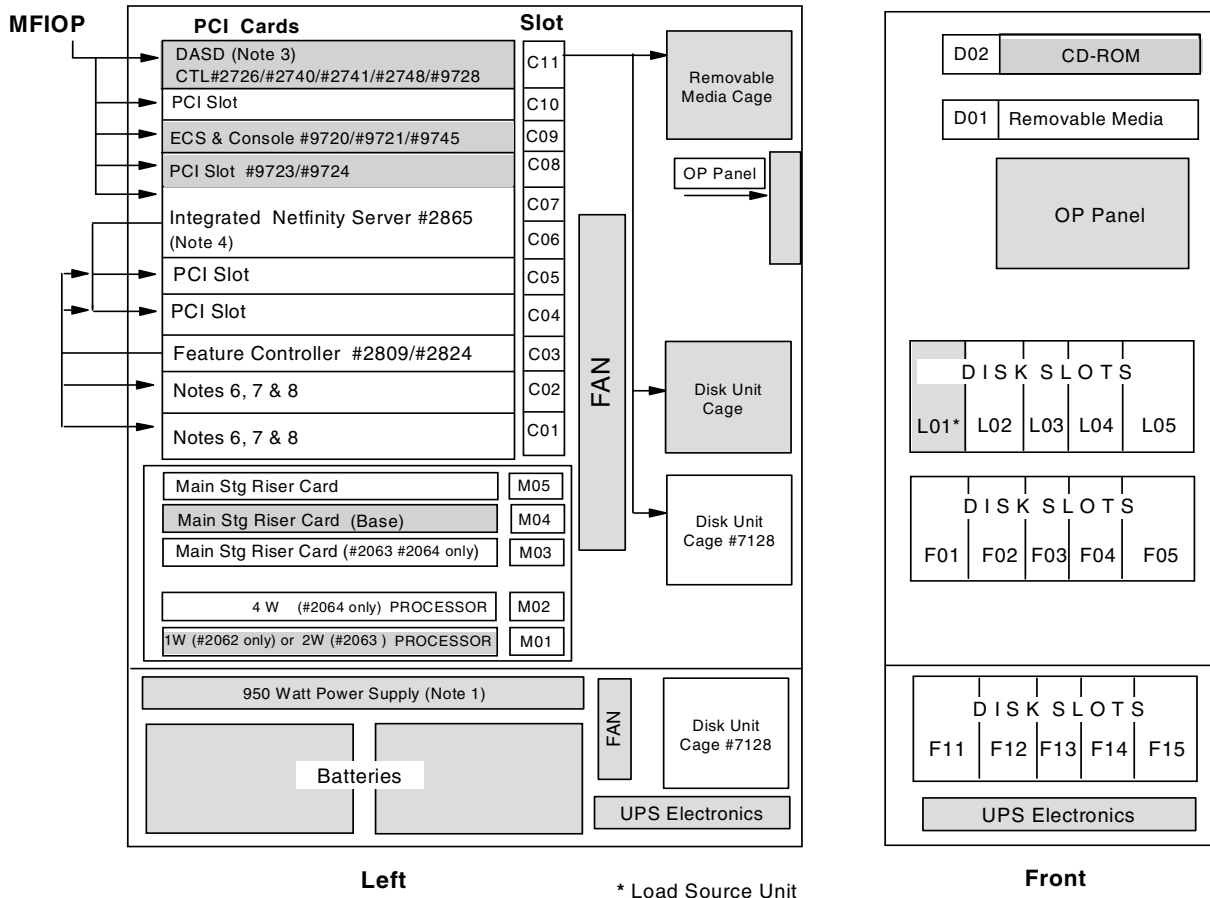
8.4 9406 Model 720 System Unit (for processor #2061)



Notes:

- Processor #2061 has a 480-watt power supply. All other 720 models use the 950-watt power supply.
- The third (lower) Disk Unit Cage is not available on 720 #2061.
- The base disk controller #9728 does not support RAID-5 or integrated hardware disk compression and only supports five disks. If there is intention to install more than five disks in the base system unit or implement RAID-5 later, the #9728 should be changed for a #2741/#2748.
- When a #2854 or #2865 Integrated Netfinity Server installed:
 - Slot C04 (port 1) supports the #2723, #2724, or #2838/#9738.
 - Slot C05 (port 2) supports the #2723 or #2724.
- The DIMMs plug directly on the Processor planar.
- The #2809 in C03 supports:
 - Slot C01 supports #281x (ATM) or #2838/#9738 100/10M Ethernet.
 - Slot C02 supports the #2718 or #2729 Magnetic Media Controller.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745, or #2746.
- The #2824 in C03.
 - Slot C01 ATM (#281x) or #2838/#9738.
 - Slot C02 supports #2718, #2729, #2750, #2751, #2761, #2838, #281x, or #4800.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, #2761 or #4800.
- If a #2838 or #281x is installed on the #2824/#2809 in C03, only features #2721 or #2745 may be installed in C04/C05.
- There is a maximum of one #2838 or #281x per #2824 IOP.
- There is a maximum of one #2750, #2751 or #2761 per #2824 IOP.
- There is a maximum of one #4800 per #2824 IOP.

8.5 9406 Model 720 System Unit (for processors #2062, #2063, #2064)

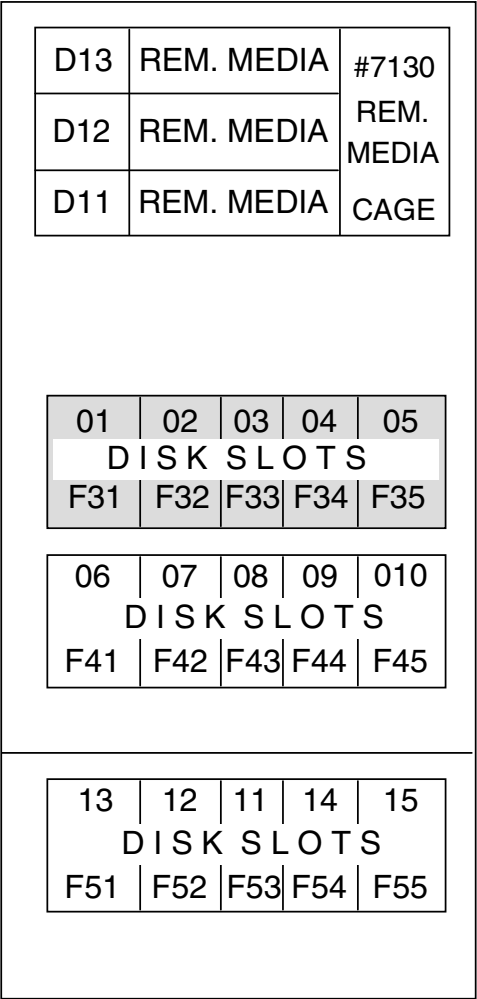


Notes:

- Processor #2061 has a 480-watt power supply. All other 720 models use the 950-watt power supply base.
- The DIMMs plug onto the main storage riser card #2830.
- The base disk controller #9728 does not support RAID-5 or integrated hardware disk compression and only supports five disks. If there is intention to install more than five disks in the base system unit or implement RAID-5 later, the #9728 should be changed for a #2741/#2748.
- The #2854 or #2865 Integrated Netfinity Server installed:
 - Slot C04 supports #2723, #2724, or #2838/#9738.
 - Slot C05 supports #2723 or #2724.
- The DIMMs plug directly on the Processor planar.
- The #2809 in C03 supports:
 - Slot C01 supports #281x (ATM) or #2838/#9738 100/10M Ethernet.
 - Slot C02 supports the #2718 or #2729 Magnetic Media Controller.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745, or #2746.
- The #2824 in C03.
 - Slot C01 ATM (#281x) or #2838/#9738.
 - Slot C02 supports #2718, #2729, #2750, #2751, #2761 or #4800.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, #2761, or #4800.
- If a #2838 or #281x is installed on the #2824/#2809 in C03, only features #2721 or #2745 may be installed in C04/C05.
- There is a maximum of one #2838 or #281x per #2824 IOP.
- There is a maximum of one #2750, #2751 or #2761 per #2824 IOP.
- There is a maximum of one #4800 per #2824 IOP.

8.6 Model 720 #9364/#5064 System Unit Expansion

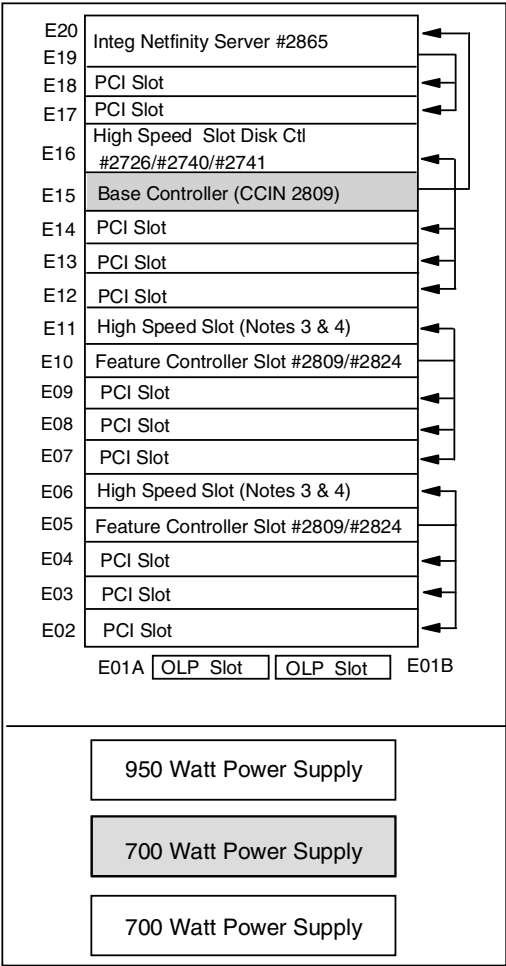
Front of #9364 or #5064



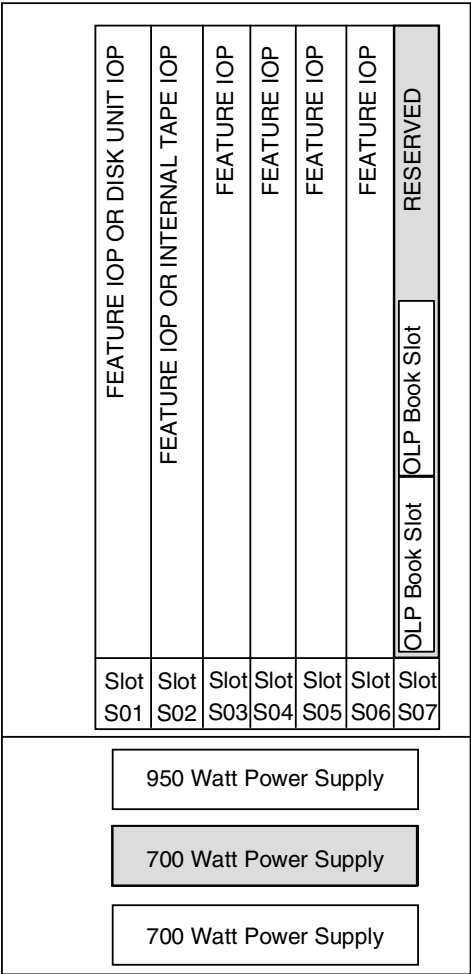
Note: The #9364/#5064 can either have a #9331 SPD or a #9329/#9330 PCI planar. See the diagram on the following page.

8.7 #9329/#9330 PCI Card Cage and #9331 SPD Card Cage

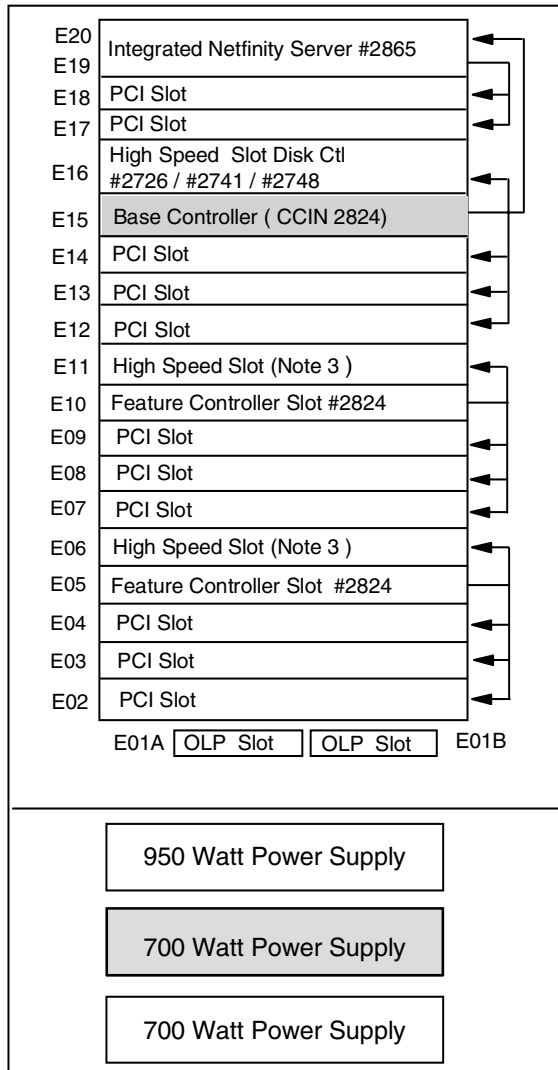
#9364 or #5064 with
#9329 PCI Card Cage



#9364 or #5064 with
#9331 SPD Card Cage



#9364 or #5064 with #9330 PCI Card Cage



Notes:

- Optical Link Processors are used for connecting Expansion Towers and Racks.
- Base PCI LAN/WAN/Workstation IOP (CCIN 2809) in #9329 slot E15 supports:
 - In slot E16 (high-speed slot):
 - #2726, #2740, #2741
 - In slots E12, E13, E14 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, #2746
 - Three cards in any combination with a maximum of one LAN card
 - When a #2851/#2854/#2865 IPCS or Integrated Netfinity Server is installed in the system expansion unit slots E19/E20, no LANs are allowed in slots E12, E13, and E14.
- 100/10 Mbps Ethernet #2838/9738 are normally located in slot E06 or E11. However, if driven by #2865 Integrated Netfinity server, one #2838/9738 is located in slot E17.
- Base PCI LAN/WAN/Workstation IOP (CCIN 2824) in #9330 slot E15 supports:
 - In slots E16 (high-speed slot):
 - #2726, #2741, or #2748.
 - In slot E12, E13, E14 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, or #2761.
 - Maximum of two LAN (#2723 and/or #2724) adapters.

- A maximum of one remote access card (#2750, #2751, or #2761)
- Any combination of WAN and Twinax adapters.
- When a #2851/#2854/#2865 PCI Integrated PC Server is installed in the system expansion unit slots E19/E20, no LAN features are allowed in slots E12, E13, and E14. Two LAN adapters are allowed on the IPCS or Integrated Netfinity Server, one of which may be high speed.

5. The #2824 PCI LAN/WAN/Workstation IOP in #9329 slots E05 or E10 supports:

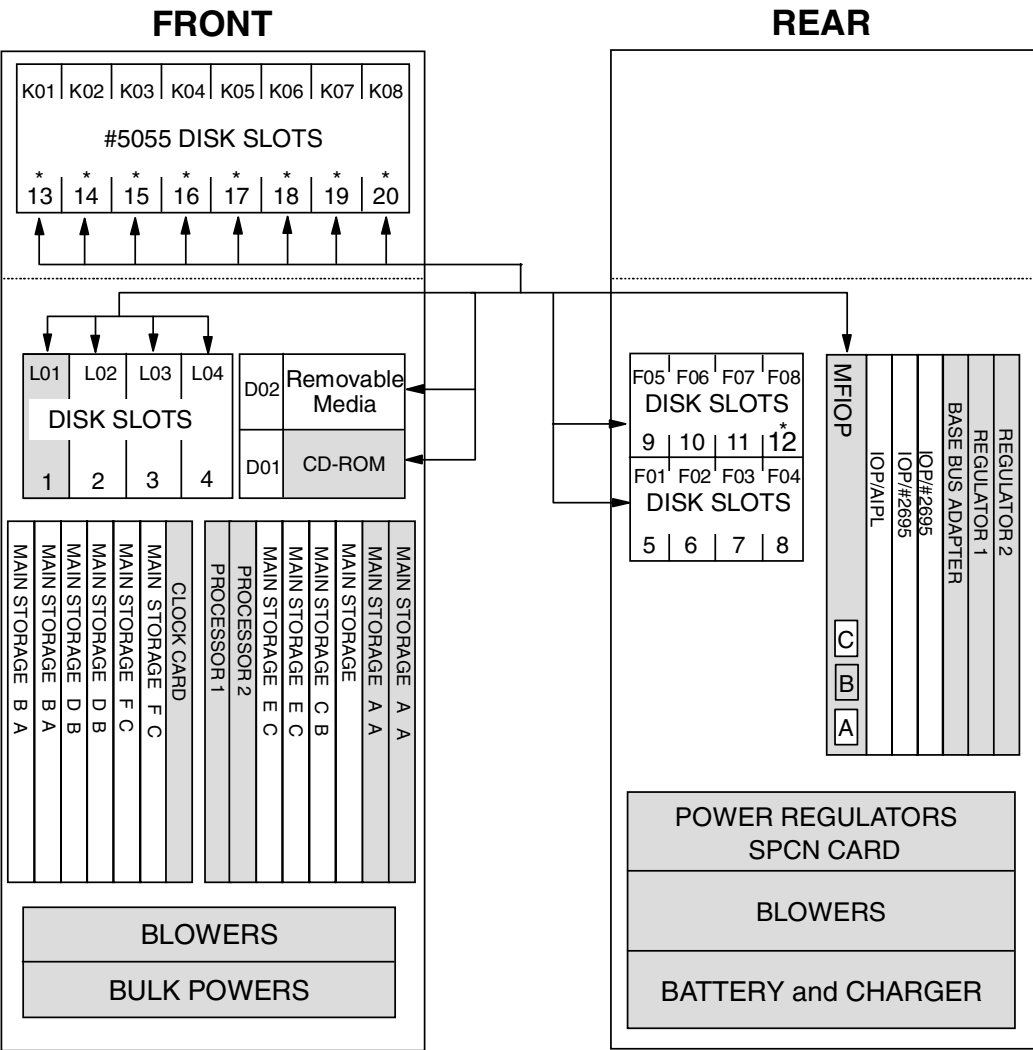
- In slots E06 or E11 (high-speed slots):
 - #2718, #2729, #2838, #2750, #2751, #2761, #281x, or #4800.
- In slots E02, E03, E04 or E07, E08, and E09 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, or #2761.
 - Three cards in any combination.
 - When a #2838 PCI 100/10Mbps Ethernet or any ATM feature is installed in E11, only #2721/#2745 PCI two-Line WAN IOAs are allowed in slots E08 and E09. E07 cannot be used.
 - When a #2838 PCI 100/10Mbps Ethernet or any ATM feature is installed in E06, only #2721/#2745 PCI two-Line WAN IOAs are allowed in slots E03 and E04. E02 cannot be used.
 - When a #2729 PCI Magnetic Media Controller is installed in E11, only one LAN is allowed in slots E08 and E09.
 - When a #2729 PCI Magnetic Media Controller is installed in E06, only one LAN is allowed in slots E03 and E04.
 - A maximum of one remote access card (#2750, #2751, or #2761) per #2824.
 - A maximum of two low-speed LANs (#2723 or #2724) per #2824.

6. The #2824 LAN/WAN/Workstation IOP in the #9330 slots E05 or E10 supports:

- In slots E06 or E11 (high-speed slots):
 - #2718, #2729, #2745, #2746, #2750, #2751, #2761, #281x, #2838, or #4800.
- In slots E02, E03, E04 or E07, E08, and E09 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, or #2761.
 - Three cards in any combination.
 - Maximum of one high-speed LAN (#2838) or one ATM (#281x) feature per #2824.
 - If a high-speed LAN or ATM feature is present, #2723/#2724 is not allowed on this #2824.
 - A maximum of one remote access card (#2750, #2751, #2761) per #2824.
 - A maximum of two low-speed LANs (#2723 and/or #2724) per #2824.

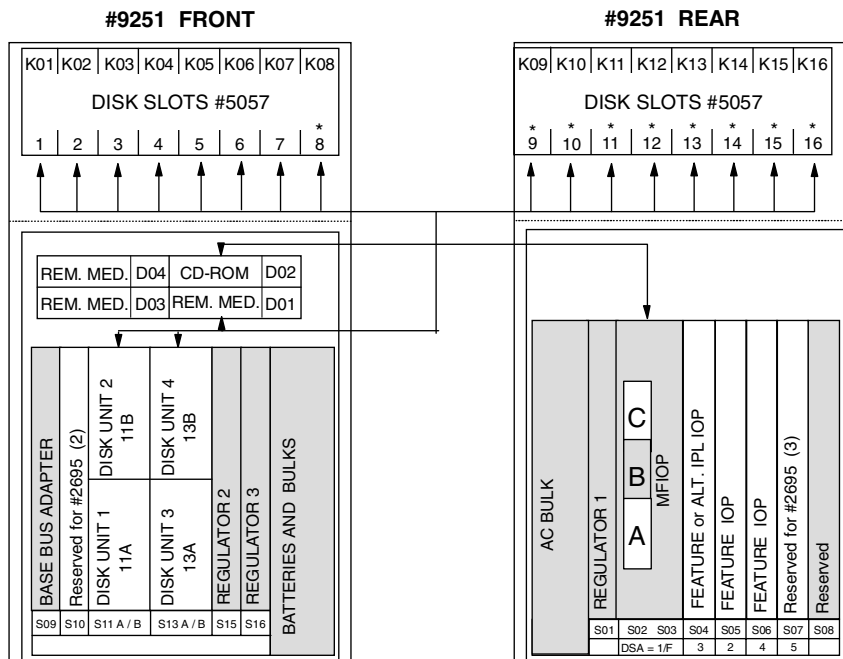
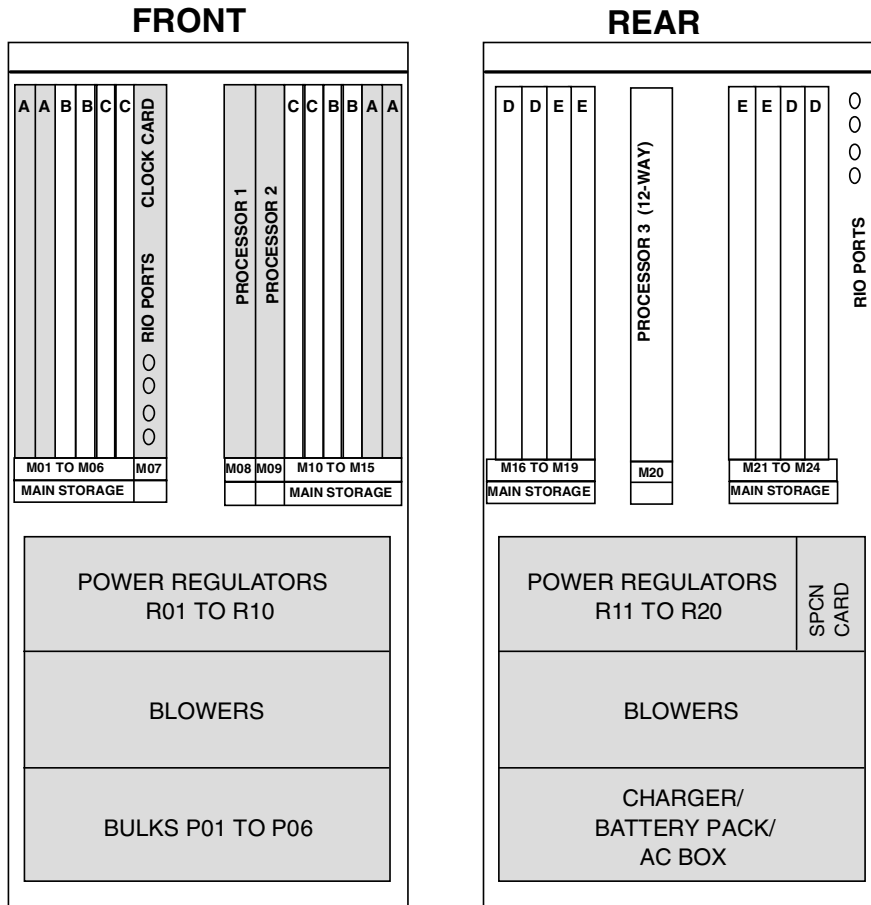
7. The #2809 is not supported in the #9330.

8.8 9406 Model 730 System Unit



7xx Models

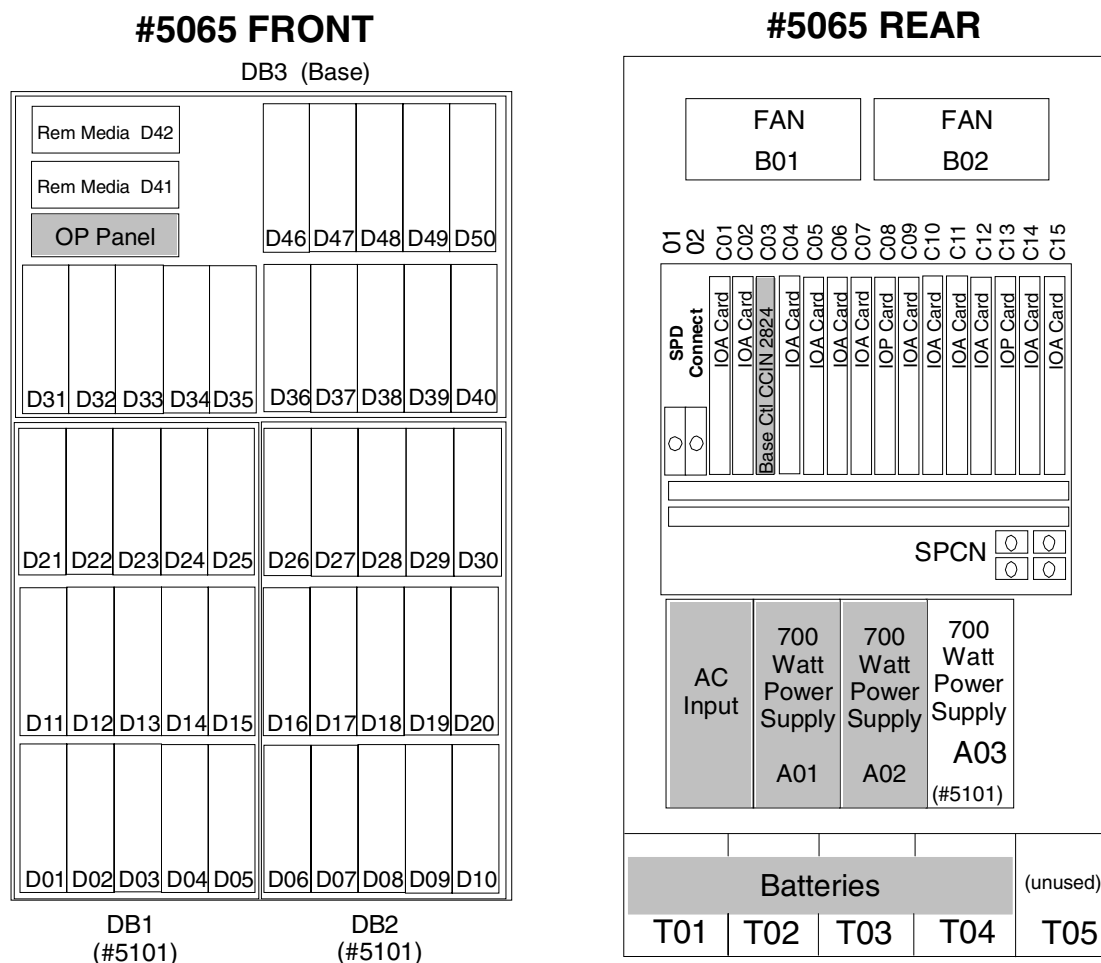
8.9 9406 Model 740 System Unit with Base #9251



 = Are part of the base configuration

* One byte disks cannot be installed in these slots

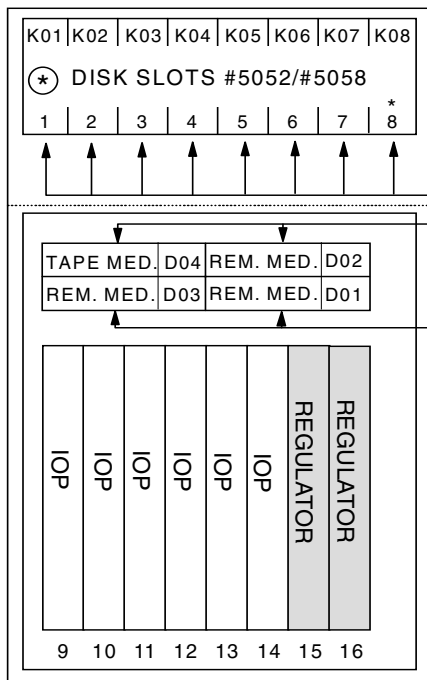
8.10 System Unit Expansion Towers for 6xx and 7xx



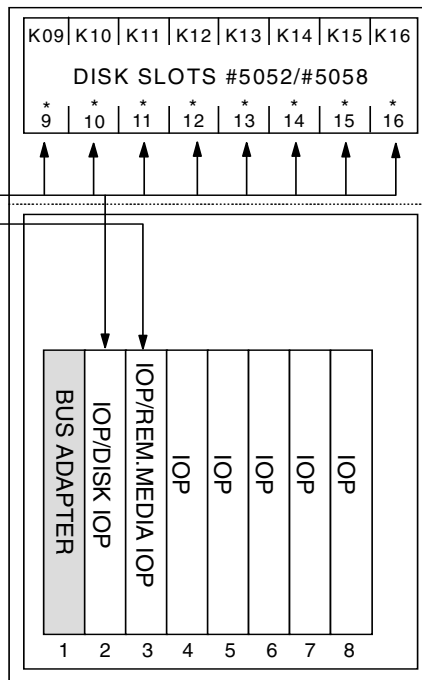
Note: The #5065 Storage/PCI Expansion Tower has two removable media positions for tape and CD-ROM devices (a maximum of one CD-ROM). The base tower has 15 disk slots, one base IOP (CCIN 2824), two additional feature IOP slots, and 12 IOA slots.

1. Base IOP (CCIN 2824) in slot C03 supports two high-speed slots and two low-speed slots.
2. The base IOP supports the following in C04 only: #2718, #2729 or #2748.
3. The base IOP supports the following in C04 or C05: #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751, #2761, or #4800.
4. The base IOP supports the following in C05 only: #2815, #2816, #2818 or #2838/#9738.
5. The base IOP supports the following in C01 or C02: #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751 or #2761.
6. There is a maximum of one #2838/#9738 or one #281x per CCIN 2824. If a #2838/#9738 or #281x feature is present, no other LAN features are allowed.
7. Maximum of two #2723/#9723 and/or #2724/#9724 per CCIN 2824.
8. Maximum of one #2750, #2751, #2761 or #4800 per CCIN 2824.

#5072 / #5073 FRONT

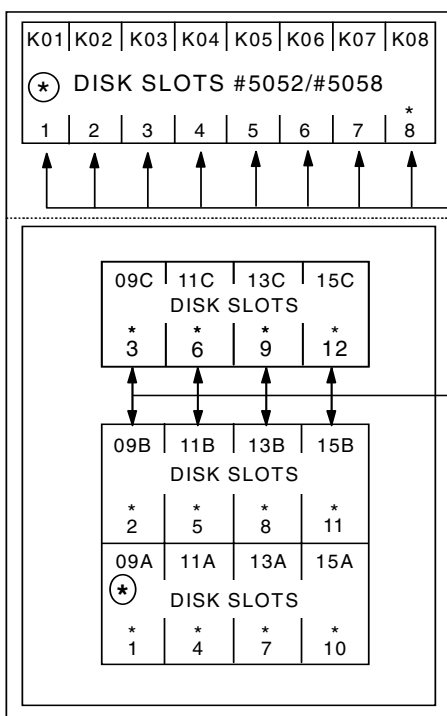


#5072 / #5073 REAR

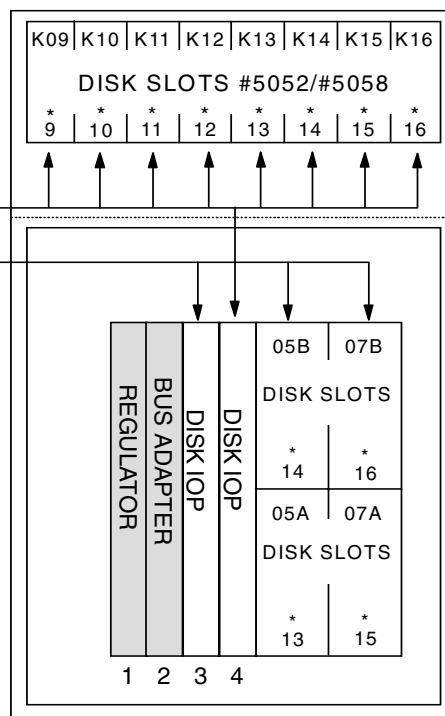


Note: The #5072/#5073 has the capability of controlling up to four tape devices or three tape devices and one CD-ROM (in positions D01, D02, D03 only). There is a maximum of one CD-ROM device per #5072 or #5073 tower.

#5082 / #5083 FRONT



#5082 / #5083 REAR



8.11 9406 Models 7xx

720 PROCESSORS		
#2061	Interactive Feature	240 RSP CPW 1-Way Processor in Client/Server Environment. Base Memory 256 MB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. Requires V4R3 or higher.
	1500	Base 35 RSP CPW in Interactive Environment. The #2061-1500 is represented by Processor Feature Code 206A. Processor Group P10.
	1501	Optional 70 RSP CPW in Interactive Environment. The #2061-1501 is represented by Processor Feature Code 206B. Processor Group P20.
	1502	Optional 120 RSP CPW in Interactive Environment. The #2061-1502 is represented by Processor Feature Code 206C. Processor Group P20.
#2062	Interactive Feature	420 RSP CPW 1-Way Processor in Client/Server Environment. Base Memory 256 MB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. Requires V4R3 or higher.
	1500	Base 35 RSP CPW in Interactive Environment. The #2062-1500 is represented by Processor Feature Code 206D. Processor Group P10.
	1501	Optional 70 RSP CPW in Interactive Environment. The #2062-1501 is represented by Processor Feature Code 206E. Processor Group P20.
	1502	Optional 120 RSP CPW in Interactive Environment. The #2062-1502 is represented by Processor Feature Code 206F. Processor Group P20.
	1503	Optional 240 RSP CPW in Interactive Environment. The #2062-1503 is represented by Processor Feature Code 207A. Processor Group P20.
#2063	Interactive Feature	810 RSP CPW 2-Way Processor in Client/Server Environment. Base Memory 256 MB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. Requires V4R3 or higher.
	1500	Base 35 RSP CPW in Interactive Environment. The #2063-1500 is represented by Processor Feature Code 207B. Processor Group P20.
	1502	Optional 120 RSP CPW in Interactive Environment. The #2063-1502 is represented by Processor Feature Code 207C. Processor Group P30.
	1503	Optional 240 RSP CPW in Interactive Environment. The #2063-1503 is represented by Processor Feature Code 207D. Processor Group P30.
	1504	Optional 560 RSP CPW in Interactive Environment. The #2063-1504 is represented by Processor Feature Code 207E. Processor Group P30.
#2064	Interactive Feature	1600 RSP CPW 4-Way Processor in Client/Server Environment. Base Memory 256 MB. If ISV software is being preloaded, see the 18.17, "Preload Feature Codes" on page 511, for a list of valid features.
	1500	Base 35 RSP CPW in Interactive Environment. The #2064-1500 is represented by Processor Feature Code 207F. Processor Group P20.
	1502	Optional 120 RSP CPW in Interactive Environment. The #2064-1502 is represented by Processor Feature Code 208A. Processor Group P30.
	1503	Optional 240 RSP CPW in Interactive Environment. The #2064-1503 is represented by Processor Feature Code 208B. Processor Group P30.
	1504	Optional 560 RSP CPW in Interactive Environment. The #2064-1504 is represented by Processor Feature Code 208C. Processor Group P30.
	1505	Optional 1050 RSP CPW in Interactive Environment. The #2064-1505 is represented by Processor Feature Code 208D. Processor Group P30.
730 PROCESSORS		
#2065	Interactive Feature	560 RSP CPW 1-Way Processor in Client/Server Environment. Base Memory 512 MB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. Requires V4R3 or higher.
	1506	Base 70 RSP CPW in Interactive Environment. The #2065-1506 is represented by Processor Feature Code 2A6A. Processor Group P20.
	1507	Optional 120 RSP CPW in Interactive Environment. The #2065-1507 is represented by Processor Feature Code 2A6B. Processor Group P30.

	1508	Optional 240 RSP CPW in Interactive Environment. The #2065-1508 is represented by Processor Feature Code 2A6C. Processor Group P30.
	1509	Optional 560 RSP CPW in Interactive Environment. The #2065-1509 is represented by Processor Feature Code 2A6D. Processor Group P30.
#2066	Interactive Feature	1050 RSP CPW 2-Way Processor in Client/Server Environment. Base Memory 512 MB. 512MB-24576MB. DASD range 4.19GB-1683.6GB (2499.6GB OS/400 V4R4). Maximum Twinax/ASCII devices 7000/3150. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511, for a list of valid features. Requires V4R3 or higher.
	1506	Base 70 RSP CPW in Interactive Environment. The #2066-1506 is represented by Processor Feature Code 2A6E. Processor Group P20.
	1507	Optional 120 RSP CPW in Interactive Environment. The #2066-1507 is represented by Processor Feature Code 2A6F. Processor Group P30.
	1508	Optional 240 RSP CPW in Interactive Environment. The #2066-1508 is represented by Processor Feature Code 2B6A. Processor Group P30.
	1509	Optional 560 RSP CPW in Interactive Environment. The #2066-1509 is represented by Processor Feature Code 2B6B. Processor Group P30.
	1510	Optional 1050 RSP CPW in Interactive Environment. The #2066-1510 is represented by Processor Feature Code 2B6C. Processor Group P30.
#2067	Interactive Feature	2000 RSP CPW 4-Way Processor in Client/Server Environment. Base Memory 512 MB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511 for a list of valid features. Requires V4R3 or higher.
	1506	Base 70 RSP CPW in Interactive Environment. The #2067-1506 is represented by Processor Feature Code 2B6D. Processor Group P30.
	1508	Optional 240 RSP CPW in Interactive Environment. The #2067-1508 is represented by Processor Feature Code 2B6E. Processor Group P40.
	1509	Optional 560 RSP CPW in Interactive Environment. The #2067-1509 is represented by Processor Feature Code 2B6F. Processor Group P40.
	1510	Optional 1050 RSP CPW in Interactive Environment. The #2067-1510 is represented by Processor Feature Code 2C6A. Processor Group P40.
	1511	Optional 2000 RSP CPW in Interactive Environment. The #2067-1511 is represented by Processor Feature Code 2C6B. Processor Group P40.
#2068	Interactive Feature	2890 RSP CPW 8-Way Processor in Client/Server Environment. Base Memory 1024 MB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511 for a list of valid features. Requires V4R3 or higher.
	1506	Base 70 RSP CPW in Interactive Environment. The #2068-1506 is represented by Processor Feature Code 2C6C. Processor Group P30.
	1508	Optional 240 RSP CPW in Interactive Environment. The #2068-1508 is represented by Processor Feature Code 2C6D. Processor Group P40.
	1509	Optional 560 RSP CPW in Interactive Environment. The #2068-1509 is represented by Processor Feature Code 2C6E. Processor Group P40.
	1510	Optional 1050 RSP CPW in Interactive Environment. The #2068-1510 is represented by Processor Feature Code 2C6F. Processor Group P40.
	1511	Optional 2000 RSP CPW in Interactive Environment. The #2068-1511 is represented by Processor Feature Code 2D6A. Processor Group P40.
740 PROCESSORS		
#2069	Interactive Feature	3660 RSP CPW 8-Way Processor in Client/Server Environment. Base Memory 1024 MB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511 for a list of valid features. Requires V4R3 or higher.
	1514	Base 120 RSP CPW in Interactive Environment. The #2069-1514 is represented by Processor Feature Code 2D6B. Processor Group P40.
	1510	Optional 1050 RSP CPW in Interactive Environment. The #2069-1510 is represented by Processor Feature Code 2D6C. Processor Group P50.
	1511	Optional 2000 RSP CPW in Interactive Environment. The #2069-1511 is represented by Processor Feature Code 2D6D. Processor Group P50.
	1512	Optional 3660 RSP CPW in Interactive Environment. The #2069-1512 is represented by Processor Feature Code 2D6E. Processor Group P50.

#2070	Interactive Feature	4550 RSP CPW 12-Way Processor in Client/Server Environment. Base Memory 1024 MB. If ISV software is being preloaded, see 18.17, "Preload Feature Codes" on page 511 for a list of valid features. Requires V4R3 or higher.
	1514	Base 120 RSP CPW in Interactive Environment. The #2070-1514 is represented by Processor Feature Code 2E6A. Processor Group P40.
	1510	Optional 1050 RSP CPW in Interactive Environment. The #2070-1510 is represented by Processor Feature Code 2E6B. Processor Group P50.
	1511	Optional 2000 RSP CPW in Interactive Environment. The #2070-1511 is represented by Processor Feature Code 2E6C. Processor Group P50.
	1512	Optional 3660 RSP CPW in Interactive Environment. The #2070-1512 is represented by Processor Feature Code 2E6D. Processor Group P50.
	1513	Optional 4550 RSP CPW in Interactive Environment. The #2070-1513 is represented by Processor Feature Code 2E6E. Processor Group P50.

POWER AND PACKAGING		
Base Optical Bus Adapter	Base Optical Bus Adapter This is the Base Optical Bus Adapter identified as CCIN 2696 with no feature code required. Models 730 and 740 only.	
#2686	Optical Link Processor (266 Mbps) This is a card that is used for attaching #5044. Each #2686 supports a maximum of one #5044. Can be placed in the #9364 with either #9331 or #9329 on the Model 720. Maximum: Two on the Model 720. Nine on Models 730 and 740. Card slots used: One open slot on the optical bus adapter.	
#2688	Optical Link Processor (1063 Mbps) This is a card that is used for attaching #5065, #5072, #5073, #5082, and #5083 Expansion Towers on the Model 7xx. Each #2688 supports a maximum of two #50xx towers. Can be placed in the #9364 with either #9329, #9330, or #9331 on the Model 720. Maximum: Two on the Model 720. Nine on the Models 730 and 740. Card slots used: One open slot on the optical bus adapter.	
#2695	Optical Bus Adapter Allows for the addition of up to three #2686 or #2688 Optical Link Processors in any combination. Card slots used: One Maximum: Two	
#2730	Programmable Regulator Model 730 only. The #2730 is required when five or more Main Storage Cards are installed. Uses slot R12.	
#5043	Primary to Secondary Rack Conversion This feature is supported on the models 7xx and is used for the conversion of a 9406 F Model System Unit rack to a 9309 #9171 type rack. Also available on feature conversion from #5040. This converted rack retains the #5043 feature.	
#5044	System Unit Expansion Rack This is a twelve SPD I/O card slot cage in a rack enclosure. Each unit provides two buses with six I/O card slots per bus. The #5044 is not available as a new feature, but is a conversion of a #5040 or #5042 rack. Requires the #2686 and an open slot on the Optical Bus Adapter. Maximum: Two on the Model 720. Nine on the Models 730 and 740.	
#5052	Storage Expansion Unit Provides space for up to sixteen disk units. It attaches to the top of the #5072 System Unit Expansion Tower and the #5082 Storage Expansion Tower. Only one #5052 per tower is supported and #5143 Power Supply may be required.	
#5055	Storage Expansion Unit (Ultra SCSI) Model 730 only. Provides space for up to eight disk units. It attaches to the top of the Model 730 System Unit. Prerequisite: #5151 Power Supply	
#5057	Storage Expansion Unit (Ultra SCSI) Model 740 only. Provides space for up to sixteen disk units. It attaches to the top of the Model 740 Base System Unit Expansion #9251.	

#5058	Storage Expansion Unit (Ultra SCSI) Provides space for up to sixteen disk units. It attaches to the top of the #5073 System Unit Expansion Tower and the #5083 Storage Expansion Tower. Only one #5058 per tower is supported.
#5064	System Unit Expansion Model 720 only. Must be specified as part of an upgrade from S20 to 720 when the S20 does not already have a #5064 installed. This feature allows one addition of either an SPD card expansion unit (#9331) or PCI card expansion unit (#9329). It also supports one #7130 Expansion Unit Tape Cage to support up to three additional tape/CD-ROM units. The #5064 supports five disks and allows two additional #7128 DASD expansion units to be added. Maximum: One
#5065	Storage/PCI Expansion Tower Provides an additional bus. It includes a 1063 Mbps optical bus card. The #5065 has redundant, hot swappable power supplies. It supports three LAN/WAN/Workstation controllers, twelve PCI IOA cards, two removable media, and up to 45 disk units. Three specific disk slots may be used for #4331 1.6 Gb Extended Adaptive Cache features. The #5065 is the only storage expansion unit to support Ultra2 SCSI. Prerequisite: #2688 Maximum: Four on the Model 720; eighteen on the Model 730 and 740. This is a Customer Install Feature (CIF).
#5066	1.8M I/O Tower Provides two additional busses. The #5066 is actually two #5065 Storage/PCI Expansion Towers installed in a #5066 1.8M I/O Tower. The #5066 reports to the system as two #5065s. The #5066 includes two 1063 Mbps optical bus cards, various cables (including optical cables) and the 1.8M I/O Tower. The #5066 includes 24 PCI IOA slots, space for 90 disk units, space for four removable media devices, battery backup, redundant/hot swap power supplies and two base PCI LAN/WAN/Workstation IOPs (CCIN 2824). The #5066 is capable of controlling Ultra2 SCSI disk units. Two line cords must be specified. Prerequisite: #2688 and V4R4 Maximum: Two on the Model 720; nine on the Model 730 and 740.
#5072	1063 Mbps System Unit Expansion Tower Provides an additional bus. It includes a 1063 Mbps optical bus card, thirteen SPD I/O card slots, space for up to four internal tape units, and battery and power supplies. It can support one #5052 Storage Expansion Unit. Due to power restrictions, some combinations of high power consumption cards may mean that an additional #5072 is required. The #2688 is a prerequisite. This feature is supported on model upgrades only and cannot be purchased as new. Prerequisite: #2688 Maximum: Four on the Model 720; eighteen on the Model 730 and 740.
#5073	1063 Mbps System Unit Expansion Tower Provides additional buses. It includes a 1063 Mbps optical bus card, thirteen SPD I/O card slots, space for up to four internal tape units, and battery and power supplies. It can support one #5058 Storage Expansion Unit. Due to power restrictions, some combinations of high power consumption cards may mean that an additional #5073 is required. Prerequisite: #2688 Maximum: Four on the Model 720; eighteen on the Model 730 and 740.
#5082	1063 Mbps Storage Expansion Tower Provides a DASD Tower for adding up to 16 disk units. A total of 32 disk units are supported with the addition of #5052. It includes a 1063 Mbps optical bus card, two SPD I/O card slots for the disk IOPs (#6532 or #6533 are orderable and #6502, #6512, #6530 supported only), and battery and power supplies. The #2688 is a prerequisite. This feature is supported on model upgrades only and cannot be purchased as new. Prerequisite: #2688 Maximum: Four on the Model 720; eighteen on the Model 730 and 740.
#5083	1063 Mbps Storage Expansion Tower (Ultra SCSI) Provides a DASD Tower for adding up to 16 disk units. A total of 32 disk units are supported with the addition of #5058. It includes a 1063 Mbps optical bus card, two SPD I/O card slots for the disk IOPs (#6502, #6512, #6530 supported but not orderable or #6532 or #6533 for new orders), and battery and power supplies. The #2688 is a prerequisite. Maximum: Four on the Model 720; eighteen on the Model 730 and 740.
#5101	30 Disk Expansion Feature This provides two 15 unit disk enclosures, a 700-watt power supply, backplanes, and internal cables. Maximum: One per #5065.
#5143	Feature Power Supply This is a 400-watt power supply that is usually a prerequisite for a #5052 installed on a #5072 or #5082. Maximum: One per #5072 or #5082.

#5150	Battery Backup (External) An external battery backup that when used in conjunction with internal battery backup is capable of extending the Continuously Power Main Storage (CPM) time to at least 48 hours. On Models 730 and 740, a standard internal battery backup is capable of maintaining CPM on 16 GB of main storage for at least 24 hours. The #5150 is required when main storage exceeds 16 GB on a Model 730 or 740. It can also be purchased for increasing the CPM time over that of the internal battery.
#5151	Power Supply (650 watts) Model 730 only. The #5151 is a 650-watt feature power supply that is a prerequisite for #5055 Storage Expansion Unit. It is also required when five or more main storage cards are installed. Maximum: One
#5153	Redundant Power Supply Model 720 Processors #2062, #2063, and #2064 only. This feature consists of two power supplies: a 950 watt (re-rated to 970 at V4R3) and a 650 watt (re-rated to 700 at V4R3). This feature provides redundancy for the power supplies in the System Unit and System Unit Expansion. This feature physically resides in the #5064 or #9364. Maximum: One
#7128	DASD Expansion Unit Model 720 only. This feature allows the addition of five disk units to either the System Unit or the #5064/#9364 System Unit Expansion. Maximum: Three in Model 720 Processor #2061; four in the Model 720 Processors #2062, #2063, and #2064.
#7130	Expansion Unit Tape/Cage Model 720 only. This feature allows the addition of three tape units or CD-ROMs to the #5064/#9364 System Unit Expansion. Tape Units #1349, #1350, #1355, #1360, #6480, #6481, #6481, #6482, #6483, #6485, #6486, or #6490 are supported in the first two tape positions. Only Tape Units #1355, and #6485 and #6586 are supported in the third position. A tape controller is required to support these tape devices. See #6425 for CD-ROM support. Maximum: One
#9251	Base I/O Tower Model 740 only. Base Tower on a Model 740. Includes four feature SPD IOP slots, space for three removable media devices, one CD-ROM drive, one MFIOIP, the ability to add up to 20 feature disk units (with #5057), and battery and power supplies.
#9329	PCI Integrated Expansion Unit Model 720 only. This feature contains eleven low-speed PCI card slots and three high-speed PCI card slots. These are driven by one Base Controller (CCIN 2809) and two Feature Controllers. One IPCS or Integrated Netfinity Server optional. It also has space for one or two #2686 or #2688 Optical Link Processor Cards to support up to four external towers. Maximum: One
#9330	PCI Integrated Expansion Unit Model 720 only. This feature contains eleven low-speed PCI card slots and three high-speed PCI card slots. These are driven by one Base Controller (CCIN 2824) and two Feature Controllers. One IPCS or Integrated Netfinity Server is optional. It also has space for one or two #2686 or #2688 Optical Link Processor Cards to support up to four external towers. Maximum: One
#9331	Expansion Unit for SPD Cards Model 720 only. This feature allows the addition of up to six SPD cards and one or two #2686 or #2688 Optical Link Processor Cards to support up to four external towers. The #9331 includes an SPD Controller Card. CD-ROM is not supported. Maximum: One
#9364	System Unit Expansion Model 720 only. This feature allows addition of either an SPD card expansion unit (#9331) or a PCI card expansion unit (#9329 or #9330). It also supports one #7130 Expansion Unit Tape Cage for up to three tapes or CD-ROMS, base DASD cage supporting five disks, up to two additional 7128 DASD cages can be supported. CD-ROM is not supported with the #9331. Maximum: One
MAIN STORAGE	
Base	There are no features to specify the base memory 256 MB on all of the Model 720 Processors. For Models 730 and 740, see later in this list. For main storage which must be added in pairs, feature codes must be ordered in pairs. The same rules apply to quads.

#2830	Main Storage Expansion Riser Card Model 720 only. This feature mounts additional main storage DIMMs. It contains 16 sockets for placement of 32 MB DIMMs or 128 MB DIMMs. Maximum: One on Processor #206; two on Processors #2063 and #2064; none on the Processor #2061.
#3001	32 MB Main Storage (DIMM) Model 720 only. Plugs directly into the CPU or #2830. Must be added in pairs. Maximum: 14 DIMMs (physically) on Processors #2061; 28 DIMMS for Processor #2062; 44 DIMMs for Processors #2063 and #2064.
#3002	128 MB Main Storage (DIMM) Model 720 only. Plugs directly into the CPU or #2830. Must be added in pairs. Maximum: 14 DIMMs (physically) on Processor #2061; 30 DIMMS on Processor #2062; 46 DIMMs on Processors #2063 and #2064.
#3004	256 MB Main Storage (DIMM) Model 720 only. Plugs directly into the CPU or #2830. Must be added in pairs. Maximum: Six DIMMs (physically) on Processors #2061; 14 DIMMS on Processor #2062; 30 DIMMS on Processors #2063 and #2064.
#3179	256 MB Main Storage Card Models 730 and 740 only. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot. Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on Model 740.
#3180	512 MB Main Storage Card Models 730 and 740 only. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot. Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on Model 740.
#3189	128 MB Main Storage Card Models 730 and 740 only. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot. Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on Model 740.
#3190	256 MB Main Storage Card Models 730 and 740 only. Support only, not orderable Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot. Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on Model 740.
#3191	512 MB Main Storage Card Models 730 and 740 only. Support only, not orderable Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot. Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on Model 740.
#3192	1024 MB Main Storage Card Models 730 and 740 only. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot. Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on Model 740.
#3193	2048 MB Main Storage Card Models 730 and 740 only. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot. Maximum: Five pairs on Model 730 #2065, #2066, and #2067; three quads on Model 730 #2068; four quads on 740.

#8180	Optional Base 512 MB Main Storage Card Models 730 and 740 only. Provides an optional 512 MB Main Storage card in place of a base 256 MB card. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot.
#8191	Optional Base 512 MB Main Storage Card Models 730 and 740 only. Support only, not orderable Provides an optional 512 MB Main Storage card in place of a base 256 MB card. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot.
#8192	Optional Base 1024 MB Main Storage Card Models 730 and 740 only. Provides an optional 1024 MB Main Storage card in place of a base 256 MB card. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot.
#8193	Optional Base 2048 MB Main Storage Card Models 730 and 740 only. Provides an optional 2048 MB Main Storage card in place of a base 256 MB card. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot.
#9179	Base 256 MB Main Storage Card Models 730 and 740 only. Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot.
#9190	Base 256 MB Main Storage Card Models 730 and 740 only. Support only, not orderable Must be added in pairs on Model 730 processor features #2065, #2066, and #2067. Must be added in quads on Model 730 processor feature #2068 and on the Model 740. Requires one dedicated memory card slot.
WORKSTATION CONTROLLERS	
Base MFIOP	Base Multifunction IOP (PCI) Model 720 only. The MFIOP on the 720 is part of the planar and does not occupy a PCI card slot. The base system includes this MFIOP which has three low-speed slots (C08, C09, C10) and one high-speed PCI card slot C11 used for the base system disk controller #2726, #2740, #2741, #2748, or #9728. The MFIOP also drives one Integrated PC Server or a PCI Integrated Netfinity Server. One PCI card slot supports the base PCI WAN/Twinaxial IOA (#9720) or the base PCI Two-Line WAN IOA (#9721/#9745). The remaining two PCI card slots support #2721, #2722, #2723, #2724, #2745 or #2746 PCI IOAs. Only one of these can be a LAN IOA (#2723 or #2724). Also, if a #2851, #2854 Integrated PC Server (IPCS) or #2865 PCI Integrated Netfinity Server is installed in slots C06 and C07, #2722 or #2746 Twinax IOA is not allowed in slot C08, and LAN IOAs are not allowed in slots C08 or C10.
Base IOP	Base Controller for PCI Integrated Expansion Unit #9329/#9330 Model 720 only. This comes as standard (no feature required) with #9329 and #9330 PCI Integrated Expansion Unit. In the #9329, it is identified as CCIN 2809. In the #9330, it is identified as CCIN 2824. It is used for attaching LAN, WAN, and workstation IOAs to the system and supports one slot reserved for a PCI disk controller and three low-speed slots. It also supports one PCI Integrated PC Server/Integrated Netfinity Server. The Base controller is located in slot E15. CCIN 2809. In the high-speed slot E16, only the #2726 or #2741 PCI Disk Unit controller is supported. In slots E12, E13 and E14, it supports any three (with a maximum of one LAN) of #2721, #2722, #2723/#9723, #2724/#9724, #2745 or #2746. When a #2865 Integrated Netfinity Server is installed in E19/E20, no LAN cards are allowed in E12, E13, and E14. CCIN 2824. In the high-speed slot E16, only the #2726, #2741 or #2748 PCI Disk Unit controller is supported. In slots E12, E13 and E14, it supports any three (with a maximum of two LAN cards) of #2721, #2722, #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751 or #2761. There is a maximum of one #2750, #2751 or #2761. There can be any combination of WAN and Twinax. When a #2865 Integrated Netfinity Server is installed in E19/E20, no LAN cards are allowed in E12, E13 and E14. Maximum: One.

Base IOP	<p>Base Controller for Storage/PCI Expansion Tower #5065</p> <p>This comes as standard (no feature required) with #5065 Storage/PCI Expansion Tower. It is installed in slot C03 and is identified as CCIN 2824. It is used for attaching LAN, WAN, and workstation IOAs through two high-speed slots and two low-speed slots.</p> <p>The #2718, #2729 or #2748 are supported in C04 only.</p> <p>The #2723/#9723, #2724/#9724, #2645, #2746, #2750, #2751, #2761, or #4800 are supported in C04 or C05.</p> <p>The #281X or #2838/#9738 are supported on C05 only.</p> <p>The #2723/#9723, #2724/#9724, #2745, #2746 #2750, #2751, or #2761 are supported in C01 or C02.</p> <p>Restrictions apply.</p> <p>Maximum: One</p>
#2629	<p>LAN/WAN/Workstation IOP (SPD)</p> <p>This supports up to three LAN/WAN/ Workstation IOAs. Those supported are #2699, #6149, #6180, or #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions of the #2629.</p> <p>Maximum: One SPD slot required per #2629.</p>
#2722	<p>Twinaxial Workstation IOA (PCI)</p> <p>One eight-port attachment is provided to support 40 active twinaxial devices.</p> <p>PCI slots required: One (low-speed only).</p> <p>Maximum: For workstation controller maximums in any combination, see 8.1, "9406 720 Model Overview" on page 157.</p>
#2746	<p>Twinaxial Workstation IOA (PCI)</p> <p>One eight-port attachment is provided to support 40 active twinaxial devices.</p> <p>PCI slots required: One (low speed in system unit or #9329, high or low speed in #9330 or #5065).</p> <p>Prerequisite: V4R4</p> <p>Maximum: For workstation controller maximums in any combination, see 8.1, "9406 720 Model Overview" on page 157.</p>
#2809	<p>Feature Controller (PCI)</p> <p>Model 720 only.</p> <p>This can be used for attaching additional LAN, WAN, and Workstation IOAs to the system. There is a maximum of one in the System Unit and two in the #9329 PCI Integrated Expansion Unit.</p> <p>In system unit slot C03, it supports PCI feature IOAs in slots C01, C02, C04 and C05 (if an Integrated Netfinity Server is installed, the server controls slots C04 and C05). In slot C01, the #2809 supports #2838/#9738 or #281x. In the C02 high-speed slot, it supports a #2718 or #2729. In C04 and C05, it supports one or two #2721 or #2722 or #2723 or #2724 or #2745 or #2746. If the #2838/#9738 is in C01, only the #2721 or #2745 may be installed in C04 and C05.</p> <p>In #9329 System Unit Expansion slots E05 or E10, it supports low-speed slots E02, E03, E04 or E07, E08, E09 and high-speed slots E06 or E11. In E06 or E11, the #2718, #2729, #2738/#9738, or #281x are supported.</p> <p>In the low-speed slots, it supports #2721, #2722, #2723/#9723, #2724/#9724, #2745, or #2746.</p>
#2824	<p>Feature Controller (PCI)</p> <p>This can be used for attaching additional LAN, WAN, and Workstation IOAs to the system. There is a maximum of one in the System Unit and two in the #9329/#9330 PCI Integrated Expansion Unit and two in the #5065 Storage/PCI Expansion Tower.</p> <p>In system unit slot C03, it supports PCI feature IOAs in slots C01, C02, C04 and C05 (if an Integrated Netfinity Server is installed, the server controls slots C04 and C05). C01 supports the #2838/#9738, #281x.</p> <p>C02 high-speed slot supports #2718, #2729, #2750, #2751, #2761 or #4800.</p> <p>C04 and C05 supports #2721/#9721, #2722, #2723/#9723, #2724/#9724, #2745/#9745, #2746, #2750, #2751, or #2761.</p> <p>If the #2838/#9738 is in C01, only the #2721/#9721 or #2745/#9745 may be installed in C04 and C05.</p> <p>In #9329 System Unit Expansion slots E05 or E10, it supports high-speed slots E06 or E11 and low-speed slots E02, E03, E04 or E07, E08, E09. In E06 and E11, it supports #2718, #2729, #2838/#9738, #2750, #2751, #2761 #281x or #4800.</p> <p>In the low-speed slots, it supports #2721, #2722, #2723/#9723, #2724/#9724, #2746, #2745, #2750, #2751 or #2761.</p> <p>In #9330 System Unit Expansion slots E05 or E10, it supports high-speed slots E06 or E11 and low-speed slots E02, E03, E04 or E07, E08, E09. In E06 and E11, it supports #2718, #2729, #2838/#9738, #2745, #2746, #2750, #2751, #2761, #281x, or #4800.</p> <p>In the low-speed slots, it supports #2721, #2722, #2723/#9723, #2724/#9724, #2746, #2745, #2750, #2751, or #2761.</p> <p>In #5065 Storage/PCI Expansion Tower slots C08 or C13 it supports two high-speed and two low-speed slots.</p> <p>The #2718, #2729 or #2748 are supported in C09 and C14 only.</p> <p>The #2838/#9738 and #281x are supported in C05, C10 and C15 only.</p> <p>The #2838/#9738, #2724/#9724, #2745, #2746, #2750, #2751, #2761, or #4800 are supported in C09, C10, C14, or C15.</p> <p>The #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751, or #2761 are supported in C06, C07, C11, or C12.</p> <p>Additional restrictions apply.</p> <p>Prerequisite: OS/400 V4R4</p>

#6050 #9050	Twinaxial Workstation Controller (SPD) One eight-port attachment is provided to support up to 40 twinaxial devices. The #6050 is supported but not orderable. Twinaxial Workstation Controller #6180 is ordered on new systems. SPD slots required: One Maximum: For workstation controller maximums in any combination, see 8.1, “9406 720 Model Overview” on page 157. #9050 is supported but not orderable as the base Twinaxial Workstation Adapter/Controller on the Models 730 and 740.
#6140 #9140	Twinaxial Workstation Controller One eight-port attachment to support up to 40 twinaxial devices. The #6140 is supported but not orderable. Twinaxial Workstation Controller #6180 is ordered on new systems. SPD slots required: One Maximum: 58 on Model 720, 175 on Models 730 and 740. #9140 is supported but not orderable as the base Twinaxial Workstation Adapter/Controller on the Models 730 and 740. Maximum: One.
#6141 #9141	ASCII Workstation Controller (SPD) Supported but not orderable. This workstation controller supports up to six ASCII devices. SPD slots required: One Maximum: 58 on Model 720, 175 on Models 730 and 740. #9141 is the base ASCII Workstation Adapter/Controller when there are no other Workstation Controllers on the order for the Models 730 and 740. Maximum: For workstation controller maximums in any combination, see 8.1, “9406 720 Model Overview” on page 157.
#6142	ASCII 12-Port Workstation Attachment (SPD) Supported but not orderable. This attachment plugs into the #6141 ASCII Workstation Controller providing an additional twelve ports. Eighteen ASCII devices can now be supported. One #6142 can be attached per #6141. SPD slots required: None
#6180 #9280	Twinaxial Workstation IOA (SPD) One eight-port attachment is provided to support up to 40 active twinaxial devices. Prerequisite: #2629 on the Model 720. IOA slots required: One in #2629. Maximum: For workstation controller maximums in any combination, see 8.1, “9406 720 Model Overview” on page 157. The #9280 is the base Twinaxial Workstation IOA residing in slot C of the MFIOP on Models 730 and 740. Maximum: One.
#9720 #2720	Base WAN/Twinaxial IOA (PCI) Model 720 only. This combined twinaxial/communications adapter can be included as base in the 720 Model. It provides four ports supporting a maximum of 28 Twinaxial devices. It also provides a single communications line to support ECS. The #9720 is mutually exclusive with #9721/#9745. (See “COMMUNICATIONS” on page 180). PCI slots required: One Maximum: One #9720 or one #2720 per system.
#9751	MFIOP with RAID (Ultra SCSI) Models 730 and 740 only. Contains function for controlling 20 disk units, one removable media unit and one CD-ROM unit. Has three IOA slots for controlling LANs, Twinaxial Workstations, and Communications. IOA Slot A is reserved for attaching one #2699 Communications IOA or one #6149 or #6181 LAN IOA. IOA Slot B is reserved for attaching the #9699 Base Multi Protocol Communications IOA. IOA Slot C is reserved for attaching one #2699 Communications IOA or one #6180 or #9280 Twinaxial IOA. Occupies two card slots. The #9751 has CCIN 6751. See Chapter 16, “CCIN Numbers” on page 441. Does not support integrated hardware disk compression.
#9754	MFIOP with RAID (Ultra SCSI) Models 730 and 740 only. Contains function for controlling 20 disk units, removable media unit and one CD-ROM unit. Has three IOA slots for controlling LANs, Twinaxial Workstations, and Communications. IOA Slot A is reserved for attaching one #2699 Communications IOA or one #6149 or #6181 LAN IOA. IOA Slot B is reserved for attaching the #9699 Base Multi Protocol Communications IOA. IOA Slot C is reserved for attaching one #2699 Communications IOA or one #6180 or #9280 Twinaxial IOA. Occupies two card slots. The #9754 has CCIN 6754. See Chapter 16, “CCIN Numbers” on page 441. Supports integrated hardware disk compression.

COMMUNICATIONS	
#2605	ISDN Basic Rate Adapter (SPD) Connects to #2623 to support one communications line connecting to an ISDN network. The ISDN Basic Rate Interface supported by #2605 contains two high-speed ISDN user channels. One or two #2605s may be attached to one #2623 with no other IOAs allowed on the #2623. SPD slots required: None Prerequisite: #2623
#2609	EIA 232/V.24 Two-Line Adapter (SPD) Connects to #2623 to support two communications lines using Async, BSC, SDLC, or X.25 protocols. Two cables must be specified: #9023 EIA 232/V.24 20ft (6m) enhanced Cable #9835 EIA 232/V.24 50ft (15m) enhanced Cable #9022 EIA 232/V.24 20ft (6m) Cable #9836 EIA 232/V.24 50ft (15m) Cable The #2609 is supported for migration. The Two-Line WAN IOA #2699 is ordered on new systems. SPD slots required: None Prerequisite: #2623
#2610	X.21 Two-Line Adapter (SPD) Connects to #2623 to support two communications lines using X.21 or X.25 networks. Two cables must be specified: #9021 X.21 20ft (6m) Cable. #9839 X.21 50ft (15m) Cable. The #2610 is supported for migration. The Two-Line WAN IOA #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2612	EIA 232/V.24 One-Line Adapter (SPD) Connects to #2623 to support one communication line using Async, BSC, SDLC, or X.25 protocols. One cable must be specified (see cable features for #2609). The #2612 is supported for migration. The Two-Line WAN IOA #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2613	V.35 One-Line Adapter (SPD) Connects to #2623 to support one V.35 communications line using either BSC, SDLC, or X.25 protocols. Each #2623 supports one V.35 line at speeds up to 640 Kbps, or two V.35 lines at speeds up to 512 Kbps, or three V.35 lines at speeds up to 384 Kbps. No other adapters allowed on #2623 when running T1/E1/J1. One cable must be specified: #9020 V.35 20ft (6m) Cable #9838 V.35 50ft (15m) Cable The #2613 is supported for migration. The Two-Line WAN IOA #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2614	X.21 One-Line Adapter (SPD) Connects to #2623 to support one communications line using X.21 or X.25 networks. One cable must be specified (see cable features for #2610). The #2614 is supported for migration, but the Two-Line WAN IOA #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2620	Full Cryptographic Processor (SPD) This feature provides full cryptographic support for encrypting and decrypting data. Distribution of this feature is restricted by U.S. Government Export Regulations. In countries outside the USA and Canada, it can only be marketed to financial institutions and subsidiaries of U.S. companies. If this feature cannot be sold, #2628 should be sold in its place. SPD slots required: One Maximum: One for the Model 720, three for the Models 730 and 740.
#2623	Six-Line Communication Controller (SPD) This controller provides for attachment of a wide range of iSeries and AS/400e communications adapters. The following IOA adapters are supported by the #2623: #2605, #2609, #2610, #2612, #2613, #2614, #2654, #2655, #2656, #2657, #2658, #2659, #6153, and #6173. The #2623 supports two #2605 ISDN adapters or up to three EIA 232/V.24, X.21, and V.35 adapters. The #2623 is only orderable on 7xx models for customers purchasing the #2605 ISDN adapter. Otherwise, although the #2623 continues to be supported, the LAN/WAN/Workstation IOP #2629 should be ordered. SPD slots required: One

#2629	LAN/WAN/Workstation IOP (SPD) This supports up to three IOAs. Those supported are #2699, #6149, #6180 or #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions. SPD slots required: One Maximum: One per SPD slot
#2628	Limited Cryptographic Processor (SPD) Provides the same function as #2620 except that it does not include data encryption/decryption using commercial Data Masking Facility for data scrambling. Can be marketed to any non-U.S. company. SPD slots required: One Maximum: One for the Model 720, three for the Models 730 and 740.
#2654	EIA 232/V.24 Two-Line Adapter with 20ft Enhanced Cable Connects to #2623 to support two communications lines supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 20-foot (6 meter) enhanced cables. The #2654 is supported for migration only. The Two-Line WAN IOA #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2655	EIA 232/V.24 Two-Line Adapter with 20ft Cable Connects to #2623 to support two communications lines supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 20-foot (6 meter) cables. The #2655 is supported for migration only. The Two-Line WAN IOA #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2656	X.21 Two-Line Adapter with 20ft Cable Connects to #2623 to support two communications lines to attach to a X.21 or X.25 network using 20-foot (6 meter) cables. The #2656 is supported for migration only. The Two-Line WAN IOA #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2657	EIA 232/V.24 Two-Line Adapter 50ft Enhanced Cable Connects to #2623 to support two communications lines supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 50-foot (15 meter) enhanced cables. The #2657 is supported for migration only. The Two-Line WAN IOA #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2658	EIA 232/V.24 Two-Line Adapter 50ft Cable Connects to #2623 to support two communications lines to supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 50-foot (15 meter) cables. The #2658 is supported for migration only. The Two-Line WAN IOA #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2659	X.21 Two-Line Adapter 50ft Cable Connects to #2623 to support two communications lines to attach to a X.21 or X.25 network using 50-foot (15 meter) cables. The #2659 is supported for migration only. The Two-Line WAN IOA #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2664	Integrated Fax Adapter (SPD) Provides two ports capable of transmission and receipt of facsimile data to or from a Group 3 capable Fax machine, another iSeries or AS/400e with the #2664, or PCs with appropriately programmed Fax adapters. SPD slots required: One Maximum: 32 on all Models 7xx

#2666	<p>High-Speed Communications Adapter (SPD) Provides one communications line capable of T1/E1 (1.544/2.048 Mbps) speeds. One of the following cables must be specified: #9879 20ft (6m) V.35 CCITT cable #9880 80ft (24m) V.35 CCITT cable #9882 20ft (6m) RS449/V.36 CCITT cable #9883 80ft (24m) RS449/V.36 CCITT cable* #9884 150ft (45m) RS449/V.36 CCITT cable* #9885 20ft (6m) X.21 CCITT cable * These cables are only allowed when the customer's modem supports Looped Clocking Mode. #2666 is supported by not orderable on Models 7xx. The newer #2699 should be ordered in its place. SPD slots required: One Maximum: 12 on the Model 720, 20 on the Model 730, and 30 on the Model 740.</p>
#2699	<p>Two-Line WAN IOA (SPD) Supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached: #0328 Operations Console 20ft (6m) Cable.* #0329 V.24/EIA232 80ft (24m) cable #0330 V.24/EIA232 20ft (6m) cable #0331 V.24/EIA232 50ft (15m) cable #0332 V.24/EIA232 20ft (6m) enhanced cable #0333 V.24/EIA232 50ft (15m) enhanced cable #0334 V.24/EIA232 80ft (24m) enhanced cable #0335 V.36/EIA449 20ft (6m) cable #0336 V.36/EIA449 50ft (15m) cable #0337 V.36/EIA449 150ft (45m) cable #0338 V.35 20ft (6m) cable #0339 V.35 50ft (15m) cable #0340 V.35 80ft (24m) cable #0341 X.21 20ft (6m) cable #0342 X.21 50ft (15m) cable * This feature is used to support the Operations Console function on CPU Models supporting Logical Partitioning (LPAR) for secondary partitions (V4R4 and higher). A maximum of one #0328 cable is allowed per #2699. For communications restriction, see "Comm Restrictions" on page 187. Prerequisite: #2629 IOA slots required: One on #2629</p>
#2721	<p>PCI Two-Line WAN IOA (PCI) Supported but not orderable. Model 720 only. Supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached: #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft (15m) enhanced PCI cable #0352 V.24/EIA232 80ft (24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 150ft (45m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0365 V.24/EIA232 80ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI Cable* *This feature is used to support the Operations Console function on CPU Models supporting Logical Partitioning (LPAR) (V4R4 and higher). A maximum of one #0367 Cable is allowed per #2721. For Communication restrictions, see "Comm Restrictions" on page 187. PCI slots required: One (low speed only).</p>

#2745	<p>PCI Two-Line WAN IOA (PCI) Model 720 only. Supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft (15m) enhanced PCI cable #0352 V.24/EIA232 80ft (24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 150ft (45m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0365 V.24/EIA232 80ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI Cable* <p>*This feature is used to support the Operations Console function on CPU Models supporting Logical Partitioning (LPAR) (V4R4 and higher). A maximum of one #0367 cable is allowed per #2745. For Communication restrictions, see "Comm Restrictions" on page 187. PCI card slots required: One (low speed only with V4R3)</p>
#2750	<p>PCI ISDN BRI U Adapter (only available in the United States and Canada) The #2750 is a four-port (8 channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #2750 is the "U"-bus (2 wire) version of the ISDN BRI PCI card. The #2750 feature supports the following protocols: PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax</p> <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2750 feature. For configuration purposes, each #2750 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex. Requirements: This feature requires country certification or homologation. Full sized PCI card slot. Maximum: One per IOP Prerequisites: #2824 and OS/400 V4R4 and PTF MF22528, or Cumulative (CUM) PTF package C9313440 or later.</p>
#2751	<p>PCI ISDN BRI S/T IOA (PCI) The #2751 is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #2751 is the "S/T"-bus (four wire) version of the ISDN BRI PCI card.</p> <p>Note: This requires a Network Terminating device in the circuit. In the United States and Canada this must be provided by the customer. In other countries, it is most likely provided by the telephone company.</p> <p>The #2751 feature supports the following protocols: PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax</p> <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2751 feature. For configuration purposes, each #2751 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex. Requirements: This feature requires country certification or homologation. Full sized PCI card slot. Maximum: One per IOP Prerequisites: #2824 and OS/400 V4R4 and PTF MF22528, or Cumulative (CUM) PTF package C9313440 or later.</p>

#2761	<p>PCI Integrated Analog Modem (PCI)</p> <p>The #2761 allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). The #2761 runs the following protocols without the need for an external modem:</p> <ul style="list-style-type: none"> SLIP/PPP uses V.90, so max line speed is 56K bps SDLC uses V.34, so max line speed is 33.6K bps Fax uses V.17 to achieve a 14.4K bps max line speed <p>An asynchronous line description is required for Fax and can only be used for Fax. ECS line not supported. Eight 30-foot (9.3 m) phone cables are shipped with each #2761. To the iSeries or AS/400e server, the #2761 appears like a single IOA with eight individual resources available. For configuration purposes, each #2761 counts as eight communications lines. Prerequisites: #2824 and OS/400 V4R4 and PTF MF22528, or Cumulative (CUM) PTF package C9313440 or later. Requirements: This feature requires country certification or homologation.</p> <p>Full sized PCI card slot.</p> <p>Maximum: One per IOP</p>
#2809	<p>Feature Controller (PCI)</p> <p>Model 720 only.</p> <p>This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details, see "WORKSTATION CONTROLLERS" on page 177. There are some restrictions on communications using #2809. For restrictions, see the end of communication section.</p>
#2824	<p>Feature Controller (PCI)</p> <p>This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details, see "WORKSTATION CONTROLLERS" on page 177. There are some restrictions on communications using #2824. For restrictions, see the end of communication section.</p>
#4800	<p>PCI Crypto Coprocessor (PCI)</p> <p>This feature is a hardware cryptography solution based on the IBM #4758 card. It is a half length PCI card. Since the feature is temperature sensitive, it is shipped separately in specially designed, insulated packaging.</p> <p>Maximum: Three per system</p> <p>Prerequisites: #2824 and V4R4</p>
#4802	<p>PCI Cryptographic Coprocessor</p> <p>#4802 is a hardware cryptography solution. The #4802 is a half-length PC form-factor PCI card which offers rich cryptography function, secure storage of cryptographic keys, and 12 MB/s performance (at the card level) for bulk data encryption and triple DES capability. The #4802 is available worldwide. The level of cryptographic function is determined by the Cryptographic Access Provider licensed program which is downloaded to the adapter.</p> <p>Note: On new shipments from the plant, #4802 is shipped with the system, but not installed.</p>
#6153	<p>V.35 One-Line Adapter 20-foot Cable</p> <p>Connects to #2623 to support one communications line supporting V.35 protocol using a 20-foot (6 meter) cable. The #6153 is supported for migration only. The newer #2699 should be ordered on new systems.</p> <p>SPD slots required: None</p> <p>Prerequisite: #2623</p>
#6173	<p>V.35 One-Line Adapter 50-foot Cable</p> <p>Connects to #2623 to support one communications line supporting V.35 protocol using a 50-foot (15 meter) cable. The #6173 is supported for migration only. The newer #2699 should be ordered on new systems.</p> <p>SPD slots required: None</p> <p>Prerequisite: #2623</p>

#9699	<p>Base Two-Line WAN IOA Models 730 and 740 only. Supports up to two multiple protocol communications ports when any one or two (in any combination) if the following cables are attached:</p> <ul style="list-style-type: none"> #0328 20ft (6m) Operations Console Cable (V4R3 required)** #0329 V.24/EIA 232 80ft (24m) cable #0330 V.24/EIA 232 20ft (6m) cable #0331 V.24/EIA 232 50ft (15m) cable #0332 V.24/EIA 232 20ft (6m) enhanced cable #0333 V.24/EIA 232 50ft (15m) enhanced cable #0334 V.24/EIA 232 80ft (24m) enhanced cable #0335 V.36/EIA 449 20ft (6m) cable #0336 V.36/EIA 449 50ft (15m) cable #0337 V.36/EIA 449 150ft (45m) cable #0338 V.35 20ft (6m) cable #0339 V.35 50ft (15m) cable #0340 V.35 80ft (24m) cable #0341 X.21 20ft (6m) cable #0342 X.21 50ft (15m) cable #0344 20ft (6m) Comms Console Cable* <p>*This feature must be ordered for Client Access Console. **This feature is used to support the Operations Console function (default). Required and Defaulted by the configurator. The #0328 and #0344 are mutually exclusive. To support the Remote Control Panel function, the #0380 Remote Control Panel Cable can be ordered as an option, this cable does not attach to a communication port. The #9699 is the base communications adapter card and is placed in Slot B of the MFIOP. See "Comm Restrictions" on page 187. IOA slots required for #9699: One on #9751, or #9754.</p>
#9720 #2720	<p>Base PCI WAN/Twinaxial IOA (PCI) Model 720 only. This combined twinax/communication adapter can be provided on the base system and supports a single communications line intended for ECS. One cable must be specified.</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) Enhanced PCI cable #0351 V.24/EIA232 50ft (15m) Enhanced PCI cable #0352 V.24/EIA232 80ft (24m) Enhanced PCI cable <p>This adapter also supports twinax workstations (see "WORKSTATION CONTROLLERS" on page 177). PCI card slots required: One Maximum: One #9720 or one #2720 per system. The #9720 is mutually exclusive with #9721, #9745, and #2720.</p>

#9721	<p>Base PCI Two-Line WAN IOA (PCI) Supported, but can not be ordered. Model 720 only. This two line communications adapter supports ECS and Client Access Console. Select one of the cables for ECS:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft (15m) enhanced PCI cable #0352 V.24/EIA232 80ft (24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 150ft (45m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0365 V.24/EIA232 80ft (24m) PCI cable <p>The following feature must be ordered for Client Access Console: #0362 20ft (6m) Client Access Console Cable. The following feature is used to support the Operations Console function (default): #0367 Operations Console 20ft (6m) PCI Cable. Required unless #2720, #2722 or #2746 is ordered. To support the Remote Control Panel function, the #0381 Remote Control Panel Cable can be ordered as an option. This cable does not attach to a communication port. PCI card slots required: One Maximum: One Mutually exclusive with #9720 and #9745.</p>
#9745	<p>Base PCI Two-Line WAN IOA (PCI) Model 720 only. This two line communications adapter supports ECS and Client Access Console. Select one of the cables for ECS:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) Enhanced PCI cable #0351 V.24/EIA232 50ft (15m) Enhanced PCI cable #0352 V.24/EIA232 80ft (24m) Enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 150ft (45m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0365 V.24/EIA232 80ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI cable** <p>The following feature must be ordered for Client Access Console: #0362 20ft (6m) Client Access Console Cable. **Used to support the Operations Console function (default): #0367 Operations Console 20ft (6m) PCI Cable. Required unless #2720, #2722 or #2746 is ordered. To support the Remote Control Panel function, the #0381 Remote Control Panel Cable can be ordered as an option. This cable does not attach to a communication port. PCI card slots required: One Maximum: One Mutually exclusive with #9720 and #9721</p>

#9751	<p>MFIOp with RAID (Ultra SCSI) Supported but not orderable. Models 730 and 740 only.</p> <p>Contains function for controlling 20 disk units, one removable media unit and one CD-ROM unit. Has three IOA slots for controlling LANs, Twinaxial Workstations, and Communications. IOA Slot A is reserved for attaching one #2699 Communications IOA or one #6149 or #6181 LAN IOA. IOA Slot B is reserved for attaching the #9699 Base Multi Protocol Communications IOA. IOA Slot C is reserved for attaching one #2699 Communications IOA or one #6180 or #9280 Twinaxial IOA. Occupies two card slots. The #9751 has CCIN 6751. Does not support integrated hardware disk compression.</p>
#9754	<p>MFIOp with RAID (Ultra SCSI) Models 730 and 740 only.</p> <p>Contains function for controlling 20 disk units, one removable media unit and one CD-ROM unit. Has three IOA slots for controlling LANs, Twinaxial Workstations, and Communications. IOA Slot A is reserved for attaching one #2699 Communications IOA or one #6149 or #6181 LAN IOA. IOA Slot B is reserved for attaching the #9699 Base Multi Protocol Communications IOA. IOA Slot C is reserved for attaching one #2699 Communications IOA or one #6180 or #9280 Twinaxial IOA. Occupies two card slots. Supports integrated hardware disk compression. The #9754 has CCIN 6754. Since Operations Console (#5544) is the default for new 7xx Models, #0328 Operations Console Cable is on the order unless an other Console Controller is specified.</p> <p>To support the Remote Control Panel function, the #0380 Remote Control Panel Cable can be ordered as an option. This cable does not attach to a communication port.</p>
Comm Restrictions	<p>The following identifies basic communications restrictions when using the MFIOp, #2629, #2699, #2720, #2721, #2745, #2809, #2824, and other communications functions. This information is a brief summary and was correct at the time this edition was printed. However, for complete information, refer to the <i>Performance Capabilities Manual</i> on the Web site: http://publib.boulder.ibm.com/pubs/html/as400/online/lib.htm</p> <p>Select your language of choice, and then the What's New category.</p> <ul style="list-style-type: none"> Maximum protocol speeds on the EIA-232/ITU V.24 electrical interfaces: <ul style="list-style-type: none"> 64 Kbps for Synchronous PPP, BSC, SDLC, and X.25 115.2 Kbps for Asynchronous protocols (including Asynchronous PPP) Maximum protocol speeds on the ITU V.35: <ul style="list-style-type: none"> Permitted only on 20-foot (6 meter) cable 2.048 Mbps for Synchronous PPP, SDLC, and Frame Relay 230.4 Kbps for Asynchronous PPP 640 Kbps for X.25 64 Kbps for BSC Speeds faster than 512 Kbps may require either the "looped" or "inverted" clocking to be configured. Maximum protocol speeds on the EIA-449/ITU V.36: <ul style="list-style-type: none"> 2.048 Mbps for Synchronous PPP, SDLC, and Frame Relay 230.4 Kbps for Asynchronous PPP 640 Kbps for X.25 64 Kbps for BSC "Looped" clocking is required on cables longer than 20 feet (6 meters) Maximum protocol speeds on the ITU X.21 electrical interfaces: <ul style="list-style-type: none"> Permitted only on 20-foot (6 meter) cable 2.048 Mbps for Synchronous PPP, SDLC, and Frame Relay 640 Kbps for X.25 Speeds faster than 512 Kbps may require either the "looped" or "inverted" clocking to be configured Only one Frame Relay or one X.25 communication line is allowed per IOP. One high-speed line permitted per IOP. <ul style="list-style-type: none"> ASYN and ASYN PPP above 115.2 Kbps is a high-speed line Frame Relay, SDLC, SYNC PPP, and X.25 above 64 Kbps is a high-speed line High-speed lines are supported on ITU X.21, ITU V.35 20 foot (6 meters) cables, or EIA-449/ITU V.36 electrical interfaces No Remote Access IOAs (#2750, #2751, #2761) installed under the same IOP If it is desired to run multiple emulated LAN lines on an ATM IOA (#281x), then the following restrictions must be satisfied: <ul style="list-style-type: none"> The ATM IOA (281x) must be running under a dedicated #2824 IOP (no other IOAs of any type) The number of emulated LANs running on the ATM IOA (#281x) is limited to a maximum of two, one Token Ring and one Ethernet

Comm Restrictions <i>continued</i>	<ul style="list-style-type: none">• Frame Relay restrictions:<ul style="list-style-type: none">– Minimum line speed 56 Kbps– Frame Relay is not allowed on EIA-232/V.24 electrical interface– Other IOAs allowed under same IOP (#2809 or #2824); one of the following two restrictions:<ul style="list-style-type: none">• Either a #281x or #2838.• A #2718 or #2729 and maximum of one #2721, #2722, #2723, #2724, #2729, #2745, or #2746.• IPX supported on Frame Relay and LAN<ul style="list-style-type: none">– Devices running IPX over the Integrated Netfinity Server is limited to 2400 routes and 2400 services.– Devices running IPX are limited to 1400 routes and 1400 service when:<ul style="list-style-type: none">• #2723, #2724, or 2838 IOAs are not controlled by the Integrated Netfinity Server.• Frame Relay running over a #2721, #2745, or #2699 IOA.• SDLC restrictions:<ul style="list-style-type: none">– Maximum of 64 remote locations per IOP (#2809, #2824, or #2629).• X.25 restrictions:<ul style="list-style-type: none">– Limit of 16 Virtual Circuits (16 remote locations)– Limit of 64 Virtual Circuits (64 remote locations) in the #5065 Storage/PCI Expansion Tower.– Speeds faster than 512 Kbps may require either “looped” or “inverted” clocking to be configured– The other port of the #2721 or #2745 may be used as a low-speed communications line.– Not allowed on the #2720/#9720 if the following combination of adapters is installed on the Base MFIOP:<ul style="list-style-type: none">• #2722 or #2746 plus one of:• #2723 or #2724• No more than seven #2629s can be placed into each #5072 System Unit Expansion Tower. <p>Note: Communication restrictions are continued on the next page.</p> <p>Notes:</p> <ul style="list-style-type: none">• It is imperative that these restrictions be understood and followed. If they are not followed, it is possible that a hardware configuration could be built that marginally works, and later, quits working when the machine is upgraded to future software releases.• For best performance, we recommend that no other features be intermixed with a PCI 100/10Mbps Ethernet IOA (#2838) or an ATM IOA (#2811/#2812/#2815/#2816/#2818/#2819) on a PCI LAN/WAN/Workstation IOP (#2809). <p>The quantity and speed of each communications line must be known and filled in the following table to determine the total communications CPW required. The #2750, #2751, and #2761 count as eight low-speed communications lines.</p> <table><tr><th colspan="7">Maximum High-Speed Communications Lines Calculation Table</th></tr><tr><th></th><th></th><th></th><th></th><th>Quantity</th><th>Factor</th><th>CPW</th></tr><tr><td>Number of lines operating at</td><td>64 Kbps or less</td><td></td><td></td><td>_____</td><td>x 0.92</td><td>= _____</td></tr><tr><td>Number of lines operating above</td><td>64 Kbps up to 128 Kbps</td><td></td><td></td><td>_____</td><td>x 1.84</td><td>= _____</td></tr><tr><td>Number of lines operating above</td><td>128 Kbps up to 256 Kbps</td><td></td><td></td><td>_____</td><td>x 3.68</td><td>= _____</td></tr><tr><td>Number of lines operating above</td><td>256 Kbps up to 512 Kbps</td><td></td><td></td><td>_____</td><td>x 7.36</td><td>= _____</td></tr><tr><td>Number of lines operating above</td><td>512 Kbps up to 1,024 Kbps</td><td></td><td></td><td>_____</td><td>x 14.72</td><td>= _____</td></tr><tr><td>Number of lines operating above</td><td>1,024 Kbps up to 2,048 Kbps</td><td></td><td></td><td>_____</td><td>x 29.44</td><td>= _____</td></tr><tr><td colspan="4"></td><td></td><td>Total</td><td>_____</td></tr></table>	Maximum High-Speed Communications Lines Calculation Table											Quantity	Factor	CPW	Number of lines operating at	64 Kbps or less			_____	x 0.92	= _____	Number of lines operating above	64 Kbps up to 128 Kbps			_____	x 1.84	= _____	Number of lines operating above	128 Kbps up to 256 Kbps			_____	x 3.68	= _____	Number of lines operating above	256 Kbps up to 512 Kbps			_____	x 7.36	= _____	Number of lines operating above	512 Kbps up to 1,024 Kbps			_____	x 14.72	= _____	Number of lines operating above	1,024 Kbps up to 2,048 Kbps			_____	x 29.44	= _____						Total	_____
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#2617	Ethernet/IEEE 802.3 Adapter/HP (SPD) Supported but not orderable Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. An AUI Ethernet cable must be ordered separately. The #2617 is supported, but the newer IOA #2723, #2838, or #6181 should be ordered on new systems. SPD slots required: One																																																															
#2618	Fiber Distributed Data Interface Adapter (SPD) Supported but not orderable. Provides one interface to connect an iSeries or AS/400e to an FDDI LAN which complies with ANSI X3T9.5 and ISO 9314 standards. Consists of a card, a wrap connector, and Licensed Internal Code, which supplies IEEE 802.2 Logical Link Control (LLC), ANSI X3T9.5/ISO 9314 Media Access Control (MAC) functions, and ANSI X3T9.5 Station Management (SMT) functions. A multi-node (62.5/125 micron) FDDI optical fiber jumper cable to connect the adapter to the FDDI ring must be ordered separately. SPD slots required: One																																																															

#2619	16/4 Mbps Token Ring Adapter/HP (SPD) Supported but not orderable. Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code (supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions), and an external 8-foot (2.4m) cable. SPD slots required: One
#2626	16/4 Mbps Token Ring Adapter/A (SPD) Supported but not orderable. Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code (supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions), and an external 8-foot (2.4m) cable. The #2626 is supported but the newer #6149 should be ordered on new systems. SPD slots required: One
#2629	LAN/WAN/Workstation IOP (SPD) This supports up to three IOAs. Those supported are #2699, #6149, #6180 or #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions. For restrictions on placing #2629 in #5072, refer to "Comm Restrictions" on page 187 SPD slots required: One Maximum: One per SPD slot
#2663	I/O Attachment Processor (SPD) This I/O processor is required to attach #2668 Wireless LAN Adapter. The #2663 and #2668 are integrated in a single hardware package to operate as a unit. Prerequisite for #2668. SPD slots required: One (with #2668)
#2665	Shielded Twisted-Pair Distributed Data Interface Adapter (SPD) Provides one interface to connect to an FDDI LAN, which is constructed of IBM Cabling System Type 1, 2, 6, or 9 shielded twisted-pair wiring. It consists of a card, a wrap connector, and Licensed Internal Code, which supplies IEEE 802.2 Logical Link Control (LLC), ANSI X3T9.5/ISO 9314 Media Access Control (MAC) functions and ANSI X3T9.5 Station Management (SMT) functions. IBM FDDI copper jumper cables to connect the adapter to the FDDI ring must be ordered separately. SPD slots required: One
#2668	Wireless LAN Adapter (SPD) Provides wireless connectivity to workstations or other systems connected to a wireless LAN network. One of the following antenna cables must be specified: #9814 20ft (6m) antenna Cable #9815 50ft (15m) antenna Cable One of the following antenna must be specified: #9889 YAGI Directional Antenna #9890 Omni Directional Antenna (360 degree) #9891 Hemispherical Antenna (180 degree) #9892 Directional Antenna (90 degree) SPD slots required: One (with #2663) Prerequisite: #2663. The #2668 is supported for migration only.
#2723 #9723	PCI Ethernet IOA (PCI) Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. Has a RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. Cabling must meet or exceed Industry Standard EIA/TIA T568B. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. The #9723 is a base LAN. The Ethernet /IEEE 802.3 IOA is capable of operating in half or full duplex mode. PCI slots required: One
#2724 #9724	PCI 16/4 Mbps Token Ring IOA (PCI) Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code, which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions, and an external 8-foot (2.4m) cable. Alternatively, a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. The #9724 is a base LAN. The IOA is capable of operating in half or full duplex mode. PCI slots required: One
#2809	Feature Controller (PCI) Model 720 only. This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details, refer to "WORKSTATION CONTROLLERS" on page 177. Maximum: One in the System Unit, two in the #9329 PCI Integrated Expansion Unit.

#2824	Feature Controller (PCI) This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details, refer to "WORKSTATION CONTROLLERS" on page 177. Maximum: One in the System Unit, two in the #9329/#9330 PCI Integrated Expansion Unit, two in #5065 Storage/PCI Exp Tower.
#2810	LAN/WAN IOP (SPD) This I/O processor is required to attach one #2838 PCI 100/10 Mbps Ethernet IOA or the #2811/#2812/#2815/#2816/#2818/#2819 PCI ATM IOA on an SPD Bus. Prerequisite for these preceding features—although they can alternatively be located directly in an appropriate PCI slot. SPD slots required: One
#2811	PCI 25 Mbps UTP ATM IOA (PCI or SPD) Provides attachment into an Asynchronous Transfer Mode (ATM) network using Unshielded Twisted Pair (UTP) cabling. The #2811 is typically used where 25 Mbps speed is required over distances of less than 100 meters. SPD slots required: One (with #2810) or high-speed PCI slots required: One Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot)
#2812	PCI 45 Mbps Coax T3/DS3 ATM IOA (PCI or SPD) Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the T3/DS-3 interface. The #2812 is typically used where 45 Mbps speed is required over distances of less than 1000 meters. SPD slots required: One (with #2810) or High-speed PCI slots required: One Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot)
#2815	PCI 155 Mbps UTP OC3 ATM IOA (PCI or SPD) Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2815 is typically used where 155 Mbps speed is required over distances of less than 100 meters. SPD slots required: One (with #2810) or High-speed PCI slots required: One Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot)
#2816	PCI 155 Mbps MMF ATM IOA (PCI or SPD) Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. #2816 is typically used where 155 Mbps speed is required over distances of less than 2 kilometers. SPD slots required: One (with #2810) or High-speed PCI slots required: One Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot).
#2818	PCI 155 Mbps SMF OC3 ATM IOA (PCI or SPD) Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Single Mode Fibre (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment, but can be used for local area switches. #2818 is typically used where 155 Mbps speed is required over distances of from 16 to 40 kilometers. SPD slots required: One (with #2810) or High-speed PCI slots required: One Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot).
#2819	PCI 34 Mbps Coax E3 ATM IOA (PCI or SPD) Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the E3 interface. #2819 is typically used where 34 Mbps speed is required over distances of less than 1000 meters. SPD slots required: One (with #2810) or High-speed PCI slots required: One Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot).
#2838 #9738	PCI 100/10 Mbps Ethernet IOA (PCI or SPD) Provides attachment to standard 100 Mbps high-speed Ethernet LANs and also allows attachment to existing 10 Mbps Ethernet LANs. The Ethernet /IEEE 802.3 IOA is capable of operating in half or full duplex mode. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media #9738 is a base LAN. Cabling for 10 Mbps must be CAT-3 or CAT-5, cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. Maximum cable length is 100 meters. SPD slots required: One (with #2810); three (with #6617 or #6618) or High-speed PCI slots required: One Prerequisite: #2809, #2824, #2854 or 2865 (when located in PCI slot); #2810, #6617 or #6618 (when located in SPD slot).

#2851	<p>PCI Integrated PC Server (PCI) Supported but not orderable. Model 720 only. Contains a 166 MHz Pentium Processor, four main storage slots, and two LAN IOA slots for high performance serving to LAN attached PCs. Comes with 32MB of main storage and supports up to three of the following main storage features: #2860 16 MB Integrated PC Server Memory #2861 32 MB Integrated PC Server Memory Either one or two of the following LAN IOAs are supported: #2723 PCI Ethernet IOA #2724 PCI Token Ring IOA PCI slots required: Two in reserved positions in the base System Unit or in the #9329 PCI Integrated Expansion Unit.</p>
#2854	<p>PCI Integrated PC Server (PCI) Model 720 only. Contains a 200 MHz Pentium Processor, four main storage slots, and two LAN IOA slots for high performance serving to LAN attached PCs. Between one and four of the following main storage features must also be ordered: #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory Up to two of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of one LAN IOA can be a #2838 or a #9738. #2723 PCI Ethernet IOA Specify #0221 is required for each #2723 ordered. #2724 PCI Token Ring IOA Specify #0220 is required for each #2724 ordered. #2838 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each #2823 ordered. Only one of the following Base LAN IOAs is supported: #9723 PCI Ethernet IOA Specify #0221 is required for each #9723 ordered. #9724 PCI Token Ring IOA Specify #0220 is required for each #9724 ordered. #9738 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each #9738 ordered. Only one of the IOAs can be a #2838 or a #9738. When running Windows NT on the #2854, then: A minimum of 64 MB IOP memory is required. The #0325 Integrated PC Server Extension Cable for Windows NT is required. The #1700 Integrated PC Server Keyboard/Mouse for Windows NT, the default in the USA. A display must be connected to the IPCS to support Windows NT. For country-specific keyboard/mouse and display support, access the site at: http://www.ibm.com/eserver/iseriess/windowsintegration/ When running OS/2 on the #2854, then: The #0325 and #1700 are not allowed. A maximum of 512 MB IOP memory allowed. When running Novell Netware on the #2854, then: The #0325 and #1700 are not allowed. A maximum of 256 MB IOP memory is supported. PCI slots required: Two in reserved positions in the System Unit or in the #9329 PCI Integrated Expansion Unit.</p>
#2865	<p>PCI Integrated Netfinity Server (PCI) Model 720 only. Requires V4R3 and CUM C8349430 or later Contains a 333 MHz Pentium Processor, four main storage slots, and two LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. At least one main storage feature is required: #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory #2867 256 MB Integrated PC Server Memory Up to two of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of one LAN IOA can be a #2838 or a #9738. #2723 PCI Ethernet IOA Specify #0221 is required for each #2723 ordered. #2724 PCI Token Ring IOA Specify #0220 is required for each #2724 ordered. #2838 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each #2838 ordered. Only one of the following Base LAN IOAs is supported: #9723 PCI Ethernet IOA Specify #0221 is required for each #9723 ordered. #9724 PCI Token Ring IOA Specify #0220 is required for each #9724 ordered. #9738 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each #9738 ordered. If running Windows NT on the #2865, then: A minimum of 64 MB IOP memory is required. #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard/Mouse for Windows NT, the default in the USA. A display is required to support Windows NT on the IPCS.</p>

#2865 <i>continued</i>	<p>For country-specific keyboard/mouse and display support, access the site at: http://www.ibm.com/eserver/series/windowsintegration/</p> <p>When running OS/2 on the #2865, then: #0325 and #1700 are not allowed. A maximum of 512 MB IOP memory is supported.</p> <p>When running Novell Netware on the #2865, then: #0325 and #1700 are not allowed. A maximum of 256 MB IOP memory is supported.</p> <p>PCI slots required: Two in reserved positions in the base System Unit or in the #9329/#9330 PCI Integrated Expansion Unit.</p>
#6149 #9249	<p>16/4 Mbps Token Ring IOA (SPD)</p> <p>Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an IOA card, internal code, which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC), and an external 8-foot (2.4m) cable. Alternatively, a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. Can operate in half or full duplex mode. The #9249 is a base LAN specify.</p> <p>SPD slots required: None</p> <p>Prerequisite: A free slot in #2629 or #6616.</p>
#6181 #9381	<p>Ethernet/IEEE 802.3 IOA (SPD)</p> <p>Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus 802.2 Logical Link Control (LLC) functions. Has a RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. Cabling must meet or exceed Industry Standard EIA/TIA T568B.</p> <p>#9381 is a base LAN specify.</p> <p>The Ethernet /IEEE 802.3 IOA is capable of operating in half or full duplex mode.</p> <p>The following cable can be ordered if the customer is choosing IBM AUI cabling:</p> <ul style="list-style-type: none"> • #9025 Ethernet Cable (3 meter AUI) <p>If the customer is not choosing IBM AUI cabling, AUI Ethernet or RJ45 twisted pair cable must be ordered separately.</p> <p>SPD slots required: None</p> <p>Prerequisite: A free slot in #2629 or #6616.</p>
IPCS #6516 #6517 #6518 #6519 #6526 #6527 #6528 #6529	<p>Integrated PC Server (IPCS) (formerly known as FSIOP) (SPD)</p> <p>Supported but not orderable.</p> <p>Contains a 66 MHz 486 Processor, main storage, and ability to attach to one or two LANs for high performance serving to LAN attached PCs.</p> <p>The following initial order configurations can be upgraded using #6509 or #6520:</p> <ul style="list-style-type: none"> 16 MB One-Port Integrated PC Server 32 MB One-Port Integrated PC Server 48 MB One-Port Integrated PC Server 64 MB One-Port Integrated PC Server 16 MB Two-Port Integrated PC Server 32 MB Two-Port Integrated PC Server 48 MB Two-Port Integrated PC Server 64 MB Two-Port Integrated PC Server <p>The following cables need to be specified depending on the LAN being attached to:</p> <ul style="list-style-type: none"> #9024 Token Ring Cable (2.4m) #9025 Ethernet Cable (3m AUI) <p>SPD slots required: Two contiguous slots</p>
#6509 #6520	<p>Additional 16 MB for Integrated PC Server</p> <p>This is used to increase the memory on an installed Integrated PC Server up to the maximum of 64MB.</p> <p>Upgrade One-Port Integrated PC Server to Two-Port Integrated PC Server</p> <p>This cannot be used with a Two-Port Integrated PC Server.</p> <p>#9024 or #9025 Cables can be ordered with #6520 depending on the LAN to be attached to.</p>
#6616	<p>Integrated PC Server (IPCS) (SPD)</p> <p>Supported but not orderable</p> <p>Contains a 166MHz Pentium Processor, two main storage slots, and two LAN IOA slots for high performance serving to LAN attached PCs. The two main storage slots can each contain one of the following features, giving a maximum of 256MB. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32MB Integrated PC Server Memory #2862 128MB Integrated PC Server Memory <p>Either one or two of the following LAN IOAs are supported:</p> <ul style="list-style-type: none"> #6149 16/4 Mbps Token Ring IOA #6181 Ethernet/IEEE 802.3 IOA <p>SPD slots required: Two contiguous slots</p>

#6617	<p>Integrated PC Server (SPD)</p> <p>Contains a 200 MHz Pentium Processor, four main storage slots, and three LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 512 MB. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838/#9738.</p> <table border="0"> <tr> <td>#2723 PCI Ethernet IOA</td><td>Specify #0221 is required for each #2723 ordered.</td></tr> <tr> <td>#2724 PCI Token Ring IOA</td><td>Specify #0220 is required for each #2724 ordered.</td></tr> <tr> <td>#2838 PCI 100/10 Mbps Ethernet IOA</td><td>Specify #0222 is required for each #2838 ordered.</td></tr> </table> <p>Only one of the following Base LAN IOAs is supported:</p> <table border="0"> <tr> <td>#9723 PCI Ethernet IOA</td><td>Specify #0221 is required for each #9723 ordered.</td></tr> <tr> <td>#9724 PCI Token Ring IOA</td><td>Specify #0220 is required for each #9724 ordered.</td></tr> <tr> <td>#9738 PCI 100/10 Mbps Ethernet IOA</td><td>Specify #0222 is required for each #9738 ordered.</td></tr> </table> <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6617. The #0222 100/10 Mbps Ethernet on IPCS is required for each #2838 attached to the #6617 Integrated PC Server. When running Windows NT on the #6617, then:</p> <ul style="list-style-type: none"> A minimum of 64 MB IOP memory is required. #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT. Default in the USA. A display unit is required to support Windows NT on the IPCS or Integrated Netfinity server. <p>For country-specific keyboard/mouse and display support, access the site at: http://www.ibm.com/eserver/series/windowsintegration/</p> <p>When running OS/2 on the #6617, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738. A maximum of 512 MB IOP memory is supported <p>When running Novell Netware on the #6617, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738. A maximum of 256 MB IOP memory is supported. <p>SPD slots required: Three contiguous slots. Cannot be placed in the #5044 System Unit Expansion Rack.</p>	#2723 PCI Ethernet IOA	Specify #0221 is required for each #2723 ordered.	#2724 PCI Token Ring IOA	Specify #0220 is required for each #2724 ordered.	#2838 PCI 100/10 Mbps Ethernet IOA	Specify #0222 is required for each #2838 ordered.	#9723 PCI Ethernet IOA	Specify #0221 is required for each #9723 ordered.	#9724 PCI Token Ring IOA	Specify #0220 is required for each #9724 ordered.	#9738 PCI 100/10 Mbps Ethernet IOA	Specify #0222 is required for each #9738 ordered.
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#6618	<p>Integrated Netfinity Server for AS/400 (SPD)</p> <p>Requires V4R3 and CUM C8349430 or later.</p> <p>Contains a 333 MHz Pentium Processor, four main storage slots, and three LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory #2867 256 MB Integrated PC Server Memory <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838/#9738.</p> <table border="0"> <tr> <td>#2723 PCI Ethernet IOA</td><td>Specify #0221 is required for each #2723 ordered.</td></tr> <tr> <td>#2724 PCI Token Ring IOA</td><td>Specify #0220 is required for each #2724 ordered.</td></tr> <tr> <td>#2838 PCI 100/10 Mbps Ethernet IOA</td><td>Specify #0222 is required for each #2838 ordered.</td></tr> </table> <p>Only one of the following Base LAN IOAs is supported:</p> <table border="0"> <tr> <td>#9723 PCI Ethernet IOA</td><td>Specify #0221 is required for each #9723 ordered.</td></tr> <tr> <td>#9724 PCI Token Ring IOA</td><td>Specify #0220 is required for each #9724 ordered.</td></tr> <tr> <td>#9738 PCI 100/10 Mbps Ethernet IOA</td><td>Specify #0222 is required for each #9738 ordered.</td></tr> </table> <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6618. The #0222 100/10 Mbps Ethernet on IPCS is required for each #2838 attached to the #6618 Integrated PC Server. When running Windows NT on the #6618, then:</p> <ul style="list-style-type: none"> A minimum of 64 MB IOP memory is required. #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT, the default in the USA. A display is required to support Windows NT on the IPCS. <p>For country-specific keyboard, mouse and display support, access the site at: http://www.ibm.com/eserver/series/windowsintegration/</p>	#2723 PCI Ethernet IOA	Specify #0221 is required for each #2723 ordered.	#2724 PCI Token Ring IOA	Specify #0220 is required for each #2724 ordered.	#2838 PCI 100/10 Mbps Ethernet IOA	Specify #0222 is required for each #2838 ordered.	#9723 PCI Ethernet IOA	Specify #0221 is required for each #9723 ordered.	#9724 PCI Token Ring IOA	Specify #0220 is required for each #9724 ordered.	#9738 PCI 100/10 Mbps Ethernet IOA	Specify #0222 is required for each #9738 ordered.
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#6618 <i>continued</i>	<p>When running OS/2 on the #6618, then: #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738. A maximum of 512 MB IOP memory is supported.</p> <p>When running Novell Netware on the #6618, then: #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738. A maximum of 256 MB IOP memory is supported. SPD slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack.</p>
#8664	<p>Base Fiber Distributed Data Interface Adapter (SPD) Supported but not orderable. Models 730 and 740 only. Provides one interface to connect an iSeries or AS/400e to an FDDI LAN which complies with ANSI X3T9.5 and ISO 9314 standards. Consists of a card, a wrap connector, and Licensed Internal Code which supplies IEEE 802.2 Logical Link Control (LLC), ANSI X3T9.5/ISO 9314 Media Access Control (MAC) functions, and ANSI X3T9.5 Station Management (SMT) functions. A multi-node (62.5/125 micron) FDDI optical fiber jumper cable to connect the adapter to the FDDI ring must be ordered separately. SPD slots required: One</p>
#8665	<p>Base Shielded Twisted-Pair Distributed Data Interface Adapter (SPD) Supported but not orderable. Models 730 and 740 only. Provides one interface to connect to an FDDI LAN which is constructed of IBM Cabling System Type 1, 2, 6, or 9 shielded twisted-pair wiring. It consists of a card, a wrap connector, and Licensed Internal Code, which supplies IEEE 802.2 Logical Link Control (LLC), ANSI X3T9.5/ISO 9314 Media Access Control (MAC) functions, and ANSI X3T9.5 Station Management (SMT) functions. IBM FDDI copper jumper cables to connect the adapter to the FDDI ring must be ordered separately. SPD slots required: One</p>
DISK UNITS	
#1312	<p>One-byte 1.03 GB Disk Unit Conversion Kit Model 720 only. Provides the hardware for migrating one 1.03 GB one-byte SCSI disk unit. Supported only in System Unit or the #5064/#9364 System Unit Expansion. One #1312 migrates the #6601, #6602, #6701, #6802, #9601, or #9602 disk.</p>
#1313	<p>One-byte 1.96 GB Disk Unit Conversion Kit Model 720 only. Provides the hardware for migrating one 1.96 GB one-byte SCSI disk unit. Supported only in System Unit or the #5064/#9364 System Unit Expansion. One #1313 migrates a #6603 disk.</p>
#1322	<p>Two-byte 1.03 GB Disk Unit Conversion Kit Model 720 only. Provides the hardware for migrating one 1.03 GB two-byte SCSI disk unit. Supported only in System Unit or the #5064/#9364 System Unit Expansion. One #1322 migrates a #6652 or #9652 disk.</p>
#1323	<p>Two-byte 1.96 GB Disk Unit Conversion Kit Model 720 only. Provides the hardware for migrating one 1.96 GB two-byte SCSI disk unit. Supported only in System Unit or the #5064/#9364 System Unit Expansion. One #1323 migrates a #4650, #6650, or #8650 disk.</p>
#1325	<p>Two-byte 1.03 GB Disk Unit Conversion Kit Model 720 only. Provides the hardware for migrating one 1.03 GB two-byte SCSI disk unit. Supported only in the System Unit or #5064/#9364 System Unit Expansion. One #1325 migrates a #4605, #6605, #9605, or #9705 disk.</p>
#1326	<p>Two-byte 1.96 GB Disk Unit Conversion Kit Model 720 only. Provides the hardware for migrating one 1.96 GB two-byte SCSI disk unit. Supported only in the System Unit or #5064/#9364 System Unit Expansion. One #1326 migrates a #4606, #6606, #8606, #8706, or #9606 disk.</p>
#1327	<p>Two-byte 4.19 GB Disk Unit Conversion Kit Model 720 only. Provides the hardware for migrating one 4.19 GB two-byte SCSI disk unit. If located in a 3xx/5xx Model #1327 is used, in a 2xx/4xx Model #1337 is used. Supported only in the System Unit or #5064/#9364 System Unit Expansion. One #1327 migrates a #4607, #6607, #7607, #8607, or #8707 disk.</p>

#1333	Two-byte 8.58 GB Disk Unit Conversion Kit (Ultra SCSI) Model 720 only. Provides the hardware for migrating one 8.58 GB two-byte SCSI disk unit. Supported only in the System Unit or #5064/#9364 System Unit Expansion. One #1333 migrates a #6713, #7713, or #8713 disk.
#1334	Two-byte 17.54 GB Disk Unit Conversion Kit (Ultra SCSI) Model 720 only. Provides the hardware for migrating one 17.54 GB two-byte SCSI disk unit. Supported only in the System Unit or #5064/#9364 System Unit Expansion. One #1334 migrates a #6714 disk.
#1336	Two-byte 1.96 GB Disk Unit Conversion Kit (Ultra SCSI) Model 720 only. Provides the hardware for migrating one 1.96 GB two-byte SCSI disk unit. Supported only in the System Unit or #5064/#9364 System Unit Expansion. One #1336 migrates a #6906 disk.
#1337	Two-byte 4.19 GB Disk Unit Conversion Kit (Ultra SCSI) Model 720 only. Provides the hardware for migrating one 4.19 GB two-byte SCSI disk unit. If located in a 5xx Model #1327 is used, in a 4xx Model #1337 is used. Supported only in the System Unit or #5064/#9364 System Unit Expansion. One #1337 migrates a #6607, #6907, or #7607 disk.
#1602	One-byte 1.03 GB Disk Unit Conversion Kit Supported but not orderable Provides the hardware for migrating one 1.03 GB one-byte SCSI disk unit. Supported only in #5052, #5057, or #5058 Storage Expansion Unit positions 1 through 7.
#1603	One-byte 1.96 GB Disk Unit Conversion Kit Supported but not orderable. Provides the hardware for migrating one 1.96 GB one-byte SCSI disk unit. Supported only in #5052, #5057, or #5058 Storage Expansion Units positions 1 through 7.
#4308	4.19 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in the #5065/#5066 only. Provides a 3 ½-inch single disk unit with 4.19 GB capacity for a additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4314	8.58 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in the #5065/#5066 only. Provides a 3 ½-inch single disk unit with 8.58 GB capacity for a additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4317	8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra2 SCSI) Supported in the #5065/#5066 only. Provides a 3 ½-inch single disk unit with 8.58 GB capacity for a additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4318	17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra2 SCSI) Supported in the #5065/#5066 only. Provides a 3 ½-inch single disk unit with 17.54 GB capacity for a additional disk storage. Prerequisite: OS/400 V4R4, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4324	17.54 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in the #5065/#5066 only. Provides a 3 ½-inch single disk unit with 17.54 GB capacity for a additional disk storage. Prerequisite: OS/400 V4R4, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4331	1.6 Gb Read Cache Device Supported in the #5065/#5066 only. This feature provides 1.6 Gb of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the disk controller #2748. Prerequisites: OS/400 V4R4 and #2748 PCI RAID Disk Unit Controller. One DASD Slot 1.6 inch. This is a Customer Install Feature (CIF). Maximum: One per #2748 IOP.
#6605	1.03 GB Additional Two-byte Disk Unit Supported but not orderable Provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. This feature is supported for migration only. Supported only in the #5052, #5055, #5057, or #5058 Storage Expansion Units or the #5082 or #5083 Storage Expansion Towers.

#6606	1.96 GB Additional Two-byte Disk Unit Supported but not orderable Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. This feature is supported for migration only. Supported in the #5052, #5055, #5057, or #5058 Storage Expansion Units or the #5082 or #5083 Storage Expansion Towers and in #9251 or Model 730 System Tower.
#6607	4.19 GB Additional Two-byte Disk Unit Supported but not orderable Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. This feature is supported for migration only. Supported in the #5052, #5055, #5057, or #5058 Storage Expansion Units or the #5082 or #5083 Storage Expansion Towers and in #9251 or Model 730 System Tower. RPQ 843977 and RPQ 843978 can be used for migration to 7xx system units and the #5064, #5072, #5073, #5082, #5083 and #9364 Storage Expansion Units and Towers.
#6650	1.96 GB Additional Two-byte Disk Unit Supported but not orderable Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. This feature is supported for migration only. Supported in the #5052, #5055, #5057, or #5058 Storage Expansion Units or the #5082 or #5083 Storage Expansion Towers and in #9251 or Model 730 System Tower.
#6652	1.03 GB Additional Two-byte Disk Unit Supported but not orderable Provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. This feature is supported for migration only. Supported in the #5052, #5055, #5057, or #5058 Storage Expansion Units or the #5082 or #5083 Storage Expansion Towers and in #9251 or Model 730 System Tower.
#6713	8.58 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported in the #5052, #5055, #5057, or #5058 Storage Expansion Units or the #5082 or #5083 Storage Expansion Towers and in the #9251 or Model 730 System Tower. RPQ 843977 and RPQ 843978 can be used for migration to 7xx system units and the #5064, #5072, #5073 and #9364 Storage Expansion Towers.
#6714	17.54 GB Additional Two-Byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported in the #5052, #5055, #5057, or #5058 Storage Expansion Units or the #5082 or #5083 Storage Expansion Towers and in the #9251 or Model 730 System Tower. RPQ 843977 and RPQ 843978 can be used for migration to 7xx system units and the #5072 and #5073 Storage Expansion Towers.
#6717	8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported in the #5052, #5055, #5057, or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers and in #9251 or Model 730 System Tower. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083. Not supported on the #6502/#6512/#6530. Supported in the #5065 and #5066 Towers through RPQ 847102. Prerequisite: OS/400 V4R3
#6718	17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported in the #5052, #5055, #5057, or #5058 Storage Expansion Units or the #5082 or #5083 Storage Expansion Towers and in #9251 or Model 730 System Tower. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083. Not supported on the #6502/#6512/#6530. Supported in the #5065 and #5066 Towers through RPQ 847102. Prerequisite: OS/400 V4R4
#6806	1.96 GB Additional Two-byte Disk Unit (Ultra SCSI) Model 720 only. Supported but not orderable. Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. Supported only in System Unit or the #5064/#9364 System Unit Expansion.
#6807	4.19 GB Additional Two-byte Disk Unit (Ultra SCSI) Model 720 only. Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. Supported only in System Unit or the #5064/#9364 System Unit Expansion.
#6813	8.58 GB Additional Two-byte Disk Unit (Ultra SCSI) Model 720 only. Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported only in System Unit or the #5064/#9364 System Unit Expansion.

#6817	8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Model 720 only Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported only in System Unit or #5064/#9364 System Unit Expansion. Not supported on the #9364 with #6502/#6512/#6530. Supported in the #5065 and #5066 Towers through RPQ 847102. Prerequisite: OS/400 V4R3
#6818	17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Model 720 only Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported only in System Unit or the #5064/#9364 System Unit Expansion. Not supported on #9364 with the #6502/#6512/#6530. Supported in the #5065 and #5066 Towers through RPQ 847102. Prerequisite: OS/400 V4R4
#6824	17.54 GB Additional Two-Byte Disk Unit (Ultra SCSI) Model 720 only. Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported only in System Unit or the #5064/#9364 System Unit Expansion.
#6831	1.6 Gb Read Cache Device Model 720 only This feature provides 1.6 Gb of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the disk controller #2748. Prerequisites: OS/400 V4R4 and #2748 PCI RAID Disk Unit Controller. One DASD Slot 1.6-inch in the system unit or in the #9364. Maximum: One per #2748 IOP.
#6906	1.96 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. Supported in the #5052, #5055, #5057 or #5058 Storage Expansion Units or the #5082 or #5083 Storage Expansion Towers and in the #9251 or Model 730 System Tower. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083.
#6907	4.19 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. Supported in the #5052, #5055, #5057 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers and in the #9251 or Model 730 System Tower. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083.
#8617	8.58 GB Optional Base Two-byte Disk Unit 10k RPM (Ultra SCSI) Models 730 and 740 only Provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of #9907. Not supported on the #6502/#6512/#6530. Prerequisite: OS/400 V4R3
#8618	17.54 GB Optional Base Two-byte Disk Unit 10k RPM (Ultra SCSI) Models 730 and 740 only Provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of #9907. Not supported on the #6502/#6512/#6530. Prerequisite: OS/400 V4R4
#8713	8.58 GB Optional Base Two-byte Disk Unit (Ultra SCSI) Models 730 and 740 only. Provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of the #9907.
#8714	17.54 GB Optional Base Two-Byte Disk Unit (Ultra SCSI) Models 730 and 740 only. Provides a 3 ½-inch single disk unit with 17.54 GB capacity as the base disk unit in place of the #9907.
#8813	8.58 GB Optional Base Two-byte Disk Unit (Ultra SCSI) Model 720 only. Provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of the #9707.
#8817	8.58 GB Optional Base Two-byte Disk Unit 10k RPM (Ultra SCSI) Model 720 only Provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of the #9707. Supported only in System Unit or #5064/#9364 System Unit Expansion. Not supported on the #9364 with the #6502/#6512/#6530. Prerequisite: V4R3 OS/400

#8818	17.54 GB Optional Base Two-byte Disk Unit 10k RPM (Ultra SCSI) Model 720 only. Provides a 3 ½-inch single disk unit with 17.54 GB capacity as the base disk unit in place of the #9707. Supported only in System Unit or #5064/#9364 System Unit Expansion. Not supported on the #9364 with the #6502/#6512/#6530. Prerequisite: V4R4 OS/400
#8824	17.54 GB Optional Base Two-Byte Disk Unit (Ultra SCSI) Model 720 only. Provides a 3 ½-inch single disk unit with 17.54 GB capacity as the base disk unit in place of the #9707.
#9606	1.967 GB Base Disk Unit Supported but not orderable Model 730 and 740 only. Provides a 3 ½-inch single disk unit with 1.967 GB capacity as base disk unit. The #9606 is retained during upgrades when no other base disk unit is selected.
#9707	4.19 GB Base Two-byte Disk Unit (Ultra SCSI) Model 720 only. Provides a 3 ½-inch single disk unit with 4.19 GB capacity as the default base disk unit. The #9707 is standard on new Model 720 orders.
#9907	4.19 GB Base Two-byte Disk Unit (Ultra SCSI) Models 730 and 740 only. Provides a 3 ½-inch single disk unit with 4.19 GB capacity as the default base disk unit. The #9907 is standard on new Model 730 and Model 740 orders.
RPQ 843977	RPQ 843977 is for customers who want to move 4/8/17GB disk units from one AS/400 to another AS/400. The RPQ provides hardware for mounting one disk unit. The hardware in this RPQ allows for mounting device types 6607/6907 (4.194 GB unit), 6713 (8.58 GB unit), and 6714 (17.54 GB unit) in the system unit of a Model 640/650/S30/S40/730/740 and the disk expansion features 5052/5055/5057/5058/5070/5071/5072/5073/5080/5081/5082/5083. These target enclosures use SPD technology. After the disk drives are installed, an RPO change must be processed to add Feature Code 6607/6907 for each device type 6607/6907 added, Feature Code 6713 for each device 6713 added, and Feature Code 6714 for each device type 6714 added.
RPQ 843978	RPQ 843978 is for customers who want to move 4/8/17GB disk units from one AS/400 to another AS/400. The RPQ provides hardware for mounting one disk unit. The hardware in this RPQ allows for mounting device types 6607/6907 (4.194 GB unit), 6713 (8.58 GB unit), and 6417 (17.54 GB unit) in the system unit of a Model 170/600/S10/620/ S20/720 and the expansion features 7101/7102/5064/9364. After the disk drives are installed, an RPO change must be processed to add Feature Code 6807 for each device type 6607/6907 added, Feature Code 6813 for each device 6713 added, and Feature Code 6824 for each device type 6417 added.
RPQ 847102	RPQ 857102 ships the disk mounting hardware and instructions required to convert Feature #6717/6817 to Feature #4317 and Feature #6718/6818 to Feature #4318. Order one RPQ for each disk unit to be converted. Confirm that there is disk space available in an existing or on-order PCI Storage Tower #5065 or #5066. This RPQ can also be used to move a disk to an iSeries 270, 8xx, 270/8xx 5075, 5074/9074 and 5079/9079 PCI Towers.
INTERNAL TAPE UNITS AND CD-ROM	
#1349	1.2 GB ¼-inch Cartridge Tape Unit Conversion Kit Model 720 only. Provides the hardware for migrating a #6368 1.2 GB ¼-inch Cartridge Tape Unit. Supported only in the System Unit or #5064/#9364 System Unit Expansion.
#1350	2.5 GB ¼-inch Cartridge Tape Unit Conversion Kit Model 720 only. Provides the hardware for migrating #6369 and #6380, 2.5 GB ¼-inch Cartridge Tape Unit. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.
#1355	13 GB ¼-inch Cartridge Tape Unit Conversion Kit Model 720 only. Provides the hardware for migrating #6385 13 GB ¼-inch Cartridge Tape Unit. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.
#1360	7 GB 8 mm Cartridge Tape Unit Conversion Kit Model 720 only. Provides the hardware for migrating a #6390 7 GB 8 mm Cartridge Tape Unit. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.

#1379	1.2 GB ¼-inch Cartridge Tape Unit Conversion Kit Supported but not orderable. Model 720 only. Provides the hardware for migrating 1.2 GB ¼-inch Cartridge Tape Units. Supported only in the #5072 or #5073 System Unit Expansion Towers.
#1380	2.5 GB ¼-inch Cartridge Tape Unit Conversion Kit Supported but not orderable. Model 720 only. Provides the hardware for migrating 2.5 GB ¼-inch Cartridge Tape Units. Supported only in the #5072 or #5073 System Unit Expansion Towers.
#4425	Optional CD-ROM Feature Supported only in the #5065 Prerequisite: V4R4 and #2748 Storage Device Controller. This is a Customer Install Feature (CIF).
#4482	4 GB ¼-inch Cartridge Tape Unit Supported only in #5065. Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).
#4483	16 GB ¼-inch Cartridge Tape Unit Supported only in the #5065. Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).
#4486	25 GB ¼-inch Cartridge Tape Unit Supported only in the #5065. Can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).
#5032	Removable Media Device Cluster Box Supported but not orderable. This is a rack-mounted box that allows the attachment between one and four #6368 or #6369 1.2 GB or 2.5 GB ¼-inch Cartridge Tape Units. This is supported for migration only and cannot be ordered as a new feature. Attaches to the #2621 Removable Media Device Attachment.
#6325	Optional CD-ROM Feature Available on Models 7xx System Unit (730 and 740) and System Unit Expansion Towers #5072 and #5073. Prerequisite: V4R4 and Storage Device Controller #2624. Maximum one per I/O tower and Model 740 System Unit, one per Model 730 System Unit. Limits the use of tape in the same tower to #6380 and #6390 on #5072s or #5073s.
#6368	1.2 GB ¼-inch Cartridge Tape Unit Supported but not orderable. Can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape is installed in a #5032. It is supported for migration only and cannot be ordered as a new feature.
#6369	2.5 GB ¼-inch Cartridge Tape Unit Supported but not orderable. Can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape is installed in a #5032. It is supported for migration only and cannot be ordered as a new feature.
#6380	2.5 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This is supported for migration only and cannot be ordered as a new feature. Supported only in the #5072, #5073, or 9251 System Unit Expansion Towers and in the Model 730 System Tower. On new orders, #6381 should be ordered unless #6325 with #2624 are ordered.
#6381	2.5 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. Supported only in the #5072, #5073 or 9251 System Unit Expansion Towers and in the Model 730 System Tower.
#6382	4 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the #5072, #5073, or 9251 System Unit Expansion Towers and in the Model 730 System Tower.

#6383	16 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the #5072, #5073, or 9251 System Unit Expansion Towers and in the Model 730 System Tower. One can be controlled by the MFIOP. Extra #6383 must be controlled by the #6513.
#6385	13 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the #5072, #5073, or 9251 System Unit Expansion Towers and in the Model 730 System Tower.
#6386	25 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the #5072, #5073, or 9251 System Unit Expansion Towers and in the Model 730 System Tower.
#6390	7 GB 8mm Cartridge Tape Unit Can be used for save/restore, alternate IPL, migration and 8mm cartridge tape exchange using appropriate media and density. Supported only in the #5072, #5073, or 9251 System Unit Expansion Towers and in the Model 730 System Tower.
#6425	Optional CD-ROM Feature Available on Model 720 System Unit (base) or the System Unit Expansion #9364 with the #9329/#9330 (but not #9331). Model 720 only. Prerequisite: V4R4 and Storage Device Controller #2726, #2740, #2741, #2748 or #9728 with the #9329/#9330. Not supported on #9331 Maximum: One CD-ROM is allowed in the System Unit (base) and one optional in the integrated Expansion Unit.
#6480	2.5 GB ¼-inch Cartridge Tape Unit Model 720 only Can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This is supported for migration only and cannot be ordered as a new feature. Supported only in the Model 720 system unit or #5064/#9364 System Unit Expansion. On new orders, #6381 should be ordered unless the #6325 with #2624 are ordered.
#6481	2.5 GB ¼-inch Cartridge Tape Unit Model 720 only. Can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.
#6482	4 GB ¼-inch Cartridge Tape Unit Model 720 only. Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.
#6483	16 GB ¼-inch Cartridge Tape Unit Model 720 only. Can be used for save/restore, alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.
#6485	13 GB ¼-inch Cartridge Tape Unit Model 720 only. Can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.
#6486	25 GB ¼-inch Cartridge Tape Unit Model 720 only. Can be used for save/restore, alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.
#6490	7 GB 8 mm Cartridge Tape Unit Model 720 only. Can be used for save/restore, alternate IPL, migration and 8mm cartridge tape exchange using appropriate media and density. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.

MAGNETIC MEDIA CONTROLLERS	
#2621	Removable Media Device Attachment (SPD) Provides attachment for one or two of the following devices with hardware data compression: 2440, 9348, 7208, 3995, 9427, and #5032. Dual drive 7208s count as two devices. If #2621 supports a 3995 or #5032, it must be dedicated to it. If #2621 supports a 9427, we recommend that the 9427 be attached to both ports of the #2621. For new orders, the #6534 is used in preference to #2621 as long as it supports the tape device required. Prerequisite: #9364 with #9331 or #5072/#5073 on the Model 720. SPD slots required: One
#2624	Storage Device Controller (SPD) Provides support for up to three internal tape drives. With the addition of the #6146, it also supports one external diskette drive. Can be used to support tape drives only in #5072 or #5073 System Expansion Towers. For new orders, the #6513 is used in preference to the #2624 unless the #2624 is required to support a diskette drive or one is already installed. Also used to support the optional CD-ROM #6325 in #5072 or #5073 System Expansion Towers. Not supported to drive #6425 CD-ROM in the Model 720 with the #9331 in the integrated System Unit Expansion #9364/#5064. SPD slots required: One
#2644	34xx Magnetic Tape Subsystem Attachment (SPD) Provides attachment for 3422, 3430, 3480, 3490 Axx, 3490 Bxx, 3490 Dxx, 3490E Axx, 3490E Bxx, 3490E Dxx, 3490E Cxx, and 3494 x10 Tape Subsystem models. Also requires the #9980 Serpentine Cable except for 3490E Cxx when ordered with internal cables. SPD slots required: One
#2718	PCI External Tape Controller (PCI) Model 720 only. Provides SCSI attachment for one 7207-122 4GB ¼-inch Cartridge External Tape Drive or 7210-020 CD ROM (V4R5 required for 7210-020). If a 7210-020 is installed on the same IOA as the 7207-122, the 7207 tape must be the first physical device. Prerequisite: #2809/#2824 LAN/WAN/Workstation IOP. High-speed PCI slots required: One Maximum: One in the System Unit, two in the System Unit Expansion #9364 with #9329/#9330, and three in the #5065.
#2726	PCI RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (PCI) (Ultra SCSI) Model 720 only. Ultra SCSI controller which provides RAID protection and a 4 MB write-cache for up to 15 disks installed in the System Unit or #5064/#9364 System Unit Expansion. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of three arrays are allowed for each #2726. The #2726 also supports one CD-ROM drive (which comes as standard) and one internal tape drive when placed in the System Unit. When placed in the #5064/#9364 System Unit Expansion, it supports up to three internal tape drives or two internal tape drives and a CD-ROM #6325. Supports #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 tape units. Mutually exclusive with #2740, #2741, or #9728 in the same System Unit or #9364. The #2726 is not capable of integrated hardware disk compression. High-speed PCI slots required: One Maximum: One per System Unit or #9364
#2729	PCI External Tape Controller (PCI) Model 720 only. Provides SCSI attachment for one 3490E Exx, 3490E Fxx, 3490E Cxx with #5040, 3494 D1x or L1x. 3570, 3575, 3590, 7208, 9348 or 9427 Tape Drive or 3995 C4x Optical Library Dataserver. High-speed PCI slots required: One. Prerequisite: #2809/#2824 LAN/WAN/Workstation IOP. Maximum: One in the System Unit, two in the System Unit Expansion #9364 with #9329/#9330 and three in the #5065.
#2740	PCI RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (PCI) (Ultra SCSI) Model 720 only. Ultra SCSI controller which provides RAID protection and a 4 MB write-cache for up to 10 disks installed in the System Unit. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are allowed for each #2740. The #2740 also supports one CD-ROM drive (which comes as standard) and one internal tape drive. Supports #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 tape units. Mutually exclusive with #9728, #2726, or #2741 in the same System Unit. The #2740 is not supported in the #5064/#9364 System Unit Expansion. The #2740 is not capable of integrated hardware disk compression. Supports concurrent maintenance when RAID-5 or mirroring disk protection is enabled. High-speed PCI slots required: One Maximum: One

#2741	<p>PCI RAID Disk Unit Controller—4 MB Cache (RAID Mirrored/Unprotected) (PCI) (Ultra SCSI)</p> <p>Model 720 only.</p> <p>Ultra SCSI controller which provides RAID protection and a 4 MB write-cache for up to 15 disks installed in the System Unit or #5064/#9364 System Unit Expansion. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of three arrays are allowed for each #2741. The #2741 also supports one CD-ROM drive (which comes as standard) and one internal tape drive when placed in the System Unit. When placed in the #5064/#9364 System Unit Expansion, it supports up to three internal tape drives or #6425 CD-ROMs. Supports #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 tape units. Mutually exclusive with #2726, #2740, or #9728 in the same System Unit or #9329 PCI Integrated Expansion Unit.</p> <p>Supports integrated hardware disk compression.</p> <p>Supports concurrent maintenance when RAID-5 or mirroring disk protection is enabled.</p> <p>High-speed PCI slots required: One</p> <p>Prerequisite: System Unit or #9364 with #9329</p> <p>Maximum: One per System Unit or #9364</p>
#2748	<p>PCI RAID Disk Unit Controller—26 MB Cache (RAID Mirrored/Unprotected) (PCI) (Ultra2 SCSI)</p> <p>The #2748 is Ultra2 SCSI capable when installed in the #5065 Storage/PCI Expansion Tower or is Ultra SCSI capable when installed in the Model 720 system unit or a #9364/#5064 System unit Expansion. The #2748 has a 26 MB write-cache and provides RAID-5 protection and compression for internal disk units. It supports up to 15 disks. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of three arrays are allowed for each #2748. The #2748 supports both compression and non-compression modes. The mode is determined by a hardware jumper on the card. The #2748 also supports #4331/#6831 1.6 GB Extended Adaptive Cache. When placed in the system unit, it supports one internal tape and one CD-ROM. In the #5064/#9364 System Unit Expansion, it supports up to three internal tape and CD-ROM. In the #5065 Storage/PCI Expansion Tower, it supports up to two internal tapes and CD-ROM. Supports #1349, #1350, #1355, #1360, #4482, #4483, #4486, #6480, #6481, #6482, #6483, #6485, #6486 or #6490 tape units. Mutually exclusive of #2726, #2740, #2741 or #9728 in the same System Unit or #9330 PCI Integrated Expansion Unit.</p> <p>High-speed PCI slots required: One</p> <p>Prerequisite: OS/400 V4R4 and System Unit or #5064/#9364 with #9330 or #5065</p> <p>Maximum: One per System Unit or #9364, three per #5065</p>
#6112	<p>Magnetic Storage Device Controller (SPD)</p> <p>Provides attachment for up to two 9331-001 or 002 Diskette Units and up to two 9347 Tape Units. This feature is supported for migration only.</p> <p>SPD slots required: One</p> <p>Maximum: Two for 9331, two for 9347. Limit of two #6112s in #9331 on Model 720.</p>
#6146	<p>Diskette Adapter (SPD)</p> <p>Supported only, not orderable.</p> <p>Provides attachment for one 9331 011, 012 diskette unit, and the #6135 5¼-inch diskette.</p> <p>SPD slots required: None</p> <p>Prerequisite: #2624</p> <p>Maximum: Two</p>
#6500	<p>Direct Access Storage Device Controller (SPD)</p> <p>Supported only, not orderable.</p> <p>Provides attachment for one 9337 0xx or 1xx. This feature is supported for migration only.</p> <p>SPD slots required: One</p> <p>Maximum: See the Model Overview tables at the beginning of this chapter.</p>
#6501	<p>Tape/Disk Device Controller (SPD)</p> <p>Provides attachment for the 2105 Versatile Storage Server. Provides attachment for up to two 9337 2xx, 4xx or 5xx Models. Also supports up to two 3490E Cxx, 3490E Exx, 3490E Fxx, 3494 Lxx or Dxx, 3570, 3575, or 3590 Models. Also provides attachment for 2105 Versatile Storage Server. DASD and Tape Units cannot be mixed on the same #6501. The #6501 is supported, but the #6534 should be ordered on new orders unless it does not support the tape drive being configured.</p> <p>SPD slots required: One</p> <p>Maximum: Four for Tape; for Disk, see the Model Overview tables at the beginning of this chapter.</p>
#6502	<p>RAID Disk Unit Controller—2 MB Cache (RAID/Mirrored/Unprotected) (SPD)</p> <p>Supported but not orderable</p> <p>Provides RAID protection and a 2 MB write-cache for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, #5082 or #5083 Storage Expansion Tower, or #5064/#9364 System Unit Expansion. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are allowed for each #6502. The #6502 is supported for migration, but the #6352 or #6533 should be ordered on new systems. The #6502 is not capable of integrated hardware disk compression.</p> <p>SPD slots required: One</p> <p>Maximum: See the Model Overview tables at the beginning of this chapter.</p>

#6512	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (SPD) Supported but not orderable Provides RAID protection and a 4 MB write-cache for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, #5082 or #5083 Storage Expansion Tower, or #5064/#9364 System Unit Expansion. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are allowed for each #6512. The #6512 is supported for migration, but the #6352 or #6533 should be ordered on new systems. The #6512 is not capable of integrated hardware disk compression. SPD slots required: One Maximum: See the Model Overview tables at the beginning of this chapter.
#6513	Internal Tape Device Controller (SPD) Provides support for up to three internal tape drives when located in #9331 Expansion Unit for SPD cards or four internal tape drives when located in #5072 or #5073 System Unit Expansion Tower. The #6513 is the default controller, unless a #2624 is installed. Supports #1379, #1380, #6380, #6381, #6382, #6383, #6385, #6386 and #6390 in #5072 or #5073 System Unit Expansion Tower; and #1349, #1350, #1355, #1360, #6481, #6482, #6483, #6485, and #6490 in a #5064/#9364 System Unit Expansion with #9331. SPD slots required: One Maximum: See the Model Overview tables at the beginning of this chapter.
#6530	Disk Unit Controller—No Cache (Mirrored/Unprotected) (SPD) Supported but not orderable Controller for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, #5082 or #5083 Storage Expansion Tower, or #5064/#9364 System Unit Expansion. Supported for migration, but the new #6532 or #6533 should be ordered on new systems. The #6530 is not capable of integrated hardware disk compression. SPD slots required: One Maximum: See the Model Overview tables at the beginning of this chapter.
#6532	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) (SPD) Ultra SCSI Controller for up to 16 disks installed in #5058 Storage Expansion Unit, #5083 Storage Expansion Tower, or #5064/#9364 System Unit Expansion. Also supports disks located in #5052 Storage Expansion Unit or #5082 Storage Expansion Tower, but these are not at Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of ten drives are supported in a RAID 5 array. A maximum of four arrays are allowed for each #6532. The #6532 Disk Unit Controller is not capable of integrated hardware disk compression. SPD slots required: One Maximum: See the Model Overview tables at the beginning of this chapter.
#6533	RAID Disk Unit Controller—4 MB Cache (Raid/Mirrored/Unprotected) (Ultra SCSI) (SPD) Ultra SCSI Controller for up to 16 disks installed in #5058 Storage Expansion Unit, #5083 Storage Expansion Tower, or #5064/#9364 System Unit Expansion. Also supports disks located in #5052 Storage Expansion Unit or #5082 Storage Expansion Tower, but these are not at Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of ten drives are supported in a RAID 5 array. A maximum of four arrays are allowed for each #6533. Supports integrated hardware disk compression. SPD slots required: One Maximum: See the Model Overview tables at the beginning of this chapter.
#6534	Magnetic Media Controller (Ultra SCSI) (SPD) Provides attachment for one 3490E Cxx with #5040, 3490E Exx, 3490E Fxx, 3494 D1x or L1x, 3570, 3575, 3590, 7208, 9348, or 9427 Tape Drives or 3995 C4x Optical Library Dataserver. V4R2 is required to support 3995. SPD slots required: One Maximum: See the Model Overview tables at the beginning of this chapter.
#9728	Base PCI Disk Unit Controller (Ultra SCSI) (PCI) Model 720 only. This is the Base IOA for the System Unit. Provides Ultra SCSI attachment for up to five internal disk units, one internal CD-ROM (standard) and one internal tape drive. Does not support RAID. Supports #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 tape units. Mutually exclusive with #2726, #2740, #2741 or #2748, in the same System Unit. The #9728 is not capable of integrated hardware disk compression. The #9728 has CCIN 2728. See Chapter 16, "CCIN Numbers" on page 441. High-speed PCI slots required: One Maximum: One per System Unit

#9751	MFIOP with RAID (Ultra SCSI) Models 730 and 740 only. Contains function for controlling 20 disk units, one removable media unit and one CD-ROM unit. Has three IOA slots for controlling LANs, Twinaxial Workstations, and Communications. IOA Slot A is reserved for attaching one #2699 Communications IOA or one #6149 or #6181 LAN IOA. IOA Slot B is reserved for attaching the #9699 Base Multi Protocol Communications IOA. IOA Slot C is reserved for attaching one #2699 Communications IOA or one #6180 or #9280 Twinaxial IOA. Occupies two card slots. The #9751 has CCIN 6751. Does not support integrated hardware disk compression.
#9754	MFIOP with RAID (Ultra SCSI) Models 730 and 740 only. Contains function for controlling 20 disk units, one removable media unit and one CD-ROM unit. Has three IOA slots for controlling LANs, Twinaxial Workstations, and Communications. IOA Slot A is reserved for attaching one #2699 Communications IOA or one #6149 or #6181 LAN IOA. IOA Slot B is reserved for attaching the #9699 Base Multi Protocol Communications IOA. IOA Slot C is reserved for attaching one #2699 Communications IOA or one #6180 or #9280 Twinaxial IOA. Occupies two card slots. The #9754 has CCIN 6754. Supports integrated hardware disk compression.

8.12 Upgrades to 7xx

The relationship between CPWs of the from and to systems varies depending on the ratio of batch to interactive workload. To determine the appropriate upgrade path, use the BEST/1 tool, which is available as part of the AS/400 Performance Tools (5769-PT1). For the 7xx models, the Interactive to Batch workload is defined by the interactive feature card.

8.12.1 System Upgrade to 720

Model 720																	
To From		2061			2062				2063				2064				
		1500	1501	1502	1500	1501	1502	1503	1500	1502	1503	1504	1500	1502	1503	1504	1505
400	2130	X	X	X													
	2131	X	X	X													
	2132	X	X	X	X	X	X	X									
	2133	X	X	X	X	X	X	X									
436	2102	X	X	X	X	X	X	X									
	2104	X	X	X	X	X	X	X									
	2106		X	X		X	X	X									
500	2140	X	X	X													
	2141	X	X	X	X	X	X	X									
	2142		X	X		X	X	X		X	X	X					
510	2143			X			X	X		X	X	X		X	X	X	X
	2144			X			X	X		X	X	X		X	X	X	X
600	2129	X	X	X													

Model 720																	
To From		2061			2062				2063				2064				
		1500	1501	1502	1500	1501	1502	1503	1500	1502	1503	1504	1500	1502	1503	1504	1505
	2134	X	X	X	X	X	X	X									
	2135		X	X		X	X	X		X	X	X					
	2136			X			X	X		X	X	X					
620	2175		X	X		X	X	X		X	X	X					
	2179			X			X	X		X	X	X		X	X	X	X
	2180			X			X	X		X	X	X		X	X	X	X
	2181							X			X	X			X	X	X
	2182											X				X	X

8.12.2 Server Upgrade to 720

Model 720																	
To		2061			2062				2063				2064				
From		1500	1501	1502	1500	1501	1502	1503	1500	1502	1503	1504	1500	1502	1503	1504	1505
40S	2109	X	X														
	2110	X	X														
	2111	X	X		X	X											
	2112	X	X	X	X	X	X	X	X	X	X						
50S	2120	X	X	X	X	X	X	X	X	X	X						
	2121	X	X	X	X	X	X	X	X	X	X						
	2122	X	X	X	X	X	X	X	X	X	X						
S10	2118	X	X		X	X											
	2119	X	X	X	X	X	X										
S20	2161	X	X	X	X	X	X	X	X		X						
	2163				X	X	X	X	X	X	X		X	X	X		
	2165								X	X	X		X	X	X	X	
	2166												X	X	X	X	
	2170									X	X	X		X	X	X	
	2177													X	X	X	X
	2178														X	X	X

8.12.3 720 Upgrade to 720

Model 720																	
To From		2061			2062				2063				2064				
		1500	1501	1502	1500	1501	1502	1503	1500	1502	1503	1504	1500	1502	1503	1504	1505
2061	1500		X	X	X	X	X	X	X	X	X		X	X	X		
	1501			X		X	X	X		X	X	X		X	X	X	
	1502						X	X		X	X	X		X	X	X	X
2062	1500					X	X	X	X	X	X		X	X	X		
	1501						X	X		X	X	X		X	X	X	
	1502							X		X	X	X		X	X	X	X
	1503										X	X			X	X	X
2063	1500									X	X		X	X	X		
	1502										X	X		X	X	X	X
	1503											X			X	X	X
	1504															X	X
2064	1500													X	X		
	1502														X	X	X
	1503															X	X
	1504																X
	1505																

8.12.4 System Upgrade to 730

		Model 730																		
To From		2065				2066					2067					2068				
		1506	1507	1508	1509	1506	1507	1508	1509	1510	1506	1508	1509	1510	1511	1506	1508	1509	1510	1511
500	2140	X	X																	
	2141	X	X	X																
	2142	X	X	X	X															
510	2143		X	X	X															
	2144		X	X	X															
530	2150			X	X			X	X	X										
	2151			X	X			X	X	X										
	2152				X				X	X			X	X	X					
	2153								X	X			X	X	X			X	X	X
	2162								X	X			X	X	X			X	X	X
620	2179		X	X	X															
	2180		X	X	X		X	X	X	X										
	2181			X	X			X	X	X		X	X	X	X					
	2182				X				X	X			X	X	X			X	X	X
640	2237				X				X	X			X	X	X					
	2238								X	X			X	X	X			X	X	X
	2239													X	X				X	X

8.12.5 Server Upgrade to 730

Model 730																				
To	From	2065				2066					2067					2068				
		1506	1507	1508	1509	1506	1507	1508	1509	1510	1506	1508	1509	1510	1511	1506	1508	1509	1510	1511
50S	2120	X	X	X																
	2121	X	X	X		X	X	X												
	2122	X	X	X		X	X	X												
53S	2154	X	X	X		X	X	X												
	2155	X	X	X		X	X	X			X	X								
	2156					X	X	X			X	X				X	X			
	2157					X	X	X			X	X				X	X			
S20	2165					X	X	X			X	X				X	X			
	2166										X	X				X	X			
	2170*					X	X	X			X	X				X	X			
	2177*							X	X			X	X				X	X		
	2178*								X	X		X	X	X			X	X		
S30	2257	X	X	X		X	X	X			X	X								
	2258					X	X	X	X		X	X	X			X	X	X		
	2259										X	X	X			X	X	X		
	2260															X	X	X		
	2320*								X	X		X	X	X	X		X	X	X	X
	2321*																	X	X	X
	2322*																	X	X	X
* An interactive card specify code for the “from” Custom Servers must be added (RPO) to the installation records by the configurator prior to the MES upgrade order.																				

8.12.6 720/730 Upgrade to 730

Model 730																				
T o	From	2065				2066					2067					2068				
		1506	1507	1508	1509	1506	1507	1508	1509	1510	1506	1508	1509	1510	1511	1506	1508	1509	1510	1511
720																				
2063	1500					X	X	X			X	X				X	X			
	1502						X	X	X	X		X	X	X			X	X	X	
	1503							X	X	X		X	X	X	X		X	X	X	X
	1504								X	X			X	X	X			X	X	X
2064	1500										X	X				X	X			
	1502											X	X	X			X	X	X	
	1503											X	X	X	X		X	X	X	X
	1504												X	X	X			X	X	X
	1505													X	X				X	X

Model 730																				
To From	2065				2066					2067					2068					
	1506	1507	1508	1509	1506	1507	1508	1509	1510	1506	1508	1509	1510	1511	1506	1508	1509	1510	1511	
730																				
2065	1506		X	X	X	X	X	X	X		X	X	X			X	X	X		
	1507			X	X		X	X	X	X		X	X	X			X	X	X	
	1508				X			X	X	X		X	X	X	X		X	X	X	X
	1509								X	X			X	X	X			X	X	X
2066	1506						X	X	X		X	X	X			X	X	X		
	1507							X	X	X		X	X	X			X	X	X	
720																				
	1508								X	X		X	X	X	X		X	X	X	X
	1509									X			X	X	X			X	X	X
	1510													X	X				X	X
2067	1506											X	X			X	X	X		
	1508												X	X	X		X	X	X	X
	1509													X	X			X	X	X
	1510														X				X	X
	1511																			X
2068	1506																X	X		
	1508																	X	X	X
	1509																		X	X
	1510																			X
	1511																			

8.12.7 System Upgrade to 740

Model 740										
To From		2069				2070				
		1514	1510	1511	1512	1514	1510	1511	1512	1513
530	2150		X	X						
	2151		X	X						
	2152		X	X						
	2153		X	X	X		X	X	X	X
	2162		X	X	X		X	X	X	X
620	2182		X	X	X		X	X	X	X
640	2238		X	X	X		X	X	X	X
	2239		X	X	X		X	X	X	X
650	2240			X	X			X	X	X
	2243				X				X	X

Model 740										
To From		2069				2070				
		1514	1510	1511	1512	1514	1510	1511	1512	1513
	2188								X	X
	2189									

8.12.8 Server Upgrade to 740

Model 740										
To From		2069				2070				
		1514	1510	1511	1512	1514	1510	1511	1512	1513
53S	2154	X								
	2155	X								
	2156	X				X				
	2157	X				X				
S20	2165	X				X				
	2166	X				X				
	2170*	X				X				
	2177*	X				X				
	2178*		X	X			X	X		
S30	2258	X				X				
	2259	X				X				
	2260	X				X				
	2320*		X	X			X	X		
	2321*		X	X	X		X	X	X	
	2322*		X	X	X		X	X	X	X
S40	2256	X				X				
	2261	X				X				
	2207					X	X			
	2208						X			
	2340*			X	X			X	X	X
	2341*								X	X

* An interactive card specify code for the “from” Custom Servers must be added (RPO) to the installation records by the configurator prior to the MES upgrade order.

8.12.9 7xx Upgrade to 740

Model 740										
To From		2069				2070				
		1514	1510	1511	1512	1514	1510	1511	1512	1513
720										
2064	1500	X				X				
	1502	X	X			X	X			
	1503		X	X			X	X		

Model 740										
From To		2069				2070				
		1514	1510	1511	1512	1514	1510	1511	1512	1513
	1504		X	X	X		X	X	X	
	1505		X	X	X		X	X	X	X
730										
2066	1506	X				X				
	1507	X	X			X	X			
	1508		X	X			X	X		
	1509		X	X	X		X	X	X	X
	1510		X	X	X		X	X	X	X
2067	1506	X				X				
	1508		X	X			X	X		
	1509		X	X	X		X	X	X	X
	1510		X	X	X		X	X	X	X
	1511			X	X			X	X	X
2068	1506	X				X				
	1508		X	X			X	X		
	1509		X	X	X		X	X	X	X
	1510			X	X			X	X	X
	1511				X				X	X
740										
2069	1514		X			X	X			
	1510			X	X		X	X	X	X
	1511				X			X	X	X
	1512								X	X
2070	1514						X			
	1510							X	X	X
	1511								X	X
	1512									X
	1513									

RISC to RISC Data Migration (#0205): This specify code is used when a customer orders a new (RISC) AS/400e server to replace an existing (RISC) AS/400e server. The #0205 is orderable on any initial order AS/400e server 170 model or 7xx model. Preload of Licensed Programs, by manufacturing, is not allowed with #0205. Manufacturing only loads SLIC up through QSYS of OS/400 when the #0205 is ordered.

The #0205 and #5000 are mutually exclusive.

Chapter 9. 9406 6xx Models

9.1 9406 600 Model Overview

Model	600			
Processor Feature	#2129	#2134	#2135	#2136
Relative System Performance (CPW - See Note 1)	22.7	32.5	45.4	73.1
Number of N-way Multiprocessors	1	1	1	1
Main Storage (MB)	64-384	64-384	64-384	128-512
Disk Storage Base (GB)	4.19			
Maximum Internal (GB)				
V4R1	85.8			
V4R2/V4R3 /V4R4	175.4			
System I/O Card Slots				
SPD	0			
PCI	8			
Communication Lines (See Note 2)	1-18			
LAN/ATM Adapters	0-3			
Maximum Workstation Controllers				
Twinaxial	5			
ASCII	0			
Maximum Workstations				
Twinaxial	188			
ASCII	0			
¼-inch/8mm Cartridge Tape (Internal)	0-1			
½-inch Tape				
Reel 9348	0-1			
Reel 2440, 9347	0			
Cartridge 34xx, 35xx	0-1			
8mm Cartridge (External)	0-1			
Optical Libraries	0-1			
Diskettes (5 ¼-inch or 8-inch)	0			
Fax Adapters	0			
Cryptographic Processor	1			
System I/O Buses	1			

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine the performance that is achievable.
Note 2:	17 lines if Client Access or Operations Console is chosen.

9.2 9406 620 Model Overview

Model	620					
Processor Feature	#2175	#2179	#2180		#2181	#2182
Relative System Performance (CPW - See Note 1)	50.0	85.6	113.8		210.0	464.3
Number of N-Way Multiprocessors	1	1	1		1	2
Main Storage (MB) (See Note 6)	64-1856	256-2048	256-2048		256-2048	256-4096
Numbers are for all processor features	Base System	SUE #9364 PCI (#9329) (#9330)	SUE #9364 SPD (#9331)	#5065 Stg/PCI Expansion Tower	Expansion Tower	System Maximum
Disk Storage Base (GB)	4.19	See Note 4 -	See Note 4 -		-	4.19
V4R1						
Maximum Internal (GB)	128.8 (5)	128.8	128.8		274.8	704.3
Maximum External (GB)	-	-	See Note 2		See Note 2	652.8
Total Maximum (GB)						704.3
V4R2/V4R3						
Maximum Internal (GB)	263.2 (5)	263.2	263.2		561.5	944.8
Maximum External (GB)	-	-	See Note 2		See Note 2	893.3
Total Maximum (GB)						944.8
V4R4						
Maximum Internal (GB)	263.2 (5)	263.2	263.2	386.5	561.5	944.8
Maximum External (GB)	-	-	See Note 2		See Note 2	893.3
Total Maximum (GB)						944.8
External SPD Bus	0	4	4		0	4
Maximum Card Slots - SPD	0	0	6	0	13	58
Maximum Card Slots - PCI	8	14	0	12	0	22
Communications Lines (See Note 3)	1-18	0-40	0-36	0-42	0-78	96
LAN/ATM Adapters	0-3	0-5	0-6	0-6	0-13	16
Maximum Workstation Controllers						
Twinaxial	5	9	18	12	39	60
ASCII	0	0	6	0	13	58
Maximum Workstations						
Twinaxial	188	360	720	240	1560	2388
ASCII	0	0	108	0	234	1044
¼-inch/8mm Cartridge Tape (Internal)	0-1	0-3	0-3	0-2	0-4	17
½-inch Tape						
Reel 9348	0-1	0-2	0-4	0-3	0-4	4
Reel 2440	0	0	0-4	0	0-4	4
Reel 9347	0	0	0-2	0	0-2	2
Cartridge 34xx, 35xx	0-1	0-2	0-4	0-3	0-4	6
8mm Cartridge (External)	0-1	0-2	0-4	3	0-4	4
Optical Libraries	0-1	0-2	0-12	3	0-14	14
Diskettes (5 ¼-inch or 8-inch)	0	0	0-2	0	0-2	2
Fax Adapters	0	0	0-6	0	0-13	32
Cryptographic Processor	0	0	0-1	3	0-1	3

Note 1: Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine the performance that is achievable.

Note 2: External DASD can be attached via an SPD card in the Expansion Unit.

Note 3:	17 Lines in the Base System if Client Access or Operations Console is chosen.
Note 4:	The #9364 must be configured with #9329/#9330 (PCI) or #9331 (SPD). Therefore, these columns are mutually exclusive.
Note 5:	Maximum is 85.8 GB (V4R1) or 175.4 GB (V4R2, V4R3, and V4R4) on #2175, #2179, and #2180 processors.
Note 6:	For orders placed between 28 October 1997 and 09 February 1998, the 620 #2175 processor will have shipped with base main storage of 256 MB due to a special promotion offered in most countries. These systems that shipped with a base 256 MB main storage have a maximum of 2048 MB. If Specify Code 0004 is present, it means that it is shipped with 64 MB.

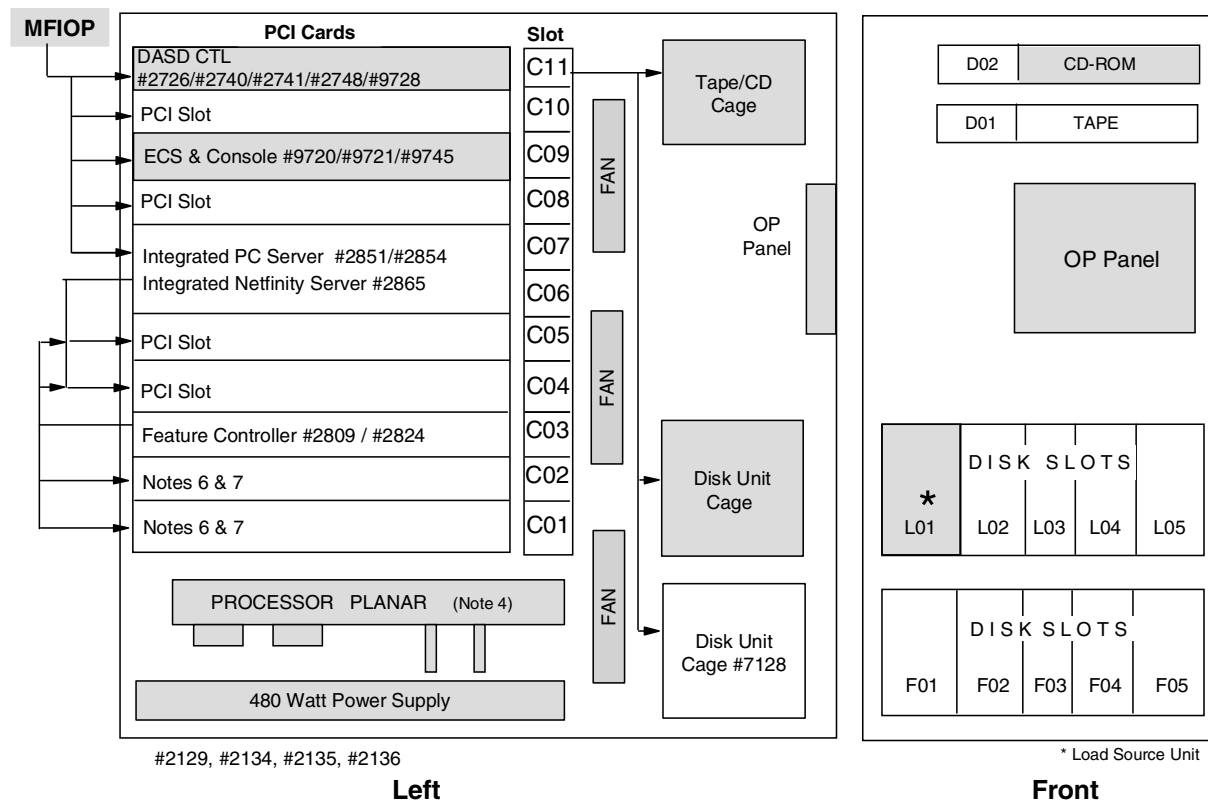
9.3 9406 640 and 650 Models Overview

Model	640			650			
Processor Feature	#2237	#2238	#2239	#2240	#2243	#2188	#2189
Relative System Performance (CPW - See Note 1)	319.0	583.3	998.6	1794.0	2340.0	3660.0	4550.0
Number of N-Way Multiprocessors	1	2	4	8	12	8	12
Main Storage (MB)							
V4R2	512-12288	512-12288	512-12288	1024-20480	1024-20480	-	-
V4R3	512-16384	512-16384	512-16384	1024-32758	1024-32758	1024-40960	1024-40960
Disk Storage Base (GB)	4.19			4.19			
V4R1							
Maximum Internal (GB)	927.7			996.4			
Maximum External (GB)	893.3			962.0			
Maximum Combined (GB)	927.7			996.4			
V4R2							
Maximum Internal (GB)	1340.0			1546.1			
Maximum External (GB)	1305.6			1511.8			
Maximum Combined (GB)	1340.0			1546.1			
V4R3 / V4R4							
Maximum Internal (GB)	1340.0			2095.9			
Maximum External (GB)	1305.6			2061.3			
Maximum Combined (GB)	1340.0			2095.9			
Disk Unit IOPs	1-37			1-37			
Minimum Feature Card Slots	3			3			
Maximum Feature Card Slots-SPD	235			237			
Maximum Feature Card Slots-PCI	216			216			
Communications Lines (V4R1/V4R2)	1-200			1-250			
Communications Lines (V4R3/V4R4)	1-200			1-300			
LAN/ATM Adapters (See Note 2)	0-32			0-48			
V4R1/V4R2/V4R3	0-32			0-72			

Maximum Workstation Controllers Twinaxial / ASCII	175	175
Maximum Workstations Twinaxial	7000	7000
ASCII	3150	3150
¼-inch/8mm Cartridge Tape (Internal)	0-17	0-17
½-inch Tape		
Reel 2440, 9348	0-4	0-4
34xx, 35xx	0-8	0-8
9347	0-2	0-2
8mm Cartridge Tape (External)	0-4	0-4
Optical Libraries	0-22	0-22
Diskettes (5 ¼-inch or 8-inch)	0-2	0-2
Fax Adapters	0-32	0-32
Cryptographic Processor	0-3	0-3
System I/O Buses	1-19	1-19
System Expansion		
#5065/#5072/#5073/#5082/#5083	0-18	0-18
Bus Expansion (#5044)	0-9	0-9
Storage Expansion		
#5055/#5057	0-1	0-1
#5052/#5058	0-18	0-18

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine the performance that is achievable.
Note 2:	Can include up to 16 Integrated Netfinity Servers.

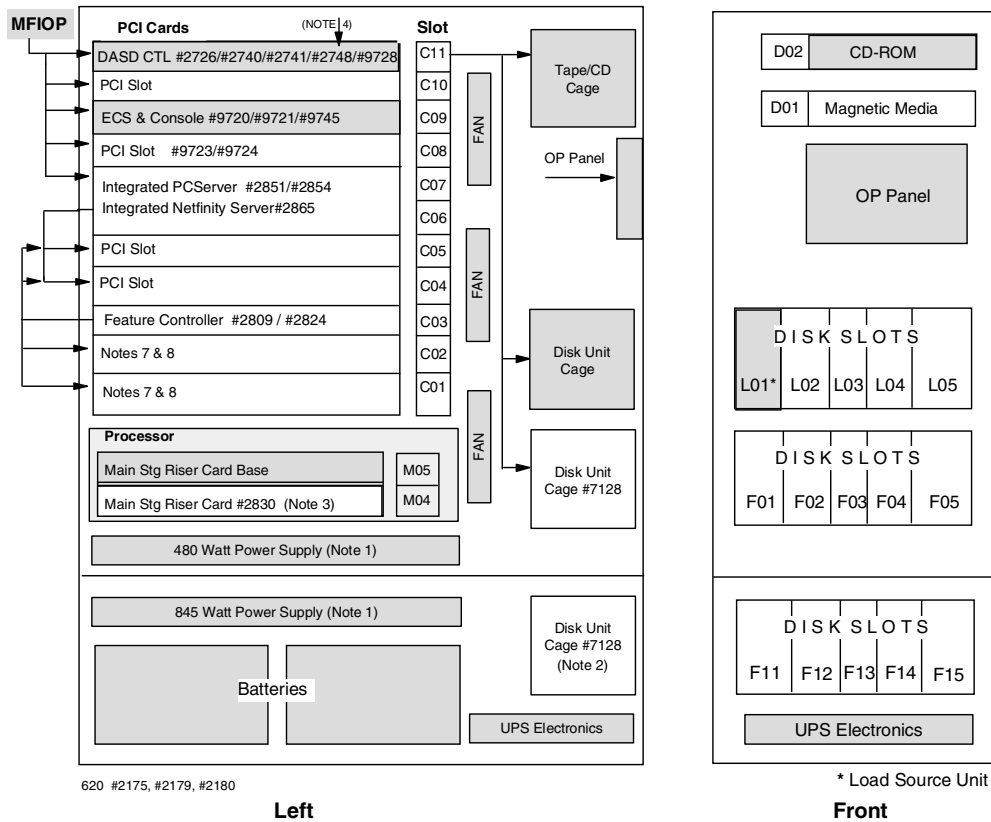
9.4 9406 Model 600 System Unit



Notes:

1. The base disk controller #9728 does not support RAID-5 or integrated hardware disk compression and only supports five disks. If there is an intention to install more than five disks or implement RAID-5 later, then the #9728 should be changed for a #2726/#2740/#2741/#2748.
2. If an Integrated PC Server is in slots C06 and C07, it will control its LAN IOAs in slots C04 and C05. If there is no IPCS or Integrated Netfinity Server, C04 and C05 are controlled by C03.
3. If an Integrated PC Server, or an Integrated Netfinity Server is in slots C06 and C07, #2722 /#2746 Twinaxial Workstation IOA is not allowed in slot C08 and LAN IOAs are not allowed in slots C08 or C10.
4. SIMM modules plug directly to the planar board.
5. If #2854 IPCS or #2865 Integrated Netfinity Server is installed in slots C06 and C07:
 - Slot C04 supports #2723, #2724 or #2838/#9738.
 - Slot C05 supports #2723 or #2724.
6. #2809 in C03:
 - Slot C01 supports #2838/#9738 100/10M Ethernet or #281x ATM.
 - Slot C02 supports the #2718 or #2729 Magnetic Media Controller.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745 or #2746.
7. #2824 in C03:
 - Slot C01 supports #2838/#9738 or #281x.
 - Slot C02 supports #2718, #2729, #2750, #2751, #2761, or #4800.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, #2761, or #4800.
8. If a #2838 or #281x is installed on the #2824/#2809 in C03, only features #2721 or #2745 may be installed in slots C04 or C05.
9. There is a maximum of one #2838 or #281x per #2824/#2809 IOP.
10. There is a maximum of one #2750, #2751 or #2761 per #2824 IOP.
11. There is a maximum of one #4800 per #2824 IOP.

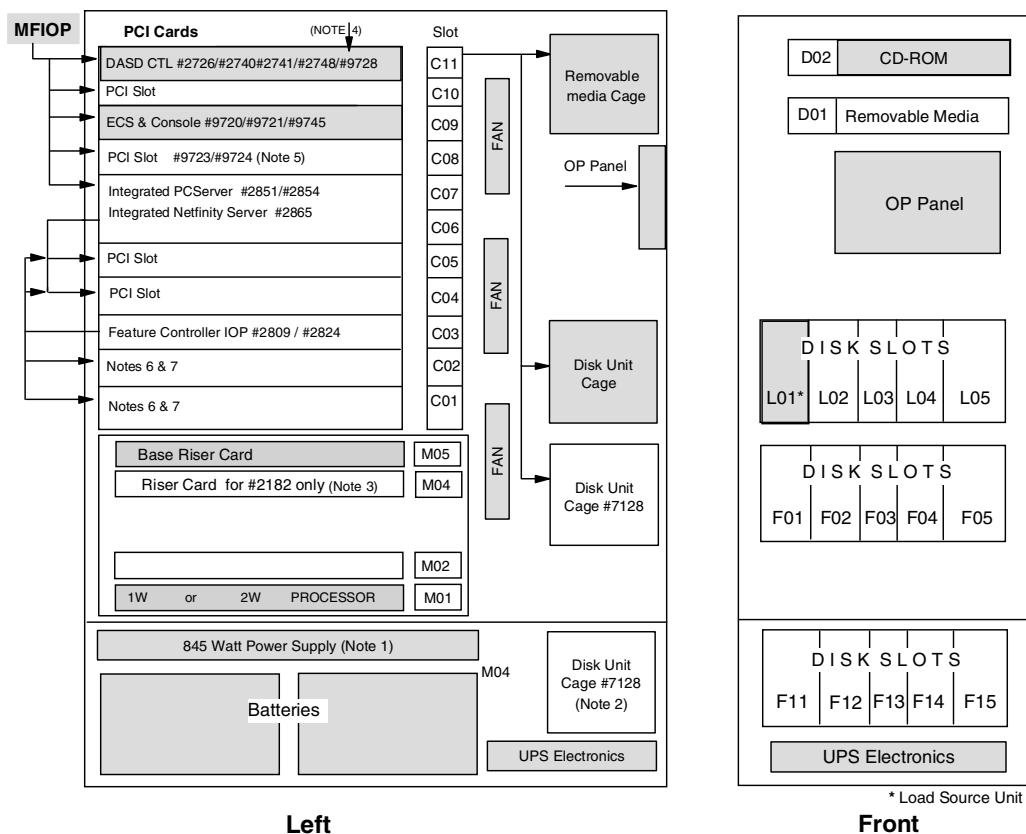
9.5 9406 Model 620 System Unit (Processors #2175, #2179, #2180)



Notes:

- Processors #2175, #2179, and #2180 have 480-watt power supply. The #2181 and #2182 have 845-watt power supply.
- This cage only available with #2181 and #2182 processors.
- Main Storage Expansion Riser Card only available on #2182.
- The base disk controller #9728 does not support RAID-5 or integrated hardware disk compression and only supports five disks. If there is intention to install more than five disks in the base system unit or implement RAID-5 later, the #9728 should be changed for a #2726/#2740/#2741/#2748.
- If an Integrated PC Server, or an Integrated Netfinity Server is in slots C06 and C07, #2722 /#2746 Twinaxial Workstation IOA and LAN IOAs are not allowed in slot C08.
- If #2854 IPCS or #2865 Integrated Netfinity Server is installed in slots C06 and C07:
 - Slot C04 supports #2723, #2724 or #2838/#9738.
 - Slot C05 supports #2723 or #2724.
- #2809 in C03.
 - Slot C01 supports #2838/#9738 100/10M Ethernet or #281x ATM.
 - Slot C02 supports the #2718 or #2729 Magnetic Media Controller.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745 or #2746.
- #2824 in C03.
 - Slot C01 supports #2838/#9738 or #281x.
 - Slot C02 supports #2718, #2729, #2750, #2751, #2761, or #4800.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, #2761, or #4800.
- If a #2838 or #281x is installed on the #2824/#2809 in C03, only features #2721 or #2745 may be installed in C04/C05.
- There is a maximum of one #2838 or #281x per #2824 IOP.
- There is a maximum of one #2750, #2751 or #2761 per #2824 IOP.
- There is a maximum of one #4800 per #2824 IOP.

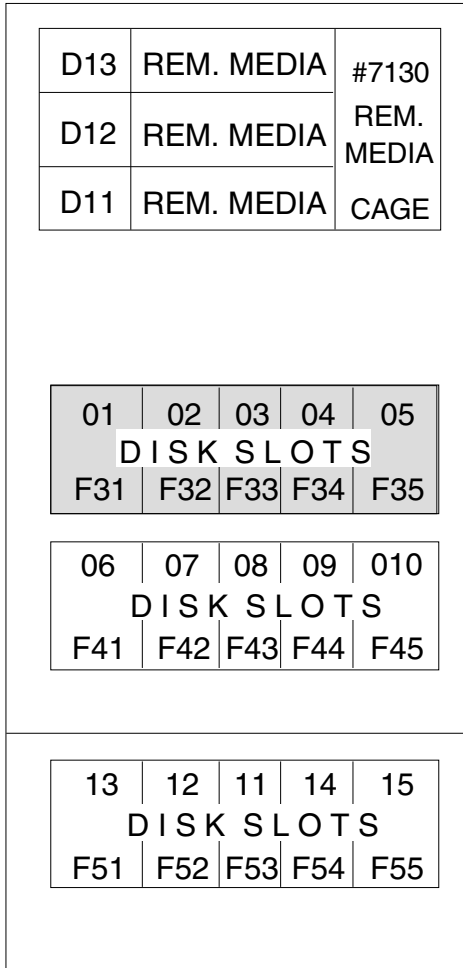
9.6 9406 Model 620 System Unit (Processors #2181, #2182)



Notes:

- Processors #2175, #2179, and #2180 have a 480-watt power supply. The #2181 and #2182 have a 845-watt power supply.
- This cage only available with #2181 and #2182 processors.
- Main Storage Expansion Riser Card only available on #2182.
- The base disk controller #9728 does not support RAID-5 or integrated hardware disk compression and only supports five disks. If there is intention to install more than five disks in the base system unit or implement RAID-5 later, the #9728 should be changed for a #2726/#2740/#2741/#2748.
- If an Integrated PC Server, or an Integrated Netfinity Server is in slots C06 and C07, #2722 /#2746 Twinaxial Workstation IOA is not allowed in slot C08 and LAN IOAs are not allowed in slot C08.
- If #2854 IPCS or #2865 Integrated Netfinity Server is installed in slots C06 and C07:
 - Slot C04 supports #2723, #2724 or #2838/#9738.
 - Slot C05 supports #2723 or #2724.
- #2809 in C03:
 - Slot C01 supports #2838/#9738 100/10M Ethernet or #281x ATM.
 - Slot C02 supports the #2718 or #2729 Magnetic Media Controller.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745 or #2746.
- #2824 in C03:
 - Slot C01 supports #2838/#9738 or #281x.
 - Slot C02 supports #2718, #2729, #2750, #2751, #2761 or #4800.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, #2761 or #4800.
- If a #2838 or #281x is installed on the #2824/#2809 in C03, then only features #2721 or #2745 may be installed in C04 or C05.
- There is a maximum of one #2838 or #281x per #2824 IOP.
- There is a maximum of one #2750, #2751 or #2761 per #2824 IOP.
- There is a maximum of one #4800 per #2824 IOP.

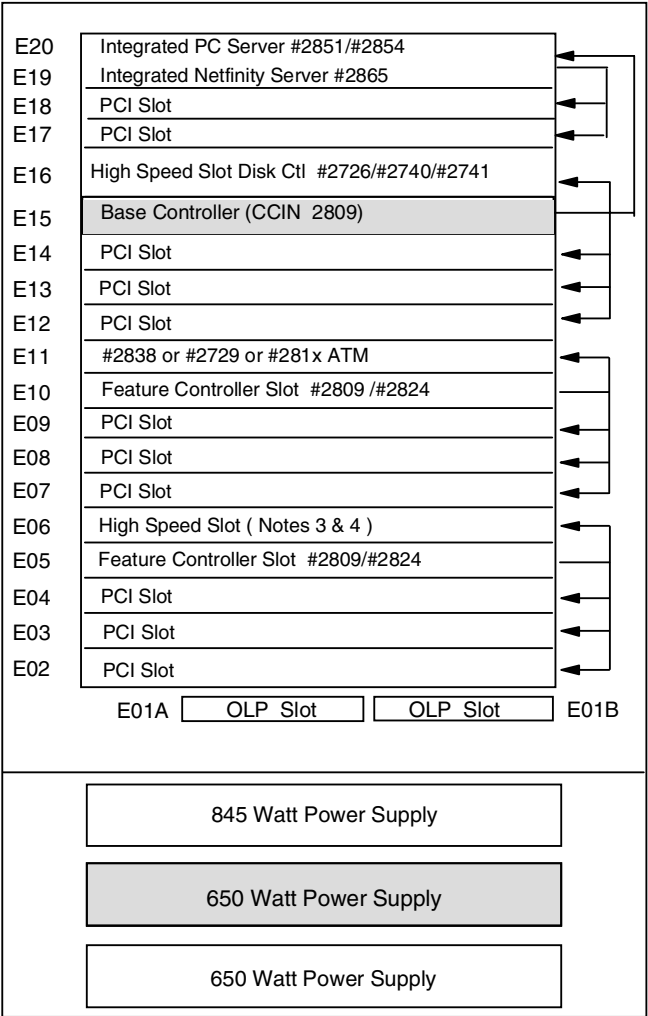
Front of #9364 or #5064



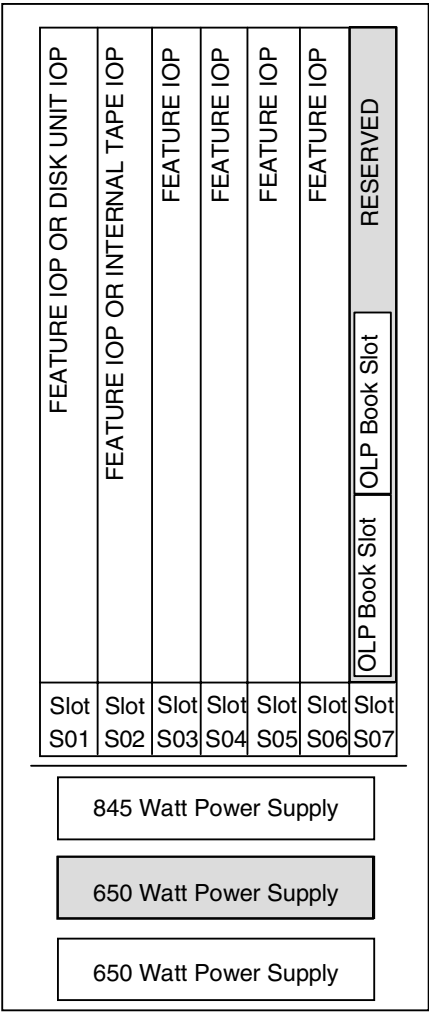
Note: The #9364/#5064 can either have #9329/#9330 PCI or a #9331 SPD planar board. See the diagram on the following page.

9.7 PCI Card Cage #9329 and SPD Card Cage #9331

#9364 or #5064 with 9329 PCI Planar



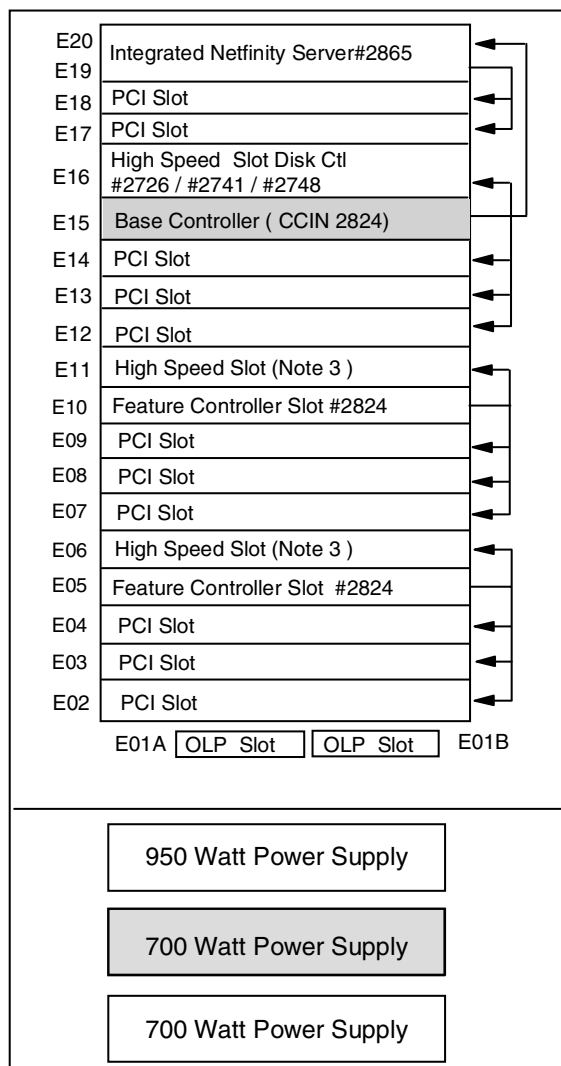
#9364 or #5064 with 9331 SPD Planar



6xx Models

9.8 #9330 PCI Card Cage

#9364 with #9330 PCI Card Cage



Notes:

- Optical Link Processors are used for connecting Expansion Towers and Racks.
- Base PCI LAN/WAN/Workstation IOP (CCIN 2809) in #9329 slot E15 supports:
 - In E16 (high-speed slot):
 - #2726, #2740, or #2741
 - In E12, E13, E14 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, or #2746
 - Three cards in any combination with a maximum of one LAN card
 - When a #2851/#2854/#2865 IPCS or Integrated Netfinity Server is installed in the system expansion unit slots E19/E20, no LANs are allowed in slots E12, E13, and E14.
- The #2809 PCI LAN/WAN/Workstation IOP in #9329 slots E05 or E10 supports:
 - In E06 or E11 (high-speed slots):
 - #2718, #2729, #2838, or #281x.
 - In E02, E03, E04 or E07, E08, or E09 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, and #2746.
 - Three cards in any combination with a maximum of two LAN cards.

- When a #2838 PCI 100/10Mbps Ethernet or any ATM feature is installed in E11, only #2721/#2745 PCI Two-Line WAN IOAs are allowed in slots E08 and E09. E07 cannot be used.
 - When a #2838 PCI 100/10Mbps Ethernet or any ATM feature is installed in E06, only #2721/#2745 PCI Two-Line WAN IOAs are allowed in slots E03 and E04. E02 cannot be used.
 - When a #2718/#2729 PCI Magnetic Media Controller is installed in E11, only one LAN is allowed in the slots E08 or E09.
 - When a #2718/#2729 PCI Magnetic Media Controller is installed in E06, only one LAN is allowed in the slots E03 or E04.
4. 100/10 Mbps Ethernet #2838/9738 will normally be located in slot E06 or E11. However, if driven by the #2865 Integrated Netfinity server, one #2838/9738 will be located in slot E17.
 5. Base PCI LAN/WAN/Workstation IOP (CCIN 2824) in #9330 slot E15 supports:
 - In E16 (high-speed slot):
 - #2726, #2741, or #2748.
 - In E12, E13, E14 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, or #2761.
 - Maximum of two LAN (#2723 or #2724) adapters.
 - A maximum of one remote access card (#2750, #2751, or #2761).
 - Any combination of WAN and Twinax adapters.
 - When a #2851/#2854/#2865 PCI Integrated PC Server is installed in the system expansion unit slots E19/E20, no LAN features are allowed in slots E12, E13, and E14. Two LAN adapters are allowed on the IPCS or Integrated Netfinity Server, one of which may be high speed.
 6. The #2824 PCI LAN/WAN/Workstation IOP in #9329 slots E05 or E10 supports:
 - In E06 or E11 (high-speed slots):
 - #2718, #2729, #2838, #2750, #2751, #2761, #281x, or #4800.
 - In E02, E03, E04 or E07, E08, E09 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, or #2761.
 - Three cards in any combination.
 - When a #2838 PCI 100/10Mbps Ethernet or any ATM feature is installed in E11, only #2721/#2745 PCI Two-Line WAN IOAs are allowed in slots E08 and E09. E07 cannot be used.
 - When a #2838 PCI 100/10Mbps Ethernet or any ATM feature is installed in E06, only #2721/#2745 PCI Two-Line WAN IOAs are allowed in slots E03 and E04. E02 cannot be used.
 - When a #2729 PCI Magnetic Media Controller is installed in E11, only one LAN is allowed in slots E08 and E09.
 - When a #2729 PCI Magnetic Media Controller is installed in E06, only one LAN is allowed in slots E03 and E04.
 - A maximum of one remote access card (#2750, #2751, or #2761) per #2824.
 - A maximum of two low-speed LANs (#2723 or #2724) per #2824.
 7. The #2824 LAN/WAN/Workstation IOP in the #9330 slots E05 or E10 supports:
 - In E06 or E11 (high-speed slots):
 - #2718, #2729, #2745, #2746, #2750, #2751, #2761, #281x, #2838, or #4800.
 - In E02, E03, E04 or E07, E08, E09 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, and #2761.
 - Three cards in any combination
 - Maximum of one high-speed LAN (#2838) or one ATM (#281x) feature per #2824.
 - If high-speed LAN or ATM feature present, #2723/#2724 not allowed on this #2824.
 - A maximum of one remote access card (#2750, #2751, or #2761) per #2824.
 - A maximum of two low-speed LANs (#2723 or #2724) per #2824.
 8. The #2809 is not supported in the #9330.

9.9 9406 Models 600 and 620

PROCESSORS	
#2129	22.7 RSP CPW Processor. Base Memory 64 MB Model 600 only.
#2134	32.5 RSP CPW Processor. Base Memory 64 MB. Model 600 only.
#2135	45.4 RSP CPW Processor. Base Memory 64 MB. Model 600 only.
#2136	73.1 RSP CPW Processor. Base Memory 128 MB. Model 600 only.
#2175	50.0 RSP CPW Processor. Base Memory 64 MB. Model 620 only. For orders placed between 24 October 1997 and 09 February 1998, this shipped with a base memory of 256 MB due to a promotion offered in most countries (if specify code 0004 is not present 256 MB).
#2179	85.6 RSP CPW Processor. Base Memory 256 MB. Model 620 only.
#2180	113.8 RSP CPW Processor. Base Memory 256 MB. Model 620 only.
#2181	210.0 RSP CPW Processor. Base Memory 256 MB. Model 620 only.
#2182	464.3 RSP CPW 2-Way Processor. Base Memory 256 MB. Model 620 only.
POWER AND PACKAGING	
#2686	Optical Link Processor (266 Mbps) This is a card that is used for attaching #5044. Each #2686 supports a maximum of one #5044. The #9364 with either #9331 or #9329 is a prerequisite. Model 620 only. Maximum: Two Card slots used: None
#2688	Optical Link Processor (1063 Mbps) This is a card that is used for attaching #5072, #5073, #5082, and #5083 Expansion Towers on the Model 620. Each #2688 supports a maximum of two #50xx towers. The #9364 with either #9331 or #9329 is a prerequisite. Model 620 only. Maximum: Two Card slots used: None
#5043	Primary to Secondary Rack Conversion This feature provides for the conversion of a 9406 F Model System Unit rack to a 9309 #9171 type rack. The new rack will retain the #5043 feature. Only available when upgrading from 9406 F Model. Also available on feature conversion from #5040. Model 620 only.
#5044	System Unit Expansion Rack This is a twelve SPD I/O card slot cage in a rack enclosure. Each unit provides two buses with six I/O card slots per bus. The #5044 is not available as a new feature but is a conversion of a #5040 or #5042 rack. Requires #2686 and an open slot on the Optical Bus Adapter. Model 620 only.
#5052	Storage Expansion Unit Provides space for up to sixteen disk units. It attaches to the top of the #5072 System Unit Expansion Tower and the #5082 Storage Expansion Tower. Only one #5052 per tower is supported and #5143 Power Supply may be required. Model 620 only.
#5058	Storage Expansion Unit (Ultra SCSI) Provides space for up to sixteen disk units. It attaches to the top of the #5073 System Unit Expansion Tower and the #5083 Storage Expansion Tower. Only one #5058 per tower is supported. Model 620 only.

#5065	Storage/PCI Expansion Tower Model 620 only Provides an additional bus. It includes a 1063 Mbps optical bus card. The #5065 has redundant, hot swappable power supplies. It supports three LAN, WAN, and Workstation controllers, twelve PCI IOA cards, two removable media and up to 45 disk units. Three specific disk slots may be used for #4331 1.6 GB Read Cache Device features. The #5065 is the only storage expansion unit to support Ultra2 SCSI. See 8.10, "System Unit Expansion Towers for 6xx and 7xx" on page 169. Prerequisite: #2688 and V4R4 Maximum: Four on the Model 620. This is a Customer Install Feature (CIF).
#5066	1.8 M I/O Tower Provides two additional busses. The #5066 is actually two #5065 Storage/PCI Expansion Towers installed in a #5066 1.8 M I/O Tower. The #5066 reports to the system as two #5065s. The #5066 includes two 1063 Mbps optical bus cards, various cables (including optical cables) and the 1.8 M I/O Tower. The #5066 includes 24 PCI IOA slots, space for 90 disk units, space for 4 removable media devices, battery backup, redundant/hot swap power supplies and two base PCI LAN/WAN/Workstation IOPs (CCIN #2824). The #5066 is capable of controlling Ultra2 SCSI disk units. Two line cords must be specified. Prerequisite: #2688 and V4R4 Maximum: Two on the Model 620.
#5072	1063 Mbps System Unit Expansion Tower Provides additional buses. It includes a 1063 Mbps optical bus card, thirteen SPD I/O card slots; space for up to four internal tape units or CD-ROMs (maximum of three), and battery and power supplies. It can support one #5052 Storage Expansion Unit. Due to power restrictions some combinations of high-powered cards may mean that an additional #5072 is required. The #2688 is a prerequisite. This feature is only supported on upgrades. It cannot be ordered with a new system. Model 620 only. Maximum: A total of four expansion towers of all types.
#5073	1063 Mbps System Unit Expansion Tower Provides additional buses. It includes a 1063 Mbps optical bus card, thirteen SPD I/O card slots, space for up to four internal tape units or CD-ROMs (a maximum of three), and battery and power supplies. It can support one #5058 Storage Expansion Unit. Due to power restrictions some combinations of high-powered cards may mean that an additional #5073 is required. The #2688 is a prerequisite. Model 620 only. Maximum: A total of four expansion towers of all types.
#5082	1063 Mbps Storage Expansion Tower Provides a DASD Tower for adding up to 16 disk units. A total of 32 disk units are supported with the addition of #5052. It includes a 1063 Mbps optical bus card, two SPD I/O card slots for the disk IOPs (#6502, #6512, #6530 supported but not orderable; or #6532 or #6533 for new orders), and battery and power supplies. The #2688 is a prerequisite. This feature is only supported on upgrades. It cannot be ordered with a new system. Model 620 only. Maximum: A total of four expansion towers of all types.
#5083	1063 Mbps Storage Expansion Tower (Ultra SCSI) Provides a DASD Tower for adding up to 16 disk units. A total of 32 disk units are supported with the addition of #5058. It includes a 1063 Mbps optical bus card, two SPD I/O card slots for the disk IOPs (#6502, #6512, #6530 supported but not orderable; or #6532 or #6533 for new orders), and battery and power supplies. The #2688 is a prerequisite. Model 620 only. Maximum: A total of four expansion towers of all types.
#5101	30 Disk Expansion Feature This provides two 15 unit disk enclosures, a 700-watt power supply, backplanes, and internal cables. Maximum: One per #5065.
#5143	Feature Power Supply This is a 400-watt power supply that is usually a prerequisite for a #5052 installed on a #5072 or #5082. Model 620 only. Maximum: One per #5072 or #5082.
#5153	Redundant Power Supply This contains two power supplies, a 970 watt and a 700 watt. This feature provides redundancy for the power supplies in the System Unit and System Unit Expansion. This feature physically resides in the #9364. Model 620 Processors #2181 and #2182 only. Maximum: One
#7128	DASD Expansion Unit This feature allows the addition of five disk units to either the System Unit or the #9364 System Unit Expansion. Maximum: One in Base System with Model 600 Processors #2129, #2134, #2135, #2136 or Model 620 Processors #2175, #2179, or #2180. Two in Base System with Model 620 Processors #2181 or #2182. Two in #9364 System Unit Expansion.
#7130	Expansion Unit Tape/Cage This feature allows the addition of three tape units to the #9364 System Unit Expansion. Tape Units #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 are supported in the first two tape positions. Only Tape Units #1355, and #6485 are supported in the third position. A tape controller is required to support these tape devices. Model 620 only. Prerequisites: #9329/#9330 or #9331 Maximum: One

#9329	PCI Integrated Expansion Unit This feature contains eleven PCI card slots and three high-speed PCI card slots. These are driven by three PCI controllers and one Integrated PC Server (not included). It also has space for one or two #2686 or #2688 Optical Link Processor Cards to support up to four external towers. A Base PCI LAN/WAN/Workstation IOP is included with #9329. Model 620 only. Prerequisite: #9364 Maximum: One
#9330	PCI Integrated Expansion Unit Model 620 only. This feature contains eleven low-speed PCI card slots and three high-speed PCI card slots. These are driven by one base Controller (CCIN 2824) and two Feature Controllers. One IPCS or Integrated Netfinity Server is optional. It also has space for one or two #2686 or #2688 Optical Link Processor Cards to support up to four external towers. Maximum: One Prerequisite: V4R4
#9331	Expansion Unit for SPD Cards This feature allows the addition of up to six SPD cards and one or two #2686 or #2688 Optical Link Processor Cards to support up to four external towers. The #9331 includes an SPD Controller Card. Model 620 only. Prerequisite: #9364 Maximum: One
#9364	System Unit Expansion This feature allows one addition of either an SPD card expansion unit (#9331) or PCI card expansion unit (#9329/#9330). It also supports one #7130 Expansion Unit Tape Cage for up to three tapes. It supports five disks and allows one or two #7128 DASD expansion units (this is processor dependent--see #7128 entry) to be added. Model 620 only. Maximum: One
MAIN STORAGE	
Base	There are no features to specify the base memory of 64 MB on the Model 600 Processors #2129, #2134 and #2135; 128 MB on the Model 600 Processor #2136 or 256 MB on all of the Model 620 Processors. For main storage, which must be added in pairs (or quads), feature codes must be ordered in pairs. The same rules apply to quads.
#2830	Main Storage Expansion This feature contains 16 sockets for placement of 32 MB or 128 MB Main Storage DIMMs. Model 620 Processor #2182 only. Maximum: One
#3001	32 MB Main Storage DIMM Plugs directly into the CPU or #2830. Must be added in pairs. Model 620 only. Maximum: 14 DIMMs on Processors #2175, #2179, #2180 and #2181; 30 DIMMs on Processor #2182. Prerequisite: One #2830 for 16 DIMMs or more on Processor #2182.
#3002	128 MB Main Storage DIMM Plugs directly into the CPU or #2830. Must be added in pairs. Model 620 only. Maximum: 14 DIMMs on Processors #2175, #2179, #2180, and #2181; 30 DIMMs on Processor #2182. Prerequisite: One #2830 for 16 DIMMs or more on Processor #2182.
#3110	64 MB Main Storage Plugs directly into the CPU. Must be added in pairs on Model 600 Processor #2136. Supported on all Model 600 Processors. Maximum: Five on Processors #2129, #2134 and #2135; six on Processor #2136.
#3182	32 MB Main Storage DIMM Plugs directly into the CPU. Must be added in pairs on Model 600 Processor #2136. Supported on all Model 600 Processors. Maximum: Five on Processors #2129, #2134 and #2135; six on Processor #2136.
#8172	32 MB Base Main Storage Replace SIMM Provides 32 MB of memory. Model 600 only. It is not orderable being supported for model upgrades only.
#8210	64 MB Optional Main Storage SIMM Provides 64 MB of additional memory. Model 600 only. It is not orderable being supported for upgrades only.
WORKSTATION CONTROLLERS	
Base MFIOP	Base Multifunction IOP (PCI) The base system includes this MFIOP, which has three PCI card slots, one high-speed PCI card slot used for the base system disk controller and which also drives one Integrated PC Server. The high-speed PCI card slot supports #2726, #2740, #2741, #2748 or #9728 Disk Unit Controller. One PCI card slot supports the base PCI WAN/Twinaxial IOA (#9720 or #9721). The remaining two PCI card slots support #2721, #2722, #2723, or #2724 PCI IOAs. Only one of these can be a LAN IOA (#2723 and #2724). Also, if a #2851 or #2854 Integrated PC Server is installed in slots C06 and C07, #2722 Twinax IOA is not allowed in slot C08 and LAN IOAs are not allowed in slots C08 or C10.

Base IOP	<p>Base Controller for PCI Integrated Expansion Unit #9329/#9330 Model 620 only.</p> <p>This comes as standard (no feature required) with #9329 and #9330 PCI Integrated Expansion Unit. In the #9329, it is identified as CCIN 2809. In the #9330, it is identified as CCIN 2824. It is used for attaching LAN, WAN, and workstation IOAs to the system and supports one slot reserved for a PCI disk controller and three low-speed slots. It also supports one PCI Integrated PC Server/Integrated Netfinity Server. The Base controller is located in slot E15.</p> <p>CCIN 2809. In the high-speed slot E16, only the #2726 or #2741 PCI Disk Unit controller is supported. In slots E12, E13, and E14, it supports any three (with a maximum of one LAN) of #2721, #2722, #2723/#9723, #2724/#9724, #2745, or #2746. When a #2865 Integrated Netfinity Server is installed in E19/E20, no LAN cards are allowed in E12, E13, and E14.</p> <p>CCIN 2824. In the high-speed slot E16, only the #2726, #2741 or #2748 PCI Disk Unit controller is supported. In slots E12, E13 and E14, it supports any three (with a maximum of two LAN cards) of #2721, #2722, #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751 or #2761. There is a maximum of one #2750, #2751 or #2761. There can be any combination of WAN and Twinax. When a #2865 Integrated Netfinity Server is installed in E19/E20, no LAN cards are allowed in E12, E13, and E14. Maximum: One.</p>
Base IOP	<p>Base Controller for Storage/PCI Expansion Tower #5065 This comes as standard (no feature required) with #5065 Storage/PCI Expansion Tower. It is installed in slot C03 and is identified as CCIN 2824. It is used for attaching LAN, WAN, and workstation IOAs through two high-speed slots and two low-speed slots.</p> <p>The #2718, #2729, or #2748 are supported in C04 only.</p> <p>The #2723/#9723, #2724/#9724, #2645, #2746, #2750, #2751, #2761, or #4800 are supported in C04 or C05.</p> <p>The #281X or #2838/#9738 are supported on C05 only.</p> <p>The #2723/#9723, #2724/#9724, #2745, #2746 #2750, #2751, or #2761 are supported in C01 or C02.</p> <p>Restrictions apply. Maximum: One</p>
#2629	<p>LAN/WAN/Workstation IOP (SPD) This supports up to three IOAs. Those supported are #2699, #6149, #6180, or #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions. For restrictions on placing #2629 in #5072, see the Model 640, 650 section. Model 620 only.</p> <p>SPD slots required: One Maximum: One per SPD slot</p>
#2722	<p>Twinaxial Workstation IOA (PCI) One eight-port attachment is provided to support 40 twinaxial devices.</p> <p>PCI slots required: One Maximum: Four in a Model 600; thirteen in a Model 620</p> <p>This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2746	<p>Twinaxial Workstation IOA (PCI) One eight-port attachment is provided to support 40 active twinaxial devices.</p> <p>PCI slots required: One (low-speed in system unit or #9329, high or low-speed in #9330 or #5065). Prerequisite: V4R4</p> <p>This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2809	<p>Feature Controller (PCI) This can be used for attaching additional LAN, WAN, and Workstation IOAs to the system. There is a maximum of one in the System Unit and two in the #9329 PCI Integrated Expansion Unit.</p> <p>In system unit slot C03, it supports PCI feature IOAs in slots C01, C02, C04 and C05 (if an Integrated Netfinity Server is installed, the server will control slots C04 and C05). In slot C01, the #2809 supports #2838/#9738 or #281x. In the C02 high-speed slot, it supports a #2718 or #2729. In C04 and C05, it supports one or two #2721 or #2722 or #2723 or #2724 or #2745 or #2746. If the #2838/#9738 is in C01, only the #2721 or #2745 may be installed in C04 and C05.</p> <p>In #9329 System Unit Expansion slots E05 or E10, it supports low-speed slots E02, E03, E04 or E07, E08, E09 and high-speed slots E06 or E11. In E06 or E11, the #2718, #2729, #2738/#9738, or #281x are supported.</p> <p>In the low-speed slots, it supports #2721, #2722, #2723/#9723, #2724/#9724, #2745, or #2746.</p> <p>This is a Customer Install Feature (CIF) on a Model 600 for an MES that includes CIF features only.</p>

#2824	<p>Feature Controller (PCI)</p> <p>This can be used for attaching additional LAN, WAN, and Workstation IOAs to the system. There is a maximum of one in the System Unit and two in the #9329/#9330 PCI Integrated Expansion Unit and two in the #5065 Storage/PCI Expansion Tower.</p> <p>In system unit slot C03, it supports PCI feature IOAs in slots C01, C02, C04, and C05 (if an Integrated Netfinity Server is installed, the server will control slots C04 and C05). In slot C01, the #2824 supports #2838/#9738 or #281x. In the C02 high-speed slot, it supports #2718, #2729, #2750, #2751, #2761, or #4800.</p> <p>In C04 and C05, it supports #2721, #2722, #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751 or #2761. If the #2838/#9738 is in C01, then only the #2721 or #2745 may be installed in C04 and C05.</p> <p>In #9329 System Unit Expansion slots E05 or E10, it supports high-speed slots E06 or E11 and low-speed slots E02, E03, E04 or E07, E08, E09. In E06 and E11, it supports #2718, #2729, #2838/#9738, #2750, #2751, #2761 #281x or #4800. In the low-speed slots, it supports #2721, #2722, #2723/#9723, #2724/#9724, #2746, #2745, #2750, #2751 or #2761.</p> <p>In #9330 System Unit Expansion slots E05 or E10, it supports high-speed slots E06 or E11 and low-speed slots E02, E03, E04 or E07, E08, E09. In E06 and E11, it supports #2718, #2729, #2838/#9738, #2745, #2746, #2750, #2751, #2761, #281x or #4800. In the low-speed slots, it supports #2721, #2722, #2723/#9723, #2724/#9724, #2746, #2745, #2750, #2751, or #2761.</p> <p>In #5065 Storage/PCI Expansion Tower slots C08 or C13, it supports two high-speed and two low-speed slots. The #2718, #2729 or #2748 are supported in C09 and C14 only. The #2838/#9738 and #281x are supported in C05, C10, and C15 only. The #2838/#9738, #2724/#9724, #2745, #2746, #2750, #2751, #2761 or #4800 are supported in C09, C10, C14, or C15. The #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751 or #2761 are supported in C06, C07, C11, or C12. Additional restrictions apply. Prerequisite: V4R4 This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#6050	<p>Twinaxial Workstation Controller (SPD)</p> <p>One eight-port attachment is provided to support up to 40 twinaxial devices. The #6050 is supported but not orderable. The new #6180 will be ordered on new systems. Model 620 only.</p> <p>SPD slots required: One</p> <p>Maximum: 59, but the total number of workstation controllers/adapters must not exceed this number.</p>
#6140	<p>Twinaxial Workstation Controller (SPD)</p> <p>One eight-port attachment to support up to 40 twinaxial devices. The #6140 is supported but not orderable. The new #6180 will be ordered on new systems. Model 620 only.</p> <p>SPD slots required: One</p> <p>Maximum: 59, but total number of workstation controllers/adapters must not exceed this number.</p>
#6141	<p>ASCII Workstation Controller (SPD)</p> <p>This workstation controller supports up to six ASCII devices. Model 620 only.</p> <p>SPD slots required: One</p> <p>Maximum: 59, but total number of workstation controllers/adapters must not exceed this number.</p>
#6142	<p>ASCII 12-Port Workstation Attachment (SPD)</p> <p>This attachment plugs into the #6141 ASCII Workstation Controller providing an additional twelve ports. Eighteen ASCII devices can now be supported. One #6142 can be attached per #6141. Model 620 only.</p> <p>SPD slots required: None</p>
#6180	<p>Twinaxial Workstation IOA (SPD)</p> <p>One eight-port attachment is provided to support up to 40 twinaxial devices. Model 620 only.</p> <p>Prerequisite: #2629</p> <p>IOA slots required: One in #2629</p> <p>Maximum: 59, but total number of workstation controllers/adapters must not exceed this number.</p>
#9720 #2720	<p>Base WAN/Twinaxial IOA (PCI)</p> <p>This combined twinaxial/communications adapter can be included as base in the 600 and 620 Models. It provides four ports supporting a maximum of 28 Twinaxial devices. It also provides a single communications line to support ECS. The #9720 is mutually exclusive with #9721/#9745 (see Communications). PCI slots required: One</p> <p>Maximum: One #9720 or one #2720 per system. The #2720 is not supported by the configurator and must be ordered manually.</p>

COMMUNICATIONS	
#2605	ISDN Basic Rate Adapter (SPD) Connects to #2623 to support one communications line connecting to an ISDN network. The ISDN Basic Rate Interface supported by #2605 contains two high-speed ISDN user channels. One or two #2605s may be attached to one #2623 with no other IOAs allowed on the #2623. Model 620 only. SPD slots required: None Prerequisite: #2623
#2609	EIA 232/V.24 Two-Line Adapter (SPD) Connects to #2623 to support two communications lines using Async, BSC, SDLC, or X.25 protocols. Two cables must be specified: #9023 EIA 232/V.24 20ft (6m) enhanced cable #9835 EIA 232/V.24 50ft (15m) enhanced cable #9022 EIA 232/V.24 20ft (6m) cable #9836 EIA 232/V.24 50ft (15m) cable #2609 is supported for migration. The newer #2699 should be ordered on new systems. Model 620 only. SPD slots required: None Prerequisite: #2623
#2610	X.21 Two-Line Adapter (SPD) Connects to #2623 to support two communications lines using X.21 or X.25 networks. Two cables must be specified: #9021 X.21 20ft (6m) cable #9839 X.21 50ft (15m) cable #2610 is supported for migration. The newer #2699 should be ordered on new systems. Model 620 only. SPD slots required: None Prerequisite: #2623
#2612	EIA 232/V.24 One-Line Adapter (SPD) Connects to #2623 to support one communication line using Async, BSC, SDLC, or X.25 protocols. One cable must be specified (see cable features for #2609). The #2612 is supported for migration. The newer #2699 should be ordered on new systems. Model 620 only. SPD slots required: None Prerequisite: #2623
#2613	V.35 One-Line Adapter (SPD) Connects to #2623 to support one V.35 communications line using either BSC, SDLC, or X.25 protocols. Each #2623 supports one V.35 line at speeds up to 640 Kbps, or two V.35 lines at speeds up to 512 Kbps, or three V.35 lines at speeds up to 384 Kbps. No other adapters allowed on #2623 when running T1/E1/J1. One cable must be specified: #9020 V.35 20ft (6m) cable #9838 V.35 50ft (15m) cable #2613 is supported for migration. The newer #2699 should be ordered on new systems. Model 620 only. SPD slots required: None Prerequisite: #2623
#2614	X.21 One-Line Adapter (SPD) Connects to #2623 to support one communications line using X.21 or X.25 networks. One cable must be specified (see cable features for #2610). The #2614 is supported for migration, but the newer #2699 should be ordered on new systems. Model 620 only. SPD slots required: None Prerequisite: #2623
#2620	Full Cryptographic Processor (SPD) This feature provides full cryptographic support for encrypting and decrypting data. Distribution of this feature is restricted by U.S. Government Export Regulations. In countries outside the USA and Canada, it can only be marketed to financial institutions and subsidiaries of U.S. companies. If this feature cannot be sold, #2628 should be sold in its place. Model 620 only. SPD slots required: One Maximum: One
#2623	Six-Line Communication Controller (SPD) This controller provides for attachment of a wide range of iSeries and AS/400e communications adapters. The following adapters are supported by the #2623: #2605, #2609, #2610, #2612, #2613, #2614, #2654, #2655, #2656, #2657, #2658, #2659, #6153, and #6173. The #2623 supports two #2605 ISDN adapters or up to three EIA 232/V.24, X.21, and V.35 adapters. The #2623 will only be orderable on Model 620 for customers purchasing the #2605 ISDN adapter. Otherwise, although #2623 continues to be supported, the newer #2699 should be ordered. Model 620 only. SPD slots required: One

#2628	Limited Cryptographic Processor (SPD) Provides the same function as the #2620 except that it does not include data encryption/decryption using commercial Data Masking Facility for data scrambling. Can be marketed to any non-U.S. company. Model 620 only. SPD slots required: One Maximum: One
#2629	LAN/WAN/Workstation IOP (SPD) This supports up to three IOAs. Those supported are the #2699, #6149, #6180 or #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions. For restrictions on placing the #2629 in the #5072, see 9.13, "9406 Models 640 and 650" on page 251. Model 620 only. SPD slots required: One Maximum: One per SPD slot
#2654	EIA 232/V.24 Two-Line Adapter 20ft Enhanced Cable Connects to the #2623 to support two communications lines supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 20-foot (6 meter) enhanced cables. The #2654 is supported for migration only. The newer #2699 should be ordered on new systems. Model 620 only. SPD slots required: None Prerequisite: #2623
#2655	EIA 232/V.24 Two-Line Adapter 20ft Cable Connects to the #2623 to support two communications lines supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 20-foot (6 meter) cables. The #2655 is supported for migration only. The newer #2699 should be ordered on new systems. Model 620 only. SPD slots required: None Prerequisite: #2623
#2656	X.21 Two-Line Adapter 20ft Cable Connects to the #2623 to support two communications lines to attach to a X.21 or X.25 network using 20-foot (6 meter) cables. The #2656 is supported for migration only. The newer #2699 should be ordered on new systems. Model 620 only. SPD slots required: None Prerequisite: #2623
#2657	EIA 232/V.24 Two-Line Adapter 50ft Enhanced Cable Connects to the #2623 to support two communications lines supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 50-foot (15 meter) enhanced cables. The #2657 is supported for migration only. The newer #2699 should be ordered on new systems. Model 620 only. SPD slots required: None Prerequisite: #2623
#2658	EIA 232/V.24 Two-Line Adapter 50ft Cable Connects to the #2623 to support two communications lines to supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 50-foot (15 meter) cables. The #2658 is supported for migration only. The newer #2699 should be ordered on new systems. Model 620 only. SPD slots required: None Prerequisite: #2623
#2659	X.21 Two-Line Adapter 50ft Cable Connects to the #2623 to support two communications lines to attach to a X.21 or X.25 network using 50-foot (15 meter) cables. The #2659 is supported for migration only. The newer #2699 should be ordered on new systems. Model 620 only. SPD slots required: None Prerequisite: #2623
#2664	Integrated Fax Adapter (SPD) Provides two ports capable of transmission and receipt of facsimile data to or from a Group 3 capable Fax machine, another iSeries or AS/400e with the #2664, or PCs with appropriately programmed Fax adapters. Model 620 only. SPD slots required: One Maximum: 32

#2666	<p>High-Speed Communications Adapter (SPD)</p> <p>Provides one communications line capable of T1/E1 (1.544/2.048 Mbps) speeds.</p> <p>One of the following cables must be specified:</p> <ul style="list-style-type: none"> #9879 20ft (6m) V.35 CCITT cable #9880 80ft (24m) V.35 CCITT cable #9882 20ft (6m) RS449/V.36 CCITT cable #9883 80ft (24m) RS449/V.36 CCITT cable* #9884 150ft (45m) RS449/V.36 CCITT cable* #9885 20ft (6m) X.21 CCITT cable <p>* These cables will only be allowed when the customer's modem supports Looped Clocking Mode. The #2666 is supported but not orderable on Model 620. The newer #2699 should be ordered in its place. Model 620 only.</p> <p>SPD slots required: One</p> <p>Maximum: Eight</p>
#2699	<p>Two-Line WAN IOA (SPD)</p> <p>Supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached:</p> <ul style="list-style-type: none"> #0328 Operations Console 20ft (6m) Cable* #0329 V.24/EIA232 80ft (24m) cable #0330 V.24/EIA232 20ft (6m) cable #0331 V.24/EIA232 50ft (15m) cable #0332 V.24/EIA232 20ft (6m) enhanced cable #0333 V.24/EIA232 50ft (15m) enhanced cable #0334 V.24/EIA232 80ft (24m) enhanced cable #0335 V.36/EIA449 20ft (6m) cable #0336 V.36/EIA449 50ft (15m) cable #0337 V.36/EIA449 150ft (45m) cable #0338 V.35 20ft (6m) cable #0339 V.35 50ft (15m) cable #0340 V.35 80ft (24m) cable #0341 X.21 20ft (6m) cable #0342 X.21 50ft (15m) cable <p>* This feature is used to support the Operations Console function for secondary partitions when Logical Partitioning (LPAR) is implemented (V4R4 and higher). A maximum of one #0328 cable is allowed per #2699.</p> <p>There are some restrictions on communications using the #2699. For full details, see "Comm Restrictions" on page 187.</p> <p>Prerequisite: #2629</p> <p>IOA slots required: One on #2629</p>
#2721	<p>PCI Two-Line WAN IOA (PCI)</p> <p>Supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft (15m) enhanced PCI cable #0352 V.24/EIA232 80ft (24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 150ft (45m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0365 V.24/EIA232 80ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI Cable* <p>* This feature is used to support the Operations Console function on CPU Models supporting Logical Partitioning (LPAR) (V4R4 and higher). A maximum of one #0367 cable is allowed per #2721.</p> <p>There are some restrictions on communications using the #2721. For full details, see "Comm Restrictions" on page 187.</p> <p>PCI slots required: One</p> <p>This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>

#2745	<p>PCI Two-Line WAN IOA (PCI) Requires V4R3. Supports up to two multiple protocol communications ports when one or two (in any combination) of the cables listed below are attached:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft (15m) enhanced PCI cable #0352 V.24/EIA232 80ft (24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 150ft (45m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0365 V.24/EIA232 80ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI Cable* <p>*This feature is used to support the Operations Console function on CPU Models supporting Logical Partitioning (LPAR) (V4R4 and higher). A maximum of one #0367 cable is allowed per #2745. For restrictions on communications using #2745, see "Comm Restrictions" on page 187. PCI slots required: One (low-speed) This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2750	<p>PCI ISDN BRI U Adapter (only available in the United States and Canada) The #2750 is a four-port (8 channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #2750 is the "U"-bus (2 wire) version of the ISDN BRI PCI card. The #2750 feature supports the following protocols:</p> <ul style="list-style-type: none"> PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2750 feature. For configuration purposes, each #2750 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex. Requirements: This feature requires country certification or homologation. Full sized PCI card slot. Maximum: One per IOP Prerequisite: The #2824 and V4R4 with PTF MF22528 (or supersede) or Cumulative PTF Package C9313440 or later. This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2751	<p>PCI ISDN BRI S/T IOA (PCI) The #2751 is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #2751 is the "S/T"-bus (four wire) version of the ISDN BRI PCI card. (This requires a Network Terminating device in the circuit. In the United States and Canada this must be provided by the customer. In other countries it is most likely provided by the telephone company.) #2751 feature supports the following protocols:</p> <ul style="list-style-type: none"> PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2751 feature. For configuration purposes, each #2751 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex. Requirements: This feature requires country certification or homologation. Full sized PCI card slot. Maximum: One per IOP Prerequisite: The #2824 and V4R4 with PTF MF22528 (or supersede) or Cumulative PTF Package C9313440 or later. This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>

#2761	<p>PCI Integrated Analog Modem (PCI)</p> <p>The #2761 allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). The #2761 runs the following protocols without the need for an external modem:</p> <ul style="list-style-type: none"> SLIP/PPP uses V.90, so max line speed is 56K bps SDLC uses V.34, so max line speed is 33.6K bps Fax uses V.17 to achieve a 14.4K bps max line speed <p>An asynchronous line description is required for Fax and can only be used for Fax. ECS line not supported. Eight 30-foot (9.3 m) phone cables are shipped with each #2761. To the iSeries or AS/400e server, the #2761 appears like a single IOA with eight individual resources available. For configuration purposes, each #2761 counts as eight communications lines. Prerequisites: The #2824 and OS/400 V4R4 and PTF MF22528, or Cumulative (CUM) PTF package C9313440 or later. Requirements: This feature requires country certification or homologation.</p> <p>Full sized PCI card slot.</p> <p>Maximum: One per IOP</p> <p>Prerequisite: The #2824 and V4R4 with PTF MF22528 (or supersede) or Cumulative PTF Package C9313440 or later</p> <p>This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2809	<p>Feature Controller (PCI)</p> <p>This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details, see "WORKSTATION CONTROLLERS" on page 254. There are some restrictions on communications using #2809. For full details, see the #2699 description in the Model 640, 650 section. Maximum: One in the System Unit, two in the #9329 PCI Integrated Expansion Unit.</p> <p>This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2824	<p>Feature Controller (PCI)</p> <p>This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details see "WORKSTATION CONTROLLERS" on page 254. There are some restrictions on communications using #2824. For restrictions, see the end of communication section.</p> <p>This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#4800	<p>PCI Crypto Coprocessor (PCI)</p> <p>This feature is a hardware cryptography solution based on the IBM 4758 card. It is a half length PCI card. Since the feature is temperature sensitive, it will be shipped separately in specially designed, insulated packaging.</p> <p>Maximum: One per IOP. Prerequisites: #2824 and V4R4</p> <p>This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#6153	<p>V.35 One-Line Adapter 20ft Cable</p> <p>Connects to #2623 to support one communications line supporting V.35 protocol using a 20-foot (6 meter) cable. The #6153 is supported for migration only. The newer #2699 should be ordered on new systems. Model 620 only.</p> <p>SPD slots required: None</p> <p>Prerequisite: #2623</p>
#6173	<p>V.35 One-Line Adapter 50ft Cable</p> <p>Connects to #2623 to support one communications line supporting V.35 protocol using a 50-foot (15 meter) cable. The #6173 is supported for migration only. The newer #2699 should be ordered on new systems. Model 620 only.</p> <p>SPD slots required: None</p> <p>Prerequisite: #2623</p>
#9720 #2720	<p>Base PCI WAN/Twinaxial IOA (PCI)</p> <p>This combined twinax/communication adapter can be provided on the base system and supports a single communications line intended for ECS. One cable must be specified:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft (15m) enhanced PCI cable #0352 V.24/EIA232 80ft (24m) enhanced PCI cable <p>This adapter also supports twinax workstations (see Workstation Controller Section).</p> <p>PCI card slots required: One</p> <p>Maximum: One #9720 or one #2720 per system. The #2720 is not supported by the configurator and must be ordered manually. The #9720 is mutually exclusive with #9721, #9745, and #2720.</p>

#9721	<p>Base PCI Two-Line WAN IOA (PCI)</p> <p>This two line communications adapter supports ECS and Client Access Console.</p> <p>Select one of the cables for ECS:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft (15m) enhanced PCI cable #0352 V.24/EIA232 80ft (24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 150ft (45m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0362 20ft (6m) Client Access Console Cable * #0365 V24/EIA232 80ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI Cable ** <p>* This feature must be ordered for Client Access Console.</p> <p>** This feature is used to support the Operations Console function on V4R3.</p> <p>To support the Remote Control Panel function, the Remote Control Panel Cable #0381 can be ordered as an option. This cable does not attach to a communication port. PCI card slots required: One</p> <p>Maximum: One</p> <p>Mutually exclusive with #9720</p>
#9745	<p>Base PCI Two-Line WAN IOA (PCI)</p> <p>Requires V4R3.</p> <p>This two line communications adapter supports ECS and Client Access Console or Operations Console.</p> <p>Select one of the cables for ECS:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft (15m) enhanced PCI cable #0352 V.24/EIA232 80ft (24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 150ft (45m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0362 20ft (6m) Client Access Console Cable * #0365 V24/EIA232 80ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI Cable ** <p>*This feature must be ordered for Client Access Console</p> <p>**This feature is used to support the Operations Console function on V4R3.</p> <p>To support the Remote Control Panel function, the #0381 Remote Control Panel Cable can be ordered as an option. This cable does not attach to a communications port.</p> <p>PCI card slots required: One</p> <p>Maximum: One</p> <p>Mutually exclusive with #9720 and #9721.</p>
Comm Restrictions	Refer to the 7xx "Comm Restrictions" on page 187.
LANS/ATM	
#2617	<p>Ethernet/IEEE 802.3 Adapter/HP (SPD)</p> <p>Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. An AUI Ethernet cable must be ordered separately. The #2617 is supported but the newer #6181 should be ordered on new systems. Model 620 only.</p> <p>SPD slots required: One</p>

#2618	Fiber Distributed Data Interface Adapter (SPD) Provides one interface to connect an iSeries or AS/400e to an FDDI LAN, which complies with ANSI X3T9.5 and ISO 9314 standards. Consists of a card, a wrap connector, and Licensed Internal Code which supplies IEEE 802.2 Logical Link Control (LLC), ANSI X3T9.5/ISO 9314 Media Access Control (MAC) functions, and ANSI X3T9.5 Station Management (SMT) functions. A multi-node (62.5/125 micron) FDDI optical fiber jumper cable to connect the adapter to the FDDI ring must be ordered separately. Model 620 only. SPD slots required: One
#2619	16/4 Mbps Token Ring Adapter/HP (SPD) Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions and an external 8ft (2.4m) cable. The #2619 is supported, but the newer #6149 should be ordered on new systems. Model 620 only. SPD slots required: One
#2626	16/4 Mbps Token Ring Adapter/A (SPD) Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions and an external 8-foot (2.4m) cable. The #2626 is supported, but the newer #6149 should be ordered on new systems. Model 620 only. SPD slots required: One
#2629	LAN/WAN/Workstation IOP (SPD) This supports up to three IOAs. Those supported are the #2699, #6149, #6180 or #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions. For restrictions on placing the #2629 in #5072, see 9.13, "9406 Models 640 and 650" on page 251. Model 620 only. SPD slots required: One Maximum: One per SPD slot
#2663	I/O Attachment Processor (SPD) This I/O processor is required to attach #2668 Wireless LAN Adapter. The #2663 and #2668 are integrated in a single hardware package to operate as a unit. Prerequisite for #2668. Model 620 only. SPD slots required: One (with #2668)
#2665	Shielded Twisted-Pair Distributed Data Interface Adapter (SPD) Provides one interface to connect to an FDDI LAN, which is constructed of IBM Cabling System Type 1, 2, 6, or 9 shielded twisted-pair wiring. It consists of a card, a wrap connector, and Licensed Internal Code which supplies IEEE 802.2 Logical Link Control (LLC), ANSI X3T9.5/ISO 9314 Media Access Control (MAC) functions and ANSI X3T9.5 Station Management (SMT) functions. IBM FDDI copper jumper cables to connect the adapter to the FDDI ring must be ordered separately. Model 620 only. SPD slots required: One
#2668	Wireless LAN Adapter (SPD) Provides wireless connectivity to workstations or other systems connected to a wireless LAN network. One of the following antenna cables must be specified: #9814 20ft (6m) antenna cable #9815 50ft (15m) antenna cable One of the following antenna must be specified: #9889 YAGI Directional Antenna #9890 Omni Directional Antenna (360 degree) #9891 Hemispherical Antenna (180 degree) #9892 Directional Antenna (90 degree) Model 620 only. SPD slots required: One (with #2663) Prerequisite: #2663
#2723 #9723	PCI Ethernet IOA (PCI) Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. This Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. Has a RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B. PCI slots required: One. The #9723 is a base LAN feature. This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.

#2724 #9724	PCI 16/4 Mbps Token Ring IOA (PCI) Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions and an external 8-foot (2.4m) cable. Alternatively a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. This IOA is capable of operating in half or full duplex mode. PCI slots required: One. The #9724 is a base LAN feature. This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.
#2809	LAN/WAN/Workstation IOP (PCI) This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details, see "WORKSTATION CONTROLLERS" on page 254. Maximum: One in the base System Unit, two in the #9329 PCI Integrated Expansion Unit. This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.
#2824	Feature Controller (PCI) This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details, refer to the "WORKSTATION CONTROLLERS" on page 254. Maximum: One in the System Unit, two in the #9329/#9330 PCI Integrated Expansion Unit, two in #5065 Storage/PCI Expansion Tower. This is a Customer Install Feature (CIF) on a Model 600 and #5065 for an MES that only includes CIF features.
#2810	LAN/WAN IOP (SPD) This I/O processor is required to attach one #2838 PCI 100/10 Mbps Ethernet IOA or #2811/#2812/#2815/#2816/#2818/#2819 PCI ATM IOA. Prerequisite for these preceding features, although they can alternatively be located directly in an appropriate PCI slot. Model 620 only. SPD slots required: One
#2811	PCI 25 Mbps UTP ATM IOA (PCI or SPD) Provides attachment into an Asynchronous Transfer Mode (ATM) network using Unshielded Twisted Pair (UTP) cabling. The #2811 will typically be used where 25 Mbps speed is required over distances of less than 100 meters. Requires OS/400 V4R2. SPD slots required: One (with #2810) or PCI slots required: One Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot) This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.
#2812	PCI 45 Mbps Coax T3/DS3 ATM IOA (PCI or SPD) Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the T3/DS-3 interface. The #2812 will typically be used where 45 Mbps speed is required over distances of less than 1000 meters. Requires OS/400 V4R2. SPD slots required: One (with #2810) or PCI slots required: One Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot) This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.
#2815	PCI 155 Mbps UTP OC3 ATM IOA (PCI or SPD) Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2815 will typically be used where 155 Mbps speed is required over distances of less than 100 meters. Requires OS/400 V4R2. SPD slots required: One (with #2810) or PCI slots required: One Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot) This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.
#2816	PCI 155 Mbps MMF ATM IOA (PCI or SPD) Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2816 will typically be used where 155 Mbps speed is required over distances of less than 2 kilometers. Requires OS/400 V4R2. SPD slots required: One (with #2810) or PCI slots required: One Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot). This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.

#2818	<p>PCI 155 Mbps SMF OC3 ATM IOA (PCI or SPD) Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Single Mode Fiber (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment, but can be used for local area switches. The #2818 will typically be used where 155 Mbps speed is required over distances of from 16 to 40 kilometers. Requires OS/400 V4R2. SPD slots required: One (with #2810) or PCI slots required: One Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot). This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2819	<p>PCI 34 Mbps Coax E3 ATM IOA (PCI or SPD) Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the E3 interface. The #2819 will typically be used where 34 Mbps speed is required over distances of less than 1000 meters. Requires OS/400 V4R2. SPD slots required: One (with #2810) or PCI slots required: One Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot). This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2838 #9738	<p>PCI 100/10 Mbps Ethernet IOA (PCI or SPD) Provides attachment to standard 100 Mbps high-speed Ethernet LANs and also allows attachment to existing 10 Mbps Ethernet LANs. The Ethernet /IEEE 802.3 IOA is capable of operating in half or full duplex mode. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media. Cabling for 10 Mbps must be CAT-3 or CAT-5, cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. SPD slots required: One (with #2810); three (with #6617/#6618) or PCI slots required: One Prerequisite: #2809/#2824 or #2854/#2865 (when located in PCI slot); #2810 or #6617/#6618 (when located in SPD slot). This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2851	<p>PCI Integrated PC Server (PCI) Contains a 166 MHz Pentium Processor, four main storage slots, and two LAN IOA slots for high performance serving to LAN attached PCs. Comes with 32MB of main storage and supports up to three of the following main storage features: #2860 16 MB Integrated PC Server Memory #2861 32 MB Integrated PC Server Memory Either one or two of the following LAN IOAs are supported: #2723 PCI Ethernet IOA #2724 PCI Token Ring IOA PCI slots required: Two in reserved positions in the base System Unit or in the #9329 PCI Integrated Expansion Unit This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2854	<p>PCI Integrated PC Server (PCI) Contains a 200 MHz Pentium Processor, four main storage slots, and two LAN IOA slots for high performance serving to LAN attached PCs. Between one and four of the following main storage features must also be ordered: #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory Either one or two of the following LAN IOAs are supported: #2723 PCI Ethernet IOA #2724 PCI Token Ring IOA #2838 PCI 100/10 Mbps Ethernet IOA (co-requisite #0222 required if installed on #2854 IPCS) Only one of the IOAs can be #2838. The #2854 comes with a special cable that provides industry standard keyboard, mouse, serial, and parallel connection. If running Windows NT on the #2854, then: #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard/Mouse for Windows NT, the default in the USA. A display unit must be connected to the IPCS to support Windows NT. When running OS/2 on the #2854, then: #0325 and #1700 are not allowed. When running Novell Netware on the #2854, then: #0325 and #1700 are not allowed. A maximum of 256 MB IOP memory is supported. For country-specific keyboard/mouse and display support, refer to the Web site at: http://www.ibm.com/eserver/series/windowsintegration/ Requires OS/400 V4R2. PCI slots required: Two in reserved positions in the base System Unit or in the #9329 PCI Integrated Expansion Unit. This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>

#2865	<p>Integrated Netfinity Server for AS/400 (PCI)</p> <p>Requires OS/400 V4R2 with Cumulative PTF Package C8342420 or V4R3 with Cumulative PTF Package C9349430. Contains a 333 MHz Pentium Processor, four main storage slots, and two LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory #2867 256 MB Integrated PC Server Memory <p>Up to two of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of one LAN IOA can be a #2838.</p> <ul style="list-style-type: none"> #2723 PCI Ethernet IOA #2724 PCI Token Ring IOA #2838 PCI 100/10 Mbps Ethernet IOA (Specify feature #0222 is required) <p>If running Windows NT on the #2865, then:</p> <ul style="list-style-type: none"> A minimum of 64 MB IOP memory is required. #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT, the default in the USA. A display is required to support Windows NT on the IPCS. <p>For country-specific keyboard or mouse and display support, go to the site at: http://www.ibm.com/eserver/series/windowsintegration/</p> <p>When running OS/2 on the #2865, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. A maximum of 512 MB IOP memory is supported. <p>When running Novell Netware on the #2865, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. A maximum of 256 MB IOP memory is supported. <p>PCI slots required: Two in reserved positions in the base System Unit or in the #9329 PCI Integrated Expansion Unit. This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#6149	<p>16/4 Mbps Token Ring IOA (SPD)</p> <p>Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an IOA card, internal code (supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC)), and an external 8-foot (2.4m) cable. Alternatively a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. Can operate in half or full duplex mode. Model 620 only. SPD slots required: None</p> <p>Prerequisite: #2629 or #6616</p> <p>#2629 or #6616 slots required: One</p>
#6181	<p>Ethernet/IEEE 802.3 IOA (SPD)</p> <p>Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus 802.2 Logical Link Control (LLC) functions. Has a RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. Cabling must meet or exceed Industry Standard EIA/TIA T568B.</p> <p>The following cable can be ordered if the customer is choosing IBM AUI cabling.</p> <ul style="list-style-type: none"> #9025 Ethernet Cable (3 meter AUI) <p>If the customer is not choosing IBM AUI cabling, AUI Ethernet or RJ45 twisted pair cable must be ordered separately.</p> <p>The #6181 is capable of operating in half or full duplex mode. Model 620 only.</p> <p>SPD slots required: None</p> <p>Prerequisite: #2629 or #6616</p> <p>#2629 or #6616 slots required: One</p>
IPCS	<p>Integrated PC Server (formerly known as FSIOP) (SPD)</p> <p>Contains a 66 MHz 486 Processor, main storage, and ability to attach to one or two LANs for high performance serving to LAN attached PCs. The following initial order configurations can be upgraded using the #6509 and #6520:</p>
#6516	16 MB One-Port Integrated PC Server
#6517	32 MB One-Port Integrated PC Server
#6518	48 MB One-Port Integrated PC Server
#6519	64 MB One-Port Integrated PC Server
#6526	16 MB Two-Port Integrated PC Server
#6527	32 MB Two-Port Integrated PC Server
#6528	48 MB Two-Port Integrated PC Server
#6529	64 MB Two-Port Integrated PC Server

IPCS <i>continued</i>	<p>The following cables need to be specified depending on the LAN being attached to:</p> <p>#9024 Token Ring Cable (2.4m)</p> <p>#9025 Ethernet Cable (3m AUI)</p> <p>Model 620 only.</p> <p>SPD slots required: Two contiguous slots</p>
#6509	<p>Additional 16 MB for Integrated PC Server</p> <p>This is used to increase the memory on an installed Integrated PC Server up to the maximum of 64 MB.</p>
#6520	<p>Upgrade One-Port Integrated PC Server to Two Port Integrated PC Server</p> <p>This cannot be used with a Two-Port Integrated PC Server. The #9024 or #9025 cables can be ordered with #6520 depending upon the LAN to be attached to.</p>
#6616	<p>Integrated PC Server (SPD)</p> <p>Contains a 166MHz Pentium Processor, two main storage slots, and two LAN IOA slots for high performance serving to LAN attached PCs. The two main storage slots can each contain one of the following features, giving a maximum of 256 MB. At least one main storage feature is required:</p> <p>#2861 32 MB Integrated PC Server Memory</p> <p>#2862 128 MB Integrated PC Server Memory</p> <p>Either one or two of the following LAN IOAs are supported:</p> <p>#6149 16/4 Mbps Token Ring IOA</p> <p>#6181 Ethernet/IEEE 802.3 IOA</p> <p>Model 620 only.</p> <p>SPD slots required: Two contiguous slots</p>
#6617	<p>Integrated PC Server (SPD)</p> <p>Contains a 200 MHz Pentium Processor, four main storage slots, and three LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 512 MB. At least one main storage feature is required:</p> <p>#2861 32 MB Integrated PC Server Memory</p> <p>#2862 128 MB Integrated PC Server Memory</p> <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838.</p> <p>#2723 PCI Ethernet IOA</p> <p>#2724 PCI Token Ring IOA</p> <p>#2838 PCI 100/10 Mbps Ethernet IOA</p> <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6617. The #0222 100/10 Mbps Ethernet on IPCS is required for each #2838 attached to the #6617 Integrated PC Server. If running Windows NT on the #6617, then:</p> <p>#0325 Integrated PC Server Extension Cable for Windows NT is required.</p> <p>#1700 Integrated PC Server Keyboard or Mouse for Windows NT, the default in the USA.</p> <p>A display unit is required to support Windows NT on the IPCS.</p> <p>For country-specific keyboard or mouse and display support, see the Web site at: http://www.ibm.com/eserver/series/windowsintegration/</p> <p>When running OS/2 on the #6617, then:</p> <p>#0325 and #1700 are not allowed.</p> <p>Only two of the LAN IOA slots can be used, and only one can contain a #2838.</p> <p>When running Novell Netware on the #6617, then:</p> <p>#0325 and #1700 are not allowed.</p> <p>Only two of the LAN IOA slots can be used, and only one can contain a #2838.</p> <p>A maximum of 256 MB IOP memory is supported.</p> <p>Requires OS/400 V4R2. Model 620 only.</p> <p>SPD slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack.</p>

#6618	<p>Integrated Netfinity Server for AS/400 (SPD)</p> <p>Requires OS/400 V4R2 with Cumulative PTF Package C8342420 or V4R3 with Cumulative PTF Package C9349430. Model 620 only.</p> <p>Requires V4R3.</p> <p>Contains a 333 MHz Pentium Processor, four main storage slots, and three LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory #2867 256 MB Integrated PC Server Memory <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838.</p> <ul style="list-style-type: none"> #2723 PCI Ethernet IOA #2724 PCI Token Ring IOA #2838 PCI 100/10 Mbps Ethernet IOA (Specify feature #0222 is required) <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6618. The #0222 100/10 Mbps Ethernet on IPCS is required for each #2838 attached to the #6618 Integrated PC Server. If running Windows NT on the #6618, then:</p> <ul style="list-style-type: none"> A minimum of 64 MB IOP memory is required. #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT. Default in the USA. A display is required to support Windows NT on the IPCS. <p>For country-specific keyboard or mouse and display support, refer to the site at: http://www.ibm.com/eserver/iseriess/windowsintegration/</p> <p>When running OS/2 on the #6618, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838. A maximum of 512 MB IOP memory is supported. <p>When running Novell Netware on the #6618, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838. A maximum of 256 MB IOP memory is supported. <p>SPD slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack.</p>
DISK UNITS	
#1312	<p>One-byte 1.03 GB Disk Unit Conversion Kit</p> <p>Provides the hardware for migrating one 1.03 GB one-byte SCSI disk unit. Supported only in System Unit or #9364 System Unit Expansion. One #1312 will migrate #1203, #1602, #6601, #6602, #6701, #6802, #9601, or #9602 disk. Two #1312 will migrate a #2802, #6612, #6812, #8612, or #9802 dual disks.</p>
#1313	<p>One-byte 1.96 GB Disk Unit Conversion Kit</p> <p>Provides the hardware for migrating one 1.96 GB one-byte SCSI disk unit. Supported only in System Unit or #9364 System Unit Expansion. One #1313 will migrate a #1204, #1603 or #6603 disks. Two #1313 will migrate #6613, #7613, or #8613 dual disks.</p>
#1322	<p>Two-byte 1.03 GB Disk Unit Conversion Kit</p> <p>Provides the hardware for migrating one 1.03 GB two-byte SCSI disk unit. Supported only in System Unit or #9364 System Unit Expansion. One #1322 will migrate a #1211, #1213, #4211, #4652, #6652, or #9652 disk.</p>
#1323	<p>Two-byte 1.96 GB Disk Unit Conversion Kit</p> <p>Provides the hardware for migrating one 1.96 GB two-byte SCSI disk unit. Supported only in System Unit or #9364 System Unit Expansion. One #1323 will migrate a #1212, #1214, #4212, #4650, #6650, or #8650 disk.</p>
#1325	<p>Two-byte 1.03 GB Disk Unit Conversion Kit</p> <p>Provides the hardware for migrating one 1.03 GB two-byte SCSI disk unit. Supported only in the System Unit or #9364 System Unit Expansion. One #1325 will migrate a #1205, #4205, #4605, #6605, #9605, or #9705 disk.</p>
#1326	<p>Two-byte 1.96 GB Disk Unit Conversion Kit</p> <p>Provides the hardware for migrating one 1.96 GB two-byte SCSI disk unit. Supported only in the System Unit or #9364 System Unit Expansion. One #1326 will migrate a #1206, #4206, #4606, #6606, #8606, #8706, or #9606 disk.</p>
#1327	<p>Two-byte 4.19 GB Disk Unit Conversion Kit</p> <p>Provides the hardware for migrating one 4.19 GB two-byte SCSI disk unit. If located in a 3xx/5xx Model, the #1327 will be used. In a 2xx/4xx Model, the #1337 will be used. Supported only in the System Unit or #9364 System Unit Expansion. One #1327 will migrate a #1207, #4207, #4607, #6607, #7607, #8607, or #8707 disk.</p>

#1333	Two-byte 8.58 GB Disk Unit Conversion Kit (Ultra SCSI) Provides the hardware for migrating one 8.58 GB two-byte SCSI disk unit. Supported only in the System Unit or #9364 System Unit Expansion. One #1333 will migrate a #6713, #7713, or #8713 disk.
#1334	Two-byte 17.54 GB Disk Unit Conversion Kit (Ultra SCSI) Provides the hardware for migrating one 17.54 GB two-byte SCSI disk unit. Supported only in the System Unit or #9364 System Unit Expansion. One #1334 will migrate a #6714 disk. Requires OS/400 V4R2. Integrated hardware disk compression supported at V4R3.
#1336	Two-byte 1.96 GB Disk Unit Conversion Kit (Ultra SCSI) Provides the hardware for migrating one 1.96 GB two-byte SCSI disk unit. Supported only in the System Unit or #9364 System Unit Expansion. One #1336 will migrate a #6906 disk.
#1337	Two-byte 4.19 GB Disk Unit Conversion Kit (Ultra SCSI) Provides the hardware for migrating one 4.19 GB two-byte SCSI disk unit. If located in a 3xx/5xx Model, #1327 will be used. In a 2xx/4xx model, #1337 will be used. Supported only in the System Unit or #9364 System Unit Expansion. One will migrate a #6607, #6907, or #7607 disk.
#1602	One-byte 1.03 GB Disk Unit Conversion Kit Provides the hardware for migrating one 1.03 GB one-byte SCSI disk unit. Supported only in #5052 or #5058 Storage Expansion Unit positions 1 through 7. Dual disk units requires two of these kits. Model 620 only. Can be placed in system unit with purchase of the #1312 migration kit.
#1603	One-byte 1.96 GB Disk Unit Conversion Kit Provides the hardware for migrating one 1.96 GB one-byte SCSI disk unit. Supported only in #5052 or #5058 Storage Expansion Units positions 1 through 7. Dual disk units require two of these kits. Model 620 only. Can be placed in system unit with purchase of the #1313 migration unit.
#4308	4.19 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in #5065/#5066 only. Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4314	8.58 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in #5065/#5066 only. Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4317	8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra2 SCSI) Supported in #5065/#5066 only. Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4318	17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra2 SCSI) Supported in #5065/#5066 only. Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4324	17.54 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in #5065/#5066 only. Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4331	1.6 GB Read Cache Device Supported in the #5065/#5066 only. This feature provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the disk controller #2748. Prerequisites: OS/400 V4R4 and the #2748 PCI RAID Disk Unit Controller. One DASD Slot 1.6-inch. This is a Customer Install Feature (CIF). Maximum: one per #2748 IOP.
#6605	1.03 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. This feature is supported for migration only. Supported only in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. Model 620 only.
#6606	1.96 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. This feature is supported for migration only. Supported only in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. Model 620 only.

#6607	4.19 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. This feature is supported for migration only. Supported only in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. Model 620 only. RPQ 843977 and RPQ 843978 can be used for migration to 6xx system units and #5072, #5073, #5081 and #9364 Storage Expansion Units and Towers.
#6650	1.96 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. This feature is supported for migration only. Supported only in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. Model 620 only.
#6652	1.03 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. This feature is supported for migration only. Supported only in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. Model 620 only.
#6713	8.58 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported only in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. For best performance, use attached to the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083. Model 620 only. RPQ 843977 and RPQ 843978 can be used for migration to 6xx system units and #5072, #5073, #5081 and #9364 Storage Expansion Units and Towers.
#6714	17.54 GB Additional Two-Byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported only in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Expansion Towers. For best performance, use attached to the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083. Integrated hardware disk compression is not supported. IBM intends to provide disk compression for this device in a future release of OS/400. Requires OS/200 V4R2. Model 620 only. RPQ 843977 and RPQ 843978 can be used for migration to 6xx system units and #5072, #5073 and #9364 Storage Expansion Units and Towers.
#6717	8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083. Not supported on #6502/#6512/#6530. Model 620 only. Supported in the #5065 and #5066 Towers through RPQ 847102. Prerequisite: OS/400 V4R3
#6718	17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083. Not supported on #6502/#6512/#6530. Model 620 only. Supported in the #5065 and #5066 Towers through RPQ 847102. Prerequisite: OS/400 V4R4
#6806	1.96 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. Supported only in System Unit or #9364 System Unit Expansion. This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.
#6807	4.19 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. Supported only in System Unit or #9364 System Unit Expansion. This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.
#6813	8.58 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported only in System Unit or #9364 System Unit Expansion. This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.
#6817	8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported only in System Unit or #9364 System Unit Expansion. Not supported on #9364 with #6502/#6512/#6530. Supported in the #5065 and #5066 Towers through RPQ 847102. Prerequisite: OS/400 V4R3.

#6818	17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported only in System Unit or #9364 System Unit Expansion. Not supported on #9364 with #6502/#6512/#6530. Supported in the #5065 and #5066 Towers through RPQ 847102. Prerequisite: OS/400 V4R4.
#6824	17.54 GB Additional Two-Byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported only in System Unit or the #9364 System Unit Expansion. Requires OS/400 V4R2. Integrated hardware disk compression is supported Integrated disk compression for #6824/#8824 is supported at V4R4. This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.
#6831	1.6 GB Read Cache Device This feature provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the disk controller #2748. Prerequisites: OS/400 V4R4 and #2748 PCI RAID Disk Unit Controller. One DASD Slot 1.6-inches. Maximum: One per #2748 IOP.
#6906	1.96 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. Supported only in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. For best performance, use attached to the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083. Model 620 only.
#6907	4.19 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. Supported only in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. For best performance, use attached to the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083. Model 620 only. RPQ 843977 and RPQ 843978 can be used for migration to 6xx system units and #5072, #5073, #5081 and #9364 Storage Expansion Units and Towers.
#8813	8.58 GB Optional Base Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of #9707.
#8817	8.58 GB Optional Base Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of #9707. Supported only in System Unit or #9364 System Unit Expansion. Not supported on #9364 with #6502/#6512/#6530. Prerequisite: V4R3 OS/400.
#8818	17.54 GB Optional Base Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity as the base disk unit in place of #9707. Supported only in System Unit or #9364 System Unit Expansion. Not supported on #9364 with #6502/#6512/#6530. Prerequisite: V4R4 OS/400.
#8824	17.54 GB Optional Base Two-Byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity as the base disk unit in place of #9707. Integrated hardware disk compression is supported at V4R4. Requires OS/400 V4R2.
#9707	4.19 GB Base Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 4.19 GB capacity as the base disk unit. The #9707 is included with new Model 600 or 620 orders and with upgrades to these Models from CISC Models.
RPQ 843977	RPQ 843977 is for customers who want to move 4/8/17 GB disk units from one AS/400 to another AS/400. The RPQ provides hardware for mounting one disk unit. The hardware in this RPQ allows for mounting device types #6607/#6907 (4.194 GB unit), #6713 (8.58 GB unit), and #6714 (17.54 GB unit) in the system unit of a Model 640/650/S30/S40/730/740 and the disk expansion features #5052/#5055/#5057/#5058/#5070/#5071/#5072/#5073/#5080/#5081/#5082/#5083. These target enclosures use SPD technology. After the disk drives are installed, an RPO change must be processed to add Feature Code #6607/6907 for each device type #6607/#6907 added, Feature Code #6713 for each device #6713 added, and Feature Code #6714 for each device type #6714 added.
RPQ 843978	RPQ 843978 is for customers who want to move 4/8/17 GB disk units from one AS/400 to another AS/400. The RPQ provides hardware for mounting one disk unit. The hardware in this RPQ allows for mounting device types #6607/#6907 (4.194 GB unit), #6713 (8.58 GB unit), and #6417 (17.54 GB unit) in the system unit of a Model 170/600/S10/620/ S20/720 and the expansion features #7101/7102/5064/9364. After the disk drives are installed, an RPO change must be processed to add Feature Code #6807 for each device type #6607/#6907 added, Feature Code #6813 for each device #6713 added, and Feature Code #6824 for each device type #6417 added.

RPQ 847102	RPQ 857102 ships the disk mounting hardware and instructions required to convert Feature #6717/#6817 to Feature #4317 and Feature #6718/#6818 to Feature #4318. Order one RPQ for each disk unit to be converted. Confirm that there is disk space available in an existing or on-order PCI Storage Tower #5065 or #5066. This RPQ can also be used to move a disk to an iSeries 270, 8xx, 270/8xx #5075, #5074/#9074, and #5079/#9079 PCI Towers.
INTERNAL CD-ROM AND TAPE UNITS	
#1349	1.2 GB ¼-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating a #1251, #1379, #6368, #7343, #8343, #9343, #5348, #6348, #7348, #8348, or #9348 1.2 GB ¼-inch Cartridge Tape Unit. Supported only in the System Unit or #9364 System Unit Expansion.
#1350	2.5 GB ¼-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating #1252, #1260, #1380, #6369, #6380, #6344, #7344, #8344, #5349, #6349, #7349, or #8349 2.5 GB ¼-inch Cartridge Tape Unit. Supported only in the System Unit or #9364 System Unit Expansion.
#1355	13 GB ¼-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating #6385 13 GB ¼-inch Cartridge Tape Unit. Supported only in the System Unit or #9364 System Unit Expansion.
#1360	7 GB 8mm Cartridge Tape Unit Conversion Kit Provides the hardware for migrating #1261 or #6390 7 GB 8 mm Cartridge Tape Unit. Supported only in the System Unit or #9364 System Unit Expansion.
#1379	1.2 GB ¼-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating 1.2 GB ¼-inch Cartridge Tape Units. Supported only in #5072 or #5073 System Unit Expansion Towers. Model 620 only.
#1380	2.5 GB ¼-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating 2.5 GB ¼-inch Cartridge Tape Units. Supported only in #5072 or #5073 System Unit Expansion Towers. Model 620 only.
#4425	Optional CD-ROM Feature Supported only in #5065 Prerequisite: V4R4 and #2748 Storage Device Controller. This is a Customer Install Feature (CIF).
#4482	4 GB ¼-inch Cartridge Tape Unit Supported only in #5065 Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).
#4483	16 GB ¼-inch Cartridge Tape Unit Supported only in #5065 Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).
#4486	25 GB ¼-inch Cartridge Tape Unit Supported only in #5065 Can be used for save/restore, Alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).
#5032	Removable Media Device Cluster Box This is a rack-mounted box that allows the attachment between one and four #6368 or #6369 1.2 GB or 2.5 GB ¼-inch Cartridge Tape Units. This is supported for migration only and cannot be ordered as a new feature. Model 620 only. Attaches to #2621 Removable Media Device Attachment.
#6325	Optional CD-ROM Feature Model 620 only. Requires V4R4. The #6325 is an optional CD-ROM device that can be mounted in the #5072 and #5073 SPD Expansion Unit. Prerequisite: Storage Device Controller #2624. Limits the use of tape in the same tower to #6380 and #6390. Maximum: One CD-ROM per #5072/#5073
#6368	1.2 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape is installed in a #5032. It is supported for migration only and cannot be ordered as a new feature. Model 620 only.

#6369	2.5 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape is installed in a #5032. It is supported for migration only and cannot be ordered as a new feature. Model 620 only.
#6380	2.5 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This is supported for migration only and cannot be ordered as a new feature. Supported only in the #5072 or #5073 System Unit Expansion Towers. Supported for migration only. On new orders, the #6381 should be ordered. Model 620 only.
#6381	2.5 GB ¼-inch Cartridge Tape Unit Model 620 and S20 expansion unit. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.
#6382	4 GB ¼-inch Cartridge Tape Unit Model 620 and S20 expansion unit. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.
#6383	16 GB ¼-inch Cartridge Tape Unit Model 620 and S20 expansion unit. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.
#6385	13 GB ¼-inch Cartridge Tape Unit Model 620 and S20 expansion unit. Can be used for save/restore, Alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.
#6386	25 GB ¼-inch Cartridge Tape Unit Model 620 and S20 expansion unit. Can be used for save/restore, Alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units.
#6390	7 GB 8 mm Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration and 8 mm cartridge tape exchange using appropriate media and density. Supported only in #5072 or #5073 System Unit Expansion Towers. Model 620 only.
#6425	Optional CD-ROM Feature Model 620 only. Requires V4R4. #6425 is an optional CD-ROM device (for models S20, 620, 720 only) that can be mounted System Unit and System Expansion #9364, with 9329 PCI integrated Expansion Unit only. It may be used for Alternate IPL and LPP distribution. Feature CD-ROMS are introduced in support of LPARs. Not supported on #9331 Prerequisite: Storage Device Controller #2726, #2740 or #2741 with #9329. Maximum: Only one CD-ROM is allowed in the System unit (base), and one in the integrated Expansion Unit with 9329 only.
#6480	2.5 GB ¼-inch Cartridge Tape Unit Model 620 and S20only Can be used for save/restore, Alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This is supported for migration only and cannot be ordered as a new feature. Supported only in the Model 620 and S20 system unit or the #5064/#9364 System Unit Expansion. On new orders, #6381 should be ordered unless the #6325 with #2624 are ordered.
#6481	2.5 GB ¼-inch Cartridge Tape Unit Model 600, 620, S10 and S20 system unit only. Can be used for save/restore, Alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.
#6482	4 GB ¼-inch Cartridge Tape Unit Model 600, 620, S10 and S20 system unit only. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.

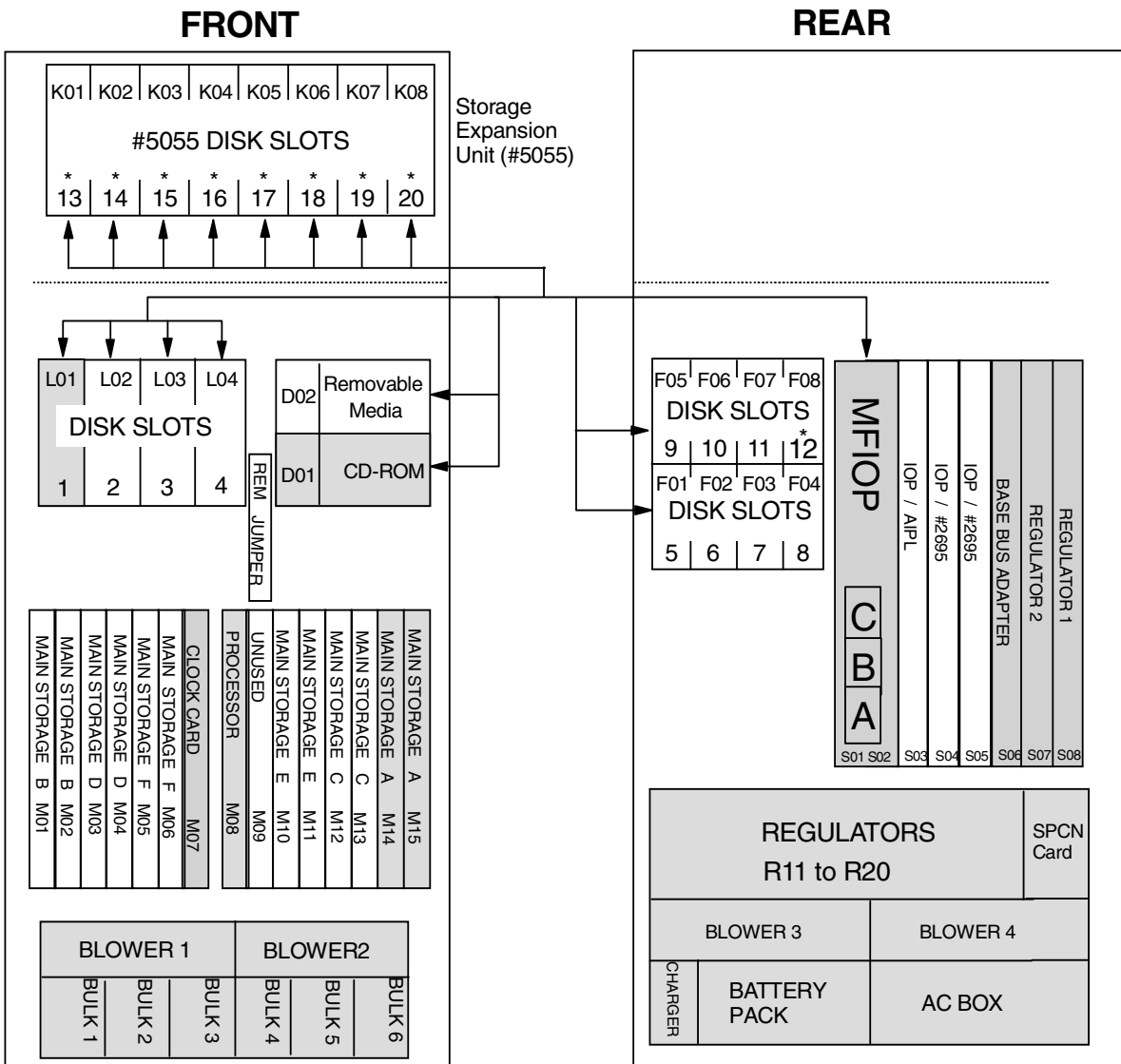
#6483	16 GB ¼-inch Cartridge Tape Unit Model 600, 620, S10, and S20 system unit only. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.
#6485	13 GB ¼-inch Cartridge Tape Unit Model 600, 620, S10, and S20 system unit only. Can be used for save/restore, Alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.
6486	25 GB ¼-inch Cartridge Tape Unit Model 600, 620, S10, and S20 system unit only. Can be used for save/restore, Alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.
#6490	7 GB 8 mm Cartridge Tape Unit Model 600, 620, S10, and S20 system unit only. Can be used for save/restore, Alternate IPL, migration and 8mm cartridge tape exchange using appropriate media and density. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.
MAGNETIC MEDIA CONTROLLERS	
#2621	Removable Media Device Attachment (SPD) Provides attachment for one or two of the following devices with hardware data compression: 2440, 9348, 7208, 3995, 9427, and #5032. Dual drive 7208s count as two devices. If #2621 supports a 3995 or #5032, it must be dedicated to it. If #2621 supports a 9427, we recommend that the 9427 be attached to both ports of the #2621. For new orders, the #6534 will be used in preference to #2621 as long as it supports the tape device required. Model 620 only. Prerequisite: #9364 with #9331 or #5072/#5073 SPD slots required: One
#2624	Storage Device Controller (SPD) Provides support for up to three internal tape drives. With the addition of the #6146, it will also support one external diskette drive. Can be used to support tape drives only in #5072 or #5073 System Expansion Towers. For new orders, the #6513 will be used in preference to #2624 unless #2624 is required to support a diskette drive or one is already installed. Also used to support the optional CD-ROM #6325 in #5072 or #5073 System Expansion Towers. Not supported to drive #6425 CD-ROM in the model 620 with #9331 in the integrated System Unit Expansion #9364. Model 620 only. SPD slots required: One Prerequisite: #9364 with #9331 or #5072/#5073
#2644	34XX Magnetic Tape Subsystem Attachment (SPD) Provides attachment for 3422, 3430, 3480, 3490 Axx, 3490 Dxx, 3490E Axx, 3490E Bxx, 3490E Dxx, 3490E Cxx, 3494 x10 Tape Subsystem Models. Also requires #9980 Serpentine Cable except for 3490E Cxx when ordered with Internal Cables. Model 620 only. SPD slots required: One Prerequisite: #9364 with #9331 or #5072/#5073
#2718	PCI External Tape Controller (PCI) Provides SCSI attachment for one 7207-122 4 GB ¼-inch Cartridge External Tape Drive and/or 7210-020 CD-ROM (V4R5 is required for 7210-020). High-speed PCI slots required: One. Prerequisite: #2809/#2824 LAN/WAN/Workstation IOP. If a 7210-020 is installed on the same IOA as the 7207-122, the 7207 tape must be the first physical device. Maximum: One in the System Unit, Two in the System Unit Expansion #9364 with #9329/#9330 and three in the #5065. This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.

#2726	<p>PCI RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (PCI) (Ultra SCSI)</p> <p>Ultra SCSI controller which provides RAID protection and a 4 MB write-cache for up to 15 disks installed in the System Unit or #9364 System Unit Expansion. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of three arrays are allowed for each #2726. The #2726 also supports one CD-ROM drive (which comes as standard) and one internal tape drive when placed in the System Unit. When placed in the #9364 System Unit Expansion, it supports up to three internal tape drives. Supports #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 tape units. It is mutually exclusive with #2740, #2741, or #9728 in the same System Unit or #9364. The #2726 is not capable of integrated hardware disk compression.</p> <p>High-speed PCI slots required: One</p> <p>Prerequisite: System Unit or #9364 with #9329</p> <p>Maximum: One per System Unit or #9364</p> <p>This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2729	<p>PCI External Tape Controller (PCI)</p> <p>Provides SCSI attachment for one 3490E Exx, 3490E Fxx, 3490E Cxx with #5040, 3494 D1x or L1x. 3570, 3575, 3590, 7208, 9348 or 9427 Tape Drive or 3995 C4x Optical Library Dataserver. OS/400 V4R2 is required to support 3995.</p> <p>High-speed PCI slots required: One.</p> <p>Prerequisite: #2809/#2824 LAN/WAN/Workstation IOP.</p> <p>Maximum: One in the System Unit, Two in the System Unit Expansion #9364 with #9329/#9330 and three in the #5065</p> <p>This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2740	<p>PCI RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (PCI) (Ultra SCSI)</p> <p>Ultra SCSI controller which provides RAID protection and a 4 MB write-cache for up to 10 disks installed in the System Unit. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are allowed for each #2740. The #2740 also supports one CD-ROM drive (which comes as standard) and one internal tape drive. Supports the #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 tape units. Mutually exclusive with the #9728, #2726, or #2741 in the same System Unit. The #2740 is not supported in the #9364 System Unit Expansion. The #2740 is not capable of integrated hardware disk compression. Requires OS/400 V4R2.</p> <p>High-speed PCI slots required: One</p> <p>Maximum: One</p> <p>This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2741	<p>PCI RAID Disk Unit Controller—4 MB Cache (RAID Mirrored/Unprotected) (PCI) (Ultra SCSI)</p> <p>Ultra SCSI controller which provides RAID protection and a 4 MB write-cache for up to 15 disks installed in the System Unit or #9364 System Unit Expansion. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of three arrays are allowed for each #2741. The #2741 also supports one CD-ROM drive (which comes as standard) and one internal tape drive when placed in the System Unit. When placed in the #9364 System Unit Expansion it supports up to three internal tape drives. Supports #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 tape units. Mutually exclusive with #2726, #2740, or #9728 in the same System Unit or #9364. Supports integrated hardware disk compression with V4R3 installed. Disk compression on #6824/#8824 (17.54 GB Disk Unit) is not currently supported. IBM intends to provide disk compression for #6824/#8824 in a future release of OS/400. Model 620 only.</p> <p>Requires OS/400 V4R2. Compression requires V4R3.</p> <p>High-speed PCI slots required: One</p> <p>Prerequisite: System Unit or #9364 with #9329</p> <p>Maximum: One per System Unit or #9364</p>
#2748	<p>PCI RAID Disk Unit Controller—26 MB Cache (RAID Mirrored/Unprotected) (PCI) (Ultra2 SCSI)</p> <p>The #2748 is Ultra2 SCSI capable when installed in the #5065 Storage/PCI Expansion Tower or is Ultra SCSI capable when installed in the Model 720 system unit or a #9364/#5064 System unit Expansion. The #2748 has a 26 MB write-cache and provides RAID-5 protection and compression for internal disk units. It supports up to 15 disks. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of three arrays are allowed for each #2748. The #2748 supports both compression and non-compression modes. The mode is determined by a hardware jumper on the card. The #2748 also supports #4331/#6831 1.6 GB Read Cache Device. When placed in the system unit, it supports one internal tape and one CD-ROM. In the #5064/#9364 System Unit Expansion, it supports up to three internal tape and CD-ROM. In the #5065 Storage/PCI Expansion Tower, it supports up to two internal tapes and CD-ROM. Supports #1349, #1350, #1355, #1360, #4482, #4483, #4486 #6480, #6481, #6482, #6483, #6485, #6486, or #6490 tape units. It is mutually exclusive with #2726, #2740, #2741 or #9728 in the same System Unit or PCI Integrated Expansion Unit #9330.</p> <p>High-speed PCI slots required: One</p> <p>Prerequisite: OS/400 V4R4 and System Unit or #9364 with #9330 or #5065</p> <p>Maximum: One per System Unit or #9364; three per #5065</p>
#6112	<p>Magnetic Storage Device Controller (SPD)</p> <p>Provides attachment for up to two 9331-001 or 002 Diskette Units and up to two 9347 Tape Units. This feature is supported for migration only. Model 620 only.</p> <p>SPD slots required: One</p> <p>Prerequisite: #9364 with #9331 or #5072/#5073</p> <p>Maximum: Two for 9331, two for 9347. Limit of two #6112s in #9331.</p>

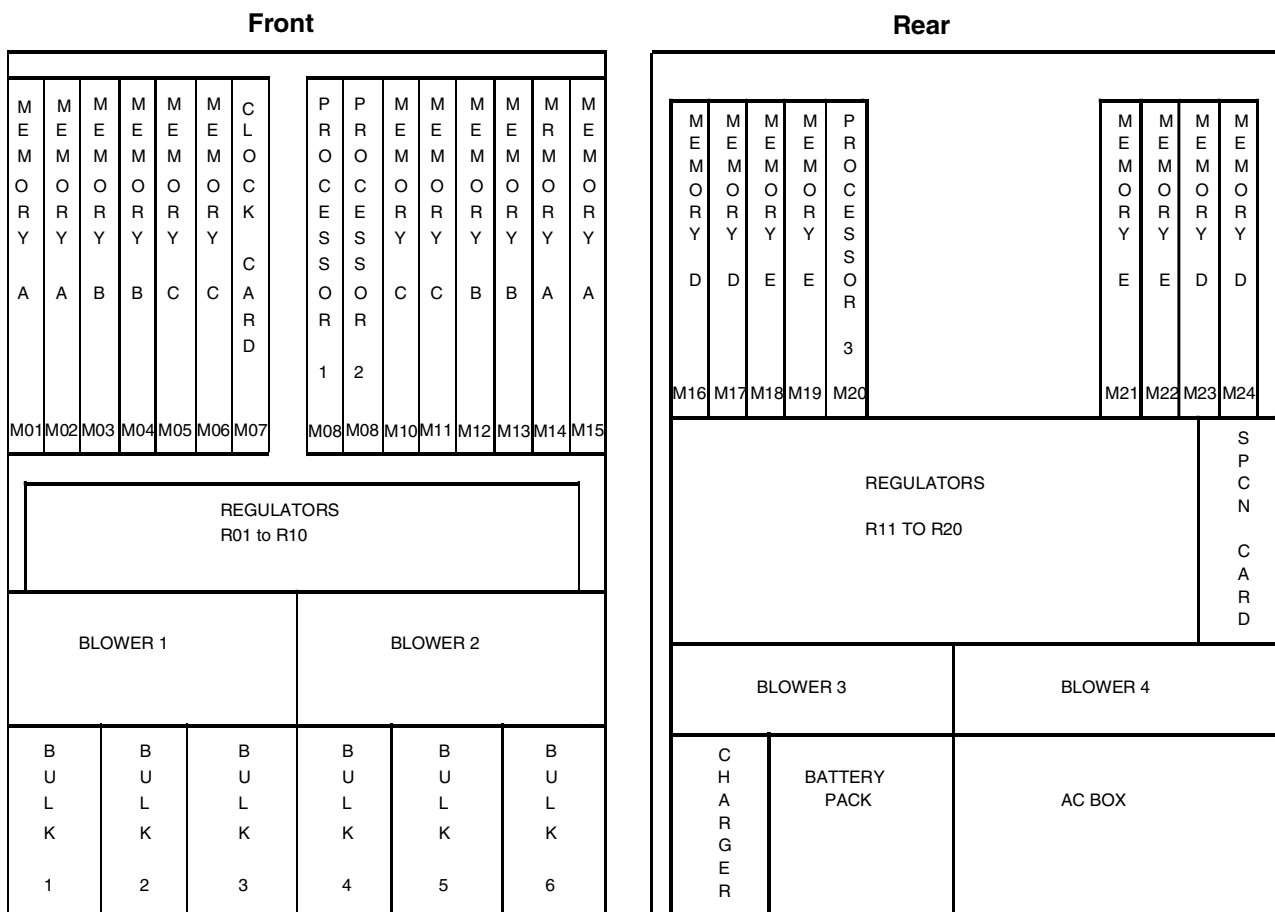
#6146	Diskette Adapter (SPD) Provides attachment for one 9331 011, 012 Diskette Unit and the #6135 5 ² -inch diskette. Model 620 only. SPD slots required: None Prerequisite: #2624 Maximum: Two
#6500	Direct Access Storage Device Controller (SPD) Provides attachment for one 9337 0xx or 1xx. This feature is supported for migration only. Model 620 only. SPD slots required: One Prerequisite: #9364 with #9331 or #5072/#5073 Maximum: See the model overview tables at the beginning of this chapter.
#6501	Tape/Disk Device Controller (SPD) Provides attachment for the 2105 Versatile Storage Server. Provides attachment for up to two 9337 2xx, 4xx or 5xx Models. Also supports up to two 3490E Cxx, 3490E Exx, 3490E Fxx, 3494 Lxx or Dxx, 3570, 3575, or 3590 Models. Also provides attachment for 2105 Versatile Storage Server. DASD and Tape Units cannot be mixed on the same #6501. The #6501 is supported but #6534 should be ordered on new orders unless it does not support the tape drive being configured. Model 620 only. SPD slots required: One Prerequisite: #9364 with #9331 or #5072/#5073 Maximum: Four for Tape. For Disk, see the model overview tables at the beginning of this chapter.
#6502	RAID Disk Unit Controller—2MB Cache (RAID/Mirrored/Unprotected) (SPD) Provides RAID protection and a 2MB write-cache for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, #5082 or #5083 Storage Expansion Tower, or #9364 System Unit Expansion. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are allowed for each #6502. The #6502 is supported for migration, but the #6352 or #6533 should be ordered on new systems. The #6502 is not capable of integrated hardware disk compression. Model 620 only. SPD slots required: One Prerequisite: #9364 with #9331 or #5072/#5073/#5082/#5083 Maximum: See the model overview tables at the beginning of this chapter.
#6512	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (SPD) Provides RAID protection and a 4 MB write-cache for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, #5082 or #5083 Storage Expansion Tower, or #9364 System Unit Expansion. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are allowed for each #6512. The #6512 is supported for migration, but the #6352 or #6533 should be ordered on new systems. The #6512 is not capable of integrated hardware disk compression. Model 620 only. SPD slots required: One Prerequisite: #9364 with #9331 or #5072/#5073/#5082/#5083 Maximum: See the model overview tables at the beginning of this chapter.
#6513	Internal Tape Device Controller (SPD) Provides support for up to three internal tape drives when located in #9331 Expansion Unit for SPD cards or four internal tape drives when located in #5072 or #5073 System Unit Expansion Tower. The #6513 is the default controller unless a #2624 is installed. Supports #1379, #1380, #6380, #6381, #6382, #6383, #6385, #6386 and #6390 in #5072 or #5073 System Unit Expansion Tower; and #1349, #1350, #1355, #1360, #6481, #6482, #6483, #6485, and #6490 in a #9364 System Unit Expansion with #9331. Model 620 only. SPD slots required: One Prerequisite: #9364 with #9331 or #5072/#5073 Maximum: Five
#6530	Disk Unit Controller—No Cache (Mirrored/Unprotected) (SPD) Controller for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, #5082 or #5083 Storage Expansion Tower, or #9364 System Unit Expansion. Supported for migration, but the new #6532 or #6533 should be ordered on new systems. The #6530 is not capable of integrated hardware disk compression. Model 620 only. SPD slots required: One Prerequisite: #9364 with #9331 or #5072/#5073/#5082/#5083 Maximum: See the model overview tables at the beginning of this chapter.

#6532	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) (SPD) Ultra SCSI Controller for up to 16 disks installed in #5058 Storage Expansion Unit, #5083 Storage Expansion Tower, or #9364 System Unit Expansion. Also supports disks located in #5052 Storage Expansion Unit or #5082 Storage Expansion Tower, but these will not be at Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of ten drives are supported in a RAID 5 array. A maximum of four arrays are allowed for each #6532. Model 620 only. The #6532 is not capable of integrated hardware disk compression. SPD slots required: One Prerequisite: #9364 with #9331 or #5072/#5073/#5082/#5083 Maximum: See the model overview tables at the beginning of this chapter.
#6533	RAID Disk Unit Controller—4 MB Cache (Raid/Mirrored/Unprotected) (Ultra SCSI) (SPD) Ultra SCSI Controller for up to 16 disks installed in #5058 Storage Expansion Unit, #5083 Storage Expansion Tower, or #9364 System Unit Expansion. Also supports disks located in #5052 Storage Expansion Unit or #5082 Storage Expansion Tower, but these will not at be Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of ten drives are supported in a RAID 5 array. A maximum of four arrays are allowed for each #6533. Supports integrated hardware disk compression with V4R3 installed. Disk compression on #6714 (17.54GB Disk Unit) is not currently supported. IBM intends to provide disk compression for #6714 in a future release of OS/400. Model 620 only. Requires OS/400 V4R2. Compression requires V4R3 SPD slots required: One Prerequisite: #9364 with #9331 or #5072/#5073/#5082/#5083 Maximum: See the model overview tables at the beginning of this chapter.
#6534	Magnetic Media Controller (SPD) Provides attachment for one 3490E Cxx with #5040, 3490E Exx, 3490E Fxx, 3494 D1x or L1x, 3570, 3575, 3590, 7208, 9348, or 9427 Tape Drives or 3995 C4x Optical Library Dataserver. OS/400 V4R2 is required to support 3995. Model 620 only. SPD slots required: One Prerequisite: #9364 with #9331 or #5072/#5073 Maximum: See the model overview tables at the beginning of this chapter.
#9728	Base PCI Disk Unit Controller (Ultra SCSI) (PCI) This is the Base IOA for the System Unit. Provides Ultra SCSI attachment for up to five internal disk units, one internal CD-ROM (standard) and one internal tape drive. Does not support RAID. Supports the #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 tape units. Mutually exclusive with the #2726, #2740, or #2741, in the same System Unit. The #9728 is not capable of integrated hardware disk compression. The #9728 has CCIN 2728. See Chapter 16, "CCIN Numbers" on page 441. High-speed PCI slots required: One Maximum: One per System Unit

9.10 9406 Model 640 System Unit

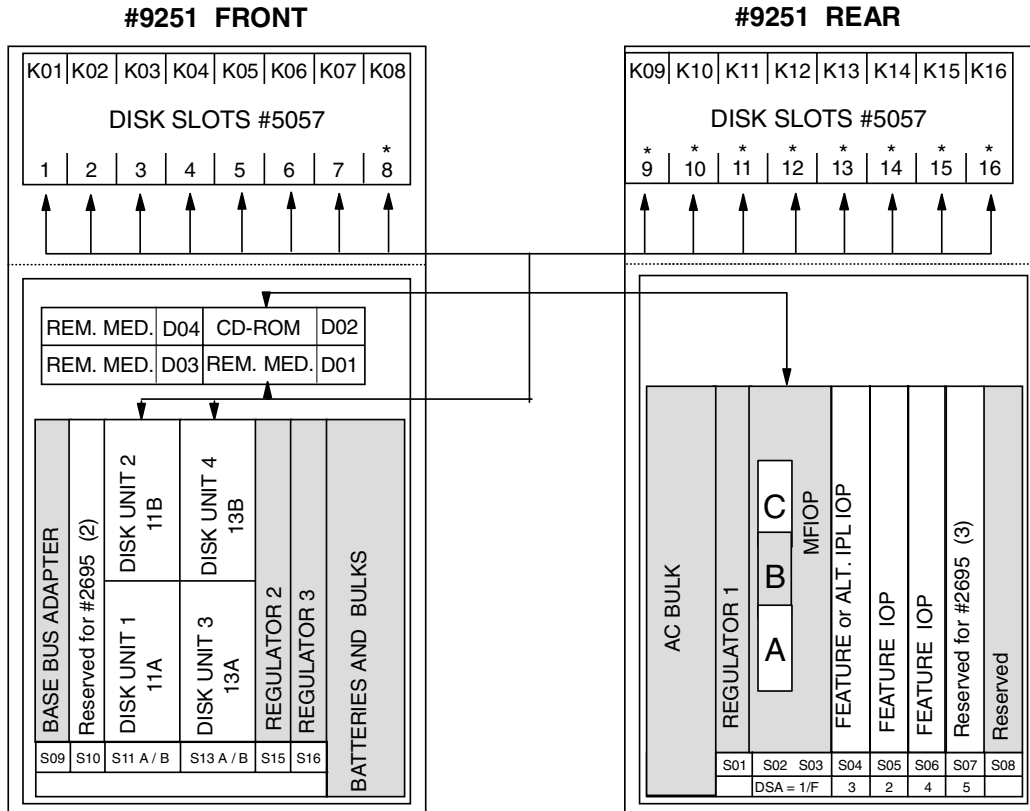


9.11 9406 Model 650 System Unit



6xx Models

9.12 Base I/O Tower (#9251)



= Are part of the base configuration

* One byte disks cannot be installed in these slots

For diagrams of the #507X and #508X expansion towers, see 8.10, "System Unit Expansion Towers for 6xx and 7xx" on page 169.

9.13 9406 Models 640 and 650

PROCESSORS	
#2237	319.0 RSP CPW Processor. Base Memory 512 MB. Model 640 only.
#2238	583.3 RSP CPW 2-way Processor. Base Memory 512 MB. Model 640 only.
#2239	998.6 RSP CPW 4-way Processor. Base Memory 512 MB. Model 640 only.
#2240	1794.0 RSP CPW 8-way Processor. Base Memory 1024 MB. Model 650 only.
#2243	2340.0 RSP CPW 12-way Processor. Base Memory 1024 MB. Model 650 only.
#2188	3660.0 RSP CPW 8-Way Processor. Base Memory 1024 MB Model 650 only. Requires V4R3.
#2189	4550.0 RSP CPW 12-Way Processor. Base Memory 1024 MB Model 650 only. Requires V4R3.
POWER AND PACKAGING	
Base Optical Bus Adapter	Base Optical Bus Adapter This is the Base Optical Bus Adapter identified as CCIN 2696 with no feature code required. Models 640 and 650 only.
#2686	Optical Link Processor (266 Mbps) This is a card that is used for attaching #5044. Each #2686 supports a maximum of one #5044. Card slots used: None Maximum: Nine Prerequisite: #2695 or IOA slot on the Base Optical Bus Adapter.
#2688	Optical Link Processor (1063 Mbps) This is a card that is used for attaching #5072, #5073, #5082, or #5083 Expansion Towers. Each #2688 supports a maximum of two #50xx Towers. Card slots used: None Maximum: Nine Prerequisite: #2695 or IOA slot on the Base Optical Bus Adapter.
#2695	Optical Bus Adapter Allows for the addition of up to three #2686 or #2688 Optical Link Processors in any combination. Card slots used: One Maximum: Two
#2730	Programmable Regulator This feature is required when five or more Main Storage Cards are installed in a Model 640. Model 640 only. Card slots used: None Maximum: One
#5043	Primary to Secondary Rack Conversion This feature provides for the conversion of a 9406 F Model System Unit rack to a 9309 #9171 type rack. The new rack will retain the #5043 feature. Only available when upgrading from 9406 F Models. Also available as feature conversion from #5040.
#5044	System Unit Expansion Rack This is a twelve I/O card slot cage in a rack enclosure. Each unit provides two buses with six I/O card slots per bus. The #5044 is not available as a new feature but is a conversion of a #5040 or #5042 rack. Prerequisite: #2686 and #2695 or #2686 and an IOA slot on the Base Optical Bus Adapter.
#5052	Storage Expansion Unit Provides space for up to sixteen disk units. It attaches to the top of the #5072 System Unit Expansion Tower and the #5082 Storage Expansion Tower. This feature is only supported with upgrades. It cannot be ordered with a new system. Only one #5052 per tower is supported and #5143 Power Supply may be required.

#5055	Storage Expansion Unit (Ultra SCSI) Provides space for up to eight disk units. It attaches to the top of the Model 640 System Unit. Model 640 only. Prerequisite: #9751 or #9754 MFIOP with RAID and #5151 Power Supply.
#5057	Storage Expansion Unit (Ultra SCSI) Provide space for up to sixteen disk units. It attaches to the top of the Model 650 System Unit. Model 650 only. Prerequisite: #9751 or #9754 MFIOP with RAID.
#5058	Storage Expansion Unit (Ultra SCSI) Provides space for up to sixteen disk units. It attaches to the top of the #5073 System Unit Expansion Tower and the #5083 Storage Expansion Tower. Only one #5058 per tower is supported.
#5065	Storage/PCI Expansion Tower Provides an additional bus. It includes a 1063 Mbps optical bus card. The #5065 has redundant, hot swappable power supplies. It supports three LAN/WAN/Workstation controllers, twelve PCI IOA cards, two removable media and up to 45 disk units. Three specific disk slots may be used for #4331 1.6 GB Read Cache Device features. The #5065 is the only storage expansion unit to support Ultra2 SCSI. Prerequisite: #2688 and V4R4 Maximum: Eighteen on the models 640 and 650. This is a Customer Install Feature (CIF).
#5066	1.8 M I/O Tower Provides two additional busses. The #5066 is actually two #5065 Storage/PCI Expansion Towers installed in a #5066 1.8 M I/O Tower. The #5066 reports to the system as two #5065s. The #5066 includes two 1063 Mbps optical bus cards, various cables (including optical cables) and the 1.8M I/O Tower. The #5066 includes 24 PCI IOA slots, space for 90 disk units, space for four removable media devices, battery backup, redundant/hot swap power supplies and two base PCI LAN/WAN/Workstation IOPs (CCIN #2824). The #5066 is capable of controlling Ultra2 SCSI disk units. Two line cords must be specified. Prerequisite: #2688 and V4R4 Maximum: Nine on the models 640 and 650.
#5072	1063 Mbps System Unit Expansion Tower Provides an I/O tower for creating additional buses on the Model 640 and 650. It includes a 1063 Mbps optical bus card, thirteen SPD I/O card slots, space for up to four internal tape units or CD-ROMs (a maximum of three), and battery and power supplies. It can support one #5052 Storage Expansion Unit. Due to power restrictions, some combinations of high powered cards may mean that an additional #5072 is required. Prerequisite: #2688 and #2695 or #2688 and an IOA slot on the Base Optical Bus Adapter. This feature is only supported on upgrades. It cannot be ordered with a new system.
#5073	1063 Mbps System Unit Expansion Tower Provides an I/O tower for creating additional buses on the Model 640 and 650. It includes a 1063 Mbps optical bus card, thirteen SPD I/O card slots, space for up to four internal tape units / CD-ROMs (a maximum of three), and battery and power supplies. It can support one #5058 Storage Expansion Unit. Due to power restrictions, some combinations of high powered cards may mean that an additional #5073 is required. Prerequisite: #2688 and #2695 or #2688 and an IOA slot on the System Unit Base Optical Bus Adapter.
#5082	1063 Mbps Storage Expansion Tower Provides a DASD Tower for adding up to 16 disk units. A total of 32 disk units are supported with an addition of #5052. It includes a 1063 Mbps Optical Bus Card, two SPD I/O card slots for the disk IOPs (#6502, #6512, #6530—all supported but not orderable; #6532 or #6533—for new orders), and battery and power supplies. Prerequisite: #2688 and #2695 or #2688 and an IOA slot on the Base Optical Bus Adapter. This feature is only supported on upgrades, it cannot be ordered with a new system.
#5083	1063 Mbps Storage Expansion Tower (Ultra SCSI) Provides a DASD Tower for adding up to 16 disk units. A total of 32 disk units are supported with an addition of #5058. It includes a 1063 Mbps Optical Bus Card, two SPD I/O card slots for the disk IOPs (#6502, #6512, #6530—all supported but not orderable; #6532 or #6533—for new orders), and battery and power supplies. Prerequisite: #2688 and #2695 or #2688 and an IOA slot on the Base Optical Bus Adapter.
#5101	30 Disk Expansion Feature This provides two 15 unit disk enclosures, a 700-watt power supply, backplanes, and internal cables. Maximum: One per #5065.
#5143	Feature Power Supply This is a 400-watt power supply that is normally a prerequisite of a #5052 installed in a #5072 or #5082 Expansion Tower. Maximum: One per #5072 or #5082

#5150	Battery Backup (External) An external battery backup that when used in conjunction with internal battery backup is capable of extending the Continuously Power Main Storage (CPM) time to at least 48 hours. On Models 640 and 650, a standard internal battery backup is capable of maintaining CPM on 16 GB of main storage for at least 24 hours. The #5150 is required when main storage exceeds 16 GB on a Model 650.
#5151	Power Supply (650 watts) #5151 is a 650-watt feature power supply that is a prerequisite for #5055 Storage Expansion Unit. Also required when six or more main storage cards are installed. Model 640 only. Maximum: One
#9251	Base I/O Tower Base Tower on a Model 650. Includes four feature SPD IOP slots, space for three removable media devices, one CD-ROM drive, one MFIO, the ability to add up to 20 feature disk units (with #5057), and battery and power supplies. Model 650 only.
MAIN STORAGE	
#3179	256 MB Main Storage Must be added in pairs on Model 640. Must be added in fours on Model 650. Requires one dedicated memory card slot. Requires OS/400 V4R2. Maximum: Five pairs on Model 640; four fours on Model 650.
#3180	512 MB Main Storage Must be added in pairs on Model 640. Must be added in fours on Model 650. Requires one dedicated memory card slot. Requires OS/400 V4R2. Maximum: Five pairs on Model 640; four fours on Model 650.
#3189	128 MB Main Storage Must be added in pairs on Model 640. Must be added in fours on Model 650. Requires one dedicated memory card slot. Maximum: Five pairs on Model 640; four fours on Model 650
#3190	256 MB Main Storage Must be added in pairs on Model 640. Must be added in fours on Model 650. Requires one dedicated memory card slot. Maximum: Five pairs on Model 640; four fours on Model 650
#3191	512 MB Main Storage Must be added in pairs on Model 640. Must be added in fours on Model 650. Requires one dedicated memory card slot. Maximum: Five pairs on Model 640; four fours on Model 650
#3192	1024 MB Main Storage Must be added in pairs on Model 640. Must be added in fours on Model 650. Requires one dedicated memory card slot. Maximum: Five pairs on Model 640; four fours on Model 650.
#3193	2048 MB Main Storage Must be added in pairs on Model 640. Must be added in fours on 650. Requires one dedicated memory card slot. Maximum: Four pairs on 640; four fours on Model 650. Requires V4R3.
#8180	Optional Base 512 MB Main Storage Provides an optional 512 MB Main Storage card in place of a base 256 MB card. Must be added in pairs on Model 640. Must be added in fours on Model 650. Requires one dedicated memory card slot. Requires OS/400 V4R2.
#8191	Optional Base 512 MB Main Storage Provides an optional 512 MB Main Storage card in place of a base 256 MB card. Must be added in pairs on Model 640. Must be added in fours on Model 650. Requires one dedicated memory card slot. This feature can only be ordered on a Model 640 or 650 that is already installed.
#8192	Optional Base 1024 MB Main Storage Provides an optional 1024 MB Main Storage card in place of a base 256 MB card. Must be added in pairs on Model 640. Must be added in fours on Model 650. Requires one dedicated memory card slot.
#8193	Base 2048 MB Main Storage Provides an optional 2048 MB Main Storage card in place of a base 256 MB card. Must be added in pairs on Model 640. Must be added in fours on Model 650. Requires one dedicated memory card slot. Requires V4R3.

#9179	Base 256 MB Main Storage Must be added in pairs on Model 640. Must be added in fours on Model 650. Requires one dedicated memory card slot. Requires OS/400 V4R2.
#9190	Base 256 MB Main Storage Must be added in pairs on Model 640. Must be added in fours on Model 650. Requires one dedicated memory card slot.
WORKSTATION CONTROLLERS	
Base IOP	Base Controller for Storage/PCI Expansion Tower #5065. This comes as standard (no feature required) with #5065 Storage/PCI Expansion Tower. It is installed in slot C03 and is identified as CCIN 2824. It is used for attaching LAN, WAN, and workstation IOAs through two high-speed slots and two low-speed slots. The #2718, #2729, or #2748 are supported in C04 only. The #2723/#9723, #2724/#9724, #2645, #2746, #2750, #2751, #2761, or #4800 are supported in C04 or C05. The #281X or #2838/#9738 are supported on C05 only. The #2723/#9723, #2724/#9724, #2745, #2746 #2750, #2751, or #2761 are supported in C01 or C02. Restrictions apply. Maximum: One
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are #2699, #6149, #6180, #6181, and #9280. LAN IOAs (#6149 and #6181) cannot occupy all three positions. No more than seven #2629s can be placed in one #5072 System Unit Expansion Tower. The #2629 cannot be placed in Slot 14 of a #5072. There is no restriction on placing the #2629 in #5073 System Unit Expansion Tower. Card slots required: One
#2746	Twinaxial Workstation IOA (PCI) One eight-port attachment is provided to support 40 active twinaxial devices. PCI slots required: One Prerequisite: #5065 Storage/PCI Expansion tower and V4R4. This is a Customer Install Feature (CIF). Maximum: For workstation controller maximums in any combination, see 8.1, "9406 720 Model Overview" on page 157.
#2824	Feature Controller (PCI) This can be used for attaching additional LAN, WAN, and Workstation IOAs to the system. There is a maximum of two in the #5065 Storage/PCI Expansion Tower. In #5065 Storage/PCI Expansion Tower slots C08 or C13, it supports two high-speed and two low-speed slots: The #2718, #2729 or #2748 are supported in C09 and C14 only. The #2838/#9738 and #281x are supported in C05, C10, and C15 only. The #2738/#9738, #2724/#9724, #2745, #2746, #2750, #2751, #2761 or #4800 are supported in C09, C10, C14, or C15. The #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751 or #2761 are supported in C06, C07, C11, or C12. Additional restrictions apply. Prerequisite: V4R4. This is a Customer Install Feature (CIF).
#5540	System Console Attached to Twinaxial Workstation Controller/Adapter Specify The System Console attaches to #6180 or #9280 Twinaxial Workstation IOA or other migrated Twinaxial Workstation Controller.
#5541	System Console Attached to ASCII Workstation Controller Specify The System Console attaches to #6141 or #9141 ASCII Workstation Controller.
#5543	Client Access/400 System Console Specify The System Console will be a PC attached to the #9751 MFIOP. Prerequisite: #0344 Cable for attaching Client Access Console and #9699 Base Multiprotocol Communications Adapter in Slot B in the #9751 MFIOP.
#5544	System Console on Op Console The system console will be a PC. Prerequisite: Cable #0328 to be attached to port 0 of the #9699 Base Multiprotocol Communications Adapter in Slot B of the #9751 or #9754 MFIOP. #0328: Operations Console cable. This is a 6-meter cable used to attach a PC to a #9699 communications adapter for use as a remote PC Console. Mutually exclusive with #0344.

#6050 #9050	Twinaxial Workstation Controller One eight-port attachment is provided to support up to 40 twinaxial devices. The #9050 is the base Twinaxial Workstation Controller on some older models. The #6050/#9050 is supported only. The newer #6180 should be ordered on new systems. For workstation controller maximums in any combination, see 9.3, "9406 640 and 650 Models Overview" on page 213. Card slots required: One
#6140 #9140	Twinaxial Workstation Controller One eight-port attachment is provided to support up to 40 twinaxial devices. The #9140 is the base Twinaxial Workstation Controller on some older models. The #6140/#9140 is supported only. The newer #6180 should be ordered on new systems. For workstation controller maximums in any combination, see 9.3, "9406 640 and 650 Models Overview" on page 213. Card slots required: One
#6141 #9141	ASCII Workstation Controller This workstation controller supports up to six ASCII devices. The #9141 can be specified as new orders on the Base Workstation Controller. For workstation controller maximums in any combination, see 9.3, "9406 640 and 650 Models Overview" on page 213. Card slots required: One
#6142	ASCII 12-Port Workstation Attachment This attachment plugs into the #6141 or #9141 ASCII Workstation Controller providing an additional twelve ports. Eighteen ASCII devices can now be supported. Only one #6142 can be attached per #6141 or #9141. Card slots required: None For workstation controller maximums in any combination, see 9.3, "9406 640 and 650 Models Overview" on page 213.
#6180 #9280	Twinaxial Workstation IOA One eight-port attachment is provided to support up to 40 twinaxial devices. The #9280 is specified on new order when a twinaxial workstation is required and there is no ASCII workstation controller. One #6180/#9280 is placed in Slot C of the #9751 or #9754 MFIOP when the System Console is ASCII. All other #6180s must be placed in a #2629 LAN/WAN/Workstation IOP. For workstation controller maximums in any combination, see 9.3, "9406 640 and 650 Models Overview" on page 213. IOA slots required: One #2629, #9751, or #9754 slot.
#9751	MFIOP with RAID (Ultra SCSI) This is standard on the Model 640 and 650. Contains function for controlling 20 disk units, one tape unit and one CD-ROM unit. Has three IOA slots for controlling LANs, Twinaxial Workstations, and Communications. IOA Slot A is reserved for attaching one #2699 Communications IOA or one #6149 or #6181 LAN IOA. IOA Slot B is reserved for attaching the #9699 Base Multi Protocol Communications IOA. IOA Slot C is reserved for attaching one #2699 Communications IOA or one #6180 or #9280 Twinaxial IOA. Occupies two card slots. The #9751 is not capable of integrated hardware disk compression. The #9751 has CCIN 6751.
#9754	MFIOP with RAID (Ultra SCSI) This is standard on the Model 640 and 650. Contains function for controlling 20 disk units, one tape unit and one CD-ROM unit. Has three IOA slots for controlling LANs, Twinaxial Workstations, and Communications. IOA Slot A is reserved for attaching one #2699 Communications IOA or one #6149 or #6181 LAN IOA. IOA Slot B is reserved for attaching the #9699 Base Multi Protocol Communications IOA. IOA Slot C is reserved for attaching one #2699 Communications IOA or one #6180 or #9280 Twinaxial IOA. Occupies two card slots. The #9754 is standard on systems ordered with V4R2. Requires OS/400 V4R2. The #9754 has CCIN 6754. Supports integrated hardware disk compression with V4R3 installed. Disk compression on #6714/#8714 17.54 GB Disk Units is supported at OS/400 V4R4.
COMMUNICATIONS	
#2605	ISDN Basic Rate Adapter Connects to #2623 to support one communications line connecting to an ISDN network. The ISDN Basic Rate Interface supported by #2605 contains two high-speed ISDN user channels. One or two #2605s may be attached to one #2623 with no other IOAs allowed on the #2623. Card slots required: None Prerequisite: #2623

#2609	EIA 232/V.24 Two-Line Adapter Connects to #2623 to support two communications lines using Async, BSC, SDLC, or X.25 protocols. Two cables must be specified: #9023 EIA 232/V.24 20ft (6m) enhanced cable #9835 EIA 232/V.24 50ft (15m) enhanced cable #9022 EIA 232/V.24 20ft (6m) cable #9836 EIA 232/V.24 50ft (15m) cable #2609 is supported, but the newer #2699 should be ordered on new systems. Card slots required: None Prerequisite: #2623
#2610	X.21 Two-Line Adapter Connects to #2623 to support two communications lines using X.21 or X.25 networks. Two cables must be specified: #9021 X.21 20ft (6m) cable #9839 X.21 50ft (15m) cable #2610 is supported, but the newer #2699 should be ordered on new systems. Card slots required: None Prerequisite: #2623
#2612	EIA 232/V.24 One-Line Adapter Connects to #2623 to support one communications line using Async, BSC, SDLC, or X.25 protocols. One cable must be specified (see cable features for #2609). The #2612 is supported, but the newer #2699 should be ordered on new systems. Card slots required: None Prerequisite: #2623
#2613	V.35 One-Line Adapter Connects to #2623 to support one V.35 communications line using either BSC, SDLC, or X.25 protocols. Each #2623 supports one V.35 line at speeds up to 640 Kbps, or two V.35 lines at speeds up to 512 Kbps, or three V.35 lines at speeds up to 384 Kbps. No other adapters are allowed on #2623 when running T1/E1/J1. One cable must be specified: #9020 V.35 20ft (6m) cable #9838 V.35 50ft (15m) cable #2613 is supported, but the newer #2699 should be ordered on new systems. Card slots required: None Prerequisite: #2623
#2614	X.21 One-Line Adapter Connects to #2623 to support one communications line using X.21 or X.25 networks. One cable must be specified (see cable features for #2610). The #2614 is supported, but the newer #2699 should be ordered on new systems. Card slots required: None Prerequisite: #2623
#2620	Full Cryptographic Processor This feature provides full cryptographic support for encrypting and decrypting data. Distribution of this feature is restricted by U.S. Government Export Regulations. In countries outside the USA and Canada, it can only be marketed to financial institutions and subsidiaries of U.S. companies. If this feature cannot be sold, #2628 should be sold in its place. Card slots required: One Maximum: One
#2623	Six-Line Communication Controller This controller provides for attachment of a wide range of iSeries or AS/400e communications adapters. The following adapters are supported by the #2623: #2605, #2609, #2610, #2612, #2613, #2614, #2654, #2655, #2656, #2657, #2658, #2659, #6153, and #6173. The #2623 supports two #2605 ISDN adapters or up to three EIA 232/V.24, X.21, and V.35 adapters. The #2623 will only be orderable on Model 640 and 650 for customers purchasing the #2605 ISDN adapter. Otherwise, although #2623 continues to be supported, the newer #2629 should be ordered. Card slots required: One
#2628	Limited Cryptographic Processor Provides the same function as #2620 except that it does not include data encryption/decryption using commercial Data Masking Facility for data scrambling. Can be marketed to any non-U.S. company. Card slots required: One Maximum: One

#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are #2699, #6149, #6180, #6181 and #9280. LAN IOAs (#6149 and #6181) cannot occupy all three positions. No more than seven #2629s can be placed in one #5072 System Unit Expansion Tower. The #2629 cannot be placed in Slot 14 of a #5072. There is no restriction on placing #2629 in #5073 System Unit Expansion Tower. Card slots required: One
#2664	Integrated Fax Adapter Provides two ports capable of transmission and receipt of facsimile data to or from a Group 3 capable Fax machine, another iSeries or AS/400e with the #2664, or PCs with appropriately programmed Fax adapter. The #2664 consists of a card, a wrap cable, two country unique attachment couplers and telephone cables, and Licensed Internal Code. Card slots required: One Maximum: 32
#2666	High-Speed Communications Adapter Provides one communications line capable of T1/E1 (1.544/2.048 Mbps) speeds. The #2666 consists of a card, a wrap connector and a cable. One of the following cables must be specified: #9879 20ft (6m) V.35 CCITT cable #9880 80ft (24m) V.35 CCITT cable #9882 20ft (6m) RS449/V.36 CCITT cable #9883 80ft (24m) RS449/V.36 CCITT cable* #9884 150ft (45m) RS449/V.36 CCITT cable* #9885 20ft (6m) X.21 CCITT cable * These cables will only be allowed when the customer's modem supports Looped Clocking Mode. The #2666 is supported but not orderable on Models 640 and 650. The newer #2699 should be ordered on new systems. Card slots required: One Maximum: Twenty on Model 640; thirty on Model 650
#2699 #9699	Two-Line WAN IOA Supports up to two multiple protocol communications ports when any one or two (in any combination) if the following cables are attached: #0328 20ft (6m) Operations Console cable (on #9699 and V4R3 defaulted)* #0329 V.24/EIA 232 80ft (24m) cable #0330 V.24/EIA 232 20ft (6m) cable #0331 V.24/EIA 232 50ft (15m) cable #0332 V.24/EIA 232 20ft (6m) enhanced cable #0333 V.24/EIA 232 50ft (15m) enhanced cable #0334 V.24/EIA 232 80ft (24m) enhanced cable #0335 V.36/EIA 449 20ft (6m) cable #0336 V.36/EIA 449 50ft (15m) cable #0337 V.36/EIA 449 150ft (45m) cable #0338 V.35 20ft (6m) cable #0339 V.35 50ft (15m) cable #0340 V.35 80ft (24m) cable #0341 X.21 20ft (6m) cable #0342 X.21 50ft (15m) cable #0344 20ft (6m) Comms Console cable *For the #2699: This feature is used to support the Operations Console function on CPU Models supporting Logical Partitioning (LPAR) for secondary partitions when Logical Partitioning is implemented (V4R4 and higher). #0380 Remote Control Panel Cable. Optional for the base partition only. Does not attach to a communication port. #9699 is the base communications adapter card and is placed in Slot B of the #9751 or #9754 MFIOP. See the #2629 description in this section for restrictions on communications when using #2629, #9751, or #9754. Prerequisite for #2699: #2629 or a spare IOA slot in #9751 or #9754 MFIOP IOA slots required for #2699: One on #2629, #9751, or #9754.

#2745	<p>PCI Two-Line WAN IOA (PCI)</p> <p>Supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft (15m) enhanced PCI cable #0352 V.24/EIA232 80ft (24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 150ft (45m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0365 V.24/EIA232 80ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI cable* <p>*This feature is used to support the Operations Console function on CPU Models supporting Logical Partitioning (LPAR) (V4R4). A maximum of one #0367 cable is allowed per #2745.</p> <p>Prerequisite: #5065</p> <p>PCI card slots required: One</p>
#2750	<p>PCI ISDN BRI U IOA (PCI)</p> <p>This is a 4 port (8 channel) ISDN BRI (basic rate, 2 wire interface) full size card. Each port consists of 2B+D configuration. A wrap cable/plug and four 30-foot RJ-45 to RJ-45 cables are shipped with each card. Each #2750 counts as eight communication lines against the system maximums. It supports SLIP/PPP, IDLC and Fax protocols. The feature is country specific.</p> <p>Prerequisite: #5065, #2824 and V4R4 with PTF MF22528 (or supersede) or Cumulative PTF Package C9313440.</p>
#2751	<p>PCI ISDN BRI S/T IOA (PCI)</p> <p>This is a 4 port (8 channel) ISDN BRI (basic rate, 4 wire interface) full size card. Each port consists of 2B+D configuration. A wrap cable/plug and four 30-foot RJ-45 to RJ-45 cables are shipped with each card. Each #2751 counts as eight communication lines against the system maximums. It supports SLIP/PPP, IDLC, and Fax protocols. The feature is country specific.</p> <p>Prerequisite: #5065, #2824 and V4R4 with PTF MF22528 (or supersede) or Cumulative PTF Package C9313440.</p>
#2761	<p>PCI Integrated Analog Modem (PCI)</p> <p>The #2761 supports multiple analog modem ports (eight phone lines). The feature includes a wrap cable/plug and eight 30-foot phone cables. Each #2761 counts as eight communication lines against the system maximums. It supports SLIP/PPP, SDLC and FAX protocols. Does not support ECS line. To the iSeries or AS/400e server, the #2761 will look like a single IOA with eight individual line resources available. The feature is country specific.</p> <p>Prerequisite: #5065, #2824 and V4R4 with PTF MF22528 (or supersede) or Cumulative PTF Package C9313440.</p>
#2824	<p>Feature Controller (PCI)</p> <p>This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details see "WORKSTATION CONTROLLERS" on page 254. There are some restrictions on communications using #2824.</p> <p>Prerequisite: #5065 and V4R4.</p>
#4800	<p>PCI Crypto Coprocessor (PCI)</p> <p>This feature is a hardware cryptography solution based on the IBM 4758 card. It is a half length PCI card. Since the feature is temperature sensitive, it will be shipped separately in specially designed, insulated packaging.</p> <p>Maximum: Three per system.</p> <p>Prerequisite: #2824 and V4R4.</p>
LANS/ATM	
#2617	<p>Ethernet/IEEE 802.3 Adapter/HP</p> <p>Provides a single attachment to one Carrier Sense Multiple Access/Collision Detector Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. An AUI Ethernet cable must be ordered separately. The #2617 is supported only. The newer #6181 should be ordered on new systems.</p> <p>Card slots required: One</p>

#2618	Fiber Distributed Data Interface Adapter Provides one interface to connect an iSeries or AS/400e to an FDDI LAN which complies with ANSI X3T9.5 and ISO 9314 standards. Consists of a card, a wrap connector, and Licensed Internal Code, which supplies IEEE 802.2 Logical Link Control (LLC), ANSI X3T9.5/ISO 9314 Media Access Control (MAC) functions, and ANSI X3T9.5 Station Management (SMT) functions. A multi-mode (62.5/125 micron) FDDI optical fiber jumper cable to connect the adapter to the FDDI ring must be ordered separately. Card slots required: One
#2619	16/4 Mbps Token Ring Adapter/HP Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code (supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions), and an external 8ft (2.4m) cable. The #2619 is supported only. The newer #6149 should be ordered on new systems. Card slots required: One
#2626	16/4 Mbps Token Ring Adapter/A Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code, which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions, and an external 8ft (2.4m) cable. The #2626 is supported only. The newer #6149 should be ordered on new systems. Card slots required: One
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are #2699, #6149, #6180, #6181, and #9280. LAN IOAs (#6149 and #6181) cannot occupy all three positions. No more than seven #2629s can be placed in one #5072 System Unit Expansion Tower. The #2629 cannot be placed in Slot 14 of a #5072. There is no restriction on placing #2629 in #5073 System Unit Expansion Tower. Card slots required: One
#2663	I/O Attachment Processor This I/O processor is required to attach #2668 Wireless LAN Adapter. The #2663 and #2668 are integrated in a single hardware package to operate as a unit. Prerequisite for #2668. Card slots required: One (with #2668)
#2665	Shielded Twisted-Pair Distributed Data Interface Adapter Provides one interface to connect to an FDDI LAN which is constructed of IBM Cabling System Type 1, 2, 6, or 9 shielded twisted-pair wiring. It consists of a card, a wrap connector, and Licensed Internal Code, which supplies IEEE 802.2 Logical Link Control (LLC), ANSI X3T9.5/ISO 9314 Media Access Control (MAC) functions and ANSI X3T9.5 Station Management (SMT) functions. IBM FDDI copper jumper cables to connect the adapter to the FDDI ring must be ordered separately. Card slots required: One
#2668	Wireless LAN Adapter Provides wireless connectivity to workstations or other systems connected to a wireless LAN network. One of the following antenna cables must be specified: #9814 20ft (6m) antenna cable #9815 50ft (15m) antenna cable One of the following antenna must be specified: #9889 YAGI Directional Antenna #9890 Omni Directional Antenna (360 degree) #9891 Hemispherical Antenna (180 degree) #9892 Directional Antenna (90 degree) Card slots required: One (with #2663) Prerequisite: #2663 Maximum: Three. Supported for migration only.
#2723 #9723	PCI Ethernet IOA Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. Has a RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B. Requires #6617/#6618 or #5065.

#2724 #9724	PCI Token Ring IOA Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions and an external 8ft (2.4m) cable. Alternatively a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. The IOA is capable of operation in half or full duplex modes. Requires #6617/#6618 or #5065.
#2810	LAN/WAN IOP This I/O processor is required to attach one #2838 PCI 100/10 Mbps Ethernet IOA or #2811/#2812/#2815/#2816/#2818/#2819 PCI ATM IOA. Prerequisite for the preceding features. Card slots required: One with any of the preceding features.
#2811	PCI 25 Mbps UTP ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Unshielded Twisted Pair (UTP) cabling. The #2811 will typically be used where 25 Mbps speed is required over distances of less than 100 meters. Requires OS/400 V4R2. Card slots required: One (with #2810) Prerequisite: #2810
#2812	PCI 45 Mbps Coax T3/DS3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the T3/DS-3 interface. The #2812 will typically be used where 45 Mbps speed is required over distances less than 1000 meters. Requires OS/400 V4R2. Card slots required: One (with #2810). Prerequisite: #2810.
#2815	PCI 155 Mbps UTP OC3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2815 will typically be used where 155 Mbps speed is required over distances of less than 100 meters. Requires OS/400 V4R2. Card slots required: One (with #2810). Prerequisite: #2810.
#2816	PCI 155 Mbps MMF ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2816 will typically be used where 155 Mbps speed is required over distances of less than 2 kilometers. Requires OS/400 V4R2. Card slots required: One (with #2810). Prerequisite: #2810.
#2818	PCI 155 Mbps SMF OC3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Single-Mode Fiber (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provides equipment but can be used for local area switches. The #2818 will typically be used where 155 Mbps speed is required over distances from 16 to 40 kilometers. Requires OS/400 V4R2. Card slots required: One (with #2810). Prerequisite: #2810.
#2819	PCI 34 Mbps Coax E3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the E3 interface. The #2819 will typically be used where speed of 34 Mbps is required over distances of less than 1000 meters. Requires OS/400 V4R2. Card slots required: One (with #2810). Prerequisite: #2810
#2838 #9738	PCI 100/10 Mbps Ethernet IOA Provides attachment to a standard 100 Mbps high-speed Ethernet LAN and also allows attachment to existing 10 Mbps Ethernet LAN. The IOA is capable of operating in half or full duplex modes. The adapter comes with an RJ45 connector for attachment to UTP-5 media. SPD card slots required: One (with #2810) or three (with #6617/#6618). PCI slots required: One Prerequisite: #2810 or #6617/#6618 or #5065
#6149	16/4 Mbps Token Ring IOA Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an IOA card, internal code which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) and an external 8ft (2.4m) Token Ring cable. Alternatively, a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. The #6149 can operate in full or half-duplex mode. Card slots required: None Prerequisite: #2629, #6616, #9751, or #9754 MFIOF slot

#6181	<p>Ethernet/IEEE 802.3 IOA (SPD)</p> <p>Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus 802.2 Logical Link Control (LLC) functions. Has a RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. Cabling must meet or exceed industry standard EIA/TIA T568B. The #6181 IOA is capable of operating in half or full duplex mode.</p> <p>The following cable can be ordered if the customer is choosing IBM AUI cabling: #9025 Ethernet Cable (3 meter AUI)</p> <p>If the customer is not choosing IBM AUI cabling, AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B.</p> <p>SPD slots required: None Card slots required: None Prerequisite: #2629, #6616, #9751, or #9754 MFIOF slot</p>
#6516 #6517 #6518 #6519 #6526 #6527 #6528 #6529	<p>Integrated PC Server (formerly known as FSIOF)</p> <p>Contains a 66MHz 486 Processor, main storage, and the ability to attach to one or two LANs for high performance serving to LAN attached PCs. The following initial order configurations can be upgraded using #6509 and #6520:</p> <p>16MB One-Port Integrated PC Server 32MB One-Port Integrated PC Server 48MB One-Port Integrated PC Server 64MB One-Port Integrated PC Server 16MB Two-Port Integrated PC Server 32MB Two-Port Integrated PC Server 48MB Two-Port Integrated PC Server 64MB Two-Port Integrated PC Server</p> <p>The following cables need to be specified depending on the LAN being attached to: #9024 Token Ring Cable (2.4m) #9025 Ethernet Cable (3m AUI)</p> <p>Card slots required: Two contiguous slots</p>
#6509	<p>Additional 16 MB for Integrated PC Server</p> <p>This is used to increase the memory on an installed Integrated PC Server up to the maximum of 64 MB.</p>
#6520	<p>Upgrade One-Port Integrated PC Server to Two Port Integrated PC Server</p> <p>This cannot be used with a Two-Port Integrated PC Server. The #9024 or #9025 can be ordered with #6520 depending on the LAN to be attached. Maximum: Sixteen</p>
#6616	<p>Integrated PC Server</p> <p>Contains a 166 MHz Pentium Processor, two Main Storage slots, and two LAN IOA slots for higher performance serving to LAN attached PCs. The two main storage slots can each contain one of the following features, giving a maximum of 256 MB. At least one main storage feature is required: #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory</p> <p>Either one or two of the following LAN IOAs are supported: #6149 16/4 Mbps Token Ring IOA #6181 Ethernet/IEEE 802.3 IOA</p> <p>Card slots required: Two contiguous slots Maximum: Sixteen</p>
#6617	<p>Integrated PC Server</p> <p>Contains a 200 MHz Pentium Processor, four Main Storage slots and three LAN IOA slots for high performance serving to LAN attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 512 MB. At least one main storage feature is required: #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory</p> <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838. #2723 PCI Ethernet IOA Specify # is not required #2724 PCI Token Ring IOA Specify # is not required #2838 PCI 100/10 Mbps Ethernet IOA Specify #0220 is required for each #2838 ordered.</p> <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6617. The #0222 100/10 Mbps Ethernet on IPCS is required for each #2838 attached to the #6617 Integrated PC Server.</p>

#6617 <i>continued</i>	<p>If running Windows NT on the #6617, then:</p> <ul style="list-style-type: none"> #0325 Integrated PC Server Extension cable for Windows NT is required #1700 Integrated PC Server Keyboard/Mouse for Windows NT is recommended (in those countries offering it). <p>A display unit must be connected to the IPCS to support Windows NT. A minimum of 64MB is required if running Windows NT.</p> <p>When running OS/2 on the #6617, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838. A maximum of 512MB IOP memory is supported. <p>When running Novell Netware on the #6617, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838. A maximum of 256 MB IOP memory is supported. <p>For country-specific keyboard/mouse and display support, see the Web site at: http://www.ibm.com/eserver/series/windowsintegration/ Requires OS/400 V4R2. Card slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack.</p>						
#6618	<p>Integrated Netfinity Server for AS/400 Requires OS/400 V4R2 (V4R2 and Cumulative PTF Package C8342420 or V4R3 and Cumulative PTF Package C8349430). Contains a 333 MHz Pentium Processor, four main storage slots, and three LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory Specify # is not required #2862 128 MB Integrated PC Server Memory Specify # is not required #2867 256 MB Integrated PC Server Memory Specify #0220 is required for each #2838 ordered <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838.</p> <table> <tr> <td>#2723 PCI Ethernet IOA</td><td>Specify # is not required</td></tr> <tr> <td>#2724 PCI Token Ring IOA</td><td>Specify # is not required</td></tr> <tr> <td>#2838 PCI 100/10 Mbps Ethernet IOA</td><td>Specify #0222 is required</td></tr> </table> <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6618. The #0222 100/10 Mbps Ethernet on IPCS is required for each #2838 attached to the #6618 Integrated PC Server. If running Windows NT on the #6618, then:</p> <ul style="list-style-type: none"> A minimum of 64 MB IOP memory is required. #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard/Mouse for Windows NT, the default in the USA. A display is required to support Windows NT on the IPCS. <p>For country-specific keyboard/mouse and display support, see the Web site at: http://www.ibm.com/eserver/series/windowsintegration/</p> <p>When running OS/2 on the #6618, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838. A maximum of 512 MB IOP memory is supported. <p>When running Novell Netware on the #6618, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838. A maximum of 256 MB IOP memory is supported. <p>SPD slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack.</p>	#2723 PCI Ethernet IOA	Specify # is not required	#2724 PCI Token Ring IOA	Specify # is not required	#2838 PCI 100/10 Mbps Ethernet IOA	Specify #0222 is required
#2723 PCI Ethernet IOA	Specify # is not required						
#2724 PCI Token Ring IOA	Specify # is not required						
#2838 PCI 100/10 Mbps Ethernet IOA	Specify #0222 is required						
DISK UNITS							
#1602	<p>1.03 GB One-byte Disk Unit Conversion Kit Provides the hardware for migrating one 1.03 GB one-byte SCSI disk unit. Supported only in System Unit or #5052, #5057, and #5058 Storage Expansion Units positions 1 through 7. One #1602 will migrate #1312, #6602, #6802, or #9602 disk. Two #1602 will migrate #2802, #6612, #6812, #8612, or #9802 dual disks.</p>						

#1603	1.96 GB One-byte Disk Unit Conversion Kit Provides the hardware for migrating one 1.96 GB one-byte SCSI disk unit. Supported only in System Unit or #5052, #5057 and #5058 Storage Expansion Unit positions 1 through 7. One #1603 will migrate #1313 or #6603 disk. Two #1602 will migrate #6613, #7613 or #8613 dual disks.
#4308	4.19 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in #5065/#5066 only Provides a 3 ½-inch single disk unit with 4.19 GB capacity for a dditional disk storage. Prerequisite: OS/400 V4R4, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4314	8.58 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in #5065/#5066 only Provides a 3 ½-inch single disk unit with 8.58 GB capacity for a dditional disk storage. Prerequisite: OS/400 V4R4, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4317	8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra2 SCSI) Supported in #5065/#5066 only Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Prerequisite: OS/400 V4R4, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4318	17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra2 SCSI) Supported in #5065/#5066 only Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4324	17.54 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in #5065/#5066 only Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4331	1.6 GB Read Cache Device Supported in #5065/#5066 only This feature provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the disk controller #2748. Prerequisites: OS/400 V4R4 and #2748 PCI RAID Disk Unit Controller. One DASD Slot 1.6-inch. This is a Customer Install Feature (CIF) Maximum: One per #2748 IOP.
#6605	1.03 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. This feature is supported for migration only.
#6606 #9606	1.96 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. This feature is supported for migration only. The #9606 specifies a 1.96 GB base disk unit.
#6607 #7607	4.19 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. This feature is supported for migration only. The #7607 specifies an optional 4.19 GB base disk unit.
#6650	1.96 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. This feature is supported for migration only.
#6652	1.03 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. This feature is supported for migration only.
#6713 #7713 #8713	8.58 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. For best performance, use attached to the #9751 or #9754 MFIOp with RAID, or #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in the System Unit; #5055, #5057, or #5058 Storage Expansion Unit; or #5083 Storage Expansion Tower. The #7713 and #8713 specify an optional 8.58 GB base disk. The #7713 is supported for migration only.

#6714 #8714	17.54 GB Additional Two-Byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. For best performance, use attached to the #9751 or #9754 MFIOP with RAID, or #6532 or #6533 RAID Disk Unit controller (Ultra SCSI) in the System Unit; #5055, #5057, or #5058 Storage Expansion Unit; or #5083 Storage Expansion Tower. The #8714 specifies an optional 17.54 GB base disk. Requires OS/400 V4R2. Integrated hardware disk compression on this disk is supported with V4R4.
#6717 #8617	8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported in #5052, #5055, #5057, or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers and in #9251 or Model 640 System Tower. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083. Not supported on #6502/#6512/#6530. The #8617 specifies an optional 8.58 GB base disk. Prerequisite: OS/400 V4R3
#6718 #8618	17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported in #5052, #5055, #5057, or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers and in #9251 or Model 640 System Tower. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083. Not supported on #6502/#6512/#6530. The #8618 specifies an optional 17.54 GB base disk. Prerequisite: OS/400 V4R4
#6906	1.96 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. For best performance, use attached to the #9751 or #9754 MFIOP with RAID, or #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in the System Unit; #5055, #5057, or #5058 Storage Expansion Unit; or #5083 Storage Expansion Tower.
#6907 #9907	4.19 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. For best performance, use attached to the #9751 or #9754; MFIOP with RAID, or #6532 or #6533; RAID Disk Unit Controller (Ultra SCSI) in the System Unit; #5055, #5057, or #5058 Storage Expansion Unit; or #5083 Storage Expansion Tower. The #9907 specifies a 4.19 GB base disk included with new Model 640 or 650 orders and with upgrades to these Models from CISC Models.
INTERNAL CD-ROM AND TAPE UNITS	
#1379	1.2 GB ¼-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating 1.2 GB ¼-inch Cartridge Tape Units. The #1379 will migrate the #1349, #5348, #6348, #6368, #7348, #8348 or #9348 Tape Units. Attaches to the #2621, #6513, #9751, or #9754 MFIOP.
#1380	2.5 GB ¼-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating 2.5 GB ¼-inch Cartridge Tape Units. The #1380 will migrate the #1350, #5349, #6349, #6369, #7349, #8349 or #9349 Tape Units. Attaches to the #2621, #6513, #9751, or #9754 MFIOP.
#4425	Optional CD-ROM Feature Supported only in #5065. Prerequisite: V4R4 and #2748 Storage Device Controller. This is a Customer Install Feature (CIF).
#4482	4 GB ¼-inch Cartridge Tape Unit Supported only in #5065. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).
#4483	16 GB ¼-inch Cartridge Tape Unit Supported only in #5065. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).
#4486	25 GB ¼-inch Cartridge Tape Unit Supported only in #5065. Can be used for save/restore, Alternate IPL, migration and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).

#5032	Removable Media Device Cluster Box This is a rack-mounted unit that allows the attachment of between one and four #6368 1.2 GB or #6369 2.5 GB ¼-inch Cartridge Tape Units. This is supported for migration only and cannot be ordered as a new feature. Attaches to #2621 Removable Media Device Attachment.
#6325	Optional CD-ROM Feature Available on System Unit Expansion Towers #5072 and #5073. Prerequisite: Storage Device Controller #2624 and V4R4. Maximum three per I/O tower. Limits the use of tape in the same tower to #6380 and #6390.
#6368	1.2 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape is installed in a #5032. It is supported for migration only and cannot be ordered as a new feature.
#6369	2.5 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape is installed in a #5032. It is supported for migration only and cannot be ordered as a new feature.
#6380	2.5 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This is supported for migration only. On new orders, #6381 should be ordered. Attaches to the #2624, #6513, #9751, or #9754 MFIOP.
#6381	2.5 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. Attaches to the #6513, #9751, or #9754 MFIOP.
#6382	4 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Attaches to the #6513, #9751, or #9754 MFIOP.
#6383	16 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the #5072, #5073 or 9251 System Unit Expansion Towers and in the Model 640 System Tower. One can be controlled by the MFIOP. Additional #6383s must be controlled by the #6513.
#6385	13 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Attaches to the #6513, #9751, or #9754 MFIOP.
#6386	25 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Attaches to the #6513, #9751, or #9754 MFIOP.
#6390	7 GB 8 mm Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and 8 mm cartridge tape exchange using appropriate media and density. Attaches to the #2624, #6513, #9751, or #9754 MFIOP.
MAGNETIC MEDIA CONTROLLERS	
#2621	Removable Media Device Attachment Provides attachment for one or two of the following devices with hardware data compression for tapes: 2440, 9348, 7208, 3995, 9427, and #5032. Dual drive 7208s count as two devices. If #2621 supports a 3995 or #5032, it must be dedicated to it. If #2621 supports a 9427, we recommend that the 9427 be attached to both ports of the #2621. For new orders, #6534 will be used in preference to #2621 as long as it supports the tape device required. Card slots required: One Maximum: Four for External Tape; two for #5032; twenty-two for 3995
#2624	Storage Device Controller Provides support for up to three internal tape drives. With the addition of #6146 it will also support one external diskette drive. For new orders, #6513 will be used in preference to #2624 unless #2624 is required anyway to support a diskette drive. Also used to support the optional CD-ROM #6325 in #5072 or #5073 System Expansion Towers. Card slots required: One Maximum: Seven for Internal Tape, two for Diskette

#2644	34XX Magnetic Tape Subsystem Attachment Provides attachment for 3422, 3430, 3480, 3490 Axx, 3490 Bxx, 3490 Dxx, 3490E Axx, 3490E Bxx, 3490E Cxx, 3490E Dxx Tape Subsystem Models. Also requires #9980 Serpentine Cable except for 3490E Cxx when ordered with Internal Cables. Card slots required: One Maximum: Eight
#2718	PCI External Tape Controller (PCI) Provides SCSI attachment for one 7207-122 4 GB ¼ inch Cartridge External Tape Drive and/or 7210-020 CD ROM (V4R5 required for 7210-020). High-speed PCI slots required: One. Prerequisite: #2824 and #5065. If a 7210-020 is installed on the same IOA as the 7207-122, the 7207 tape must be the first physical device. Maximum: Three in the #5065.
#2729	PCI External Tape Controller (PCI) Provides SCSI attachment for one 3490E Exx, 3490E Fxx, 3490E Cxx with #5040, 3494 D1x or L1x. 3570, 3575, 3590, 7208, 9348 or 9427 Tape Drive or 3995 C4x Optical Library Dataserver. High-speed PCI slots required: One. Prerequisite: #2824 and #5065. Maximum: Three in the #5065.
#2748	PCI RAID Disk Unit Controller—26 MB Cache (RAID Mirrored/Unprotected) (PCI) (Ultra2 SCSI) The #2748 is Ultra2 SCSI capable when installed in the #5065 Storage/PCI Expansion Tower. The #2748 has a 26MB write-cache and provides RAID-5 protection and compression for internal disk units. It supports up to 15 disks. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of three arrays are allowed for each #2748. The #2748 supports both compression and non-compression modes. The mode is determined by a hardware jumper on the card. The #2748 also supports #4331 1.6 GB Read Cache Device. It supports up to two internal tapes and CD-ROM. Supports #1349, #1350, #1355, #1360, #4482, #4483, #4486, #6480, #6481, #6482, #6483, #6485, #6486, or #6490 tape units. High-speed PCI slots required: One Prerequisite: OS/400 V4R4 and #5065. Maximum: Three per #5065.
#6112	Magnetic Storage Device Controller Provides attachment for up to two 9331-001 or 002 Diskette Units and up to two 9347 Tape Units. This feature is supported for migration only. Card slots required: One Maximum: Two for 9331, Two for 9347
#6146	Diskette Adapter Provides attachment for one 9331 011 or 012 Diskette Unit. Card slots required: None Prerequisite: #2624 Maximum: Two
#6500	Direct Access Storage Device Controller Provides attachment for one 9337 0xx or 1xx Disk Unit. This feature is supported for migration only. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter.
#6501	Tape/Disk Device Controller Provides attachment for up to two 9337 2xx, 4xx, or 5xx Models. Also supports up to two 3490E Cxx with #5040, 3490E Exx, 3490E Fxx, 3494 Lxx or Dxx, 3570, 3575, or 3590 Models. Also provides attachment for 2105 Versatile Storage Server. DASD and Tape Units cannot be mixed on the same #6501. The #6534 will be used in preference to #6501 if it supports the tape device being configured. Card slots required: One Maximum: Eight for Tape; for Disk, see the model overview tables at the beginning of this chapter.
#6502	RAID Disk Unit Controller—2 MB Cache (RAID/Mirrored/Unprotected) Provides RAID protection and a 2 MB write-cache for up to 16 disks located in #5052 or #5058 Storage Expansion Unit or #5082 or #5083 Storage Expansion Tower. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are allowed for each #6502. The #6502 is supported for migration but the #6532 or #6533 should be ordered on new systems. The #6502 is not capable of integrated hardware disk compression. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter.

#6512	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) Provides RAID protection and a 4 MB write-cache for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, #5082 or #5083 Storage Expansion Tower. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are allowed for each #6512. The #6512 is supported for migration but the #6532 or #6533 should be ordered on new systems. The #6512 is not capable of integrated hardware disk compression. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter.
#6513	Internal Tape Device Controller Provides support for up to two internal tape drives when located in Model 650 System Unit or four internal tape drives when located in #5072 or #5073 System Unit Expansion Tower. The #6513 is the default controller unless a #2624 is installed. Supports #1379, #1380, #6380, #6381, #6382, #6383, #6385, #6386, and #6390 Tape Units. Card slots required: One Maximum: Five
#6530	Disk Unit Controller—No Cache (Mirrored/Unprotected) Controller for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, or #5082 or #5083 Storage Expansion Tower. The #6530 is supported for migration, but the #6532 or #6533 should be ordered on new systems. The #6530 is not capable of integrated hardware disk compression. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter.
#6532	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) Ultra SCSI Controller for up to 16 disks installed in #5058 Storage Expansion Units or #5083 Storage Expansion Tower. Also supports disks located in #5052 Storage Expansion Unit or #5082 Storage Expansion Tower, but these will not be at Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of four arrays are allowed for each #6532. The #6532 is not capable of integrated hardware disk compression. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter.
#6533	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) Ultra SCSI Controller for up to 16 disks installed in #5058 Storage Expansion Units or #5083 Storage Expansion Tower. Also supports disks located in #5052 Storage Expansion Unit or #5082 Storage Expansion Tower, but these will not be at Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of four arrays are allowed for each #6533. Requires OS/400 V4R2. Supports integrated hardware disk compression with V4R3 installed. Disk compression on #6714/#8714 (17.54GB Disk Unit) is currently not supported. IBM intends to provide disk compression for #6714/#8714 in a future release of OS/400. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter.
#6534	Magnetic Media Controller Provides attachment for one 3490E Cxx with #5040, 3490E Exx, 3490E Fxx, 3494 L1x or D1x, 3570, 3575, 3590, 7208, 9348, or 9427 Tape Drive or 3995 C4x Optical Libraries Dataserver. OS/400 V4R2 is required to support 3995. Card slots required: One Maximum: Eight
#9751	MFIOP with RAID—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) Ultra SCSI controller for up to 20 disks installed in the System Unit and #5055 or #5057 Storage Expansion Unit. On the Model 640, disks 1 to 12 can be located in the System Unit and 13 to 20 in the #5055 Storage Expansion Unit. On the Model 650, disks 1 to 4 can be located in the System Unit and 5 to 20 in the #5057 Storage Expansion Unit. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of four arrays are allowed. The #9751 is not capable of integrated hardware disk compression. The #9751 has CCIN 6754. Card slots required: Two Maximum: One

#9754	MFIOp with RAID—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) Ultra SCSI controller for up to 20 disks installed in the System Unit and #5055 or #5057 Storage Expansion Unit. On the Model 640, disks 1 to 12 can be located in the System Unit and 13 to 20 in the #5055 Storage Expansion Unit. On the Model 650, disks 1 to 4 can be located in the System Unit and 5 to 20 in the #5057 Storage Expansion Unit. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of four arrays are allowed. The #9754 is standard on all systems ordered with V4R2. The #9754 has CCIN 6754. Supports integrated hardware disk compression with V4R3 installed. Disk compression on #6714/#8714 (17.54GB Disk Units) is supported at OS/400 V4R4. Card slots required: Two Maximum: One
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9.14 Upgrades to Model 6xx

9.14.1 Models 2xx, 3xx, 4xx, and 5xx to Model 6xx

The process of upgrading to an AS/400e based on RISC Technology from CISC Technology (F, 2xx, and 3xx models) requires careful planning. Refer to *AS/400 Roadmap for Changing to PowerPC Technology*, SA41-5150, for information on planning, ordering, and executing upgrades to RISC Models.

The following table indicates the valid upgrades to 6xx models. B, C, D, and E models cannot be upgraded to 6xx Models. It also shows the percentage increase in power given by the announced upgrade paths.

Effective 31 March 1999, IBM withdrew the following upgrades from marketing:

- Fxx to 6xx
- 200 to 6xx
- 3X0 to 6xx

From 9402/4/6		To 9402/9404/9406 Model 600, 620, 640, and 650															
Model		600				620					640			650			
	Proc	#2129	#2134	#2135	#2136	#2175	#2179	#2180	#2181	#2182	#2237	#2238	#2239	#2240	#2243	#2188	#2189
	RSP CPW (1)	22.7	32.5	45.4	73.1	50.0	85.6	113.8	210.0	464.3	319.0	583.3	998.6	1794	2340	3660	4550
F02	5.5	313%	491%	725%													
F04	7.3	211%	345%	522%	901%												
F06	9.6	136%	239%	373%	661%												
F10	9.6	136%	239%	373%	661%	420%	792%										
F20	11.6	96%	180%	291%	530%	331%	638%	881%									
F25	13.7	66%	137%	231%	434%	265%	525%	731%									
F35	13.7	66%	137%	231%	434%	265%	525%	731%									
F45	17.1		90%	165%	327%	192%	401%	565%									
F50	27.8					80%	208%	309%	655%								
F60	40.0						114%	185%	425%	1064%	698%						
F70	57.0							100%	268%	715%	460%	923%					
F80	97.1								116%	378%	229%	501%					
F90	127.7								64%	264%	150%	357%	682%				
F95	148.8										114%	292%	571%				
F97	177.4										80%	229%	463%	911%			
236 ³	16.3			179%	348%	207%	425%	598%									
200/#2030	7.3	211%	345%	522%	901%	585%	1073%										
200/#2031	11.6	96%	180%	291%	530%	331%	638%	881%									

From 9402/4/6		To 9402/9404/9406 Model 600, 620, 640, and 650															
Model		600				620					640			650			
	Proc	#2129	#2134	#2135	#2136	#2175	#2179	#2180	#2181	#2182	#2237	#2238	#2239	#2240	#2243	#2188	#2189
	RSP CPW (1)	22.7	32.5	45.4	73.1	50.0	85.6	113.8	210.0	464.3	319.0	583.3	998.6	1794	2340	3660	4550
200/#2032	16.8		93%	170%	335%	198%	410%	577%									
400/#2130 ²	13.8	64%	136%	229%	430%	262%	520%	725%									
400/#2131 ²	20.6		58%	120%	255%	143%	316%	452%	919%								
400/#2132 ²	27.0			68%	171%	85%	217%	321%	678%								
400/#2133 ²	33.3				120%		157%	242%	531%								
436/#2102	16.3			179%	348%	207%	425%	598%									
436/#2104	20.6			120%	255%	143%	316%	452%	919%								
436/#2106	27.4							315%	666%								
300/#2040	11.6	96%	180%	291%	530%	331%	638%	881%									
300/#2041	16.8		93%	170%	335%	198%	410%	577%									
300/#2042	21.1		54%	115%	246%	137%	306%	439%	895%								
310/#2043	33.8						153%	237%	521%	1274%	844%						
310/#2044	56.5							101%	272%	722%	465%	932%					
320/#2050	67.5							69%	211%	588%	373%	764%					
320/#2051	120.3							75%	286%	165%	385%	730%					
320/#2052	177.4									80%	229%	463%	911%				
500/#2140	21.4					134%	300%	432%	881%								
500/#2141	30.7					63%	179%	271%	584%	1412%	939%						
500/#2142	43.9						95%	159%	378%	958%	627%	1229%					
510/#2143	77.7							46%	170%	498%	311%	651%	1185%				
510/#2144	104.2								102%	346%	206%	460%	858%				
530/#2150	131.1										143%	345%	662%	1268%			
530/#2151	162.7										96%	259%	514%	1003%			
530/#2152	278.8											109%	258%	543%	739%	1213%	
530/#2153	459.3												117%	291%	409%	697%	890%
530/#2162	509.9												96%	252%	359%	618%	792%
Note 1:		Relative System Performance (CPW-Commercial Processing Workload). For the 6x0 Models, this is based on V4. For the "from" model, this is based on V3R1 for CISC boxes and V3R7 for RISC boxes. Boxes still on V3R6 will, therefore, see greater improvements.															
Note 2:		400 includes package Models 40E, 40G, 40L, 41E, 41G, 41L, 42E, 42G and 42L.															
Note 3:		The 236 does not run OS/400. However, the 436-2102 has an equivalent processor so the figures for that have been used.															

All new systems will be 9406 Machine Type (for example, 9406 Model 600). However, AS/400e servers that are upgraded from a 9402 or 9404 retain that Machine Type number to become a 9402/9404 Model 6xx, despite the fact that physically it is the same as a 9406 6xx.

9.14.2 Model 6xx to Model 6xx Upgrades

From 9402/4/6		To 9402/9404/9406 Model 600, 620, 640, and 650															
Model		600				620					640			650			
	Proc	#2129	#2134	#2135	#2136	#2175	#2179	#2180	#2181	#2182	#2237	#2238	#2239	#2240	#2243	#2188	#2189
	RSP CPW(1)	22.7	32.5	45.4	73.1	50.0	85.6	113.8	210.0	464.3	319.0	583.3	998.6	1794	2340	3660	4550
600 #2129	22.7		43%	100%	222%	120%	277%	401%	825%								
#2134	32.5			40%	125%	54%	163%	250%	546%								
#2135	45.4				61%		89%	151%	363%	923%							
#2136	73.1							56%	187%	535%							
620 #2175	50.0						71%	128%	320%	829%	538%						
#2179	85.6							33%	145%	442%	273%	581%					
#2180	113.8								85%	308%	180%	413%	718%				
#2181	210.0									121%	52%	178%	376%	754%			
#2182	464.3												115%	286%	404%	688%	880%
640 #2237	319.0											83%	213%	462%	634%	1047%	
#2238	583.3												71%	208%	301%	527%	680%
#2239	998.6													80%	134%	267%	356%
650 #2240	1794														30%	104%	154%
#2243	2340															56%	94%
#2188	3660																24%
#2189	4550																

9.14.3 Upgrade Considerations for CISC-Based Models to RISC-Based AS/400e 6xx Models

Refer to 18.2, “Supported Upgrade Paths” on page 468 to identify the supported software upgrade paths for OS/400.

1. OS/400 Version 4 is a prerequisite for all 6xx Models.
2. Prior to ordering an upgrade from CISC to the 6xx Models, customers should order 5798-TBU. They receive them the *AS/400 Roadmap for Changing to PowerPC Technology*, SA41-5150, as well as the Upgrade Assistant PTFs that allows them to plan, order, and execute the upgrade.
3. If upgrading from a RISC Model to the 6xx Models, customers should consult the *System Upgrade Roadmap (RISC to RISC)*, SA41-5155.
4. For physical planning information such as weights, dimensions, and power requirements of the 6xx Models, customers should consult the *Physical Planning Reference Manual*, SA41-5109.
5. Before proposing an upgrade to a Model 600, the customer’s plans for growth should be considered as the Model 600 provides limited expansion for adapters. For example, if a fully configured Integrated PC Server (IPCS) supporting two LANs (Token Ring or Ethernet) is installed space remains for four additional adapters, two of which are dedicated for use by the 100/10 Mbps Ethernet IOA (#2838) or ATM IOAs (#281x) and the PCI Magnetic Media Controller (#2729). Therefore, the Model 620 should be considered.
6. The Model 600 supports PCI cards only. Therefore, when upgrading to this model, all SPD cards will have to be replaced. Most functions are supported with PCI format cards. However, the following are not supported with PCI cards and are not supported on the Model 600:

- Cryptographic Processors
- Fax Adapter
- ASCII Adapters
- ISDN Adapter
- SDDI Adapter
- FDDI Adapter
- Wireless LAN
- LocalTalk Adapter

- All upgrades to 6xx Models ship new system units.
- Upgrades from Fxx, 2x0, and 3x0 Models will require increased main storage. The general rule is to double the existing memory except where the current memory is less than 160MB when the recommendation is to double and add a further 16MB. BEST/1 should be used to confirm these requirements.
- Memory requirements should be planned with care due to the rule that on most 6xx processors memory must be installed in pairs or fours.
- When moving from Fxx, 2x0, and 3x0 Models to RISC Models, application software must be in observable format or have source code available or have a RISC based version ready.
- The following racks are supported with the 9406 RISC Models:
 - 9309 - #9171: General Purpose Rack with SPCN (stage 2)
 - 9406 - #5044: Converted D/E/F System (#5042) or Bus (#5040) Extension Unit
 - 9406 - #5043: Converted D/E/F System Unit (equivalent to 9309-#9171)
 - 9309 - #9141: General Purpose Rack without SPCN (stage 1). Must connect to one of the above three for power control.

The #9141 can attach to all system units if a jumper (P/N 93X0167) is installed. This is only recommended if the rack contains tape or diskette (not on Model 600). The #9141 can be converted to a #9171 using chargeable RPQ 843849. Older racks can be converted to the #9141 rack.
- Upgrades from Fxx, 2x0, and 3x0 will have a 4.19GB disk included with the upgrade. Upgrades from 4x0 and 5x0 do not. No other disks will be included unless ordered. Version 4 Release 1, Release 2, and Release 3 will require more disk space than Version 3 Release 6 or Release 7. Refer to *Software Installation Guide*, SC41-5120.
- A CD-ROM drive is included on all RISC based models. All IBM AS/400e software is now shipped on CD-ROM for these models.
- The CD-ROM on the 6xx Models is not identified by a feature. This also applies to base memory on the 600/620 Models.
- It is likely that conversion kits will be required for internal tapes and disk units. Therefore, the expected placement of such units should be checked to ensure the correct number of these kits are ordered. It should be noted that the same feature code kit may contain different parts depending on which model it will be placed in. And, the same tape unit may require different kits depending on what model it will be placed in.
- AS/400e RISC based Models use a substantially faster bus. All existing tower or racks have to have their bus controller converted to the faster bus controller using conversion kits.
- No 320 MB, 400 MB, 640 MB (dual), 800 MB (dual), 988 MB, or 1976 MB (dual) disk units are supported on the 6xx Model range and these must be replaced.
- The 120 MB and 525 MB 1/4-inch cartridges and the 840 MB 1/4-inch cartridge mini cartridge tape units are not supported on the 6xx Models.

19. Be aware of Card Technology changes from PCI to SPD when upgrading a Model 620 to a 640 or 650.

20. The use of CFAS400 or the PC-based Portable Configurator PCAS400 is mandatory for all upgrades.

9.14.4 Upgrade Specify Codes/Options on CISC to RISC Upgrades

Replacing the Release (#0200): This no-charge specify code denotes the upgrade will be done using the Replacing the Release method. This upgrade method may be used for upgrading systems running OS/400 Version 3 Release 1 or Release 2 or Version 3 Release 2. The Replacing the Release method is based on user objects remaining on the DASD units throughout the upgrade process. All supported DASD units are retained in the upgrade to the Version 4 system. Prior to upgrading the hardware, the Disk Preparation Utility must be run to prepare the DASD units on the prior release system for the new 4KB page size. All necessary object conversions are done by the system as part of the upgrade. This is the preferred approach for larger systems when all DASD units will be moved to the Version 4 system. Replacing the release reduces potential problems caused by save/restore and tape handling. It is the method most commonly used by AS/400e customers. This upgrade method keeps the same serial number.

Unload/Reload (#0201): This no-charge specify code denotes the upgrade will be done using the Unload/Reload upgrade method. This method consists of unloading user applications and data to tape, upgrading the hardware, installing OS/400 Version 4 and reloading the user applications and data. This approach is attractive for smaller systems, and reduces upgrade time compared to replacing the release. It may also be an effective method for upgrading common programs and files on multiple systems. This upgrade method keeps the same serial number unless ordered with #0203.

Staged Upgrade Offering (#0202): This priced option provides an upgrade alternative that allows a customer to use the upgrade hardware for a limited period of time to translate and validate user applications prior to the actual upgrade. This option is available using either #0200 (Replacing the Release) or #0201 (Unload/Reload) methods. This priced offering requires careful advance planning. *AS/400 Roadmap for Changing to PowerPC Technology*, SA41-5150, describes this offering in detail. The following hardware is delivered with this option:

- Power/Frame/Covers/Power Cord
- Processor Card
- Base Memory
- Feature Memory
- Base DASD
- Feature DASD

The customer can order optional features for inclusion in this hardware package. This package does not include a workstation controller, a tape adapter (or internal tape drive) or a communications adapter to allow transferring of data and programs. The customer will need to supply these for the duration of the transition. These can be “borrowed” from the current system, if possible.

Side by Side Install (#0203): This no-charge specify code is used to alert IBM service representatives of the intention to install a new system concurrently with an existing system, and over time, move applications to the new system. This method may be used when adding a system to an existing complex or network, or when a replaced system is being moved to another location. *AS/400 Roadmap for Changing to PowerPC Technology*, SA41-5150, describes this option in detail. This is a new system and therefore, will result in a new serial number.

Staged Side by Side Upgrade (#0204): This no-charge specify code denotes that the Staged Side-by-Side Upgrade method will be used. Feature #0202 (Staged Upgrade Offering) is a prerequisite that provides a base functional RISC system that will be used to translate and validate user applications prior to the actual upgrade. The #0204 assumes that the customer will be purchasing enough disk storage (and other features as necessary) to completely duplicate the disk storage of their production

| CISC machine. The #0204 also indicates that the upgrade will be performed using a method similar to the Side-by-Side Install method (#0203) which is described in the *AS/400 Roadmap for Changing to PowerPC Technology*, SA41-5150. This offering requires careful advanced planning. This upgrade method keeps the same serial number.

9.14.5 Upgrade Specify Code/Option for RISC to RISC Data Migration

| **RISC to RISC Data Migration(#0205):** This specify code is used when a customer has ordered a new (RISC) AS/400e server to replace an existing (RISC) AS/400e server. The #0205 is orderable on any initial order AS/400e server 170 model or 7xx model. Preloading License Programs, in manufacturing, is not allowed with #0205. Manufacturing will only load SLIC and up through QSYS of OS/400 when #0205 is on an order.

The #0205 and #5000 are mutually exclusive.

Chapter 10. 9406 Sxx Models

10.1 9406 S10 Model Overview

Model	S10	
Processor Feature	#2118	#2119
Relative System Performance (CPW) (See Note 1)		
Client/Server Environment	45.4	73.1
Interactive Environment	16.2	24.4
Number of N-Way Multiprocessors	1	1
Main Storage (MB)	64-384	128-512
Disk Storage Base (GB)	4.19	
Maximum Internal (GB)		
V4R1	85.8	
V4R2/R3	175.4	
System I/O Card Slots		
SPD	0	
PCI	8	
Communications Lines (Note 2)	1-10	
LAN/ATM Adapters	1-3	
Maximum Workstation Controllers		
Twinaxial	1	
ASCII	0	
Maximum Workstations		
Twinaxial (V4R1)	7	
Twinaxial (V4R2/R3)	28	
ASCII	0	
¼-inch/8mm Cartridge Tape (Internal)	0-1	
½-inch Tape		
Reel 9348	0-1	
Reel 2440,9347	0	
Cartridge 34xx, 35xx	0-1	
8mm Cartridge (External)	0-1	
Optical Libraries	0-1	
Diskettes (5 ¼-inch or 8-inch)	0	
Fax Adapters	0	
Cryptographic Processor	0	
System I/O Buses	1	

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	One line is used for Operations Console or Client Access Console if selected. Maximum is nine if Twinaxial Console is selected.

10.2 9406 S20 Model Overview

Model	S20						
Processor Feature	#2161	#2163	#2165	#2166	#2170	#2177	#2178
Relative System Performance (See Note 1)							
Client/Server Environment	113.8	210.0	464.3	759.0	464.3	759.0	759.0
Interactive Environment	31.0	35.8	49.7	56.9	49.7	110.7	221.4
Number of N-Way Multiprocessors	1	1	2	4	1	4	4
Main Storage (MB)	256-2048	256-2048	256-4096	256-4096	256-4096	256-4096	256-4096
Numbers are for all processor features	Base System	SUE #5064 PCI (#9329)	SUE #5064 SPD (#9331)	Expansion Tower	#5065 Expansion Tower	System Maximum	
Disk Storage Base (GB)	4.19	See Note 4	See Note 4	-			4.19
Maximum internal (GB) (V4R2/R3)	263.2 (5)	-	-	274.8			944.8
Maximum external (GB) (V4R2/R3)	-	263.2	263.2	561.5			893.3
Total maximum (GB) (V4R2/R3)		-	See Note 2	See Note 2			944.8
Total maximum (GB) (V4R4)	263.2(5)	263.2	263.2	561.5	386.5		944.8
External SPD Bus	0	4	4	0			4
Maximum card slots-SPD	0	0	6	13	0		58
Maximum card slots-PCI	8	14	0	0	12		22
Communication Lines (See Note 3)	1-10	0-18	0-30	0-78	0-36		96
LAN/ATM Adapters	1-3	0-5	0-6	0-13	3		16
Maximum Workstation Controllers (See Note 6)					12		
Twinaxial	1	1	1	1			1
ASCII (V4R1)	0	0	1	1			1
ASCII (V4R2/R3)	0	0	2	2			2
Maximum Workstations (Note 6)							
Twinaxial (V4R1)	7	7	7	7	28		7
Twinaxial (V4R2/R3)	28	28	28	28	1		28
Twinaxial (V4R4)	0	0	6	6			6
ASCII (V4R1)	0	0	28	28			28
ASCII (V4R2/R3)							
¼-inch/8mm Cartridge Tape (Internal)	0-1	0-3	0-3	0-4	0-2		0-17
½-inch Tape							
Reel 9348	0-1	0-2	0-4	0-4			4
Reel 2440	0	0	0-4	0-4			4
Reel 9347	0	0	0	0			0
Cartridge 34xx, 35xx	0-1	0-2	0-4	0-4	0-3		6
8mm Cartridge (External)	0-1	0-2	0-4	0-4	0-3		4
Tape Libraries	0-1	0-2	0-4		0-3		4
Optical Libraries	0-1	0-2	0-12	0-14	3		14
Diskettes (5 ¼-inch or 8-inch)	0	0	0-2	0-2			2
Fax Adapters	0	0	0-6	0-13			32
Cryptographic Processor	0	0	0-1	0-1	0-3		1

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine the performance that is achievable.
Note 2:	External DASD can be attached using an SPD card in the Expansion Unit.
Note 3:	One line is used for Client Access Console or Operations Console if selected. Maximum is nine if Twinaxial Console is selected.
Note 4:	The #5064 must be configured with #9329 (PCI) or #9331 (SPD). Therefore, these columns are mutually exclusive.
Note 5:	Maximum is 85.8 GB (V4R1) or 175.4 GB (V4R2/R3/V4R4) on #2161 Processor.
Note 6:	The S20 processors #2170, #2177, and #2178 support a maximum of 60 Twinax and 58 ASCII Workstation Controllers and 2392 Twinax and 1044 ASCII Workstations.

10.3 9406 S30 Model Overview

Model	S30						
Processor Feature	#2257	#2258	#2259	#2260	#2320	#2321	#2322
Relative System Performance (CPW) (See Note 1)							
Client/Server Environment	319.0	583.3	998.6	1794.0	998.6	1794.0	1794.0
Interactive Environment	51.5	64.0	64.0	64.0	215.1	386.4	579.6
Number of N-Way Multiprocessors	1	2	4	8	4	8	8
Main Storage (MB)							
Minimum	512	512	512	1024	512	1024	1024
Maximum (V4R1/R2)	12288	12288	12288	12288	12288	12288	12288
Maximum (V4R3)	16384	16384	16384	24576	16384	24576	24576
Disk Storage Base (GB)		4.19				4.19	
Maximum Internal (GB) (V4R1)		927.7				927.7	
Maximum External (GB) (V4R1)		893.3				893.3	
Maximum Combined (GB) (V4R1)		927.7				927.7	
Max Internal (GB) (V4R2/R3)		1340.0				1340.0	
Maximum External (GB) (V4R2/R3)		1305.6				1305.6	
Maximum Combined (GB) (V4R2/R3)		1340.0				1340.0	
Disk Unit IOPs		1-37				1-37	
Minimum Feature Card Slots		3				3	
Maximum Feature Card Slots		235				235	
Communication Lines		1-200				1-200	
LAN/ATM Adapters (See Note 2)		1-32				1-32	
Maximum Workstation Controllers							
Twinaxial		1				175	
ASCII (V4R1)		1				175	
ASCII (V4R2/R3)		2				175	
Maximum Workstations							
Twinaxial (V4R1)		7				7000	
Twinaxial (V4R2/R3)		28				7000	
ASCII (V4R1)		6				3150	
ASCII (V4R2/R3)		28				3150	
¼-inch/8mm Cartridge Tape (Internal)		0-17				0-17	
½-inch Tape							
Reel 2440, 9348		0-4				0-4	
34xx, 35xx		0-8				0-8	
8mm Cartridge Tape (External)		0-4				0-4	
Optical Libraries		0-22				0-22	
Diskettes (5 ¼-inch or 8-inch)		0-2				0-2	
Fax Adapters		0-32				0-32	
Cryptographic Processor		0-1				0-1	
System I/O Buses		1-19				1-19	
System Expansion		0-18				0-18	
(#5072/#5073/#5082/#5083)							
Storage Expansion		0-1				0-1	
(#5055/#5057)							
Storage Expansion		0-18				0-18	
(#5052/#5058)							

Note 1:

Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine the performance that is achievable.

Note 2:

Can include up to 16 Integrated PC Servers.

10.4 9406 S40 Model Overview

Model	S40					
Processor Feature	#2256	#2261	#2207	#2208	#2340	#2341
Relative System Performance (CPW See Note 1)						
Client/Server Environment	1794	2340	3660	4550	3660	4450
Interactive Environment	64	64	120	120	1050	2050
Number of N-Way Multiprocessors	8	12	8	12	8	12
Main Storage (MB)						
Minimum	1024	1024	1024	1024	1024	1024
Maximum (V4R1/R2)	20480	20480	-	-	-	-
Maximum (V4R3)	32768	32768	40960	40960	40960	40960
Disk Storage Base (GB)						
Minimum			4.19			4.19
V4R1						
Maximum Internal			996.4			-
Maximum External			893.3			-
Maximum Combined			996.4			-
V4R2						-
Maximum Internal			1546.1			-
Maximum External			1511.8			-
Maximum Combined			1546.8			-
V4R3						
Maximum Internal			2095.9			2095.9
Maximum External			2061.3			2061.3
Maximum Combined			2095.9			2095.9
Disk Unit IOPs			1-37			1-37
Minimum Feature Card Slots			3			3
Maximum Feature Card Slots			237			237
Communications Lines						
V4R1/R2			1-250			-
V4R3			1-300			1-300
LAN/ATM Adapters (See Note 2)						
V4R1/R2			1-48			-
V4R3			1-72			1-72
Workstation Controllers			1-3			1-175
Twinaxial			0-1			0-175
ASCII (V4R1)			0-1			-
ASCII (V4R2/R3)			0-2			0-175
Maximum Workstations						
Twinaxial (V4R1)			7			-
Twinaxial (V4R2/R3)			28			7000
ASCII (V4R1)			6			-
ASCII (V4R2/R3)			28			3150
¼-inch/8mm Cartridge Tape			0-17			0-17
½ (Internal)						
½-inch Tape						
Reel-to-Reel (2440, 9348)			0-4			0-4
Cartridge (34xx, 35xx)			0-8			0-8
8mm Cartridge Tape (External)			0-4			0-4
Optical Libraries			0-22			0-22
Diskettes (5 ¼-inch or 8-inch)			0-2			0-2
Fax Adapters			0-32			0-32
Cryptographic Processor			0-1			0-1
System I/O Buses			1-19			1-19
System Expansion			0-18			0-18
(#5072/#5073/#5082/#5083)						
Storage Expansion (#5057)			0-1			0-1
Storage Expansion (#5052/#5058)			0-18			0-18

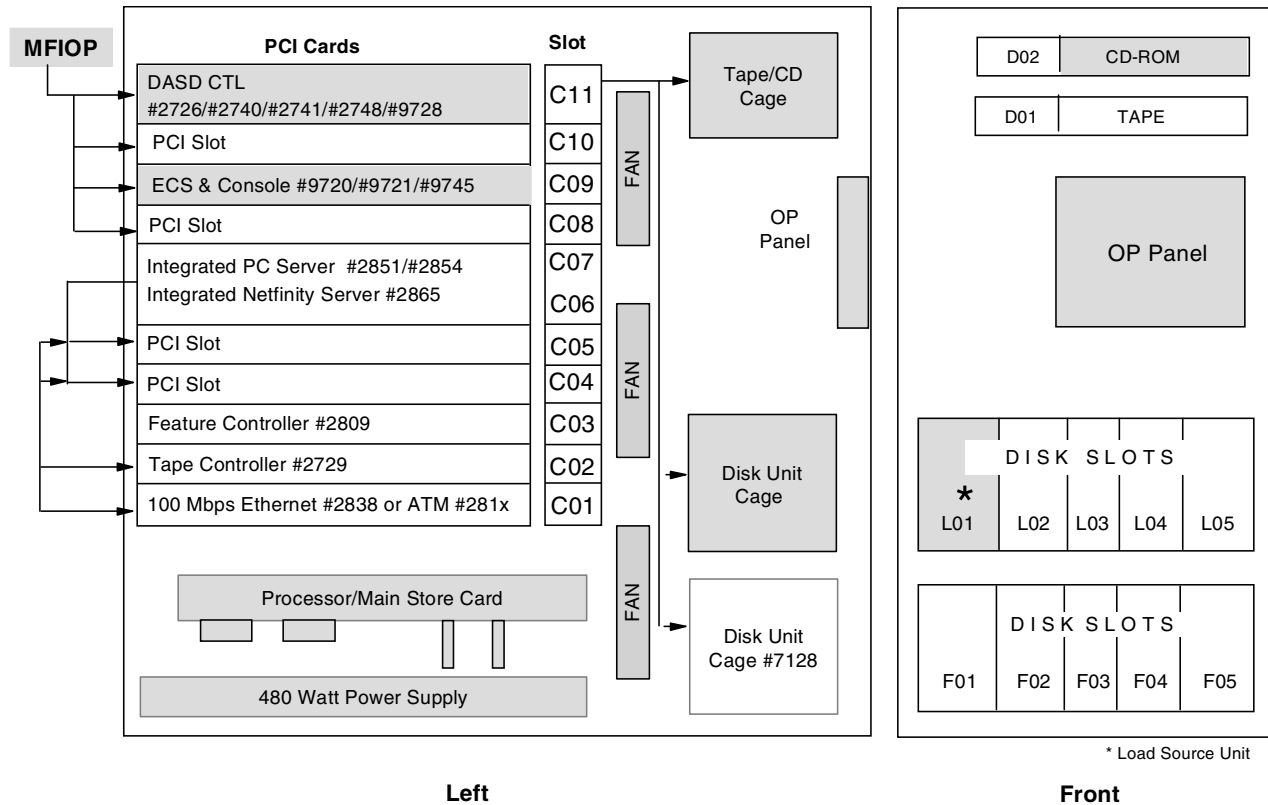
Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine the performance that is achievable.
Note 2:	Can include up to 16 Integrated PC Servers.

10.5 9406 SB1 Model Overview

Model	SB1			
Processor Feature	#2310	#2311	#2312	#2313
Relative System Performance (See Note 1)				
Normalized FI Dialog Steps Per Hour	125,888	185,533	Note 2	Note 2
Number of N-Way Multiprocessors	8	12	8	12
Main Storage (MB)	4096	4096	8192	8192
Disk Storage Base (GB)				
Minimum			16.77	
Maximum Internal			34.35	
Maximum External			-	
Maximum Combined			34.35	
Disk Unit IOPs			1	
Minimum Feature Card Slots			3	
Maximum Feature Card Slots			29	
Communications Lines			1-16	
LAN/ATM Adapters			1-5	
Workstation Controllers			1-3	
Twinaxial			0-1	
ASCII (V4R1)			0-1	
ASCII (V4R2/R3)			0-2	
Maximum Workstations				
Twinaxial (V4R1)			7	
Twinaxial (V4R2/R3)			28	
ASCII (V4R1)			6	
ASCII (V4R2/R3)			28	
¼-inch/8mm Cartridge Tape			0-3	
½-inch Tape				
Reel-to-Reel (2440, 9348)			0-4	
Cartridge (34xx, 35xx)			0-4	
8mm Cartridge Tape (External)			0-4	
Optical Libraries			0-2	
Diskettes (5 ¼-inch or 8-inch)			0-2	
Fax Adapters			0-2	
Cryptographic Processor			0-1	
System I/O Buses			1-5	
System Expansion (#5073)			0-2	

Note 1:	Model SB1 performance measurements when used as a SAP R/3 application server. FI Dialog Steps may not be realized in all environments. Listed FI Dialog Steps per hour are at 65% CPU Utilization.
Note 2:	See http://www.softmall.ibm.com/as400/isvsol for additional information.

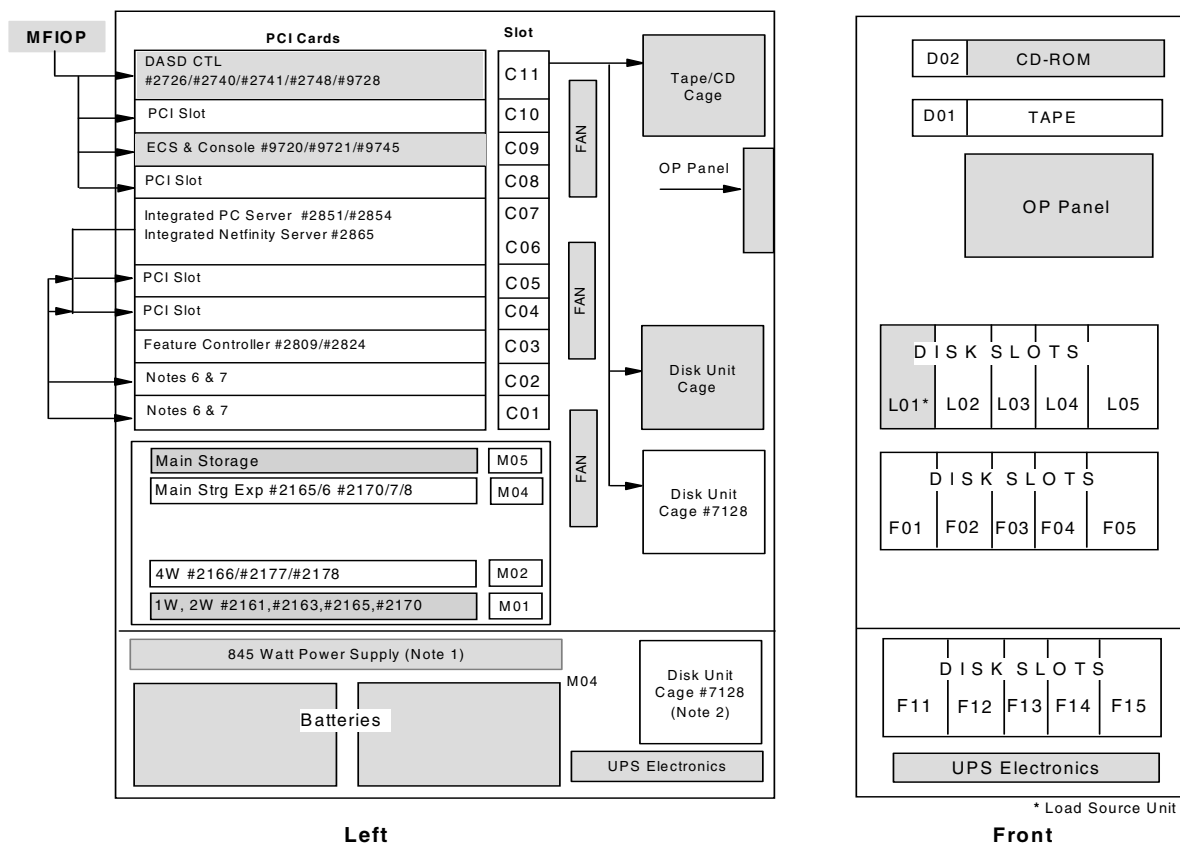
10.6 9406 Model S10 System Unit



Notes:

- The base disk controller #9728 does not support RAID-5 or integrated hardware disk compression and only supports five disks. If there is an intention to install more than five disks or implement RAID-5 later, the #9728 should be changed for a #2726/#2740/#2741/#2748.
- If an Integrated PC Server is in slots C06 and C07, it controls its LAN IOAs in slots C04 and C05. If there is no IPCS or Integrated Netfinity Server, C04 and C05 are controlled by C03.
- If an Integrated PC Server, or an Integrated Netfinity Server is in slots C06 and C07. The #2722 /#2746 Twinaxial Workstation IOA is not allowed in slot C08, and LAN IOAs are not allowed in slots C08 or C10.
- Simm modules plug directly to the planar board.
- If #2854 IPCS or #2865 Integrated Netfinity Server is installed in slots C06 and C07:
 - Slot C04 supports #2723, #2724, or #2838/#9738.
 - Slot C05 supports #2723 or #2724.
- The #2809 in C03:
 - Slot C01 supports #2838/#9738 100/10M Ethernet or #281x ATM.
 - Slot C02 supports the #2718 or #2729 Magnetic Media Controller.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745, or #2746.
- The #2824 in C03:
 - Slot C01 supports #2838/#9738 or #281x.
 - Slot C02 supports #2718, #2729, #2750, #2751, #2761 or #4800.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, #2761, or #4800.
- If a #2838 or #281x is installed on the #2824/#2809 in C03, only features #2721 or #2745 may be installed in slots C04 or C05.
- There is a maximum of one #2838 or #281x per #2824/#2809 IOP.
- There is a maximum of one #2750, #2751 or #2761 per #2824 IOP.
- There is a maximum of one #4800 per #2824 IOP.

10.7 9406 Model S20 System Unit



Notes:

- Processors #2161 has a 480-watt power supply. All other S20 models use the 845-watt power supply. The layout of the #2161 processor/main storage compartment differs from this drawing.
- This cage is not available with #2161 processor.
- The base disk controller #9728 does not support RAID-5 or integrated hardware disk compression and only supports five disks. If there is intention to install more than five disks in the base system unit or implement RAID-5 later, the #9728 should be changed for a #2726/#2740/#2741/#2748.
- If an Integrated PC Server, or an Integrated Netfinity Server is in slots C06 and C07, then #2722 /#2746 Twinaxial Workstation IOA and LAN IOAs are not allowed in slot C08.
- If #2854 IPCS or #2865 Integrated Netfinity Server is installed in slots C06 and C07:
 - Slot C04 supports #2723, #2724, or #2838/#9738.
 - Slot C05 supports #2723 or #2724.
- The #2809 in C03:
 - Slot C01 supports #2838/#9738 100/10M Ethernet or #281x ATM.
 - Slot C02 supports the #2718 or #2729 Magnetic Media Controller.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745, or #2746.
- The #2824 in C03:
 - Slot C01 supports #2838/#9738 or #281x.
 - Slot C02 supports #2718, #2729, #2750, #2751, #2761, or #4800.
 - Slots C04/C05 support #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, #2761, or #4800.
- If a #2838 or #281x is installed on the #2824/#2809 in C03, only features #2721 or #2745 may be installed in C04/C05.
- There is a maximum of one #2838 or #281x per #2824 IOP.
- There is a maximum of one #2750, #2751, or #2761 per #2824 IOP.
- There is a maximum of one #4800 per #2824 IOP.

10.8 Model S20 #5064 System Unit Expansion

Front of #5064

D13	REM. MEDIA	#7130 REM. MEDIA CAGE
D12	REM. MEDIA	
D11	REM. MEDIA	

01	02	03	04	05
DISK SLOTS				
F31	F32	F33	F34	F35

06	07	08	09	010
DISK SLOTS				
F41	F42	F43	F44	F45

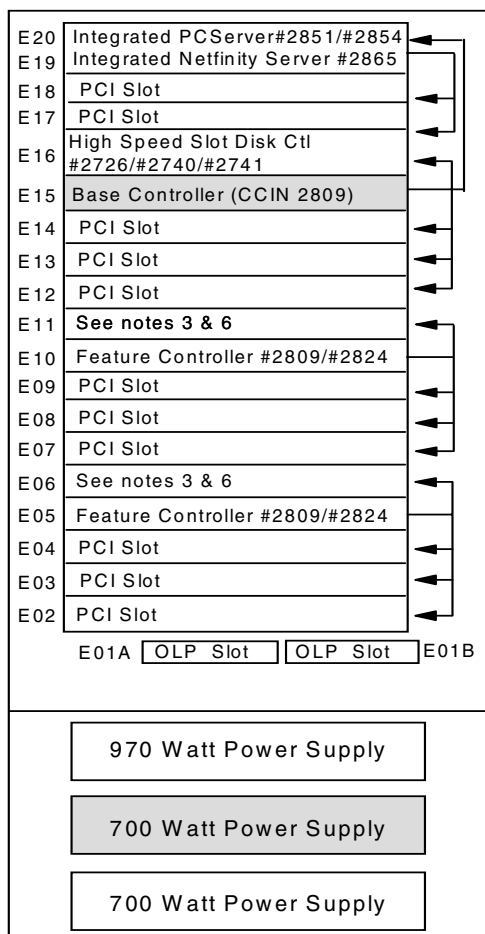
13	12	11	14	15
DISK SLOTS				
F51	F52	F53	F54	F55

Note: The #5064 can either have #9329/#9330 PCI or a #9331 SPD planar board. See the diagram on the following page.

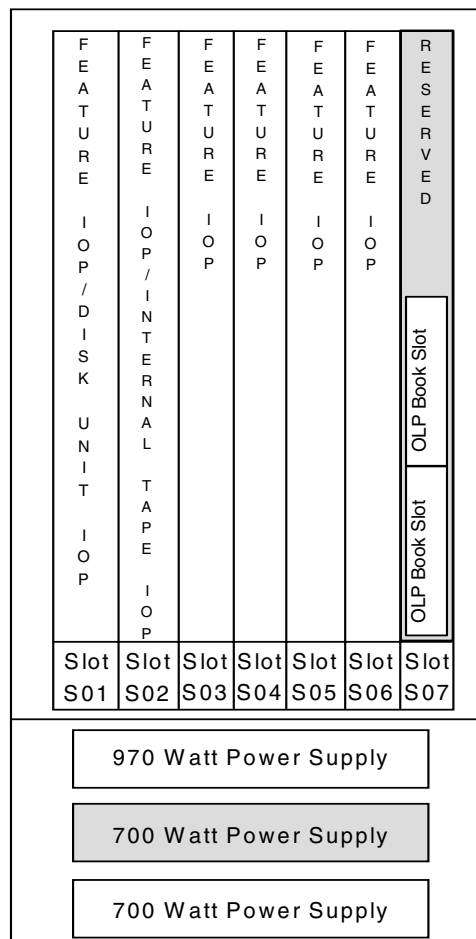
For diagrams of the #597X and #508X expansion towers, see the beginning of 13.1, “9406 500, 510, and 530 Models Overview” on page 363.

10.9 PCI Card Cage #9329 and SPD Card Cage #9331

#5064 with 9329 PCI Card Cage

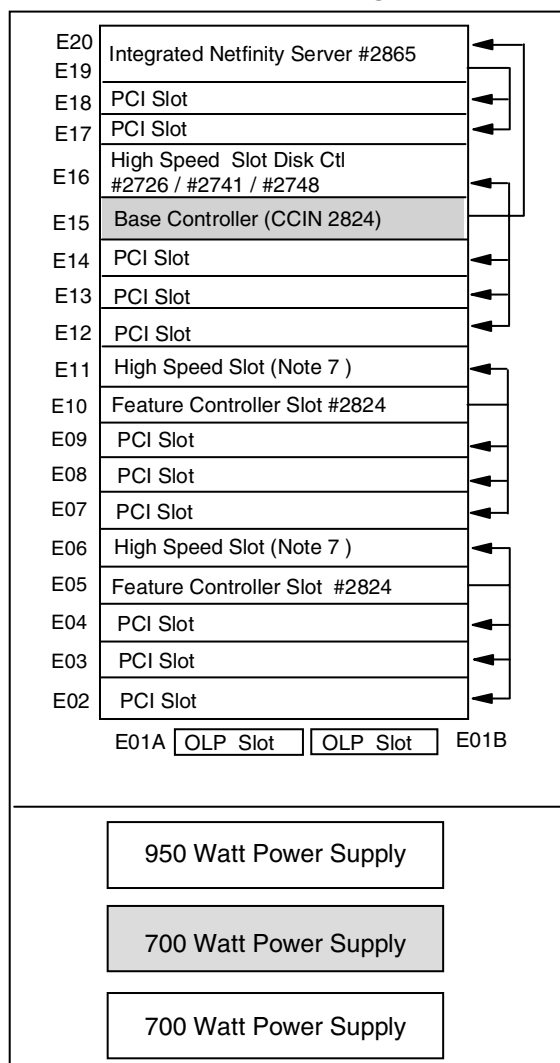


#5064 with 9331 SPD Card Cage



10.10 #9330 PCI Card Cage

#5064 with # 9330 PCI Card Cage



Notes:

- Optical Link Processors are used for connecting Expansion Towers and Racks.
- Base PCI LAN/WAN/Workstation IOP (CCIN 2809) in #9329 slot E15 supports:
 - In E16 (high-speed slot):
 - #2726, #2740, #2741
 - In E12, E13, E14 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, or #2746.
 - Three cards in any combination with a maximum of one LAN card.
 - When a #2851/#2854/#2865 IPCS or Integrated Netfinity Server is installed in the system expansion unit slots E19/E20, no LANs are allowed in slots E12, E13, and E14.
- The #2809 PCI LAN/WAN/Workstation IOP in #9329 slots E05 or E10 supports:
 - In E06 or E11 (high-speed slots):
 - #2718, #2729, #2838, or #281x.
 - In E02, E03, E04 or E07, E08, and E09 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, or #2746.
 - Three cards in any combination with a maximum of two LAN cards.

- When a #2838 PCI 100/10 Mbps Ethernet or any ATM feature is installed in E11, only #2721/#2745 PCI Two-Line WAN IOAs are allowed in slots E08 and E09. E07 cannot be used.
 - When a #2838 PCI 100/10 Mbps Ethernet or any ATM feature is installed in E06, only #2721/#2745 PCI Two-Line WAN IOAs are allowed in slots E03 and E04. E02 cannot be used.
 - When a #2718/#2729 PCI Magnetic Media Controller is installed in E11, only one LAN is allowed in the slots E08 or E09.
 - When a #2718/#2729 PCI Magnetic Media Controller is installed in E06, only one LAN is allowed in the slots E03 or E04.
4. 100/10 Mbps Ethernet #2838/9738 is normally located in slot E06 or E11. However, if driven by #2865 Integrated Netfinity server one #2838/9738 is located in slot E17.
5. Base PCI LAN/WAN/Workstation IOP (CCIN 2824) in #9330 slot E15 supports:
- In E16 (high-speed slot):
 - #2726, #2741, or #2748.
 - In E12, E13, E14 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, or #2761.
 - Maximum of two LAN (#2723 and/or #2724) adapters.
 - A maximum of one remote access card (#2750, #2751 or #2761)
 - Any combination of WAN and Twinax adapters.
 - When a #2851/#2854/#2865 PCI Integrated PC Server is installed in the system expansion unit slots E19/E20, no LAN features are allowed in slots E12, E13, and E14. Two LAN adapters are allowed on the IPCS or Integrated Netfinity Server, one of which may be high speed.
6. The #2824 PCI LAN/WAN/Workstation IOP in #9329 slots E05 or E10 supports:
- In E06 or E11 (high-speed slots):
 - #2718, #2729, #2838, #2750, #2751, #2761, #281x, or #4800.
 - In E02, E03, E04 or E07, E08, E09 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, or #2761.
 - Three cards in any combination.
 - When a #2838 PCI 100/10 Mbps Ethernet or any ATM feature is installed in E11, only #2721/#2745 PCI Two-Line WAN IOAs are allowed in slots E08 and E09. E07 cannot be used.
 - When a #2838 PCI 100/10 Mbps Ethernet or any ATM feature is installed in E06, only #2721/#2745 PCI Two-Line WAN IOAs are allowed in slots E03 and E04. E02 cannot be used.
 - When a #2729 PCI Magnetic Media Controller is installed in E11, only one LAN is allowed in slots E08 and E09.
 - When a #2729 PCI Magnetic Media Controller is installed in E06, only one LAN is allowed in slots E03 and E04.
 - A maximum of one remote access card (#2750, #2751 or #2761) per #2824.
 - A maximum of two low-speed LANs (#2723 and/or #2724) per #2824.
7. The #2824 LAN/WAN/Workstation IOP in the #9330 slots E05 or E10 supports:
- In E06 or E11 (high-speed slots):
 - #2718, #2729, #2745, #2746, #2750, #2751, #2761, #281x, #2838, or #4800.
 - In E02, E03, E04 or E07, E08, E09 (low-speed slots):
 - #2721, #2722, #2723, #2724, #2745, #2746, #2750, #2751, or #2761.
 - Three cards in any combination.
 - Maximum of one high-speed LAN (#2838) or one ATM (#281x) feature per #2824.
 - If high-speed LAN or ATM feature present, #2723/#2724 not allowed on this #2824.
 - A maximum of one remote access card (#2750, #2751, or #2761) per #2824.
 - A maximum of two low-speed LANs (#2723 or #2724) per #2824.

10.11 9406 Models S10 and S20

PROCESSORS	
#2118	45.4 RSP CPW Processor in Client/Server, 16.2 RSP CPW Processor Interactive Environment. Base Memory 64 MB. Model S10 only.
#2119	73.1 RSP CPW Processor in Client/Server Environment, 24.4 RSP CPW Processor in Interactive Environment. Base Memory 128 MB. Model S10 only.
#2161	113.8 RSP CPW Processor in Client/Server Environment, 31.0 CPW Processor in Interactive Environment. Base Memory 256 MB. Model S20 only.
#2163	210.0 RSP CPW Processor in Client/Server Environment, 35.8 RSP CPW in Interactive Environment. Base Memory 256 MB. Model S20 only.
#2165	464.3 RSP CPW 2-Way Processor in Client/Server Environment, 49.7 RSP CPW 2-Way Processor in Interactive Environment. Base Memory 256 MB. Model S20 only.
#2166	759.0 RSP CPW 4-Way Processor in Client/Server Environment, 56.9 RSP CPW 4-Way Processor in Interactive Environment. Base Memory 256 MB. Model S20 only.
#2170	464.3 RSP CPW 2-Way Processor in Client/Server Environment, 49.7 RSP CPW 2-Way Processor in Interactive Environment. Base Memory 256 MB. Model S20 only. Requires V4R2. Prerequisite: #04xx ISV Software feature. See 18.17, "Preload Feature Codes" on page 511 for a list of valid features. Interactive specify #1490 must be RPOed to the records of the Model S20 with processor feature #2170 to have the interactive capacity of this system properly converted to the appropriate supported feature when upgrading to a Model 7xx.
#2177	759.0 RSP CPW 4-Way Processor in Client/Server Environment, 110.7 RSP CPW 4-Way Processor in Interactive Environment. Base Memory 256 MB. Model S20 only. Prerequisite: #04xx ISV Software feature. See 18.17, "Preload Feature Codes" on page 511 for a list of valid features. Interactive specify #1491 must be RPOed to the records of the Model S20 with processor feature #2177 to have the interactive capacity of this system properly converted to the appropriate supported feature when upgrading to a Model 7xx.
#2178	759.0 RSP CPW 4-Way Processor in Client/Server Environment, 221.4 RSP CPW 4-Way Processor in Interactive Environment. Base Memory 256 MB. Model S20 only. Prerequisite: #04xx ISV Software feature. See 18.17, "Preload Feature Codes" on page 511 for a list of valid features. Interactive specify #1492 must be RPOed to the records of the Model S20 with processor feature #2178 to have the interactive capacity of this system properly converted to the appropriate supported feature when upgrading to a Model 7xx.
POWER AND PACKAGING	
#2688	Optical Link Processor (1063 Mbps) Model S20 only. This is a card that is used for attaching #5072, #5073, #5082, and #5083 Expansion Towers on the Model S20. Each #2688 supports a maximum of two #50xx towers. The #5064 with either #9331 or #9329 is a prerequisite. Maximum: Two Card slots used: None
#2695	Optical Bus Adapter Allows for the addition of up to three #2686 or #2688 Optical Link Processors in any combination. Card slots used: One Maximum: Two
#5052	Storage Expansion Unit Model S20 only. Provides space for up to sixteen disk units. It attaches to the top of the #5072 System Unit Expansion Tower and the #5082 per tower is supported and # 5143 Power Supply may be required.
#5058	Storage Expansion Unit (Ultra SCSI) Model S20 only. Provides space for up to disk units. It attaches to the top of the #5073 System Unit Expansion Tower and the #5083 Storage Expansion Tower. Only one #5052 per tower is supported.

#5064	System Unit Expansion Model S20 only. This feature allows one addition of either an SPD card expansion unit (#9331 or PCI card expansion unit (#9329). It also supports one #7130 Expansion Unit Tape Cage for up to three tapes or CD-ROMs. It supports five disks and allows one or two #7128 DASD expansion units (this is processor dependent—see the #7128 entry) to be added. Maximum: One
#5065	Storage/PCI Expansion Tower Model S20 only Provides an additional bus. It includes a 1063 Mbps optical bus card. The #5065 has redundant, hot swappable power supplies. It supports three LAN, WAN, or Workstation controllers, twelve PCI IOA cards, two removable media, and up to 45 disk units. Three specific disk slots may be used for the #4331 1.6 GB Read Cache Device. The #5065 is the only storage expansion unit to support Ultra2 SCSI. See 8.10, “System Unit Expansion Towers for 6xx and 7xx” on page 169. Prerequisite: #2688 and V4R4 Maximum: Four on the Model S20. This is a Customer Install Feature (CIF).
#5066	1.8 M I/O Tower Provides two additional buses. The #5066 is actually two #5065 Storage/PCI Expansion Towers installed in a #5066 1.8M I/O Tower. The #5066 reports to the system as two #5065s. The #5066 includes two 1063 Mbps optical bus cards, various cables (including optical cables) and the 1.8M I/O Tower. The #5066 includes 24 PCI IOA slots, space for 90 disk units, space for four removable media devices, battery backup, redundant/hot swap power supplies, and two base PCI LAN/WAN/Workstation IOPs (CCIN #2824). The #5066 is capable of controlling Ultra2 SCSI disk units. Two line cords must be specified. Prerequisite: #2688 and V4R4 Maximum: Two on the Model S20.
#5072	1063 Mbps System Unit Expansion Tower Model S20 only. Provides additional buses. It includes a 1063 Mbps optical bus card, thirteen SPD I/O card slots, space for up to four internal tape units or CD-ROMs (a maximum of three), and battery and power supplies. It can support one #5052 Storage Expansion Unit. Due to power restrictions, some combinations of high-powered cards may mean that an additional #5072 is required. The #2688 is a prerequisite. This feature is only supported on upgrades. It cannot be ordered with a new system. Maximum: A total of four expansion towers of all types.
#5073	1063 Mbps System Unit Expansion Tower Model S20 only. Provides additional buses. It includes a 1063 Mbps optical bus card, thirteen SPD I/O card slots, space for up to four internal tape units or CD-ROMs (a maximum of three), and battery and power supplies. It can support one #5058 Storage Expansion Unit. Due to power restrictions, some combinations of high-powered cards may mean that an additional #5073 is required. The #2688 is a prerequisite. Maximum: A total of four expansion towers of all types.
#5082	1063 Mbps Storage Expansion Tower Model S20 only. Provides a DASD Tower for adding up to 16 disk units. A total of 32 disks units are supported with the addition of #5052. It includes a 1063 Mbps optical bus card, two SPD I/O card slots for the disk IOPs (#6502, #6512, #6530 supported but not orderable, or # 6532 or #6533 for new orders), and battery and power supplies. The #2688 is a prerequisite. This feature is only supported on upgrades. It cannot be ordered with a new system. Maximum: A total of four expansion towers of all types.
#5083	1063 Mbps Storage Expansion Tower (Ultra SCSI) Model S20 only. Provides a DASD Tower for adding up to 16 disk units. A total of 32 disks units are supported with the addition of #5058. It includes a 1063 Mbps optical bus card, two SPD I/Os (#6502, #6512, #6530 supported but not orderable, or #6532 or #6533 for new orders), and battery and power supplies. The #2688 is a prerequisite. Maximum: A total of four expansion towers of all types.
#5143	Feature Power Supply Model S20 only. This is a 400 watt-power supply that is usually a prerequisite for a # 5052 installed on a #5072 or #5082. Maximum: One per #5072 or #5082.
#5153	Redundant Power Supply Model S20 Processors #2163, #2165, #2166, #2170, #2177, and #2178 only. This contains two power supplies, an 970 watt and a 700 watt. This feature provides redundancy for the power supplies in the System Unit and System Unit Expansion. This feature physically resides in the #5064. Maximum: One
#7128	DASD Expansion Unit This feature allows the addition of five disk units to either the System Unit or the #5064 System Unit Expansion. Maximum: One in Base System with Model S10 Processors # 2118, # 2119, or Model S20 Processor #2161. Two in Base System with Model S20 Processors #2163, #2165, #2166, #2170, #2177, or #2178. Two in #5064 System Unit Expansion.

#7130	Expansion Unit Tape/Cage Model S20 only. This feature allows the addition of three tape or CD-ROM units to the #5064 System Unit Expansion. Tape Units #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 are supported in the first two tape positions. Only Tape Units #1355 and #6485 are supported in the third position. A tape controller is required to support these tape devices Prerequisite: #5064 Maximum: One
#9329	PCI Integrated Expansion Unit Model S20 only. This feature contains eleven PCI card slots and three high-speed PCI card slots. These are driven by three PCI controllers and one Integrated PC Server (not included). It also has space for one or two #2686 or #2688 Optical Link Processor Cards to support up to four external towers. A Base PCI LAN/WAN/Workstation IOP is included with #9329. Prerequisite: #5064 Maximum: One
#9330	PCI Integrated Expansion Unit Model S20 only. This feature contains eleven low-speed PCI card slots and three high-speed PCI card slots. These are driven by one base Controller (CCIN 2824) and two Feature Controllers. One IPCS or Integrated Netfinity Server is optional. It also has space for one or two #2686 or #2688 Optical Link Processor Cards to support up to four external towers. Maximum: One Prerequisite: V4R4
#9331	Expansion Unit for SPD Cards Model S20 only. This feature allows the addition of up to six SPD cards and one or two #2686 or #2688 Optical Link Processor Cards to support up to four external towers. The #9331 includes an SPD Controller Card. Prerequisite: #5064 Maximum: One
MAIN STORAGE	
Base	There are no features to specify the base memory of 64 MB on the Model S10 Processors #2118; 128 MB on the Model S10 Processor; #2119 or 265 MB on all of the Model S20 processors.
#2830	Main Storage Expansion Model S20 only. This feature contains 16 sockets for placement of 32 MB or 128 MB Main Storage card. Processors #2165, #2166, #2170, #2177, and #2178 only. Maximum: One
#3001	32 MB Main Storage Model S20 only. Plugs directly into the CPU or #2830. Must be added in pairs. Model S20 only. Prerequisite: One #2830 for 16 or more on Processors #2165, #2166, #2170, #2177, and #2178. Maximum: 14 on processors #2161 and #2163; 30 on processors #2165, #2166, #2170, #2177, and #2178.
#3002	128 MB Main Storage Model S20 only. Plugs directly into the CPU or #2830. Must be added in pairs. Prerequisite: One #2830 for 16 or more on Processors #2165, #2166, #2170, #2177, and #2178. Maximum: 14 on processors #2161 and #2163; 30 on processors #2165, #2166, #2170, #2177, and #2178.
#3110	64 MB Main Storage Model S10 only. Plugs directly into the CPU. Must be added in pairs on Model S10 Processor #2119. Supported on both Model S10 Processors. Maximum: Five on processor #2118; six on processor #2119.
#3182	32 MB Main Storage Model S10 only. Plugs directly into the CPU. Must be added in pairs on Model S10 Processor #2119. Supported on both Model S10 Processors. Maximum: Five on processor #2118; six on processor #2119.
#8172	32 MB Base Main Storage Replace Model S10 only. Provides 32 MB of memory. It is not orderable being supported for model upgrades only.
#8210	64 MB Optional Main Storage Model S10 only. Provides 64 MB of additional memory. It is not orderable being supported for upgrades only.

WORKSTATION CONTROLLERS	
Base MFIOP	<p>Base Multifunction IOP (PCI)</p> <p>The base system includes this MFIOP which has three PCI card slots, one high-speed PCI card slots used for the base system disk controller and which also drives one Integrated PC Server. The high-speed PCI card slot supports #2723, #2740, #2741, or #9278 Disk Unit Controller. One PCI card slot supports the base PCI WAN/Twinaxial IOA (#9720 or #9721). The remaining two PCI card slots support #2720, #2721, #2723, #2724, #9273 or #9274 PCI IOAs. Only one of these can be a LAN IOA (#2723, #2724, #9723, or #9724). Also, if a #2851 or #2854 Integrated PC Server is installed in slots C06 and C07, #2720 WAN/Twinaxial IOA is not allowed in slot C08 and LAN IOAs are not allowed in slots C08 or C10.</p>
Base IOP	<p>Base Controller for PCI Integrated Expansion Unit #9329 / #9330.</p> <p>Model S20 only.</p> <p>This comes as standard (no feature required) with #9329 and #9330 PCI Integrated Expansion Unit. In the #9329, it is identified as CCIN 2809. In the #9330, it is identified as CCIN 2824. It is used for attaching LAN, WAN, and workstation IOAs to the system and supports one slot reserved for a PCI disk controller and three low-speed slots. It also supports one PCI Integrated PC Server/Integrated Netfinity Server. The Base controller is located in slot E15.</p> <p>CCIN 2809. In the high-speed slot E16, only the #2726 or #2741 PCI Disk Unit controller is supported. In slots E12, E13, and E14, it supports any three (with a maximum of one LAN) of #2721, #2722, #2723/#9723, #2724/#9724, #2745 or #2746. When a #2865 Integrated Netfinity Server is installed in E19/E20, no LAN cards are allowed in E12, E13, and E14.</p> <p>CCIN 2824. In the high-speed slot E16, only the #2726, #2741 or #2748 PCI Disk Unit controller is supported. In slots E12, E13, and E14, it supports any three (with a maximum of two LAN cards) of #2721, #2722, #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751 or #2761. There is a maximum of one #2750, #2751 or #2761. There can be any combination of WAN and Twinax. When a #2865 Integrated Netfinity Server is installed in E19/E20, no LAN cards are allowed in E12, E13, and E14.</p> <p>Maximum: One.</p>
Base IOP	<p>Base Controller for Storage/PCI Expansion Tower #5065.</p> <p>This comes as standard (no feature required) with #5065 Storage/PCI Expansion Tower. It is installed in slot C03 and is identified as CCIN 2824. It is used for attaching LAN, WAN, and workstation IOAs through two high-speed slots and two low-speed slots.</p> <p>The #2718, #2729 or #2748 are supported in C04 only.</p> <p>The #2723/#9723, #2724/#9724, #2645, #2746, #2750, #2751, #2761, or #4800 are supported in C04 or C05.</p> <p>The #281X or #2838/#9738 are supported on C05 only.</p> <p>The #2723/#9723, #2724/#9724, #2745, #2746 #2750, #2751, or #2761 are supported in C01 or C02.</p> <p>Restrictions apply.</p> <p>Maximum: One</p>
#2629	<p>LAN/WAN/Workstation IOP (SPD)</p> <p>Model S20 only.</p> <p>This supports up to three IOAs. Those supported are #2699, #6149, #6180, or #6181. LAN IOAs (#6149 and #9181) cannot occupy all three positions. For restrictions on placing #2629 in #5072, see 9.3, "9406 640 and 650 Models Overview" on page 213. SPD slots required: One</p> <p>Maximum: One per SPD slot</p>
#2720	<p>WAN/Twinaxial IOA (PCI)</p> <p>Combined twinaxial/communications adapter for S10 and S20. Supports 28 twinax devices but is limited to seven display sessions with V4R1 or 28 with V4R2 and above. Model S20 processors #2170, #2177, and #2178 support twinax devices on any release. See the model overview tables at the beginning of this chapter.</p> <p>Provides a single communication line.</p> <p>PCI slots required: One</p> <p>Maximum: One</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.</p>
#2722	<p>Twinaxial Workstation IOA (PCI)</p> <p>Model S20 only.</p> <p>One eight-port attachment is provided to support 40 twinax devices but is limited to seven display sessions with V4R1 or 28 with V4R2 and above. Model S20 processors #2170, #2177, and #2178 support twinax devices on any release. See the model overview tables at the beginning of this chapter.</p> <p>PCI slots required: One</p> <p>Maximum: One</p>

#2746	<p>Twinaxial Workstation IOA (PCI) Model S20 only. One eight-port attachment is provided to support 40 twinax devices but is limited to seven display sessions with V4R1 or 28 with V4R2 and above. Model S20 processors #2170, #2177, and #2178 support twinax devices on any release. See the model overview tables at the beginning of this chapter. Maximum: One PCI slots required: One (low speed in system unit or #9329, High or low speed in #9330 or #5065 Storage/PCI Expansion Tower). Prerequisite: V4R4</p>
#2809	<p>LAN/WAN/Workstation IOP (PCI) This can be used for attaching LAN, WAN, and Workstation IOAs to the system. When installed in the System Unit in slot C03, it can support #2838 or #281x ATM IOA in high-speed slot C01, #2729 in high-speed slot C02, and any combination of #2721, #2722, #2723, or #2724 in low-speed slots C04 and C05. If #2838 is installed in slot C03 only, #2721 is allowed in slots C04 and C05. If #2851/#2854 is installed in slots C06 and C07, slots C04 and C05 cannot be used. The #2809 can also be installed in slot E05 or E10 of the #5064 System Unit Expansion with #9329. In each of these positions (E05 or E10), this card supports one high-speed card slot which can support a #2838, #2729, or #281x ATM IOA. It also supports three low-speed card slots which can contain any combination of #2721, #2722, #2723, or #2724. If #2838 is installed in the first two low-speed slots. Maximum: One in the System Unit. two in the #9329 PCI Integrated Expansion Unit. This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#2824	<p>Feature Controller (PCI) This can be used for attaching additional LAN, WAN, and Workstation IOAs to the system. There is a maximum of one in the System Unit, two in the #9329/#9330 PCI Integrated Expansion Unit, and two in the #5065 Storage/PCI Expansion Tower.</p> <p>In system unit slot C03, it supports PCI feature IOAs in slots C01, C02, C04 and C05 (if an Integrated Netfinity Server is installed). The server controls slots C04 and C05). In slot C01, the #2824 supports #2838/#9738 or #281x. In the C02 high-speed slot, it supports #2718, #2729, #2750, #2751, #2761, or #4800. In C04 and C05, it supports #2721, #2722, #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751, or #2761. If the #2838/#9738 is in C01, only the #2721 or #2745 may be installed in C04 and C05.</p> <p>In #9329 System Unit Expansion slots E05 or E10, it supports high-speed slots E06 or E11 and low-speed slots E02, E03, E04 or E07, E08, E09. In E06 and E11, it supports #2718, #2729, #2838/#9738, #2750, #2751, #2761 #281x, or #4800. In the low-speed slots, it supports #2721, #2722, #2723/#9723, #2724/#9724, #2746, #2745, #2750, #2751, or #2761.</p> <p>In #9330 System Unit Expansion slots E05 or E10, it supports high-speed slots E06 or E11 and low-speed slots E02, E03, E04 or E07, E08, E09. In E06 and E11, it supports #2718, #2729, #2838/#9738, #2745, #2746, #2750, #2751, #2761, #281x, or #4800. In the low-speed slots, it supports #2721, #2722, #2723/#9723, #2724/#9724, #2746, #2745, #2750, #2751, or #2761.</p> <p>In #5065 Storage/PCI Expansion Tower slots C08 or C13, it supports two high-speed and two low-speed slots. The #2718, #2729 or #2748 are supported in C09 and C14 only. The #2838/#9738 and #281x are supported in C05, C10, and C15 only. The #2738/#9738, #2724/#9724, #2745, #2746, #2750, #2751, #2761, or #4800 are supported in C09, C10, C14, or C15.</p> <p>The #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751 or #2761 are supported in C06, C07, C11, or C12. Additional restrictions apply. Prerequisite: V4R4 This is a Customer Install Feature (CIF) on a Model 600 for an MES that only includes CIF features.</p>
#6050	<p>Twinaxial Workstation Controller (SPD) Model S20 only. One eight-port attachment is provided to support up to seven twinaxial devices with V4R1 or 28 with V4R2 or V4R3. Model S20 processors #2170, #2177, and #2178 support more twinax devices on any release. See the model overview tables at the beginning of this chapter. The #6050 is supported but not orderable. The new #2720/#9720 is ordered on new systems. SPD slots required: One Maximum: One</p>
#6141	<p>ASCII Workstation Controller (SPD) Model S20 only. This workstation controller supports up to six ASCII devices. SPD slots required: One Maximum: One</p>

#6142	ASCII 12-Port Workstation Attachment Model S20 only. This attachment plugs into the #6141 or #9141 ASCII Workstation Controller providing an additional twelve ports. Eighteen ASCII devices can now be supported. Only one #6142 can be attached per #6141. SPD slots required: None
#6180	Twinaxial Workstation IOA (SPD) Model S20 only. One eight-port attachment is provided to support up to seven twinaxial devices with V4R1 or 28 with V4R2 and above. Model S20 processors #2170, #2177, and #2178 support more twinax devices on any release. See the model overview tables at the beginning of this chapter. Prerequisite: #2629 IOA slots required: One in #2629 Maximum: One
#9720	Base WAN/Twinaxial IOA (PCI) This combined twinaxial/communications adapter can be included as the base in the S10 and S20 models. It provides four posts supporting a maximum of seven Twinaxial devices with V4R1 or 28 with V4R2 and above. Model S20 Processors #2170, #2177, and #2178 support 28 twinax devices on the #9720 on any release. See the model overview tables at the beginning of this chapter. It also provides a single communication line to support ECS. It is mutually exclusive with #2720 and #9721 and #9745 (see Communications). PCI slots required: One Maximum: One
COMMUNICATIONS	
#2605	ISDN Basic Rate Adapter (SPD) Model S20 only. Connects to #2623 to support one communication line connecting to an ISDN network. The ISDN Basic Rate Interface supported by #2605 contains two high-speed ISDN user channels. One or two #2605s may be attached to one #2623 with no other IOAs allowed on the #2623. SPD slots required: None Prerequisite: #2623
#2609	EIA 232/V.24 Two-Line Adapter (SPD) Model S20 only. Connects to #2623 to support two communications lines using Async, BSC, SDLC, or X.25 protocols. Two cables must be specified: #9023 EIA 232/V.24 20ft (6m) enhanced cable #9835 EIA 232/V.24 50ft (15m) enhanced cable #9022 EIA 232/V.24 20ft (6m) enhanced cable #9836 EIA 232/V.24 50ft (15m) enhanced cable #2609 is supported for migration. The newer #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2610	X.21 Two-Line Adapter (SPD) Model S20 only. Connects to #2623 to support two communications line using X.21 or X.25 networks. Two cables must be specified: #9021 X.21 20ft (6m) cable #9839 X.21 50ft (15m) cable #2610 is supported for migration. The newer #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2612	EIA 232/V.24 One-Line Adapter (SPD) Model S20 only. Connects to #2623 to support one communications line using Async, BSC, SDLC, or X.25 protocols. One cable must be specified (see cable features for the #2609). The #2612 is supported for migration. The newer #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623

#2613	V.35 One-Line Adapter (SPD) Model S20 only. Connects to #2623 to support one V.35 communications line using either BSC, SDLC, or X.25 protocols. Each #2623 supports one V.35 line at speeds up to 640 Kbps, or three V.35 lines at speeds up to 384 Kbps. No other adapters allowed on the #2623 when running T1/E1/J1. One cable must be specified: #9020 V.35 20ft (6m) Cable #9838 V.35 50ft (15m) Cable #2613 is supported for migration. The newer #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2614	X.21 One-Line Adapter (SPD) Model S20 only. Connects to #2623 to support one communications line using X.21 or X.25 networks. One cable must be specified (see cable features for the #2610). The #2614 is supported for migration, but the newer #2699 should be ordered on new systems. SPD slots required: One Prerequisite: #2623
#2620	Full Cryptographic Processor (SPD) Model S20 only. This feature provides full cryptographic support for encrypting and decrypting data. Distribution of this feature is restricted by U.S. Government Export Regulations. In countries outside the USA and Canada, it can only be marked to financial institutions and subsidiaries of U.S. companies. If this feature cannot be sold, the #2628 should be sold in its place. Card slots required: One Maximum: One
#2623	Six-Line Communication Controller (SPD) Model S20 only. This controller provides for attachment of a wide range of iSeries or AS/400e communications adapters. The following adapters are supported by the #2623: #2605, #2609, #2610, #2612, #2613, #2614, #2654, #2655, #2656, #2657, #2658, #2659, #6153, and #6173. The #2623 supports two #2605 ISDN adapters or up to three EIA 232/V.24, X.21, and V.35 adapters. The #2623 is only orderable on Model S20 for customers purchasing the @2605 ISDN adapter. Otherwise, although #2623 continues to be supported, the newer #2699 should be ordered. SPD slots required: One
#2628	Limited Cryptographic Processor (SPD) Model S20 only. Provides the same function as the #2620, except that it does not include data encryption/decryption using a commercial Data Masking Facility for data scrambling. Can be marketed to any non-U.S. company. SPD slots required: One Maximum: One
#2629	LAN/WAN/Workstation IOP (SPD) Model S20 only. This supports up to three IOAs. Those supported are #2699, #6149, #6180, #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions. For restrictions on placing the #2629 in the #5072, see 9.3, "9406 640 and 650 Models Overview" on page 213. SPD slots required: One Maximum: One per SPD slot
#2654	EIA 232V/V.24 Two-Line Adapter 20ft Enhanced Cable Model S20 only. Connects to #2623 to support two communications line supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 20-foot (6 meter) enhanced cables. The #2654 is supported for migration only. The newer #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2655	EIA 232/V.24 Two-Line Adapter 20ft Cable Model S20 only. Connects to the #2623 to support two communications lines supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 20-foot (6 meter) cables. The #2655 is supported for migration only. The newer #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2656	X.21 Two-Lined Adapter 20ft Cable Model S20 only. Connects to #2623 to support two communications lines to attach to a X.21 or X.25 network using 20-foot (6 meter) cables. The #2656 is supported for migration only. The newer #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623

#2657	EIA 232/V.24 Two-Lined Adapter 50ft Enhanced Cable Model S20 only. Connects to #2623 to support two communications lines supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 50-foot (15 meter) enhanced cables. The #2657 is supported for migration only. The newer #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2658	EIA 232/V.24 Two-Lined Adapter 50ft Cable Model S20 only. Connects to #2623 to support two communications lines supporting Async, BSC, SDLC, or X.25 protocols using two EIA 232/V.24 50-foot (15 meter) enhanced cables. The #2658 is supported for migration only. The newer #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2659	X.21 Two-Line Adapter 50ft Cable Model S20 only. Connects to #2623 to support two communications lines to attach to a X.21 or X.25 network using 50-foot (15 meter) cables. The #2659 is supported for migration only. The newer #2699 should be ordered on new systems. SPD slots required: None Prerequisite: #2623
#2664	Integrated Fax Adapter (SPD) Model S20 only. Provides two ports capable of transmission and receipt of facsimile data to or from a Group 3 capable Fax machine, another iSeries or AS/400e with the #2664, or PCs with appropriately programmed Fax adapters. SPD slots required: One Maximum: 32
#2666	High-Speed Communications Adapter (SPD) Model S20 only. Provides one communications line capable at T1/E1 (1.544/2.048 Mbps) speeds. One of the following cables must be specified: #9879 20ft (6m) V.35 CCITT cable #9880 80ft (24m) V.35 CCITT cable #9882 20ft (6m) RS449/V.36 CCITT cable #9883 80ft (24m) RS449/V.36 CCITT cable* #9884 150ft (45m) RS449/V.36 CCITT cable* #9885 20ft (6m) X.21 CCITT cable * These cables are only allowed when the customer's modem supports Looped Clocking Mode. The #2666 is supported by not orderable on Model S20. The newer #2699 should be ordered in its place. SPD slots required: One Maximum: Eight
#2699	Two-Line WAN IOA (SPD) Model S20 only. Supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached: #0328 Operations Console 20ft (6m) PCI cable* #0329 V.24/EIA232 80ft (24m) cable #0330 V.24/EIA232 20ft (6m) cable #0331 V.24/EIA232 50ft (15m) cable #0332 V.24/EIA232 20ft (6m) enhanced cable #0333 V.24/EIA232 50ft (15m) enhanced cable #0334 V.24/EIA232 80ft (24m) enhanced cable #0335 V.36/EIA449 20ft (6m) cable #0336 V.36/EIA449 50ft (15m) cable #0337 V.36/EIA449 150ft (45m) cable #0338 V.35 20ft (6m) cable #0339 V.35 50ft (15m) cable #0340 V.35 80ft (24m) cable #0341 X.21 20ft (6m) cable #0342 X.21 50ft (15m) cable *The following feature is used to support the Operations Console function on CPU models supporting Logical Partitioning (LPAR) for secondary partitions when Logical Partitioning is implemented. (V4R4 and higher): #0328 Operations Console 20ft (6m) Cable. There are some restrictions on communications using #2699. For full details, see "Comm Restrictions" on page 187. Prerequisite: #2629 IOA slots required: One on #2629

#2720	<p>PCI WAN/Twinaxial IOA (PCI)</p> <p>Combined twinaxial/communications adapter for Model S10 and S20. Supports a single multiple protocol port based on which one of the cables listed below is attached. It also supports twinax workstations (see “WORKSTATION CONTROLLERS” on page 289).</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft(15m) enhanced PCI cable #0352 V.24/EIA232 80ft(24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 80ft (24m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0365 V.24/EIA232 80 ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI cable* <p>Mutually exclusive with #9720</p> <p>PCI slots required: One</p> <p>Maximum: One</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for MES that only includes CIF features.</p>
#2721	<p>PCI Two-Line WAN IOA (PCI)</p> <p>Supports up to two multiple protocol communications ports when one or two (in any combination) of the cables listed below are attached:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft(15m) enhanced PCI cable #0352 V.24/EIA232 80ft(24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 80ft (24m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0365 V.24/EIA232 80 ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI cable* <p>*The following feature is used to support the Operations Console function on CPU models supporting Logical Partitioning (LPAR) for secondary partitions when Logical Partitioning is implemented. (V4R4 and higher):</p> <ul style="list-style-type: none"> #0367 Operations Console 20ft (6m) PCI cable. <p>There are some restrictions on communications using the #2721. For details, see “Comm Restrictions” on page 187.</p> <p>PCI slots required: One (low speed only)</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for MES that only includes CIF features.</p>

#2745	<p>PCI Two-Line WAN IOA (PCI) Requires V4R3. Supports up to two multiple protocol communications ports when one or two (in any combination) of the cables listed below are attached:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft(15m) enhanced PCI cable #0352 V.24/EIA232 80ft(24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 80ft (24m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0365 V.24/EIA232 80 ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI cable* <p>*The following feature is used to support the Operations Console function on CPU models supporting Logical Partitioning (LPAR) for secondary partitions when Logical Partitioning is implemented. (V4R4 and higher): #0367 Operations Console 20ft (6m) PCI cable.</p> <p>There are some restrictions on communications using the #2745. For full details, see "Comm Restrictions" on page 187. PCI slots required: One (low speed). This is a Customer Install Feature (CIF) on a Model S10 for an MES that includes CIF features only.</p>
#2750	<p>PCI ISDN BRI U Adapter (only available in the United States and Canada) The #2750 is a four-port (8 channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #2750 is the "U"-bus (2 wire) version of the ISDN BRI PCI card. The #2750 feature supports the following protocols: PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax</p> <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2750 feature. For configuration purposes, each #2750 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex.</p> <p>Requirements: This feature requires country certification or homologation. Full sized PCI card slot.</p> <p>Maximum: One per IOP This is a Customer Install Feature (CIF) on a Model S10 for an MES that includes CIF features only.</p>
#2751	<p>PCI ISDN BRI S/T IOA (PCI) The #2751 is a four-port (eight channel) ISDN BRI (basic rate) full sized PCI card. Each port consists of 2B+D configuration. The #2751 is the "S/T"-bus (four wire) version of the ISDN BRI PCI card.</p> <p>Note: This requires a Network Terminating device in the circuit. In the United States and Canada this must be provided by the customer. In other countries it is most likely provided by the telephone company.</p> <p>The #2751 feature supports the following protocols: PPP (communicates with remote analog modems (V.90) as well as with remote ISDN devices) IDLC Fax</p> <p>Four 30-foot (9.3 m) RJ-45 to RJ-45 network cables are shipped with each #2751 feature. For configuration purposes, each #2751 counts as eight lines (two lines per port) towards the system communication maximums. Supports full duplex.</p> <p>Requirements: This feature requires country certification or homologation. Full sized PCI card slot.</p> <p>Maximum: One per IOP Prerequisites: #2824 and OS/400 V4R4 and PTF MF22528, or Cumulative (CUM) PTF package C9313440 or later.</p>

#2761	<p>PCI Integrated Analog Modem (PCI)</p> <p>The #2761 allows the modem function to be integrated into the IOA and supports multiple analog modem ports (eight phone lines). The #2761 runs the following protocols without the need for an external modem:</p> <ul style="list-style-type: none"> SLIP/PPP uses V.90, so max line speed is 56K bps SDLC uses V.34, so max line speed is 33.6K bps Fax uses V.17 to achieve a 14.4K bps max line speed <p>An asynchronous line description is required for Fax and can only be used for Fax. ECS line not supported. Eight 30-foot (9.3 m) phone cables are shipped with each #2761. To the iSeries or AS/400e server, the #2761 appears like a single IOA with eight individual resources available. For configuration purposes, each #2761 counts as eight communications lines.</p> <p>Requirements: This feature requires country certification or homologation.</p> <p>Full sized PCI card slot.</p> <p>Maximum: One per IOP</p> <p>Prerequisites: #2824 and V4R4 with PTF MF22528 (or supersede) or Cumulative Package C9313440 or later</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that includes CIF features only.</p>
#2809	<p>LAN/WAN/Workstation IOP (PCI)</p> <p>This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details, see "WORKSTATION CONTROLLERS" on page 289. There are some restrictions on communications using #2809. For full details, see #2609 in 9.13, "9406 Models 640 and 650" on page 251.</p> <p>Maximum: One in the base System Unit, two in the #9329 PCI Integrated Expansion Unit.</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that includes CIF features only.</p>
#2824	<p>Feature Controller (PCI)</p> <p>This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details, see "WORKSTATION CONTROLLERS" on page 289. There are some restrictions on communications using #2824. For restrictions, see "Comm Restrictions" on page 187.</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that includes CIF features only.</p>
#4800	<p>PCI Crypto Co-processor (PCI)</p> <p>This feature is a hardware cryptography solution based on the IBM 4758 card. It is a half-length PCI card. Since the feature is temperature sensitive, it is shipped separately in specially designed, insulated packaging.</p> <p>Maximum: One per #2824. Prerequisites: #2824 and V4R4</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that includes CIF features only.</p>
#4802	<p>PCI Cryptographic Coprocessor</p> <p>The #4802 is a hardware cryptography solution. The #4802 is a half-length PC form-factor PCI card that offers rich cryptography function, secure storage of cryptographic keys, and 12 MB/s performance (at the card level) for bulk data encryption and triple DES capability. The #4802 is available worldwide. The level of cryptographic function is determined by the Cryptographic Access Provider licensed program which is downloaded to the adapter.</p> <p>Note: On new shipments from the plant, the #4802 is shipped with the system, but not installed.</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that includes CIF features only.</p>
#6153	<p>V.35 One-Line Adapter (20ft Cable)</p> <p>Model S20 only.</p> <p>Connects to the #2623 to support one communications line supporting V.35 protocol using a 50-foot (15m) cable. The #6173 is supported for migration only. The newer #2699 should be ordered on new systems.</p> <p>SPD Slots required: None</p> <p>Prerequisite: #2623</p>
#6173	<p>V.35 One-Line Adapter (50ft Cable)</p> <p>Model S20 only.</p> <p>Connects to #2623 to support one communications line supporting V.35 protocol using a 50-foot (15 meter) cable. The #6173 is supported for migration only. The newer #2699 should be ordered on new systems.</p> <p>SPD Slots Required: None</p> <p>Prerequisite: #2623</p>
#9720 #2720	<p>Base PCI WAN/Twinaxial IOA (PCI)</p> <p>This combined twinax/communications adapter is provided on the base system and supports a single communications line intended for ECS. One cable must be specified:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) Enhanced PCI cable #0351 V.24/EIA232 50ft(15m) Enhanced PCI cable #0352 V.24/EIA232 80ft(24m) Enhanced PCI cable #3065 V.24/EIA232 80 ft (24m) PCI cable <p>This adapter also supports twinax workstations (see "WORKSTATION CONTROLLERS" on page 289).</p> <p>PCI card slots required: One</p> <p>Maximum: One</p> <p>Mutually exclusive with #2720 (see "WORKSTATION CONTROLLERS" on page 289) and #9721 or #9745.</p>

#9721	<p>Base PCI Two-Line WAN IOA (PCI)</p> <p>This two line communications adapter supports ECS and Client Access Console or Operations Console. Select one of the cables for ECS:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft (15m) enhanced PCI cable #0352 V.24/EIA232 80ft (24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 80ft (24m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0365 V.24/EIA232 80 ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI cable* <p>*The following feature must be ordered for Client Access Console:</p> <ul style="list-style-type: none"> #0362 20ft (6m) Client Access Console cable <p>**The following features are used to support the Operations Console function on V4R3:</p> <ul style="list-style-type: none"> #0367 Operations Console 20ft (6m) PCI cable (required). <p>To support the Remote Control Panel function, the Remote Control Panel Cable #0381 can be ordered as an option. This cable does not attach to a communication port.</p> <p>PCI card slots required: One Maximum: One Mutually exclusive with #9720 and #9745.</p>
#9745	<p>Base PCI Two-Line WAN IOA (PCI)</p> <p>Requires V4R3.</p> <p>This two line communications adapter supports ECS and Client Access Console or Operations Console. Select one of the cables for ECS:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft(15m) enhanced PCI cable #0352 V.24/EIA232 80ft(24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 80ft (24m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0365 V.24/EIA232 80 ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI cable* <p>The following feature must be ordered for Client Access Console.</p> <ul style="list-style-type: none"> #0362 20ft (6m) Client Access Console cable <p>*The following features are used to support the Operations Console function on V4R3.</p> <ul style="list-style-type: none"> #0367 Operations Console 20ft (6m) PCI cable (required). <p>To support the Remote Control Panel function, the Remote Control Panel Cable #0381 can be ordered as an option. This cable does not attach to a communication port.</p> <p>PCI card slots required: One Maximum: One Mutually exclusive with #9720 and #9721.</p>
Comm Restriction	Refer to "Comm Restrictions" on page 187.

LANS/ATM	
#2617	Ethernet/IEEE 802.3 Adapter/HP (SPD) Model S20 only. Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. An AUI Ethernet cable must be ordered separately. The #2617 is supported, but the newer #6181 should be ordered on new systems. SPD slots required: One
#2618	Fiber Distributed Data Interface Adapter (SPD) Model S20 only. Provides one interface to connect an iSeries or AS/400e to an FDDI LAN which complies with ANSI X3T9.5 and ISO 9314 standards. Consists of a card, a wrap connector, and Licensed Internal Code, which supplies IEEE 802.2 Logical Link Control (LLC), ANSI X3T9.5/ISO 9314 Media Access Control (MAC) functions, and ANSI X3T9.5 Station Management (SMT) functions. A multi-code (62.5/125 micron) FDDI optical fiber jumper cable to connect the adapter to the FDDI ring must be ordered separately. SPD slots required: One
#2619	16/4 Mbps Token Ring Adapter/HP (SPD) Model S20 only. Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code (supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions), and an external 8-foot (2.4m) cable. The #2619 is supported, but the newer #6149 should be ordered on new systems. SPD slots required: One
#2629	LAN/WAN/Workstation IOP (SPD) Model S20 only. This supports up to three IOAs. Those supported are #2699, #6149, #6180, or #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions. For restrictions on placing #2629 in #5072, see 9.13, "9406 Models 640 and 650" on page 251. SPD slots required: One Maximum: One per SPD slot
#2663	I/O Attachment Processor (SPD) Model S20 only. This I/O processor is required to attach #2668 Wireless LAN Adapter. The #2663 and #2668 are Integrated in a single hardware package to operate as a unit. Prerequisite for #2668. SPD slots required: One (with #2668)
#2665	Shielded Twisted-Pair Distributed Data Interface Adapter (SPD) Model S20 only. Provides one interface to connect to an FDDI LAN which is constructed of IBM Cabling System Type 1, 2, 6, or 9 shielded twisted-pair wiring. It consists of a card, a wrap connector, and Licensed Internal Code, which supplies IEEE 802.2 Logical Link Control (LLC), ANSI X3T9.5/ISO 9314 Media Access Control (MAC) functions and ANSI X3T9.5 Station Management (SMT) functions. IBM FDDI copper jumper cables to connect the adapter to the FDDI ring must be ordered separately. SPD slots required: One
#2668	Wireless LAN Adapter (SPD) Model S20 only. Provides wireless connectivity to workstations or other systems connected to a wireless LAN network. One of the following antenna cables must be specified: #9814 20ft (6m) Antenna Cable #9815 50ft (15m) Antenna Cable One of the following antenna must be specified: #9889 YAGI Directional Antenna #9890 Omni Directional Antenna (360 degree) #9891 Hemispherical Antenna (180 degree) #9892 Directional Antenna (90 degree) SPD slots required: One (with #2663) Prerequisite: #2663

#2723 #9723	<p>PCI Ethernet IOA (PCI)</p> <p>Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. This Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. Has a RJ45 connector and a 15-pin D-shell connector for attachment of customer supplied cabling. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B.</p> <p>PCI slots required: One.</p> <p>The #9723 is a base LAN feature.</p> <p>Requires #6617/#6618 or #5065.</p>
#2724 #9724	<p>PCI 16/4 Mbps Token Ring IOA (PCI)</p> <p>Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code (supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions), and an external 8ft (2.4m) cable. Alternatively a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. This IOA is capable of operating in half or full duplex mode.</p> <p>PCI slots required: One. The #9724 is a base LAN feature.</p> <p>Requires #6617/#6618 or #5065 Storage/PCI Expansion Tower.</p>
#2809	<p>LAN/WAN/Workstation IOP (PCI)</p> <p>This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details, see "WORKSTATION CONTROLLERS" on page 289.</p> <p>Maximum: One in the base System Unit, two in the #9329 PCI Integrated Expansion Unit.</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.</p>
#2810	<p>LAN/WAN IOP (SPD)</p> <p>Model S20 only.</p> <p>This I/O processor is required to attach one #2838 PCI 100/10 Mbps Ethernet IOA, or #2811/#2812/#2815/#2816/#2818/#2819 PCI ATM IOA. Prerequisite for these preceding features, although they can alternatively be located directly in an appropriate PCI slot.</p> <p>SPD slots required: One</p>
#2811	<p>PCI 25 Mbps UTP ATM IOA (PCI or SPD)</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using Unshielded Twisted Pair (UTO) cabling. The #2811 is typically used where 25 Mbps speed is required over distances of less than 100 meters. Requires V4R2.</p> <p>SPD slots required: One (with #2810) or PCI slots required: One</p> <p>Prerequisite: #2809 (when located on PCI slot); #2810 (when located in SPD slot)</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.</p>
#2812	<p>PCI 45 Mbps Coax T3/DS3 ATM IOA (PCI or SPD)</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the T3/DS-3 interface. The #2812 is typically used where 45 Mbps speed is required over distances of less than 100 meters. Requires V4R2.</p> <p>SPD slots required: One (with #2810) or PCI slots required: One</p> <p>Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot)</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.</p>
#2815	<p>PCI 155 Mbps UTP OC3 ATM IOA (PCI or SPD)</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2815 is typically used where 155 Mbps speed is required over distances of less than 100 meters.</p> <p>Requires V4R2.</p> <p>SPD slots required: One (with #2810) or PCI slots required: One</p> <p>Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot)</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.</p>
#2816	<p>PCI 155 Mbps MMF ATM IOA (PCI or SPD)</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2816 is typically used where 155 Mbps speed is required over distances of less than 2 kilometers. Requires V4R2.</p> <p>SPD slots required: One (with #2810) or PCI slots required: One</p> <p>Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot).</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.</p>

#2818	<p>PCI 155 Mbps SMF OC3 ATM IOA (PCI or SPD)</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Single Mode Fiber (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment, but can be used for local area switches.</p> <p>The #2818 is typically used where 155 Mbps speed is required over distances of from 16 to 40 kilometers. Requires V4R2.</p> <p>SPD slots required: One (with #2810) or PCI slots required: One</p> <p>Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot)</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.</p>
#2819	<p>PCI 34 Mbps Coax E3 ATM IOA (PCI or SPD)</p> <p>Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the E3 interface. The #2819 is typically used where 34 Mbps speed is required over distances of less than 1000 meters. Requires V4R2.</p> <p>SPD slots required: One (with #2810) or PCI slots required: One</p> <p>Prerequisite: #2809 (when located in PCI slot); #2810 (when located in SPD slot)</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.</p>
#2838 #9738	<p>PCI 100/10 Mbps Ethernet IOA (PCI or SPD)</p> <p>Provides attachment to standard 100 Mbps high-speed Ethernet LANs and also allows attachment to existing 10 Mbps Ethernet LANs. The Ethernet /IEEE 802.3 IOA is capable of operating in half or full duplex mode. The adapter comes standard with an RJ45 connector for attachment to UTP-5 media.</p> <p>SPD slots required: One (with #2810); three (with #6617/#6618) or PCI slots required: One</p> <p>Prerequisite: #2809/#2824 or #2854/#2865 (when located in PCI slot); #2810 or #6617/#6618 (when located in SPD slot).</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.</p>
#2851	<p>PCI Integrated PC Server (PCI)</p> <p>Contains a 166 MHz Pentium Processor, four main storage slots, and two LAN IOA slots for high performance serving to LAN attached PCs. Comes with 32 MB main storage and supports up to three of the following main storage features:</p> <ul style="list-style-type: none"> #2860 16 MB Integrated PC Server Memory #2961 32 MB Integrated PC Server Memory <p>Either one or two of the following LAN IOAs are supported:</p> <ul style="list-style-type: none"> #2723/#9723 PCI Ethernet IOA #2724/#9724 PCI Token Ring IOA <p>The #9723 and #9724 are the base LAN.</p> <p>PCI slots required: Two in reserved positions in the base System Unit or in the #9329 PCI Integrated Expansion Unit</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.</p>
#2854	<p>PCI Integrated PC Server (PCI)</p> <p>Contains a 200 MHz Pentium Processor, four main storage slots, and two LAN IOA slots for high performance serving to LAN attached PCs. Between one and four of the following main storage features must be ordered:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory <p>Either one or two of the following LAN IOAs are supported:</p> <ul style="list-style-type: none"> #2723/#9723 PCI Ethernet IOA #2724/#9724 PCI Token Ring IOA #2838/#9738 PCI 100/10 Mbps Ethernet IOA (specify #0222 required if installed on #2854 IPCS) <p>The #9723, #9724, and #9738 are the base LAN. Only one of the IOAs can be #2838/#9738. The #2854 comes with a special cable which provides industry standard keyboard, mouse, serial, and parallel connections. If running Windows NT on the #2854, then:</p> <ul style="list-style-type: none"> #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT is the default in the USA. A display is required on the IPCS to support Windows NT. <p>For country-specific keyboard/mouse and display support, refer to the Web site at: http://www.ibm.com/eserver/iseries/windowsintegration/</p> <p>When running OS/2 on the #2854, then the #0325 and #1700 are not allowed.</p> <p>When running Novell Netware on the #2854, then the #0325 and #1700 are not allowed. A maximum of 256 MB IOP memory is supported.</p> <p>Requires V4R2.</p> <p>PCI slots required: Two reserved positions in the base System Unit or in the #9329 PCI Integrated Expansion Unit.</p> <p>This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.</p>

#2865	<p>Integrated Netfinity Server for AS/400 (PCI) Requires V4R2 and Cumulative Package C8342420 or V4R3 and Cumulative Package C8349430 or later. Contains a 333 MHz Pentium Processor, four main storage slots, and two LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory #2867 256 MB Integrated PC Server Memory <p>Up to two of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of one LAN IOA can be a #2838/#9738.</p> <ul style="list-style-type: none"> #2723 PCI Ethernet IOA #2724 PCI Token Ring IOA #2838 PCI 100/10 Mbps Ethernet IOA (specify feature #0222 is required) <p>Only one of the following Base LAN IOAs is supported:</p> <ul style="list-style-type: none"> #9723 PCI Ethernet IOA #9724 PCI Token Ring IOA #9738 PCI 100/10 Mbps Ethernet IOA (specify feature #0222 is required) <p>If running Windows NT on the #2865, then:</p> <ul style="list-style-type: none"> A minimum of 64 MB IOP memory is required. #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard/Mouse for Windows NT, the default in the USA. A display is required to support NT on the IPCS. <p>For country-specific keyboard or mouse and display support, refer to the Web site at: http://www.ibm.com/eserver/series/windowsintegration/</p> <p>When running OS/2 on the #2865, then the #0325 and #1700 are not allowed. A maximum of 512 MB IOP memory is supported.</p> <p>When running Novell Netware on the #2865, then the #0325 and #1700 are not allowed. A maximum of 256 MB IOP memory is supported.</p> <p>PCI slots required: Two in reserved positions in the base System Unit or in the #9329 PCI Integrated Expansion Unit.</p>
#6149	<p>16/4 Mbps Token Ring IOA (SPD) Model S20 only. Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an IOA card, internal code, which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC), and an external 8ft (204m) cable. Alternatively, a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. Can operate in half or full duplex mode. SPD slots required: None Prerequisite: #2629 or #6616 #2629 or #6616 slots required: One</p>
#6181	<p>Ethernet/IEEE 802.3 IOA (SPD) Model S20 only. Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus 802.2 Logical Link Control (LLC) functions. Has an RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. The following cable can be ordered if the customer is choosing IBM AUI cabling: #9025 Ethernet Cable (3 meter AUI) If the customer is not choosing IBM AUI cabling, AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B. The Ethernet /IEEE 802.3 IOA is capable of operating in half or full duplex mode. SPD slots required: None Prerequisite: #2629 or #6616 #2629 or #6616 slots required: One</p>

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#6617 <i>continued</i>	<p>When running OS/2 on the #6617, then: #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738.</p> <p>When running Novell Netware on the #6617, then: #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738. A maximum of 256 MB IOP memory is supported.</p> <p>Requires V4R2. SPD slots required: Three contiguous slots.</p>
#6618	<p>Integrated Netfinity Server for AS/400 (SPD) Model S20 only. Requires V4R2 and Cumulative Package C8342420 or V4R3 and Cumulative Package C8349430 or later. Contains a 333 MHz Pentium Processor, four main storage slots, and three LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. At least one main storage feature is required: #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory #2867 256 MB Integrated PC Server Memory</p> <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838/#9738: #2723 PCI Ethernet IOA #2724 PCI Token Ring IOA #2838 PCI 100/10 Mbps Ethernet IOA (Specify feature #0222 is required)</p> <p>Only one of the following Base LAN IOAs is supported: #9723 PCI Ethernet IOA #9724 PCI Token Ring IOA #9738 PCI 100/10 Mbps Ethernet IOA (Specify feature #0222 is required)</p> <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6618. The #0222 100/10 Mbps Ethernet on IPCS is required for each #2838 attached to the #6618 Integrated PC Server. If running Windows NT on the #6618, then: A minimum of 64 MB IOP memory is required. #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT, the default in the USA. A display is required to support Windows NT on the IPCS. For country-specific keyboard or mouse and display support, refer to the Web site at: http://www.ibm.com/eserver/series/windowsintegration/</p> <p>When running OS/2 on the #6618, then: #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738. A maximum of 512 MB IOP memory is supported.</p> <p>When running Novell Netware on the #6618, then: #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738. A maximum of 256 MB IOP memory is supported.</p> <p>SPD slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack.</p>
DISK UNITS	
#1312	<p>One-byte 1.03 GB Disk Unit Conversion Kit Provides the hardware for migrating one 1.03 GB one-byte SCSI disk unit. Supported only in System Unit or #5064 System Unit Expansion. One #1312 migrates #1203, #1602, #6601, #6602, #6701, #6802, #9601, or #9602 disk. Two #1312 migrates #2802, #6612, #6812, #8612, or #9802 dual disks.</p>
#1313	<p>One-byte 1.96 GB Disk Unit Conversion Kit Provides the hardware for migrating one 1.96 GB one-byte SCSI disk unit. Supported only in System Unit or #5064 System Unit Expansion. One #1313 migrates #1204, #1603, or #6603 disk. Two migrate #6613, #7613, or #86130 dual disks.</p>

#1322	Two-byte 1.03 GB Disk Unit Conversion Kit Provides the hardware for migrating one 1.03 GB two-byte SCSI disk unit. Supported only in System Unit or #5064 System Unit Expansion. One #1322 migrates #1211, #1213, #4211, #4652, #6652, or #9652 disk.
#1323	Two-byte 1.96 GB Disk Unit Conversion Kit Provides the hardware for migrating one 1.96 GB two-byte SCSI disk unit. Supported only in System Unit or #5064 System Unit Expansion. One #1323 migrates #1212, #1214, #4212, #4650, #6650, or #8650 disk.
#1325	Two-byte 1.03 GB Disk Unit Conversion Kit Provides the hardware for migrating one 1.03 GB two-byte SCSI disk unit. Supported only in System Unit or #5064 System Unit Expansion. One #1325 migrates #1205, #4205, #4605, #6605, #9605, or #9705 disks.
#1326	Two-byte 1.96 GB Disk Unit Conversion Kit Provides the hardware for migrating one 1.96 GB two-byte SCSI disk unit. Supported only in System Unit or #5064 System Unit Expansion. One #1326 migrates #1206, #4206, #4606, #6606, #8606, #8706, or #9606 disks.
#1327	Two-byte 4.19 GB Disk Unit Conversion Kit Provides the hardware for migrating one 4.19 GB two-byte SCSI disk unit. If located in a 3xx/5xx model, #1327 is used, in a 2xx/4xx model, #1377 is used. Supported only in the System Unit or #5064 System Unit Expansion. One #1327 migrates #1207, #4207, #4607, #6607, #7607, #8607, or #8707 disks.
#1333	Two-byte 8.58 GB Disk Unit Conversion Kit (Ultra SCSI) Provides the hardware for migrating one 8.58 GB two-byte SCSI disk unit. Supported only in the System Unit or #5064 System Unit Expansion. One #1333 migrates #6713, #7713, or #8713 disk.
#1334	Two-byte 17.54 GB Disk Unit Conversion Kit (Ultra SCSI) Provides the hardware for migrating one 14.54 GB two-byte SCSI disk unit. Supported only in the System Unit or #5064 System Unit Expansion. One #1334 migrates #6714 disk. Integrated hardware disk compression is supported at OS/400 V4R4. Requires V4R2.
#1336	Two-byte 1.96 GB Disk Unit Conversion Kit (Ultra SCSI) Provides the hardware for migrating one 1.96 GB two-byte SCSI disk unit. Supported only in System Unit or #5064 System Unit Expansion. One #1336 migrates #6906 disk.
#1337	Two-byte 4.19 GB Disk Unit Conversion Kit (Ultra SCSI) Provides the hardware for migrating one 4.19 GB two-byte SCSI disk unit. If located in a 3xx/5xx model, the #1337 is used, and in a 2xx/4xx model, #1337 is used. Supported only in the System Unit or #5064 System Unit Expansion. One #1337 migrates #6607, #6907, or #7607 disk.
#1602	One-byte 1.03 GB Disk Unit Conversion Kit Model S20 only. Provides the hardware for migrating one 1.03 GB one-byte SCSI disk unit. Supported only in the #5052 or #5058 Storage Expansion Units positions 1 through 7. Dual disk units requires two of these kits. Can be placed in system unit with purchase of #1312 migration kit.
#1603	One-byte 1.96 GB Disk Unit Conversion Kit Model S20 only. Provides the hardware for migrating one 1.96 GB one-byte SCSI disk unit. Supported only in #5052 or #5058 Storage Expansion Units positions 1 through 7. Dual disk units require two of these kits. Can be placed in system unit with purchase of #1313 migration unit.
#4308	4.19 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in #5065/#5066 only. Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4314	8.58 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in #5065/#5066 only. Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4317	8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra2 SCSI) Supported in #5065/#5066 only. Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4318	17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra2 SCSI) Supported in #5065/#5066 only. Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).

#4324	17.54 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in #5065/#5066 only Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Prerequisite: V4R4 OS/400, #5065/#5066 with #2748. This is a Customer Install Feature (CIF).
#4331	1.6 GB Read Cache Device Supported in #5065/#5066 only. This feature provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the disk controller #2748. Prerequisites: OS/400 V4R4 and the #2748 PCI RAID Disk Unit Controller. One DASD Slot 1.6 inch. This is a CIF feature. Maximum: One per #2748 IOP.
#6605	1.03 GB Additional Two-byte Disk Unit Model S20 only. Provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. This feature is supported for migration only. Supported only in the #5052 or #5058 Storage Expansion Towers.
#6606	1.96 GB Additional Two-byte Disk Unit Model S20 only. Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. This feature is supported for migration only. Supported only in #5052 or #5058 Storage Expansion Units or the #5082 or the #5083 Storage Expansion Towers.
#6607	4.19 GB Additional Two-byte Disk Unit Model S20 only. Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. This feature is supported for migration only. Supported only in #5052 or #5058 Storage Expansion Units or the #5082 or #5083 Storage Expansion Towers. RPQ 843977 and RPQ 843978 can be used for migration to Sxx system units and the #5064, #5072 and #5073 Storage Expansion Units and Towers.
#6650	1.96 GB Additional Two-byte Disk Unit Model S20 only. Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. This feature is supported for migration only. Supported only in the #5052 or #5058 Storage Expansion Units or the #5082 or #5083 Storage Expansion Towers.
#6652	1.03 GB Additional Two-byte Disk Unit Model S20 only. Provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. This feature is supported for migration only. Supported only in the #5052 or #5058 Storage Expansion Units or the #5082 or #5083 Storage Expansion Towers.
#6713	8.58 GB Additional Two-byte Disk Unit (Ultra SCSI) Model S20 only. Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported only in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. For best performance, use attached to the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5803. RPQ 843977 and RPQ 843978 can be used for migration to Sxx system units and the #5064, #5072, and #5073 Storage Expansion Units and Towers.
#6714	17.54 GB Additional Two-byte Disk Unit (Ultra SCSI) Model S20 only. Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported only in the #5052 or #5058 Storage Expansion Units or #5082 or Expansion Towers. For best performance, use attached to the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5803. Integrated hardware disk compression is supported at OS/400 V4R4. Requires V4R2. RPQ 843977 and RPQ 843978 can be used for migration to Sxx system units and the #5064, #5072, and #5073 Storage Expansion Units and Towers.
#6717	8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. For best performance when installed in the Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5803. Not supported on #6502/#6512/#6530. Model S20 only Prerequisite: V4R4 OS/400 Supported in the #5065 and #5066 Towers through RPQ 847102.

#6718	17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported in the #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083. Not supported on #6502/#6512/#6530. Model S20 only Prerequisite: V4R3 OS/400 Supported in the #5065 and #5066 Towers through RPQ 847102.
#6806	1.96 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. Supported only in the System Unit or #5064 System Unit Expansion. This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.
#6807	4.19 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. Supported only in the System Unit or #5064 System Unit Expansion. This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.
#6813	8.58 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported only in the System Unit or #5064 System Unit Expansion. This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.
#6817	8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported only in the System Unit or #5064/#9364 System Unit Expansion. Not supported on #5064/#9364 with #6502/#6512/#6530. Prerequisite: V4R3 OS/400. Supported in the #5065 and #5066 Towers through RPQ 847102.
#6818	17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported only in System Unit or #5064/#9364 System Unit Expansion. Not supported on #5064/#9364 with #6502/#6512/#6530. Prerequisite: OS/400 V4R4. Supported in the #5065 and #5066 Towers through RPQ 847102.
#6824	17.54 GB Additional Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported only in System Unit or #5064 System Unit Expansion. Integrated hardware disk compression is supported at OS/400 V4R4. Requires OS/400 V4R2. This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.
#6831	1.6 GB Read Cache Device This feature provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the disk controller #2748. Prerequisites: OS/400 V4R4 and #2748 PCI RAID Disk Unit Controller. One DASD Slot 1.6 inch. Maximum: One per #2748 IOP.
#6906	1.96 GB Additional Two-byte Disk Unit (Ultra SCSI) Model S20 only. Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. Supported only in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. For best performance, use it attached to the #6532 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083.
#6907	4.19 GB Additional Two-byte Disk Unit (Ultra SCSI) Model S20 only. Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. Supported only in #5052 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers. For best performance, use it attached to the #6532 RAID Disk Controller (Ultra SCSI) in a #5058 or #5083. RPQ 843977 and RPQ 843978 can be used for migration to Sxx system units and the #5064, #5072, and #5073 Storage Expansion Units and Towers.
#8813	8.58 GB Optional Base Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of the #9707.
#8817	8.58 GB Optional Base Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 8.58 GB capacity as the base disk unit in place of the #9707. Supported only in System Unit or #5064/#9364 System Unit Expansion. Not supported on #5064/#9364 with #6502/#6512/#6530. Prerequisite: V4R3 OS/400.
#8818	17.54 GB Optional Base Two-byte Disk Unit 10k RPM (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity as the base disk unit in place of 9707. Supported only in System Unit or the #5064/#9364 System Unit Expansion. Not supported on the #5064/#9364 with the #6502/#6512/#6530. Prerequisite: OS/400 V4R4.

#8824	17.54 GB Optional Base Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity as the base disk unit in place of the #9707. Integrated hardware disk compression is supported at OS/400 V4R4. Requires OS/400 V4R2.
#9707	4.19 GB Base Two-byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 4.19 GB capacity as the base disk unit. The #9707 is included with new Model S10 or S20 orders.
RPQ 843977	RPQ 843977 is for customers who want to move 4/8/17 GB disk units from one AS/400 to another AS/400. The RPQ provides hardware for mounting one disk unit. The hardware in this RPQ allows for mounting device types #6607/#6907 (4.194 GB unit), #6713 (8.58 GB unit), and #6714 (17.54 GB unit) in the system unit of a Model 640/650/S30/S40/730/740 and the disk expansion features #5052/#5055/#5057/#5058/#5070/#5071/#5072/#5073/#5080/#5081/#5082/#5083. These target enclosures use SPD technology. After the disk drives are installed, an RPO change must be processed to add Feature Code 6607/6907 for each device type 6607/6907 added, Feature Code 6713 for each device 6713 added, and Feature Code 6714 for each device type 6714 added.
RPQ 843978	RPQ 843978 is for customers who want to move 4/8/17GB disk units from one AS/400 to another AS/400. The RPQ provides hardware for mounting one disk unit. The hardware in this RPQ allows for mounting device types #6607/#6907 (4.194 GB unit), #6713 (8.58 GB unit), and #6417 (17.54 GB unit) in the system unit of a Model 170/600/S10/620/S20/720 and the expansion features #7101/#7102/#5064/#9364. After the disk drives are installed, an RPO change must be processed to add Feature Code 6807 for each device type 6607/6907 added, Feature Code 6813 for each device 6713 added, and Feature Code 6824 for each device type 6417 added.
RPQ 847102	RPQ 857102 ships the disk mounting hardware and instructions required to convert Feature #6717/6817 to Feature #4317 and Feature #6718/#6818 to Feature #4318. Order one RPQ for each disk unit to be converted. Confirm that there is disk space available in an existing or on-order PCI Storage Tower #5065 or #5066. This RPQ can also be used to move a disk to an iSeries 270, 8xx, 270/8xx #5075, #5074/#9074, and #5079/#9079 PCI Towers.
INTERNAL TAPE AND CD-ROM UNITS	
#1349	1.2 GB ¼-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating a #1251, #1379, #6368, #7343, #8343, #9343, #5348, #6348, #7348, #8348, or #9348 1.2 GB ¼-inch Cartridge Tape Unit. Supported only in the System Unit or #5064 System Unit Expansion.
#1350	2.5 GB ¼-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating a #1252, #1260, #1380, #6369, #6380, #6344, #7344, #8344, #5349, #6349, #7349, or #8349 2.5 GB ¼-inch Cartridge Tape Unit. Supported only in the System Unit or #5064 System Unit Expansion.
#1355	13 GB ¼-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating the #6385 13 GB ¼-inch Cartridge Tape Unit. Supported only in the System Unit or #5064 System Unit Expansion.
#1360	7 GB 8 mm Cartridge Tape Unit Conversion Kit Provides the hardware for migrating #1261 or #6390 7 GB 8 mm Cartridge Tape Unit. Supported only in the System Unit or #5064 System Unit Expansion.
#1379	1.2 GB ¼-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating 1.2 GB ¼-inch Cartridge Tape Unit. Supported only in #5072 or #5073 System Unit Expansion Towers. Model S20 only.
#1380	2.5 GB ¼-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating a 2.5 GB ¼-inch Cartridge Tape Unit. Supported only in #5072 or #5073 System Unit Expansion Towers. Model S20 only.
#4425	Optional CD-ROM Feature Supported only in #5065 Storage/PCI Expansion Tower. Prerequisite: V4R4 and #2748 Storage Device Controller. This is a Customer Install Feature (CIF). This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.
#4482	4 GB ¼-inch Cartridge Tape Unit Supported only in #5065 Storage/PCI Expansion Tower. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).
#4483	16 GB ¼-inch Cartridge Tape Unit Supported only in #5065 Storage/PCI Expansion Tower. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).

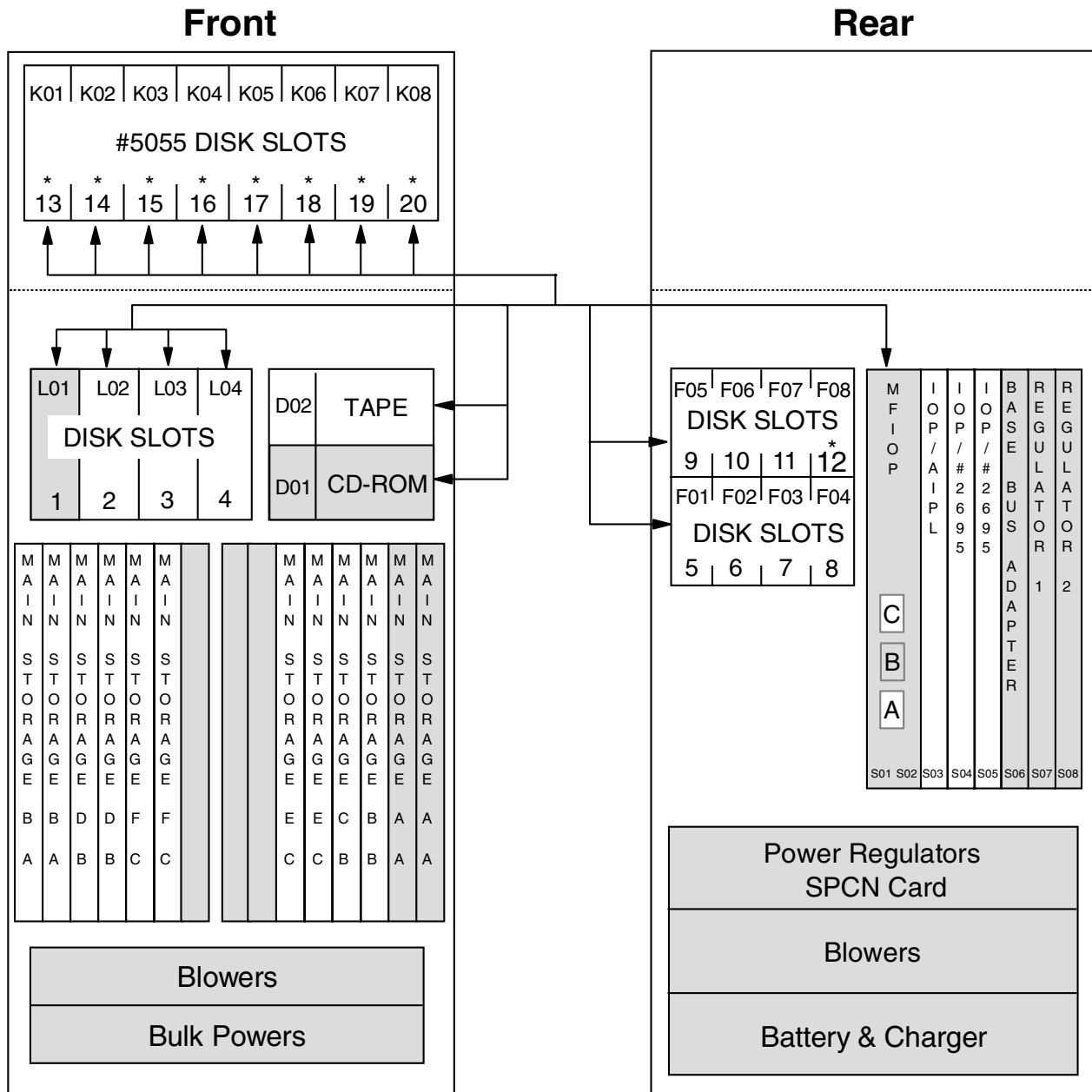
#4486	25 GB ¼-inch Cartridge Tape Unit Supported only in #5065 Storage/PCI Expansion Tower. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. This is a Customer Install Feature (CIF).
#6325	Optional CD-ROM Feature Model S20 only. Requires V4R4. Available on Models S20 System Unit Expansion Towers #5072 and #5073. Prerequisite: Storage Device Controller #2624. Limits the use of tape in the same tower to #6380 and #6390.
#6380	2.5 GB ¼-inch Cartridge Tape Unit Conversion Kit Model S20 only. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This is supported for migration only and cannot be ordered as a new feature. Supported only in #5072 or #5073 System Unit Expansion Towers. Supported for migration only. On new orders, the #6381 should be ordered.
#6381	2.5 GB ¼-inch Cartridge Tape Unit Conversion Kit Model S20 only. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. Supported only in #5072 or #5073 System Unit Expansion Towers.
#6382	4 GB ¼-inch Cartridge Tape Unit Model S20 only. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in #5072 or #5073 System Unit Expansion Towers.
#6383	16 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the #5072 or #5073. The #6363 must be controlled by the #6513. S20 only.
#6385	13 GB ¼-inch Cartridge Tape Unit Model S20 only. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the #5072 or #5073 System Unit Expansion Towers.
#6386	25 GB ¼-inch Cartridge Tape Unit Model S20 only. Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the #5072 or #5073 System Unit Expansion Towers.
#6390	7 GB 8 mm Cartridge Tape Unit Model S20 only. Can be used for save/restore, Alternate IPL, migration, and 8 mm cartridge tape exchange using appropriate media and density. Supported only #5072 or #5073 System Unit Expansion Towers.
#6425	Optional CD-ROM Feature Model S20 only. Requires V4R3. Available on Model S20 System Expansion #5064. Prerequisite: Storage Device Controller #2726, #2740 or #2741 with #9329. Not supported in combination with the #9331.
#6481	2.5 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. Supported only in the System Unit or the #5064 System Unit Expansion.
#6482	4 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in System Unit or the #5064 System Unit Expansion.
#6483	16 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the System Unit or the #5064/#9364 System Unit Expansion.

#6485	13 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in the System Unit or the #5064 System Unit Expansion.
#6486	25 GB ¼-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and ¼-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 ¼-inch cartridge tape units. Supported only in System Unit or the #5064 System Unit Expansion.
#6490	7 GB 8 mm Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and 8 mm cartridge tape exchange using appropriate media and density. Supported only in the System Unit or the #5064 System Unit Expansion.
MAGNETIC MEDIA CONTROLLERS	
#2621	Removable Media Device Attachment (SPD) Model S20 only. Provides attachment for one or two of the following devices with hardware data compression: 2440, 9348, 7208, 3995, and 9427. Dual drive 7208s count as two devices. If #2621 supports a 3995 or #5032, it must be dedicated to it. If #2621 supports a 9427, we recommend that the 9427 be attached to both ports of the #2621. For new orders, #6534 is used in preference to #2621 as long as it supports the tape device required. Prerequisite: #5064 with #9331 or #5072/#5073 SPD slots required: One
#2624	Storage Device Controller (SPD) Model S20 only. Provides support for up to three internal tape drives. With the addition of #6146 it also supports one external diskette drive. Can be used to support tape drives only in #5072 or #5073 System Expansion Towers. For new orders, the #6513 is used in preference to #2624 unless #2624 is required to support a diskette drive or one is already installed. Also used to support the optional CD-ROM #6325 in #5072 or #5073 System Expansion Towers. Not supported to drive #6425 CD-ROM in the Model S20 with #9331 in the integrated #5064 System Unit Expansion. SPD slots required: One Prerequisite: #5064 with #9331 or #5072/#5073
#2644	34xx Magnetic Tape Subsystem Attachment (SPD) Model S20 only. Provides attachment for 3422, 3430, 3480, 3490 Axx, 3490 Bxx, 3490 Dxx, 3490E Axx, 3490E Cxx, x10 Tape Subsystem Models. Also requires #9980 Serpentine Cable except for 3490E Cxx when ordered with Internal Cables. SPD slots required: One Prerequisite: #5064 with #9331 or #5072/#5073
#2718	PCI External Tape Controller (PCI) Provides SCSI attachment for one 7207-122 4GB 1/4 inch Cartridge External Tape Drive high-speed PCI slots required: One. Prerequisite: #2809/#2824 LAN/WAN/Workstation IOP. Maximum: One in the System Unit, two in the System Unit Expansion #5064 with #9329/#9330, and three in the #5065 Storage/PCI Expansion Tower. If a 7210-020 is installed on the same IOA as the 7207-122, the 7207 tape must be the first physical device. This is a Customer Install Feature (CIF) on a Model S10 for an MES that only includes CIF features.
#2726	PCI RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (PCI) Ultra SCSI controller which provides RAID protection and a 4 MB write-cache for up to 15 disks installed in the System Unit or #5064 System Unit Expansion. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of three arrays are allowed for each #2726. The #2726 also supports one CD-ROM drive (which comes as standard) and one internal tape drive when placed in the System Unit. When placed in the #5064 System Unit Expansion, it supports up to three internal tape drives. Supports #1349, #1350, #1355, #160, #6481, #6482, #6485, or #6490 tape units. Mutually exclusive with #9728, #2740, or #2741 in the same System Unit or #5064. The #2726 is not capable of Integrated hardware disk compression. High-speed PCI slots required: One Prerequisite: System Unit or #5064 with #9329 Maximum: One per System Unit or #5064 This is a Customer Install Feature (CIF) in a Model S10 for an MES that only includes CIF features.
#2729	PCI External Tape Controller (PCI) Provides SCSI attachment for one 3490E Fxx, 3490E Cxx with #5040, 3494 D1x or L1x, 3570, 3575, 3590, 7208, 9348, or 9427 Tape drive or 3995 C4x Optical Library Dataserver. V4R2 required to support 3995. High-speed PCI slots required: One Prerequisite: #2809 / #2824 LAN/WAN/Workstation IOP. Maximum: One per System Unit or two in the #5064 System Unit Expansion with #9329/#9330 and three in the #5065 This is a Customer Install Feature (CIF) in a Model S10 for an MES that only includes CIF features.

#2740	<p>PCI RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (PCI) (Ultra SCSI)</p> <p>Ultra SCSI controller which provides RAID protection and a 4 MB write-cache for up to 10 disks installed in the System Unit. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are allowed for each #2740. The #2740 also supports one CD-ROM drive (which comes as standard) and one internal tape drive. Supports #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 tape units. Mutually exclusive with the #9728, #2726, or #2741, in the same System Unit. The #2740 is not supported in the #5064 System Unit Expansion. The #2740 is not capable of Integrated hardware disk compression. Requires V4R2.</p> <p>High-speed PCI slots required: One</p> <p>Maximum: One</p> <p>This is a Customer Install Feature (CIF) in a Model S10 for an MES that only includes CIF features.</p>
#2741	<p>PCI RAID Disk Unit Controller—4 MB Cache (RAID Mirrored/Unprotected) (PCI) (Ultra SCSI)</p> <p>Ultra SCSI controller which provides RAID protection and a 4MB write-cache for up to 15 disks installed in the System Unit or #5064 System Unit Expansion. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of three arrays are allowed for each #2726. The #2726 also supports one CD-ROM drive (which comes as standard) and one internal tape drive when placed in the System Unit. When placed in the #5064 System Unit Expansion, it supports up to three internal tape drives. Supports the #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 tape units. Mutually exclusive with the #2726, #2740, or #9728 in the same System Unit or #5064. Supports integrated hardware disk compression except on the #6824/#8824 17.54 GB Disk Unit. Model S20 only. Requires V4R2.</p> <p>Disk compression requires V4R3.</p> <p>High-speed PCI slots required: One</p> <p>Prerequisite: System Unit or #5064 with #9329</p> <p>Maximum: One per System Unit or #5064</p>
#2748	<p>PCI RAID Disk Unit Controller—26 MB Cache (RAID Mirrored/Unprotected) (PCI) (Ultra2 SCSI)</p> <p>The #2748 is Ultra2 SCSI capable when installed in the #5065 Storage/PCI Expansion Tower or is Ultra SCSI capable when installed in the Model 720 system unit or a #9364/#5064 System unit Expansion. The #2748 has a 26 MB write-cache and provides RAID-5 protection and compression for internal disk units. It supports up to 15 disks. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of three arrays are allowed for each #2748. The #2748 supports both compression and non-compression modes. The mode is determined by a hardware jumper on the card. The #2748 also supports #4331/#6831 1.6 GB Read Cache Device. When placed in the system unit, it supports one internal tape and one CD-ROM. In the #5064/#9364 System Unit Expansion, it supports up to three internal tape and CD-ROM. In the #5065 Storage/PCI Expansion Tower, it supports up to two internal tapes and CD-ROM. Supports the #1349, #1350, #1355, #1360, #4482, #4483, #4486 #6480, #6481, #6482, #6483, #6485, #6486 or #6490 tape units. Mutually exclusive with the #2726, #2740, #2741 or #9728 in the same System Unit or PCI Integrated Expansion Unit #9330.</p> <p>High-speed PCI slots required: One</p> <p>Prerequisite: OS/400 V4R4 and System Unit or #5064 with #9330 or #5065 Storage/PCI Expansion Tower.</p> <p>Maximum: One per System Unit or #5064, three per #5065 Storage/PCI Expansion Tower.</p>
#6146	<p>Diskette Adapter (SPD)</p> <p>Model S20 only.</p> <p>Provides attachment for one 9331 011, 012 Diskette Unit and the #6134 5 ¼-inch diskette drive.</p> <p>SPD slots required: None</p> <p>Prerequisite: #2624</p> <p>Maximum: Two</p>
#6501	<p>Tape/Disk Device Controller (SPD)</p> <p>Model S20 only.</p> <p>Provides attachment for up to two 9337 2xx, 4xx or 5xx models. Also supports up to two 3490E Exx. 3490E Fxx, 3570, 3575, or 3590 models. Also provides attachment for the 2105 Versatile Storage Server. DASD and Tape Units cannot be mixed on the same #6501. The #6501 is supported but #6534 should be ordered on new orders unless it does not support the tape drive being configured.</p> <p>SPD slots required: One</p> <p>Prerequisite: #5064 with #9331 or #5072/#5073</p> <p>Maximum: Four for Tape; for Disk, see the model overview tables at the beginning of this chapter.</p>
#6502	<p>RAID Disk Unit Controller—2 MB Cache (RAID/Mirrored/Unprotected) (PCI) (Ultra SCSI)</p> <p>Model S20 only.</p> <p>Provides RAID protection and a 2 MB write-cache for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, #5082 or #5083 Storage Expansion Tower, or #5064 System Unit Expansion. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are allowed for each #6502. The #6502 is supported for migration, but the #6532 or #6533 should be ordered on new systems. The #6502 is not capable of integrated hardware disk compression.</p> <p>SPD slots required: One</p> <p>Prerequisite: #5064 with #9331 or #5072/#5073/#5082/#5083</p> <p>Maximum: See the model overview tables at the beginning of this chapter.</p>

#6512	<p>RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (PCI) (SPD)</p> <p>Model S20 only.</p> <p>Provides RAID protection and a 4 MB write-cache for up to 16 disks located in #5052 or #5058 Storage Expansion Tower, or #5064 System Unit Expansion. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are allowed for each #6512. The #6512 is supported for migration, but the #6532 or #6533 should be ordered on new systems. The #6512 is not capable of integrated hardware disk compression.</p> <p>SPD slots required: One</p> <p>Prerequisite: #5064 with #9331 or #5072/#5073/#5082/#5083</p> <p>Maximum: See the model overview tables at the beginning of this chapter.</p>
#6513	<p>Internal Tape Device Controller (SPD)</p> <p>Model S20 only.</p> <p>Provides support for up to three internal tape drives when located in #9331 Expansion Unit for SPD cards, or four internal tape drives when located in the #5072 or #5073 System Unit Expansion. The #6513 is the default controller unless a #2624 is installed. Supports the #1379, #1380, #6380, #6381, #6382, #6383, #6385, #6386, and #6390 in #5072 or #5073 System Unit Expansion Tower; and the #1349, #1350, #1355, #1360, #6481, #6482, #6485, #6486, and #6490 in a #5064 System Unit Expansion with the #9331.</p> <p>SPD slots required: One</p> <p>Prerequisite: #5064 with #9331 or #5072/#5073</p> <p>Maximum: Five</p>
#6530	<p>Disk Unit Controller—No Cache (Mirrored/Unprotected) (SPD)</p> <p>Model S20 only.</p> <p>Controller for up to 16 disks located in the #5052 or #5058 Storage Expansion Unit, #5082 or #5083 Storage Expansion Tower, or #5064 System Unit Expansion. Supported for migration, but the new #6532 or #6533 should be ordered on new systems. The #6530 is not capable of integrated hardware disk compression.</p> <p>SPD slots required: One</p> <p>Prerequisite: #5064 with #9331 or #5072/#5073/#5082/#5083.</p> <p>Maximum: See the model overview tables at the beginning of this chapter.</p>
#6532	<p>RAID Disk Unit Controller—4 MB Cache (RAID/ Mirrored/Unprotected) (Ultra SCSI) (SPD)</p> <p>Model S20 only.</p> <p>Ultra SCSI Controller for up to 16 disks installed in #5058 Storage Expansion Unit, #5083 Storage Expansion Tower, or #5064 System Unit Expansion. Also supports disks located in #5052 Storage Expansion Unit or #5082 Storage Expansion Tower, but these are not at Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of ten drives are supported in a RAID-5 array. A maximum of four arrays are allowed for each #6532.</p> <p>#6532 is not capable of integrated hardware disk compression.</p> <p>SPD slots required: One</p> <p>Prerequisite: #5064 with #9331 or #5072/#5073/#5082/#5083.</p> <p>Maximum: See the model overview tables at the beginning of this chapter.</p>
#6533	<p>RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) (SPD)</p> <p>Model S20 only.</p> <p>Ultra SCSI Controller for up to 16 disks installed in the #5058 Storage Expansion Unit, #5083 Storage Expansion Tower, or #5064 System Unit Expansion. Also supports disks located in the #5052 Storage Expansion Unit or #5082 Storage Expansion Tower, but these are not at Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of ten drives are supported in a RAID 5 array. A maximum of four arrays are allowed for each #6533. Supports integrated hardware disk compression except on #6714 17.54 GB Disk Unit.</p> <p>Requires V4R2. Integrated hardware disk compression requires V4R3.</p> <p>SPD slots required: One</p> <p>Prerequisite: #5064 with #9331 or #5072/#5073/#5082/#5083.</p> <p>Maximum: See the model overview tables at the beginning of this chapter.</p>
#6534	<p>Magnetic Media Controller (SPD)</p> <p>Model S20 only.</p> <p>Provides attachment for one 3490E Cxx with #5040, 3490E Exx, 3490E Fxx, 3494 D1x or L1x, 3570, 3575, 3590, 7208, 9348, or 9427 Tape Drives or 3995 C4x Optical Library Dataserver. V4R2 is required to support 3995.</p> <p>SPD slots required: One</p> <p>Prerequisite: #5064 with #9331 or #5072/#5072.</p> <p>Maximum: See the model overview tables at the beginning of this chapter.</p>
#9728	<p>Base PDI Disk Unit Controller (Ultra SCSI) (PCI)</p> <p>This is the base IOA for the System Unit. Provides Ultra SCSI attachment for up to five internal disk units, one internal CD-ROM (standard) and one internal tape drive. Does not support RAID. Supports the #1349, #1350, #1355, #1360, #6481, #6482, #6485, or #6490 tape units. Mutually exclusive with the #2726, #2740, or #2741 in the same System Unit. The #9728 is not capable on integrated hardware disk compression. The #9728 has CCIN 2728. See Chapter 16, "CCIN Numbers" on page 441.</p> <p>High-speed PCI slots required: One</p> <p>Maximum: One per System Unit.</p>

10.12 9406 Model S30 System Unit



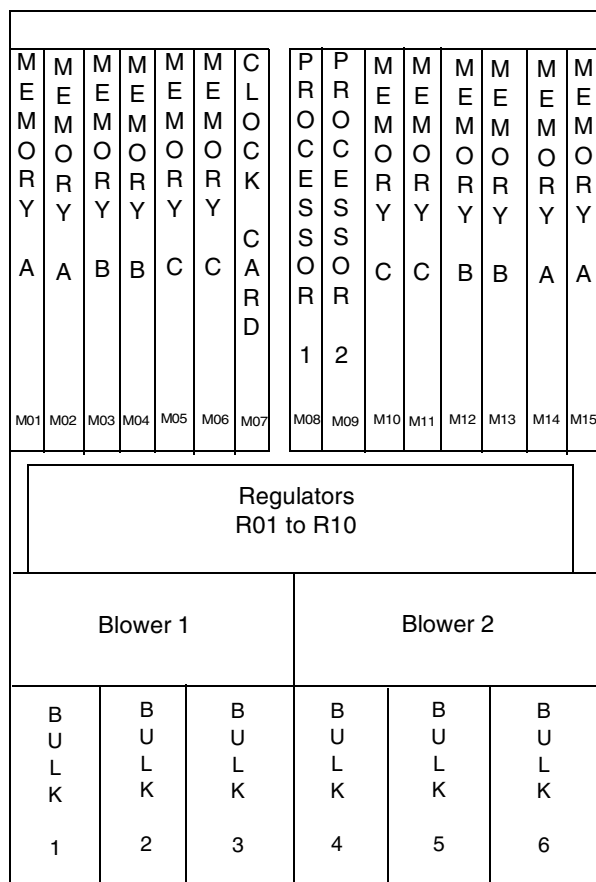
** This slot is used only in S30 #2260, #2321, and #2322.

* One-byte disks cannot be installed in these slots.

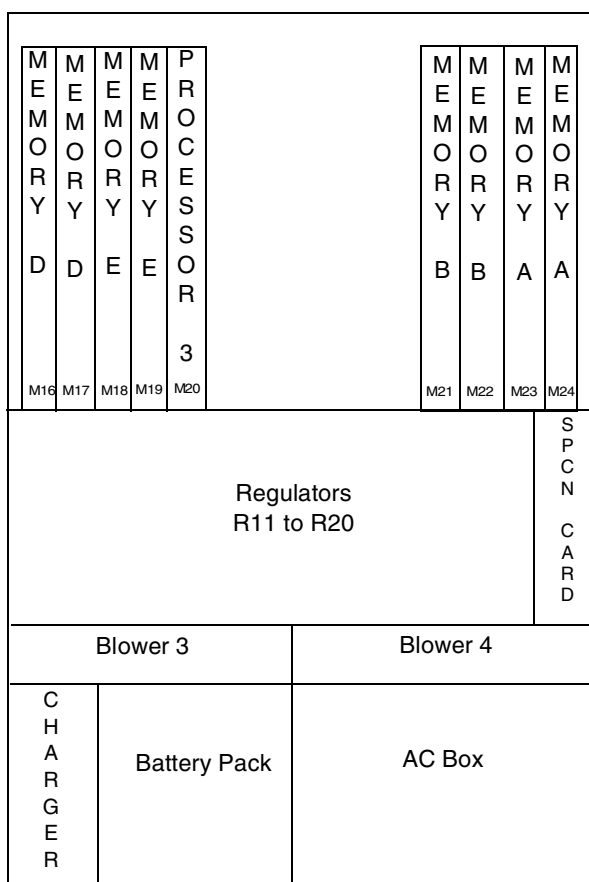
Note: For memory slots, the first letter applies to S30 #2257, #2258, #2259, and #2320. The second letter applies to S30 #2260, #2321, and #2322.

10.13 9406 Model S40 System Unit

Front

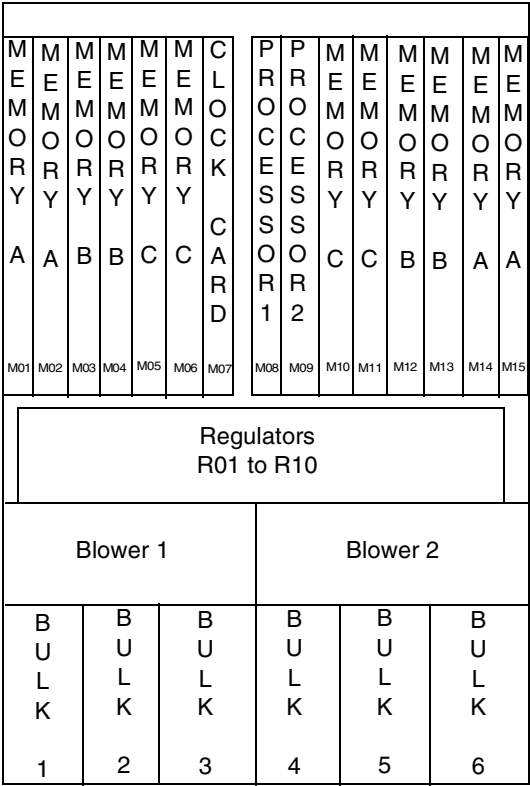


Rear

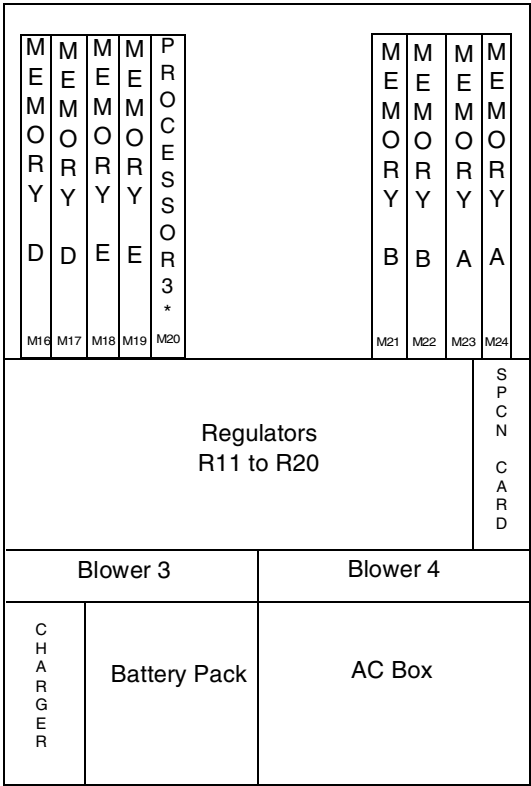


10.14 9406 Model SB1 System Unit

Front

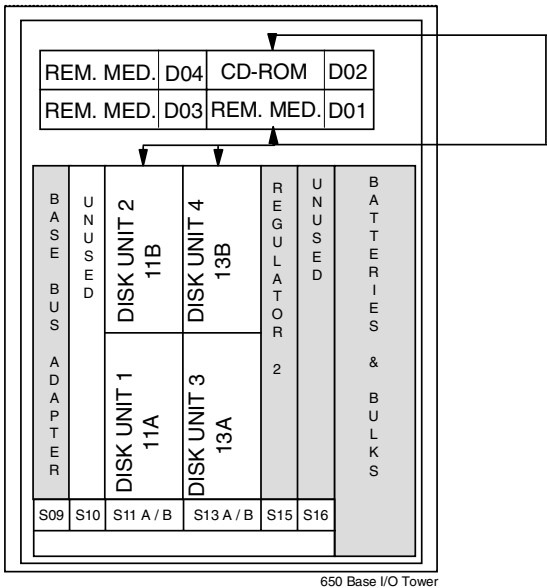


Rear

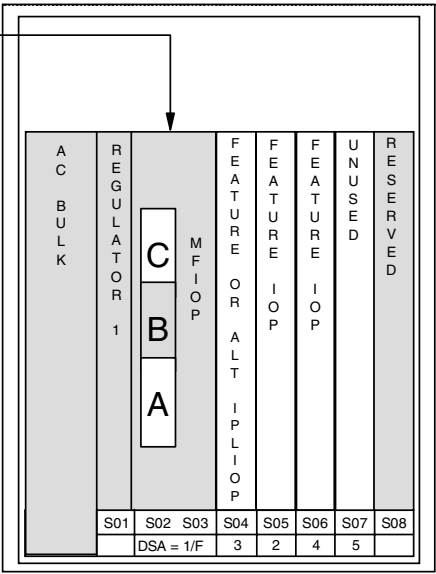


*This slot is only used in SB1 #2311

#9251 Front



#9251 Rear



= Are part of the base configuration

* One byte disks cannot be installed in these slots

10.15 9406 Models S30, S40, and SB1

Processors	
#2207	3660 RSP CPW 8-Way Processor in Client/Server Environment 120 RSP CPW 8-Way Processor in Interactive Environment. Base Memory 1024 MB. Model S40 only. Requires V4R3.
#2208	4550 RSP CPW 12-Way Processor in Client/Server Environment 120 RSP CPW 8-Way Processor in Interactive Environment. Base Memory 1024 MB. Model S40 only. Requires V4R3.
#2256	1794.0 RSP CPW 8-way Processor in Client/Server Environment, 64.0 RSP CPW 8-Way Processor in Interactive Environment. Base Memory 1024 MB. Model S40 only.
#2257	319.0 RSP CPW Processor in Client/Server Environment, 51.5 RSP CPW Processor in Interactive Environment. Base Memory 512 MB. Model S30 only.
#2258	583.3 RSP CPW 2-way Processor in Client/Server Environment, 64.0 RSP CPW 2-Way Processor in Interactive Environment. Base Memory 512 MB. Model S30 only.
#2259	998.6 RSP CPW 4-way Processor in Client/Server Environment, 64.0 RSP CPW 4-way Processor in Interactive Environment. Base Memory 512 MB. Model S30 only.
#2260	1794.0 RSP CPW 8-way Processor in Client/Server Environment, 64.0 RSP CPW 8-way Processor in Interactive Environment. Base Memory 1024 MB. Model S30 only.
#2261	2340.0 RSP CPW 12-way Processor in Client/Server Environment, 64.0 RSP CPW 12-way Processor in Interactive Environment. Base Memory 1024 MB. Model S40 only.
#2310	8-way Processor. Base Memory 4096 MB. 125,888 normalized FI Dialog Steps per hour at 65% CPU. Model SB1 only. Prerequisite: #04xx ISV Software feature. See 18.17, "Preload Feature Codes" on page 511 for a list of valid features.
#2311	12-way processor. Base Memory 4096 MB. 185,533 normalized FI Dialog Steps per hour at 65% CPU. Model SB1 only. Prerequisite: #04xx ISV Software feature. See 18.17, "Preload Feature Codes" on page 511 for a list of valid features.
#2312	8-Way Processor. Base Memory 8192 MB. See http://www-4.ibm.com/software/ for the latest information. Model SB1 only. Prerequisite: #04xx ISV Software feature. See 18.17, "Preload Feature Codes" on page 511 for a list of valid features.
#2313	12-Way Processor. Base Memory 8192 MB. At time of print, FI Dialog steps were still being finalized. See http://www-4.ibm.com/software/ for the latest information. Model SB1 only. Prerequisite: #04xx ISV Software feature. See 18.17, "Preload Feature Codes" on page 511 for a list of valid features.
#2320	998.6 RSP CPW 4-way Processor in Client/Server Environment, 215.1 RSP CPW 4-way Processor in Interactive Environment. Base Memory 512 MB. Model S30 only. Prerequisite: #04xx ISV Software feature. See 18.17, "Preload Feature Codes" on page 511, for a list of valid features.
#2321	1794.0 RSP CPW 8-way Processor in Client/Server Environment, 386.4 RSP CPW 8-way Processor in Interactive Environment. Base Memory 1024 MB. Model S30 only. Prerequisite: #04xx ISV Software feature. See 18.17, "Preload Feature Codes" on page 511 for a list of valid features.
#2322	1794.0 RSP CPW 8-way Processor in Client/Server Environment, 579.6 RSP CPW 8-way Processor in Interactive Environment. Base Memory 1024 MB. Model S30 only. Prerequisite: #04xx ISV Software feature. See 18.17, "Preload Feature Codes" on page 511 for a list of valid features.
#2340	3660 RSP CPW 8-Way Processor in Client/Server Environment 1050 RSP CPW 8-Way Processor in Interactive Environment Base Memory 1024 MB. Model S40 only. Prerequisite: #04xx ISV Software feature. See 18.17, "Preload Feature Codes" on page 511 for a list of valid features. Requires V4R3.

#2341	4550 RSP CPW 12-Way Processor in Client/ Server Environment 2050 SRP CPW 8-Way Processor in Interactive Environment Base Memory 1024 MB Model S40 only. Prerequisites: #04xx ISV Software feature. See 18.17, "Preload Feature Codes" on page 511 for a list of valid features. Requires V4R3.
POWER AND PACKAGING	
Base Optical Bus Adapter	Base Optical Bus Adapter This is a base Optical Bus Adapter in the S30 and S40 identified as CCIN 2696 with no feature code required.
#2688	Optical Link Processor (1063 Mbps) This is a card that is used for attaching #5072, #5073, #5082, or #5083 Expansion Towers. Each #2688 supports a maximum of two #50xx Towers. Card slots used: None Maximum: Nine on S30 and S40, two on SB1 Prerequisite: #2695 or IOA slot on the Base Optical Bus Adaptor.
#2695	Optical Bus Adapter Allows for the addition of up to three #2688 Optical Link Processors. Card slots used: One Maximum: One
#2730	Programmable Regulator This feature is required when five or more Main Storage Cards are installed in a Model S30 only. Card slots used: None Maximum: One
#5052	Storage Expansion Unit Provides space for up to sixteen disk units. It attaches to the top of the #5072 System Expansion Tower and the #5082 Storage Expansion Tower. This feature is only supported with upgrades. It cannot be ordered with a new system. Only one #5052 per tower is supported and #5143 Power Supply may be required. Models S30 and S40 only.
#5055	Storage Expansion Unit (Ultra SCSI) Provides space up to eight disk units. It attaches to the top of the Model S30 System Unit. Model S30 only. Prerequisite: #9751 or #9754 MFIOP with RAID and #5151 Power Supply.
#5057	Storage Expansion Unit (Ultra SCSI) Provide space for up to sixteen disk units. It attaches to the top of the Model S40 System Unit. Model S30 only. Prerequisite: #9751 or #9754 MFIOP with RAID.
#5058	Storage Expansion Unit (Ultra SCSI) Provides space for up to sixteen disk units. It attaches to the top of the #5073 System Unit Expansion Tower and the #5083 Storage Expansion Tower. Only one #5058 per tower is supported. Models S30 and S40 only.
#5065	Storage/PCI Expansion Tower Provides an additional bus. It includes a 1063 Mbps optical bus card. The #5065 has redundant, hot swappable power supplies. It supports three LAN/WAN/Workstation controllers, twelve PCI IOA cards, two removable media, and up to 45 disk units. Three specific disk slots may be used for #4331 1.6 GB Read Cache Device. The #5065 is the only storage expansion unit to support Ultra2 SCSI. Prerequisite: #2688 and V4R4. Maximum: Eighteen on the Models S30 and S40. This is a Customer Install Feature (CIF).
#5066	1.8M I/O Tower Provides two additional busses. The #5066 is actually two #5065 Storage/PCI Expansion Towers installed in a #5066 1.8M I/O Tower. The #5066 reports to the system as two #5065s. The #5066 includes two 1063 Mbps optical bus cards, various cables (including optical cables) and the 1.8M I/O Tower. The #5066 includes 24 PCI IOA slots, space for 90 disk units, space for four removable media devices, battery backup, redundant/hot swap power supplies, and two base PCI LAN/WAN/Workstation IOPs (CCIN #2824). The #5066 is capable of controlling Ultra2 SCSI disk units. Two line cords must be specified. Prerequisite: #2688 and V4R4 Maximum: Nine on the Models S30 and S40. Not supported on the SB1.
#5072	1063 Mbps System Unit Expansion Tower Provides an I/O tower for creating additional buses on the Model S30 and S40. It includes a 1063 Mbps optical bus card, thirteen SPD I/O card slots, space for up to four internal tape units or CD-ROMs (a maximum of three), and battery and power supplies. It can support one #5052 Storage Expansion Unit. Due to power restrictions, some combinations of high powered cards may mean that an additional #5072 is required. Prerequisite: #2688 and #2695 or #2688 and an IOA slot on the System Unit Base Optical Bus Adapter. This feature is only supported on upgrades, it cannot be ordered with a new system. Models S30 and S40 only.

#5073	1063 Mbps System Unit Expansion Tower Provides an I/O tower for creating additional buses on the Model S30, S40, and SB1. It includes a 1063 Mbps optical bus card, thirteen SPD I/O card slots, space for up to four internal tape units or CD-ROMs (a maximum of three), and battery and power supplies. It can support one #5058 Storage Expansion Unit. Due to power restrictions, some combinations of high powered cards may mean that an additional #5073 is required. Prerequisite: #2688 and #2695 or #2688 and an IOA slot on the System Unit Base Optical Bus Adapter.
#5082	1063 Mbps Storage Expansion Tower Provides a DASD Tower for adding up to 16 disk units. A total of 32 disk units are supported with an addition of #5052. It includes a 1063 Mbps Optical Bus Card, two SPD I/O card slots for the disk IOPs (#6502, #6512, #6530—all supported but not orderable; #6532 or #6533—for new orders), and battery and power supplies. Prerequisites: #2688 and #2695 or #2688 and an IOA slot on the Base Optical Bus Adapter. This feature is only supported on upgrades, it cannot be ordered with a new system Models S30 and S40 only.
#5083	1063 Mbps Storage Expansion Tower (Ultra SCSI) Provides a DASD Tower for adding up to 16 disk units. A total of 32 disk units are supported with an addition of #5058. It includes a 1063 Mbps Optical Bus Card, two SPD I/O card slots for the disk IOPs (#6502, #6512, #6430—all supported but not orderable; #6532 or #6533—for new orders), and battery and power supplies. Prerequisites: #2688 and #2695 or #2688 and an IOA slot on the Base Optical Bus Adapter. Models S30 and S40 only.
#5101	30 Disk Expansion Feature This provides two 15 unit disk enclosures, a 700-watt power supply, backplanes and internal cables. Maximum: One per #5065 Storage/PCI Expansion Tower.
#5143	Feature Power Supply This is a 400-watt power supply that is normally a prerequisite of a #5052 installed in a #5072 or #5082 Expansion Tower. Models S30 and S40 only. Maximum: One per #5072 or #5082.
#5150	Battery Backup (External) An external battery backup that when used in conjunction with an internal battery backup is capable of extending the Continuously Power Main Storage (CPM) time to at least 48 hours. On Models S30, S40, and SBI a standard internal battery backup is capable of maintaining CPM on 16 GB of main storage for at least 24 hours. The #5150 is required when main storage exceeds 16 GB on a Model 30 and S40.
#5151	Power Supply (650 watts) #5151 is a 650 feature Power Supply that is a prerequisite for #5055 Storage Expansion Unit. Also required when six or more main storage cards are installed. Model S30 only. Maximum: One
#9251	Base I/O Tower Base Tower on a Model S40 and SB1. Includes four feature SPD IOP slots, space for three removable media devices, one CD-ROM drive, one MFIO, the ability to add up to 20 feature disk units (with #5057—Model S40 only), and battery and power supplies. Models S40 and SB1 only.
MAIN STORAGE	
#3179	256 MB Main Storage Must be added in pairs on Model S30 Processors #2257, #2258, #2259, and #2320. Must be added in fours on Model S30 Processors #2260, #2321, and #2322 and Model S40 Processors. Requires one dedicated memory card slot. Requires V4R2. Maximum: Five pairs on Model S30 Processors #2257, #2258, #2259 and #2320; two fours on Model S30 Processors #2260, #2321, and #2322; four fours on Model S40. Model S30 and S40 only.
#3180	512 MB Main Storage Must be added in pairs on Model S30 Processors #2257, #2258, #2259, and #2220. Must be added in fours on Model S30 Processors #2260, #2321, and #2322 and Model S40 Processors. Requires one dedicated memory card slot. Requires V4R2. Maximum: Five pairs on Model S30 Processors #2257, #2258, #2259, and #2320; two fours on Model S30 Processors #2260, #2321, #2322; four fours on S40. Model S30 and S40 only.
#3189	128 MB Main Storage Must be added in pairs on Model S30 Processors #2257, #2258, #2259, and #2320. Must be added in fours on Model S30 Processors #2260, #2321, and #2322 and Model S40. Requires one dedicated memory card slot. Maximum: Five pairs on Model S30 Processors #2257, #2258, #2259, and #2320; two fours on Model S30 Processors #2260, #2321, and #2322; four fours on Model S40. Model S30 and S40 only.
#3190	256 MB Main Storage Must be added in pairs on Model S30 Processors #2257, #2258, #2259, and #2320. Must be added in fours on Model S30 Processors #2260, #2321 and #2322 and Model S40. Requires one dedicated memory card slot. Maximum: Five pairs on Model S30 Processors #2257, #2258, #2259, and #2320; two fours on Model S30 Processors #2260, #2321, and #2322; four fours on Model S40. Model S30 and S40 only.

#3191	512 MB Main Storage Must be added in pairs on Model S30 Processors #2257, #2258, #2259, and #2320. Must be added in focus on Model S30 Processors #2260, #2321, and #2322 and Model S40. Requires one dedicated memory card slot. Maximum: Five pairs on Model S30 Processors #2257, #2258, #2259, and #2320; and two fours on Model S30 Processors #2260, #2321, and #2322; four fours on Model S40. Model S30 and S40 only.
#3192	1024 MB Main Storage Must be added in pairs on Model S30 Processors #2257, #2258, #2259, and #2320. Must be added in fours on Model S30 Processors #2360, #2321, and #2322 on Model S40. Requires one dedicated memory card slot. Maximum: Five pairs on Model S30 Processors #2257, #2258, #2259, and #2320; two fours on Model S30 Processors #2260, #2321, and #2322; four fours on Model S40. Model S30 and S40 only.
#3193	2084 MB Main Storage Must be added in pairs on Model S30 Processors #2257, #2258, #2259, and #2320. Must be added in fours on Model S30 Processors #2260, #2321, and #2322 and Model S40. Requires one dedicated memory card slot. Maximum: Four pairs on Model S30 Processors #2257, #2258, #2259, and #2320; two fours on Model S30 Processors #2260, #2321, and #2322; four fours on Model S40. Requires V4R3. Model S30 and S40 only.
#8180	Optional Base 512 MB Main Storage Provides an optional 512 MB Main Storage card in place of a base 256 MB card. Must be added in pairs on Model S30 Processors #2257, #2258, #2259, and #2230. Must be added in fours on Model S30 Processors #2260, #2321, and #2322 and Model S40. Requires V4R2. Requires one dedicated memory card slot. Model S30 and S40 only.
#8191	Optional Base 512 MB Main Storage Provides an optional 512 MB Main Storage card in place of a base 256 MB card. Must be added in pairs on Model S30 Processors #2257, #2258, #2259, and #2320. Must be added in fours on Model S30 Processors #2260, #2321, and #2322 and Model S40. Requires one dedicated memory card slot. Model S30 and S40 only.
#8192	Optional Base 1024 MB Main Storage Provides an optional 1024 MB Main Storage card in place of a base 256 MB card. Must be added in pairs on Model S30 Processors #2257, #2258, #2259, and #2320. Must be added in fours on Model S30 Processors #2260, #2321, and #2321, and #2322, and Model S40. Requires one dedicated memory card slot. Model S30 and S40 only.
#8193	Optional Base 2048 MB Main Storage Provides an optional 2048 MB Main Storage card in place of base 256 MB card. Must be added in pairs on Model S30 Processors #2257, #2258, #2259, and #2320. Must be added in fours on Model S30 Processors #2260, #2321, and #2322, and Model S40. Requires V4R3. Requires one dedicated card slot. Models S30 and S40 only.
#9179	Base 256 MB Main Storage Must be added in pairs on Model S30 Processors #2257, #2258, #2259, and #2320. Must be added in fours on Model S30 Processors #2260, #2321, and #2322 and Model S40. Requires on dedicated memory card slot. Requires V4R2. Model SB1 comes standard with four 1024MB Main Storage card on processors #2310 and #2311 and eight 1024 MB Main Storage cards on processors #2312 and #2313. There are no additional Main Storage features on Model SB1.
#9190	Base 256 MB Main Storage Must be added in pairs on Model S30 Processors #2257, #2258, #2259, and #2320. Must be added in fours on Model S30 Processors #2260, #2321, and #2322 and Model S40. Requires one dedicated memory card slot. Model SB1 comes standard with four 1024 MB Main Storage cards on processors #2310 and #2311 and with 1024 MB Main Storage cards on processors #2312 and #2313. There is no additional feature Main Storage Available on Model SB1.
WORKSTATION CONTROLLERS	
Base IOP	Base Controller for Storage/PCI Expansion Tower #5065. This comes as standard (no feature required) with #5065 Storage/PCI Expansion Tower. It is installed in slot C03 and is identified as CCIN 2824. It is used for attaching LAN, WAN, and workstation IOAs through two high-speed slots and two low-speed slots. The #2718, #2729 or #2748 are supported in C04 only. The #2723/#9723, #2724/#9724, #2645, #2746, #2750, #2751, #2761 or #4800 are supported in C04 or C05. The #281X or #2838/#9738 are supported on C05 only. The #2723/#9723, #2724/#9724, #2745, #2746 #2750, #2751 or #2761 are supported in C01 or C02. Restrictions apply. Maximum: One
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are #2699, #6149m #6180, #6181, #9249, #9280 and #9381. LAN IOAs (#6149, #6181, #9249, and #9381) cannot occupy all three positions. No more than seven #2629s can be placed in one #5072 System Unit Expansion Tower. The #2629 cannot be placed in Slot 14 of a #5072. There is no restriction on placing #2629 in #5073 System Unit Expansion Tower. Card slots required: One
#2746	Twinaxial Workstation IOA (PCI) One eight-port attachment is provided to support 40 active twinaxial devices. PCI slots required: One Prerequisite: #5065 Storage/PCI Expansion tower and V4R4. Maximum: For workstation controller maximums in any combination, see 8.1, "9406 720 Model Overview" on page 157.

#2824	Feature Controller (PCI) This can be used for attaching additional LAN, WAN, and Workstation IOAs to the system. There is a maximum of two in the #5065 Storage/PCI Expansion Tower. In #5065 Storage/PCI Expansion Tower slots C08 or C13, it supports two high-speed and two low-speed slots. The #2718, #2729 or #2748 are supported in C09 and C14 only. The #2838/#9738 and #281x are supported in C05, C10 and C15 only. The #2838/#9738, #2724/#9724, #2745, #2746, #2750, #2751, #2761 or #4800 are supported in C09, C10, C14, or C15. The #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751 or #2761 are supported in C06, C07, C11, or C12. Additional restrictions apply. Prerequisite: V4R4
#5540	System Console Attached to Twinaxial Workstation Controller/Adaptor Specify The System Console attaches to #6180 or #9280 Twinaxial Workstation IOA or other migrated Twinaxial Workstation Controller.
#5541	System Console Attached to ASCII Workstation Controller Specify The System Console attaches to #6141 or #9141 ASCII Workstation Controller.
#5543	Client Access/400 System Console Specify The System Console is a PC attached to the #9751 MFIOP. Prerequisite: #0344 Cable for attaching Client Access Console and #9699 Base Multiprotocol Communications Adapter in Slot B in the #9751 or #9754 MFIOP.
#5544	System Console on Op Console Requires V4R3. The System Console is a PC. The #5544 is the default for V4R3 Server Models (S30, S40, and SB1). Prerequisite: #0328 Cable to be attached to Port 0 of the #9699 Base Multiprotocol Communications Adapter in Slot B of the #9751 or #9754 MFIOP. #0328: Operations Console Cable: This is a 6-meter used to attach a PC to a #9699 communication adapter for use as a remote PC Console. Mutually exclusive with #3044.
#6050 #9050	Twinaxial Workstation Controller One eight-port attachment is provided to support up to seven twinaxial devices with V4R1 or 28 with V4R2 or V4R3. Model S30 processors #2320, #2321, and #2322 and S40 processors #2340 and #2341 support more twinax devices on any release. See the model overview tables at the beginning of this chapter. The #9050 is the base Twinaxial Workstation Controller on some older models. The #6050/#9050 is supported, but the newer #6180 should be ordered on new systems. Model S30 or S40 only. Card slots required: One
#6141 #9141	ASCII Workstation Controller This workstation controller supports up to six ASCII devices. The #9141 can be specified as new orders on the Base Workstation Controller. Card slots required: One
#6142	ASCII 12-Port Workstation Attachment This attachment plugs into the #6141 or #9141 ASCII Workstation Controller providing an additional twelve ports. Eighteen ASCII devices can now be supported. Only one #6142 can be attached per #6141 or #9141. Card slots required: None
#6180 #9280	Twinaxial Workstation IOA One eight-port attachment is provided to support up to seven twinaxial devices with V4R1 or 28 with V4R2. Model S30 processors #2320, #2321, and #2322 and S40 processors #2340 and #2341 support more twinax devices on any release. See the model overview tables at the beginning of this chapter. The #9280 is specified on new order when a twinaxial workstation is required and there is no ASCII workstation controller. One #6280/#9280 is placed in Slot C of the #9751 or #9754 MFIOP when the System Console is ASCII. All other #6180s must be placed in a #2629 LAN/WAN/Workstation IOP. IOA slots required: One #2629, #9751, or #9754 slot.
#9751	MFIOP with RAID (Ultra SCSI) This is standard on the Model S30, S40, and SB1. Contains function for controlling 20 disk units, one tape unit and one CD-ROM unit. Has three IOA slots for controlling LANs, Twinaxial Workstations, and Communications. IOA Slot A is reserved for attaching one #2699 Communications IOA or one #6149 or #6181 LAN IOA. IOA Slot B is reserved for attaching the #9699 Base Multi Protocol Communications IOA. IOA Slot C is reserved for attaching one #2699 Communications IOA or one #6180 or #9280 Twinaxial IOA. Occupies two card slots. The #9751 is not capable of integrated hardware disk compression. The #9751 has CCIN 6751. See Chapter 16, "CCIN Numbers" on page 441.
#9754	MFIOP with RAID (Ultra SCSI) This is standard on the Model S30, S40, and SB1. Contains function for controlling 20 disk units, one tape unit and one CD-ROM unit. Has three IOA slots for controlling LANs, Twinaxial Workstations, and Communications. IOA Slot A is reserved for attaching one #2699 Communications IOA or one #6149 or #6181 LAN IOA. IOA Slot B is reserved for attaching the #9699 Base MultiProtocol Communications IOA. IOA Slot C is reserved for attaching one #2699 Communications IOA or one #6180 or #9280 Twinaxial IOA. Occupies two card slots. The #9754 is standard on systems ordered with V4R2. Requires V4R2. The #9754 has CCIN 6754. Supports Disk Compression with V4R3 installed. Integrated hardware disk compression of #6714/#8714 17.54 GB Disk Units is supported at OS/400 V4R4.

COMMUNICATIONS	
#2605	ISDN Basic Rate Adapter Connects to #2623 to support one communications line connecting to an ISDN network. The ISDN Basic Rate Interface supported by #2605 contains two high-speed ISDN user channels. One or two #2605s may be attached to one #2623 with no other IOAs allowed on the #2523. Card slots required: None Prerequisite: #2623
#2609	EIA 232/V.24 Two-Line Adaptor Connects to #2623 to support two communications lines using Async, BSC, SDLC, or X.25 protocols. Two cables must be specified: #9023 EIA 223/V.24 20ft (6m) Enhanced Cable #9835 EIA 223/V.24 50ft (15m) Enhanced Cable #9022 EIA 232/V.24 20ft (6m) Cable #9836 EIA 232/V.24 50ft (15m) Cable #2609 is supported, but the newer #2699 should be ordered on new systems. Models S30 and S40 only. Card slots required: None Prerequisite: #2623
#2610	X.21 Two-Line Adapter Connects to #2623 to support two communications lines using X.21 or X.25 networks. Two cables must be specified: #9021 X.21 20ft (6m) Cable #9839 X.21 50ft (15m) Cable #2610 is supported but the newer #2699 should be ordered on new systems. Model S30 or S40 only. Prerequisite: #2623
#2612	EIA 232/V.24 One-Line Adapter Connects to #2623 to support one communications line using Async, BSC, SDLC, or X.25 protocols. One cable must be specified (see cable features for #2609). The #2612 is supported but the newer #2699 should be ordered on new systems. Model S30 and S40 only. Card slots required: None Prerequisite: #2623
#2613	V.35 One-Line Adaptor Connects to #2623 to support one V.35 communications line using either BSC, SDLC, or X.25 protocols. Each #2623 supports one V.35 line at speeds up to S30 Kbps, or two V.35 lines at speeds up to 512 Kbps, or three V.35 lines at speeds up to 384 Kbps. No other adapters are allowed on #2623 when running T1/E1/J1. One cable must be specified: #9020 V.35 20ft (6m) Cable #9838 V.35 50ft (15m) Cable #2613 is supported but the newer #2699 should be ordered on new systems. Model S30 or S40 only. Card slots required: None Prerequisite: #2623
#2614	X.21 One-Line Adapter Connects to #2623 to support one communications line using X.21 or X.25 networks. One cable must be specified (see cable features for #2610). The #2614 is supported but the newer #2699 should be ordered on new systems. Model S30 or S40 only. Card slots required: None Prerequisite: #2623
#2620	Full Cryptographic Processor This feature provides full cryptographic support for encrypting and decrypting data. Distribution of this feature is restricted by U.S. Government Export Regulations. In countries outside the USA and Canada it can only be marketed to financial institutions and subsidiaries U.S. companies. If this feature cannot be sold, #2628 should be sold in its place. Card slots required: One Maximum: One
#2623	Six-Line Communication Controller This controller provides for attachment of a wide range of iSeries or AS/400e communications adapters. The following adapters are supported by the #2623: #2605, #2609, #2620, #2612, #2613, #2614, #2655, #2656, #2657, #2658, #2659, #6153, and #6173. Of these only the #2605 is supported on the Model SB1. The #2623 supports two #2605 ISDN adapters or up to three EIA 232/V.24, X.21, and V.35 adapters. The #2623 is only orderable on Model S30, S40 and SB1 for customers purchasing the #2605 ISDN adapter. Otherwise, although #2623 continues to be supported, the newer #2699 should be ordered. Card slots required: One

#2628	Limited Cryptographic Processor Provides the same function as #2620 except that it does not include data encryption/decryption using commercial Data Masking Facility for data scrambling. Can be marketed to any non-IBM company. Card slots required: One Maximum: One
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are the #2699, #6149, #6180, #6181, #9280 and #9381. LAN IOAs (#6149, #6181, #9149 and #9381) cannot occupy all three positions. No more than seven #2629s can be placed in one #5072 System Unit Expansion Tower. The #2629 cannot be placed in Slot 14 of a #5072. There is no restriction on placing #2629 in #5073 System Unit Expansion Tower. Card slots required: One
#2664	Integrated Fax Adaptor Provides two ports capable of transmission and receipt of facsimile data to or from a Group 3 capable Fax machine, another iSeries or AS/400e with #2663, or PCs with approximately programmed Fax adaptor. The #2664 consists of a card, a wrap cable, two country unique attachment couplers and telephone cables and Licensed Internal Code. Card slots required: One Maximum: 32 on Model S30 and S40, two on Model SB1.
#2666	High-Speed Communications Adapter Provides one communications line capable of T1/E1 (1.544/2.048 Mbps) speeds. The #2666 consists of a card, a wrap connector and a cable. One of the following cables must be specified: #9879 20ft (6m) V.35 CCITT cable #9880 80ft (24m) V.35 CCITT cable #9882 20ft (6m) RS449/V.36 CCITT cable #9883 80 ft (24m) RS440/V.36 CCITT cable* #9884 150ft (45m) RS449/V.36 CCITT cable* #9885 20ft (6m) X.21 CCITT cable * These cables are only allowed when the customer's modem supports Looped Clocking Mode. The #2666 is supported but not orderable on Models S30 and S40. The newer #2699 should be ordered on new systems. Model S30 or S40 only. Card slots required: One Maximum: Twenty on Model S30; thirty on Model S40
#2699 #9699	Two-Line WAN IOA Supports up to two multiple protocol communications ports when any one or two (in any combination) if the following cables are attached: #0328 Operations Console Cable 20ft (6m) (for #9699 and requires V4R3)* #0329 V.24/EIA 232 80ft (24m) cable #0330 V.24/EIA 232 20ft (6m) cable #0331 V.24/EIA 232 50ft (15m) cable #0332 V.24/EIA 232 20ft (6m) enhanced cable #0333 V.24/EIA 232 50ft (15m) enhanced cable #0334 V.24/EIA 232 80ft (24m) enhanced cable #0335 V.24/EIA 449 20ft (6m) cable #0336 V.36/EIA 449 50ft (15m) cable #0337 V.36/EIA 449 150ft (45m) cable #0338 V.35 20ft (6m) cable #0339 V.35 50ft (15m) cable #0340 V.35 80ft (24m) cable #0341 X.21 20ft (6m) cable #0342 X.21 50ft (15m) cable #0344 Comms Console Cable 20ft (6m) *For #2699: The following feature is used to support the Operations Console function on CPU models supporting Logical Partitioning (LPAR) for secondary partitions when Logical Partitioning is implemented (V4R4 and higher): #0328 Operations Console 20ft (6m) Cable. For #9699 and to support the Remote Control Panel function (supported for the primary partition only), the Remote Control Panel Cable #0380 can be ordered as an option. This cable does not attach to a communication port. The #9699 is the base communications adapter card and is placed in Slot B of the #9751 or #9754 MFIOF. There are some restrictions on communications using #2699. For full details, see "Comm Restrictions" on page 187. Prerequisite for #2699: #2629 or a spare IOA slot in #9751 or #9754 MFIOF. IOA slots required for #2699: One on #2629, #9751, or #9754

#2745	<p>PCI Two-Line WAN IOA (PCI)</p> <p>Supports up to two multiple protocol communications ports when one or two (in any combination) of the following cables are attached:</p> <ul style="list-style-type: none"> #0348 V.24/EIA232 20ft (6m) PCI cable #0349 V.24/EIA232 50ft (15m) PCI cable #0350 V.24/EIA232 20ft (6m) enhanced PCI cable #0351 V.24/EIA232 50ft (15m) enhanced PCI cable #0352 V.24/EIA232 80ft (24m) enhanced PCI cable #0353 V.35 20ft (6m) PCI cable #0354 V.35 50ft (15m) PCI cable #0355 V.35 80ft (24m) PCI cable #0356 V.36 20ft (6m) PCI cable #0357 V.36 50ft (15m) PCI cable #0358 V.36 150ft (45m) PCI cable #0359 X.21 20ft (6m) PCI cable #0360 X.21 50ft (15m) PCI cable #0365 V.24/EIA232 80ft (24m) PCI cable #0367 Operations Console 20ft (6m) PCI cable* <p>*This feature is used to support the Operations Console function on CPU models supporting Logical Partitioning (LPAR) (V4R4 and higher). A maximum of one #0367 cable is allowed per #2745.</p> <p>See "Comm Restrictions" on page 187.</p> <p>Prerequisite: #5065 Storage/PCI Expansion Tower.</p> <p>PCI card slots required: One</p>
#2750	<p>PCI ISDN BRI U IOA (PCI)</p> <p>This is a 4 port (8 channel) ISDN BRI (basic rate, 2 wire interface) full size card. Each port consists of 2B+D configuration A wrap cable/plug and four 30-foot RJ-45 to RJ-45 cables are shipped with each card. Each #2750 counts as eight communication lines against the system maximums. It supports SLIP/PPP, IDLC, and Fax protocols. Supports full duplex. The feature is country specific.</p> <p>Prerequisites: #5065 Storage/PCI Expansion Tower, #2824 and V4R4 with PTF MF22528 (or supersede) or Cumulative Package C9313440.</p>
#2751	<p>PCI ISDN BRI S/T IOA (PCI)</p> <p>This is a 4 port (8 channel) ISDN BRI (basic rate, 4 wire interface) full size card. Each port consists of 2B+D configuration A wrap cable/plug and four 30 ft RJ-45 to RJ-45 cables are shipped with each card. Each #2751 counts as eight communication lines against the system maximums. It supports SLIP/PPP, IDLC, and Fax protocols. Supports full duplex. The feature is country specific.</p> <p>Prerequisites: #5065 Storage/PCI Expansion Tower, #2824 and V4R4 with PTF MF22528 (or supersede) or Cumulative Package C9313440.</p>
#2761	<p>PCI Integrated Analog Modem (PCI)</p> <p>The #2761 supports multiple analog modem ports (eight phone lines). The feature includes a wrap cable/plug and eight 30-foot phone cables. Each #2761 counts as eight communication lines against the system maximums. It supports SLIP/PPP, SDLC and Fax protocols. Supports full duplex. ECS line not supported. To the iSeries or AS/400e server, the #2761 looks like a single IOA with eight individual line resources available. The feature is country specific.</p> <p>Prerequisites: #5065 Storage/PCI Expansion Tower, #2824 and V4R4 with PTF MF22528 (or supersede) or Cumulative Package C9313440.</p>
#2824	<p>Feature Controller (PCI)</p> <p>This can be used for attaching LAN, WAN, and Workstation IOAs to the system. For full details, see the Workstation Controllers section. There are some restrictions on communications using #2824.</p> <p>Prerequisite: #5065 Storage/PCI Expansion Tower and V4R4.</p>
#4800	<p>PCI Crypto Coprocessor (PCI)</p> <p>This feature is a hardware cryptography solution based on the IBM 4758 card. It is a half length PCI card. As the feature is temperature sensitive, it is shipped separately in specially designed, insulated packaging.</p> <p>Maximum: Three per system</p> <p>Prerequisites: #2824 and V4R4</p>
#2824	<p>Feature Controller (PCI)</p> <p>This can be used for attaching additional LAN, WAN, and Workstation IOAs to the system. There is a maximum of two in the #5065 Storage/PCI Expansion Tower.</p> <p>In #5065 Storage/PCI Expansion Tower slots C08 or C13, it supports two high-speed and two low-speed slots. The #2718, #2729 or #2748 are supported in C09 and C14 only.</p> <p>The #2838/#9738 and #281x are supported in C05, C10 and C15 only.</p> <p>The #2738/#9738, #2724/#9724, #2745, #2746, #2750, #2751, #2761 or #4800 are supported in C09, C10, C14 or C15.</p> <p>The #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751 or #2761 are supported in C06, C07, C11 or C12.</p> <p>Additional restrictions apply. Prerequisite: V4R4</p>

LANs/ATM	
#2617 #9617	Ethernet/IEEE 802.3 Adapter/HP Provides a single attachment to one Carrier Sense Multiple Access/Collision Detector Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. An AIO Ethernet cable must be ordered separately. The #2617 is supported, but the newer #6181 should be ordered on new systems. The #9617 specifies the base LAN on upgraded systems. Model S30 and S40 only. Card slots required: One
#2618 #8664	Fiber Distributed Data Interface Adapter Provides one interface to connect an iSeries or AS/400e to an FDDI LAN which complies with ANSI X3T9.5 and ISO 9314 standards. Consists of a card, a wrap connector, and Licensed Internal Code, which supplies IEEE 802.2 Logical Link Control (LLC), ANSI X3T9.5/ISO 9314 Media Access Control (MAC) functions, and ANSI X3T9.5 Station Management (SMT) functions. A multi-node (62.5/125 micron) FDDI optical fiber jumper cable to connect the adapter to the FDDI ring must be ordered separately. The #8664 specifies the base LAN. Card slots required: One
#2619 #9619	16/4 Mbps Token Ring Adapter/HP Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions and an external 8-foot (2.4m) cable. The #2619 is supported but the newer #6149 should be ordered on new systems. The #9619 specifies the base LAN on upgraded systems. Model S30 and S40 only. Card slots required: One
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are #2699, #6149, #6180, #6181, #9249, #9280, and #9381. LAN IOAs (#6149, #6181, #9249, and #9381) cannot occupy all three positions. No more than seven #2629s can be placed in one #5072 System Unit Expansion Tower, #2629 cannot be placed in Slot 14 of a #4072. There is no restriction on placing #2629 in #5073 System Unit Expansion Tower. Card slots required: One
#2663	I/O Attachment Processor This I/O processor is required to attach #2668 Wireless LAN Adapter, #2663 and #2668 are integrated in a single hardware package to operate as a unit. Prerequisite for #2668. Card slots required: One (with #2668)
#2665 #8665	Shielded Twisted-Pair Distributed Data Interface Adapter Provides one interface to connect to an FDDI LAN which is constructed of IBM Cabling System Type 1, 2, or 9 shielded twisted-pair wiring. It consists of a card, a wrap connector, and Licensed Internal Code, which supplies IEEE 802.2 Logical Link Control (LLC), ANSI X3T9.5/ISO 9314 Media Access Control (MAC) functions and ANSI X3T9.5 Station Management (SMT) functions. IBM FDDI copper jumper cables to connect the adapter to the FDDI ring must be ordered separately. The #8665 specifies the base LAN on upgraded systems. Model S30 and S40 only. Card slots required: One
#2668	Wireless LAN Adapter Provides wireless connectivity to workstations or other systems connected to a wireless LAN network. One of the following antenna cables must be specified: #9814 20ft (6m) Antenna Cable #9815 50ft (15m) Antenna Cable One of the following antenna must be specified #9889 YAGI Directional Antenna #9890 Omni Directional Antenna (360 degree) #9891 Hemispherical Antenna (180 degree) #9892 Directional Antenna (90 degree) Card slots required: One (with #2663) Prerequisite: #2663 Maximum: Three on S30 and S40, two on SB1
#2723 #9723	PCI Ethernet IOA (PCI) Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. This Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. Has a RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B. The #9723 is a base LAN feature. SPD card slots required: Three (with #6617 or #6618). PCI slots required: One. Prerequisite: #6617/#6618 or #5065 Storage/PCI Expansion Tower.

#2724 #9724	PCI 16/4 Mbps Token Ring IOA (PCI) Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions and an external 8ft (2.4m) cable. Alternatively, a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. This IOA is capable of operating in half or full duplex mode. SPD card slots required: Three (with #6617 or #6618). PCI slots required: One. The #9724 is a base LAN feature. Prerequisite: #6617/#6618 or #5065 Storage/PCI Expansion Tower.
#2810	LAN/WAN IOP This I/O processor is required to attach one #2838 PCU 100/10 Mbps Ethernet IOA or #2811/#2812/#2815/#2816/#2818/#2819 PCI ATM IOA. Prerequisite for proceeding features. Card slots required: One (with any of the preceding features)
#2811	PCI 25 Mbps UTP ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Unshielded Twisted Pair (UTP) cabling, #2811 is typically used where 25 Mbps speed is required over distances of less than 100 meters. Requires V4R2. Card slots required: One (with #2810). Prerequisite: #2810
#2812	PCI 45 Mbps Coax T3/DS3 ATM IOA Provides attachment in an Asynchronous Transfer Mode (ATM) network using Coax cabling and the T3/DS-3 interface. The #2812 is typically used where 45 Mbps speed is required over distances of less than 1000 meters. Requires V4R2. Card slots required: One (with #2810). Prerequisite: #2810
#2815	PCI 155 Mbps UTP OC3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Unshielded Twisted Partible-5) interface. This interface is intended for connection to both local area switches and direct connection to server provider equipment. The #2815 is typically used where 155 Mbps speed is required over distances of less than 100 meters. Requires V4R2. Card slots required: One (with #2810). Prerequisite: #2810
#2816	PCI 155 Mbps MMF ATM IOA Provides attachment into Asynchronous Transfer Mode (ATM) network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2816 typically used where 155 Mbps speed is required over distances of less than 2 kilometers. Requires V4R2. Card slots required: One (with #2810). Prerequisite: #2810
#2818	PCI 155 Mbps SMF OC3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Single Mode Fiber (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment, but can be used for local area switches. #2818 is typically used where 155 Mbps speed is required over distances of from 16 to 40 kilometers. Requires V4R2. Card slots required: One (with #2810). Prerequisite: #2810
#2819	PCI 34 Mbps Coax E3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the E3 interface. The #2819 is typically used where 34 Mbps speed is required over distances of less than 1000 meters. Requires V4R2. Card slots required: One (with #2810). Prerequisite: #2810
#2824	Feature Controller (PCI) This can be used for attaching additional LAN, WAN, and Workstation IOAs to the system. There is a maximum of two in the #5065 Storage/PCI Expansion Tower. In #5065 Storage/PCI Expansion Tower slots C08 or C13, it supports two high-speed and two low-speed slots: The #2718, #2729 or #2748 are supported in C09 and C14 only. The #2838/#9738 and #281x are supported in C05, C10 and C15 only. The #2738/#9738, #2724/#9724, #2745, #2746, #2750, #2751, #2761, or #4800 are supported in C09, C10, C14, or C15. The #2723/#9723, #2724/#9724, #2745, #2746, #2750, #2751, or #2761 are supported in C06, C07, C11, or C12. Additional restrictions apply. Prerequisite: V4R4
#2838 #9738	PCI 100/10 Mbps Ethernet IOA Provides attachment to a standard 100 Mbps high-speed Ethernet LAN and also allows attachment to existing 10 Mbps Ethernet LAN. This Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex. The adapter comes with an RJ45 connector for attachment to UTP-5 media. Cabling for 10 Mbps must be CAT-3 or CAT-5, cabling for 100 Mbps must be CAT-5 that meets or exceeds Industry Standard EIA/TIA T568A or T568B. SPD card slots required: One (with #2810) or three (with #6617 or #6618). PCI slots required: One Prerequisite: #2810 or #6617/#6618 or #5065 Storage/PCI Expansion Tower.

#6149 #9249	<p>16/4 Mbps Token Ring IOA</p> <p>Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an IOA card, internal code, which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) and an external 8-foot (2.4m) Token Ring cable. Alternatively a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. The #6149 can operate in full or half-duplex mode.</p> <p>#9249 specifies the base LAN.</p> <p>Prerequisite: #2629, #6616, #9751, or #9754 MFIOP slot</p>
#6181 #9381	<p>Ethernet/IEEE 802.3 IOA</p> <p>Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus 802.2 Logical Link Control (LLC) functions. Has a FJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. This Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. The #9025 Ethernet Cable (3M AUI) can be ordered if the customer chooses IBM AUI cabling. Cabling must meet or exceed Industry Standard EIA/TIA T568B.</p> <p>The #9381 specifies the base LAN.</p> <p>Card slots required: None</p> <p>Prerequisite: #2629, #6616, #9751, or #9754 MFIOP slot</p>
#6516 #6517 #6518 #6519 #6526 #6527 #6528 #6529 #8716 to #8719 #8726 to #8729 #6509 #6520	<p>Integrated PC Server (formerly known as FSIOP)</p> <p>Contains a 66MHz 486 Processor, main storage and ability to attach to one or two LANs for high performance serving to LAN attached PCs. The following initial order configurations can be upgraded using the #6509 and #6520:</p> <ul style="list-style-type: none"> 16 MB One-Port Integrated PC Server 32 MB One-Port Integrated PC Server 48 MB One-Port Integrated PC Server 64 MB One-Port Integrated PC Server 16 MB Two-Port Integrated PC Server 32 MB Two-Port Integrated PC Server 48 MB Two-Port Integrated PC Server 64 MB Two-Port Integrated PC Server <p>Specify for One-Port Integrated PC Server as a base LAN.</p> <p>Specify for Two-Port Integrated PC Server as a base LAN.</p> <p>The following cables need to be specified depending on the LAN being attached to:</p> <ul style="list-style-type: none"> #9024 Token Ring Cable (2.4m) #9025 Ethernet Cable (3m AUI) <p>Model S30 and S40 only.</p> <p>Card slots required: Two contiguous slots</p> <p>Additional 16 MB for Integrated PC Server</p> <p>This is used to increase the memory on an installed PC Server up to the maximum of 65 MB.</p> <p>Upgrade One-Port Integrated PC Server to Two Port Integrated PC Server</p> <p>This cannot be used with a Two-Port Integrated PC Server. The #9024 or #9025 can be ordered with #6520 depending upon the LAN to be attached to.</p> <p>Maximum: 16</p>
#6616	<p>Integrated PC Server</p> <p>Contains a 166MHz Pentium Processor, two Main Storage slots, and two LAN IOA slots for higher performance serving to LAN attached PCs. The two main storage slots can each contain one of the following features, giving a maximum of 256 MB. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory <p>Either one or two of the following IOAs are supported:</p> <ul style="list-style-type: none"> #6149/#9249 16/4 Mbps Token Ring IOA #6181/#9381 Ethernet/IEEE 802.3 IOA <p>#9249 and #9381 specify base LAN adapters.</p> <p>Card slots required: Two contiguous slots</p> <p>Maximum: 16 on S30 and S40; two on SB1.</p>

#6617	<p>Integrated PC Server</p> <p>Contains a 200 MHz Pentium Processor, four main storage slots, and three LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 512 MB. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be the #2838/#9738.</p> <ul style="list-style-type: none"> #2723/#9323 PCI Ethernet IOA #2723/#9724 PCI Token Ring IOA #2838/#9738 PCI 100/10 Mbps Ethernet IOA (Specify feature #0222 is required) <p>The #9723, #9724, and #9738 are the base LAN.</p> <p>The third LAN and the second #2838. The #9738 can be used if running Windows NT on the #6617. The #0222, 100.10 Mbps Ethernet on IPCS is required for each #2838/#9738 attached to the #6617 Integrated PC Server. If running Windows NT on the #6617, then:</p> <ul style="list-style-type: none"> #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server keyboard/Mouse for Windows NT is recommended (in those countries offering it). <p>A display is required on the IPCS to support Windows NT.</p> <p>A minimum of 64MB is required if running Windows NT.</p> <p>For country-specific keyboard/mouse and display support, see the Web site at: http://www.ibm.com/eserver/series/windowsintegration/</p> <p>When running OS/2 on the #6617, then the #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used, and only one can contain a #2838/#9738.</p> <p>When running Novell Netware on the #6617, then the #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used, and only one can contain a #2838/#9738. A maximum of 256 MB IOP memory is supported.</p> <p>Requires V4R2.</p> <p>Card slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack.</p>
#6618	<p>Integrated Netfinity Server for AS/400)</p> <p>Requires V4R2 and Cumulative Package C8342420 or V4R3 and Cumulative Package C8349430 or later.</p> <p>Contains a 333 MHz Pentium Processor, four main storage slots, and three LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory #2867 256 MB Integrated PC Server Memory <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838.</p> <ul style="list-style-type: none"> #2723 PCI Ethernet IOA #2724 PCI Token Ring IOA #2838 PCI 100/10 Mbps Ethernet IOA (Specify #0222 is required) <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6618. The #0222 100/10 Mbps Ethernet on IPCS is required for each #2838 attached to the #6618 Integrated PC Server. If running Windows NT on the #6618, then:</p> <ul style="list-style-type: none"> A minimum of 64 MB IOP memory is required. #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT, the default in the USA. <p>A display is required to support Windows NT on the IPCS.</p> <p>For country-specific keyboard/mouse and display support, see the Web site at: http://www.ibm.com/eserver/series/windowsintegration/</p> <p>When running OS/2 on the #6618, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. <p>Only two of the LAN IOA slots can be used.</p> <p>A maximum of 512 MB IOP memory is supported.</p>

#6618 <i>continued</i>	<p>When running Novell Network on the #6618, then: #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used. A maximum of 256 MB IOP memory is supported.</p> <p>SPD slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack.</p>
DISK UNITS	
#1602	<p>1.03 GB One-byte Disk Unit Conversion Kit Provides the hardware for migrating one 1.03 GB one-byte SCSI disk unit. Supported only in System Unit or #5052, #5057, and #5058 Storage Expansion Units positions 1 through 7. One #1602 migrates #1312, #6602, #6802, #9602 disk. Two #1602 migrates #2802, #6612, #6812, #8612, or #9802 dual disks. Model S30 or S40 only.</p>
#1603	<p>1.96 GB One-byte Disk Unit Conversion Kit Provides the hardware for migrating one 1.96 GB one-byte SCSI disk unit. Supported only in System Unit or #5052, #5057 and #5058 Storage Expansion Unit positions 1 through 7. One #1603 migrates #1313 or #6603 disk. Two #1602 migrates #6613, #7613 or #8613 dual disks. Model S30 or S40 only.</p>
#4308	<p>4.19 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in #5065/#5066 only. Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. Prerequisite: OS/400 V4R4, the #5065/#5066 with #2748. This is a Customer Install Feature (CIF). Not supported on Model SB1.</p>
#4314	<p>8.58 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in #5065/#5066 only. Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Prerequisite: OS/400 V4R4, the #5065/#5066 with #2748. This is a Customer Install Feature (CIF). Not supported on Model SB1.</p>
#4317	<p>8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra2 SCSI) Supported in #5065/#5066 only. Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Prerequisite: OS/400 V4R4, the #5065/#5066 with #2748. This is a Customer Install Feature (CIF). Not supported on Model SB1.</p>
#4318	<p>17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra2 SCSI) Supported in #5065/#5066 only Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Prerequisite: OS/400 V4R4, the #5065/#5066 with #2748. This is a Customer Install Feature (CIF).</p>
#4324	<p>17.54 GB Additional Two-byte Disk Unit (Ultra SCSI) Supported in #5065/#5066 only Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Prerequisite: OS/400 V4R4, the #5065/#5066 with #2748. This is a Customer Install Feature (CIF).</p>
#4331	<p>1.6 GB Read Cache Device Supported in #5065/#5066 only. This feature provides 1.6 GB of capacity for large read cache function. It is mutually exclusive with DASD compression. The system arrives in performance mode with compression function turned off on the disk controller #2748. Prerequisites: OS/400 V4R4 and #2748 PCI RAID Disk Unit Controller. One DASD Slot 1.6 inch. This is a Customer Install Feature (CIF). Not supported on Model SB1. Maximum: One per #2748 IOP.</p>
#6605	<p>1.03 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. This feature is supported for migration only. Model S30 or S40 only.</p>
#6606 #9606	<p>1.96 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. This feature is supported for migration only. The #9606 specifies a 1.96 GB base disk unit. Model S39 or S40 only.</p>
#6607 #7607	<p>4.19 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. This feature is supported for migration only. The #7607 specifies an optional 4.19 GB base disk unit. Model S30 or S40 only. RPQ 843977 and RPQ 843978 can be used for the #6607 migration to Sxx system units and the #5052, #5055, #5057, #5058, #5072, #5073, #5082 and #5083 Storage Expansion Units and Towers.</p>
#6650	<p>1.96 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. This feature is supported or migration only. Model S30 or S40 only.</p>
#6652	<p>1.03 GB Additional Two-byte Disk Unit Provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. This feature is supported for migration only. Model S30 or S40 only.</p>

#6713 #7713 #8713	<p>8.58 GB Additional Two-byte Disk Unit (Ultra SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 8.57 GB capacity for additional disk storage. For best performance, use attached to the #9751 or #9754 MFIOp with RAID, #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in the System Unit; #5055, #5057, #5058 Storage Expansion Unit; or #5083 Storage Expansion Tower. The #7713 and #8713 specify an optional 8.57GB base disk. The #7713 is supported for migration only.</p> <p>#7713 Model S30 or S40 only. The #6713 and #8713 Model S30 or S40 or SB1. Four are required if ordered on Model SB1 and they must be mirrored.</p> <p>RPQ 843977 and RPQ 843978 can be used for the #6713 migration to Sxx system units and #5052, #5055, #5057, #5058, #5072, #5073, #5082 and #5083 Storage Expansion Units and Towers.</p>
#6714 #8714	<p>17.54 GB Additional Two-Byte Disk Unit (Ultra SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. For best performance, use attached to the #9751 or #9754 MFIOp with RAID, or #6532 or #6533 RAID Disk Unit controller (Ultra SCSI) in the System Unit, OS/400 V4R4.</p> <p>Model S30 or S40 only.</p> <p>RPQ 843977 and RPQ 843978 can be used for #6714 migration to Sxx system units and #5052, #5055, #5057, #5058, #5072, #5073, #5082 and #5083 Storage Expansion Units and Towers.</p>
#6717 #8617	<p>8.58 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. Supported in #5052, #5055, #5057 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers and in the #9251 or Model S30 System Tower. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083. Not supported on #6502/#6512/#6530. The #8617 specifies an optional 8.58 GB base disk.</p> <p>Prerequisite: V4R3 OS/400</p> <p>Supported in the #5065 and #5066 Towers through RPQ 847102.</p>
#6718 #8618	<p>17.54 GB Additional Two-byte Disk Unit 10k RPM (Ultra SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. Supported in #5052, #5055, #5057 or #5058 Storage Expansion Units or #5082 or #5083 Storage Expansion Towers and in #9251 or Model S30 System Tower. For best performance when installed in Storage Expansion or Storage Expansion Tower, use the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in a #5058 or #5083. Not supported on #6502/#6512/#6530. The #8618 specifies an optional 17.54 GB base disk.</p> <p>Prerequisite: V4R4 OS/400</p> <p>Supported in the #5065 and #5066 Towers through RPQ 847102.</p>
#6906	<p>1.96 GB Additional Two-byte Disk Unit (Ultra SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. For best performance, use attached to the #9751 or #9754 MFIOp with RAID, #6532, or #6533 RAID Disk Unit Controller (Ultra SCSI) in the System Unit; #5055, #5057, #5058 Storage Expansion Unit; or #5083 Storage Expansion Tower. Model S30 or S40 only.</p>
#6907 #9907	<p>4.19 GB Additional Two-byte Disk Unit (Ultra SCSI)</p> <p>Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. For best performance, use attached to the #9751 or #9754 MFIOp with RAID, #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in the System Unit; #5055, #5057 or #5058 Storage Expansion Unit; or #5083 Storage Expansion Tower. The #6906 Model S30 or S40 only. The #9907 specifies a 4.19 GB base disk included with new Model S30 and S40 orders and with upgrades to these Models from CICS Models. Model SB1 includes four #9907.</p> <p>RPQ 843977 and RPQ 843978 can be used for #6907 migration to Sxx system units and #5052, #5055, #5057, #5058, #5072, #5073, #5082 and #5083 Storage Expansion Units and Towers.</p>
RPQ 843977	<p>RPQ 843977 is for customers who want to move 4/8/17 GB disk units from one AS/400 to another AS/400. The RPQ provides hardware for mounting one disk unit. The hardware in this RPQ allows for mounting device types #6607/#6907 (4.194 GB unit), #6713 (8.58 GB unit), and #6714 (17.54 GB unit) in the system unit of a Model 640/650/S30/S40/730/740 and the disk expansion features #5052/#5055/#5057/#5058/#5070/#5071/#5072/#5073/#5080/#5081/#5082/#5083. These target enclosures use SPD technology. After the disk drives are installed, an RPO change must be processed to add Feature Code #6607/#6907 for each device type #6607/#6907 added, Feature Code #6713 for each device #6713 added, and Feature Code #6714 for each device type #6714 added.</p>
RPQ 843978	<p>RPQ 843978 is for customers who want to move 4/8/17 GB disk units from one AS/400 to another AS/400. The RPQ provides hardware for mounting one disk unit. The hardware in this RPQ allows for mounting device types #6607/#6907 (4.194 GB unit), #6713 (8.58 GB unit), and #6417 (17.54 GB unit) in the system unit of a Model 170/600/S10/620/ S20/720 and the expansion features #7101/#7102/#5064/#9364. After the disk drives are installed, an RPO change must be processed to add Feature Code #6807 for each device type #6607/#6907 added, Feature Code #6813 for each device #6713 added, and Feature Code #6824 for each device type #6417 added.</p>
RPQ 847102	<p>RPQ 857102 ships the disk mounting hardware and instructions required to convert Feature #6717/#6817 to Feature #4317 and Feature #6718/6818 to Feature #4318. Order one RPQ for each disk unit to be converted. Confirm that there is disk space available in an existing or on-order PCI Storage Tower #5065 or #5066. This RPQ can also be used to move a disk to an iSeries 270, 8xx, 270/8xx #5075, #5074/#9074, and #5079/#9079 PCI Towers.</p>

INTERNAL TAPE AND CD-ROM UNITS	
#1379	1.2 GB 1/4-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating 1.2 GB 1/4-inch Cartridge Tape Units. The #1379 migrates #1349, #5348, #6368, #7348, #8348 or #9349 Tape Units. Attaches to #2621, #6513, #9751, or #9754 MFIOF. Model S30 or S40 only.
#1380	2.5 GB 1/4-inch Cartridge Tape Unit Conversion Kit Provides the hardware for migrating 2.5 GB 1/4-inch Cartridge Tape Units. The #1380 migrates #1350, #5349, #6349, #6369, #7349, #8349 or #9349 Tape Units. Attaches to #2621, #6513, #9751, or #9754 MFIOF. Model S30 or S40 only.
#4425	Optional CD-ROM Feature Supported only in #5065 Storage/PCI Expansion Tower. Prerequisite: V4R4 and #2748 Storage Device Controller. This is a Customer Install Feature (CIF). Not supported on Model SB1.
#4482	4 GB 1/4-inch Cartridge Tape Unit Supported only in #5065 Storage/PCI Expansion Tower. Can be used for save/restore, Alternate IPL, migration, and 1/4-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 1/4-inch cartridge tape units. This is a Customer Install Feature (CIF).
#4483	16 GB 1/4-inch Cartridge Tape Unit Supported only in #5065 Storage/PCI Expansion Tower. Can be used for save/restore, Alternate IPL, migration, and 1/4-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 1/4-inch cartridge tape units. This is a Customer Install Feature (CIF).
#4486	25 GB 1/4-inch Cartridge Tape Unit Supported only in #5065 Storage/PCI Expansion Tower. Can be used for save/restore, Alternate IPL, migration, and 1/4-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 1/4-inch cartridge tape units. This is a Customer Install Feature (CIF).
#6325	Optional CD-ROM Feature Requires V4R3. Available on Models S30 and S40 System Unit Expansion Towers #5072 and #5073. Prerequisite: Storage Device Controller #2624. Limits the use of tape in the same tower to #6380 and #6390.
#6380	2.5 GB 1/4-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and 1/4-inch cartridge tape exchange using appropriate media and density. This is supported for migration only. On new orders, #6381 should be ordered. Attaches to the #2624, #6513, #9751, or #9754 MFIOF. Model S30 or S40 only.
#6381	2.5 GB 1/4-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and 1/4-inch cartridge tape exchange using appropriate media and density. Attaches to #6513, #9751, or #9754 MFIOF.
#6382	4 GB 1/4-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and 1/4-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 1/4-inch cartridge tape units. Attaches to the #6513, #9751, or #9754 MFIOF.
#6383	16 GB 1/4-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and 1/4-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 1/4-inch cartridge tape units. Supported only in the #5072, #5073, or the #9251 System Unit Expansion Towers and in the Model S30 System Tower. One can be controlled by the MFIOF. An additional #6383 must be controlled by the #6513.
#6385	13 GB 1/4-inch Cartridge Tape Unit. Can be used for save/restore, Alternate IPL, migration, and 1/4-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 1/4-inch cartridge tape units. Attaches to the #6513, #9751, or #9754 MFIOF.
#6386	25 GB 1/4-inch Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and 1/4-inch cartridge tape exchange using appropriate media and density. This tape unit is not compatible with System/36 1/4-inch cartridge tape units. Supported only in #5072, #5073 or 9251 System Unit Expansion Towers and in the Model S30 System Tower.
#6390	7 GB 8 mm Cartridge Tape Unit Can be used for save/restore, Alternate IPL, migration, and 1/4-inch cartridge tape exchange using appropriate media and density. Attaches to the #2624, #6513, #9751, or #9754 MFIOF.

MAGNETIC MEDIA CONTROLLERS	
#2621	Removable Media Device Attachment Provides attachment for one or two of the following devices with hardware data compression for tapes: 2240, 9348, 7208, 3995, 9427, and #5032. Dual drive 7208s counts as two devices. If #2621 supports a 3995 or #5023, it must be dedicated to it. If #2621 supports a 9427 it is recommended that the 9427 be attached to both parts of the #2621. For new orders, #6434 is used in preference to #2621 as long as it supports the tape device required. Card slots required: One Maximum: Four for external tape, 22 for #3995 on S30 or S40; two for external tape and for #3995 on SB1.
#2624	Storage Device Controller Provides support for up to three internal tape drives. With the addition of #6146, it also supports one external diskette drive. For new orders, #6513 is used in preference to #2624 unless #2624 is required anyway to support a diskette drive. Supports also the internal CD-ROM installed in the System Unit Expansion Towers #5072 and #5073. Card slots required: One Maximum: Seven for Internal Tape/CD-ROM on S30 or S40, two for Internal Tape on SB1; two for diskette.
#2644	34xx Magnetic Tape Subsystem Attachment Provides attachment for 3422, 3430, 3480, 3490 Exx, 3490 Box, 3490 Exx, 3490E Box, 3490E Cxx, 3490E Exx Tape Subsystem Models. Also requires the #9980 Serpentine Cable except for 3490E Cxx when ordered with Internal Cables. Card slots required: One Maximum: Eight on S30 and S40, two on SB1.
#2718	PCI External Tape Controller (PCI) Provides SCSI attachment for one 7207-122 4 GB ¼-inch Cartridge External Tape Drive and/or 7210-020 CD-ROM (V4R5 required for 7210-020). High-speed PCI slots required: One. Prerequisite: #2824 LAN/WAN/Workstation IOP. If a 7210-020 is installed on the same IOA as the 7207-122, the 7207 tape must be the first physical device. Maximum: Three in the #5065 Storage/PCI Expansion Tower.
#2729	PCI External Tape Controller (PCI) Provides SCSI attachment for one 3490E Exx, 3490E Fxx, 3490E Cxx with #5040, 3494 D1x or L1x. 3570, 3575, 3590, 7208, 9348 or 9427 Tape Drive or 3995 C4x Optical Library Dataserver. V4R2 is required to support 3995. High-speed PCI slots required: One. Prerequisite: #2824 LAN/WAN/Workstation IOP. Maximum: Three in the #5065 Storage/PCI Expansion Tower.
#2748	PCI RAID Disk Unit Controller—26 MB Cache (RAID Mirrored/Unprotected) (PCI) (Ultra2 SCSI) The #2748 is Ultra2 SCSI capable when installed in the #5065 Storage/PCI Expansion Tower. The #2748 has a 26 MB write-cache and provides RAID-5 protection and compression for internal disk units. It supports up to 15 disks. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of three arrays are allowed for each #2748. The #2748 supports both compression and non-compression modes. The mode is determined by a hardware jumper on the card. The #2748 also supports #4331/#6831. 1.6 GB Read Cache Device. It supports up to three internal tape and CD-ROMs. In the #5065 Storage/PCI Expansion Tower, it supports up to two internal tapes and CD-ROM. Supports the #1349, #1350, #1355, #1360, #4482, #4483, #4486 #6480, #6481, #6482, #6483, #6485, #6486 or #6490 tape units. High-speed PCI slots required: One Prerequisite: OS/400 V4R4 and #5065 Storage/PCI Expansion Tower. Maximum: Three per #5065 Storage/PCI Expansion Tower.
#6146	Diskette Adapter Provides attachment for on 9331 011 or 012 Diskette Unit. Card slots required: None Prerequisite: #2624 Maximum: Two
#6500	Direct Access Storage Device Controller Provides attachment for one 9337 0xx or 1xx Disk Unit. This feature is supported for migration only. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter. Model S30 and S40 only.
#6501	Tape/Disk Device Controller Provides attachment for up to two 9337 2xx, 4xx, or 5xx models. Also supports up to two 3490E Cxx with #5040, 3490E Exx, 3494 Lxx or Dxx, 3490E Fxx, 3570, or 3590 models. Also provides attachment for 2105 Versatile Storage Server. DASD and Tape Units cannot be mixed on the same #6501. The #6534 is used in preference to the #6501 if it supports the tape device being configured. Card slots required: One Maximum: Eight for Tape; for Disk, see the model overview tables at the beginning of this chapter. Model S30 or S40 only.

#6502	RAID Disk Unit Controller—2 MB Cache (RAID/Mirrored/Unprotected) Provides RAID protection and a 2 MB write-cache for up to 16 disks located in #5052 or #5058 Storage Expansion Unit or #5053 Storage Expansion Tower. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are allowed for each #6502. The #6502 is supported for migration, but the #6532 or #6533 should be ordered on new systems. The #6502 is not capable of integrated hardware disk compression. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter. Model S30 and S40 only.
#6512	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) Provides RAID protection and a 4 MB write-cache for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, #5082 or #5083 Storage Expansion Tower. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of two arrays are allowed for each #6512. The #6512 is supported for migration but the #6532 or #6533 should be ordered on new systems. Model S30 and S40 only. The #6512 is not capable of integrated hardware compression. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter.
#6513	Internal Tape Device Controller Provides support for up to two internal tape drives when located in Model S40 or SB1 System Unit or four internal tape drives when located in #5072 or #5073 System Unit Expansion Tower. The #6513 is the default controller unless a #2624 is installed. Supports #1379, #1380, #6380, #6381, #6382, #6383, #6385, #6386, and #6390 Tape Units. Card slots required: One Maximum: Five on S30 and S40; one on SB1.
#6530	Disk Unit Controller—No Cache (Mirrored/Unprotected) Controller for up to 16 disks located in #5052 or #5058 Storage Expansion Unit, or #5082 or #5083 Storage Expansion Tower. The #6530 is supported for migration, but the #6532 or #6533 should be ordered on new systems. Model S30 and S40 only. The #6530 is not capable of integrated hardware disk compression. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter.
#6532	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) Ultra SCSI Controller for up to 16 disks installed in the #5058 Storage Expansion Units or #5083 Storage Expansion Tower. Also Supports disks located in the #5052 Storage Expansion Unit or the #5082 Storage Expansion Tower, but these are not at Ultra SCSI speeds. Offers performance improvements over the #6502, #6512, and #6530. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of four arrays are allowed for each #6532. Model S30 and S40 only. The #6532 is not capable of integrated hardware disk compression. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter.
#6533	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) Ultra SCSI Controller for up to 16 disks installed in #5058 Storage Expansion Units or #5083 Storage Expansion Tower. Also Supports disks located in #5052 Storage Expansion Unit or #5082 Storage Expansion Tower, but these are not at Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of four arrays are allowed for each #6533. Supports integrated hardware disk compression with V4R3 installed. Model S30 and S40 only. Requires V4R2 or higher. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter.
#6534	Magnetic Media Controller) Provides attachment for one 3490E Cxx with #5040), 3490E Exx, 3490E Fxx, 3494 D1x or L1x, 3570, 3575, 3590, 7208, 9348, or 9427 Tape Drive or 3995 C4x Optical Library Dataserver. V4R2 is required to support 3995. Card slots required: One Maximum: Eight on S30 and S40, two on SB1.
#9751	MFIOp with RAID—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) Ultra SCSI controller for up to 20 disks installed in the System Unit and #5505 or #5057 Storage Expansion Unit. On the Model S30, disks 1 to 12 can be located in the System Unit and 13 to 20 in the #5055 Storage Expansion Unit. On the Model S40, disks 1 to 4 can be located in the System Unit and 5 to 20 in the #5057 Storage Expansion Unit. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of four arrays are allowed. Model SB1 supports a maximum of four disks. The #9751 is not capable of integrated hardware disk compression. The #9751 has CCIN 6751. Card slots required: Two Maximum: One

#9754	MFIOP with RAID—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) Ultra SCSI controller for up to 20 disks installed in the System Unit and the #5505 or #5057 Storage Expansion Unit. On the Model S30, disks 1 to 12 can be located in the System Unit and 13 to 20 in the #5055 Storage Expansion Unit. On the Model S40, disks 1 to 4 can be located in the System Unit and 5 to 20 in the #5057 Storage Expansion Unit. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of four arrays are allowed. Supports integrated hardware disk compression with V4R3 installed. Disk compression on the #6714/#8714 17.54GB Disk Units is supported at OS/400 V4R4. Model SB1 supports a maximum of four disks. The #9754 has CCIN 6754. Card slots required: Two Maximum: One #9754 is standard on systems ordered with V4R2. Requires V4R2 or higher.
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10.16 Upgrades to Sxx Models

The process of upgrading to Sxx models requires careful planning due to the changes in features and software version. The following table indicates the valid upgrades to Sxx models. Models 100, 135, 140, 20S, and 30S cannot be upgraded to Sxx models. The percentage figures show the increase in client/server (batch) performance given by the announced upgrade paths.

From 9402/4/6		To 9402/9404/9406 Model S10, S20, S30, and S40													
Model		S10		S20				S30				S40			
	Proc- essor	#2118	#2119	#2161	#2163	#2165	#2166	#2257	#2258	#2259	#2260	#2256	#2261	#2207	#2208
	RSP CPW Client/ Server	45.4	73.1	113.8	210	464.3	759	319	583.3	998.6	1794	1794	2340	3660	4550
40S/#2109 ²	27.0	68%	171%	321%	678%										
#2110 ²	33.3		210%	242%	531%										
#2111 ²	59.8			90%	251%	676%									
#2112 ²	87.3				141%	432%	769%								
50S/#2120	77.7				170%	498%	877%	311%	651%						
#2121	104.2				102%	346%	638%	206%	460%	858%					
#2122	130.7				61%	255%	481%	144%	346%	664%					
53S/#2154	162.7							96%	259%	514%	1003%	1003%			
#2155	278.8								109%	258%	543%	543%	739%		
#2156	459.3									117%	291%	291%	409%	697%	891%
#2157	509.9									96%	252%	252%	359%	618%	792%
S10/#2118	45.4		61%	151%	363%	923%									
#2119	73.1			56%	187%	535%	938%								
S20/#2161	113.8				85%	308%	567%	180%	413%	778%					
#2163	210					121%	261%	52%	178%	376%					
#2165	464.3						63%			115%	286%	286%	404%	688%	880%
#2166	759										136%	136%	208%	382%	499%
S30/#2257	319								83%	213%	462%	462%	634%	1047%	
#2258	583.3									71%	208%	208%	301%	527%	680%
#2259	998.6										80%	80%	134%	267%	356%
#2260	1794												30%	104%	154%
S40/#2256	1794												30%	104%	154%
#2261	2340													56%	94%
#2207	3660														24%
#2208	4550														

Note 1: Relative System Performance (CPW-Commercial Processing Workload) Client Server Environment. For the Sxx models, this is based on V4R1. For the "from" model, this is based on V3R6. AS/400e servers still on V3R6 will, therefore, see greater improvements.

Note 2: 40S includes package models 4SS, 4SE, 4SG, 4SL, 4TG, 4TL, 4HS, 4HE, 5HG and 4HL.

Note 3: There are no CISC to Sxx RISC Server Processor upgrades available.

10.16.1 Upgrade Considerations to AS/400e Sxx Models

1. V4R1, V4R2, or V4R3 is a prerequisite for all Sxx models.
2. If upgrading to the Sxx models, customers should consult the *System Upgrade Roadmap (RISC to RISC)*, SC41-5155.
3. For physical planning information, such as weights, dimensions and power requirements of the Sxx models, customers should consult the *Physical Planning Reference Manual*, SA41-5109.
4. Before proposing an upgrade to a Model S10, the customer's plans for growth should be considered as the S10 provides limited expansion for adapters. For example, if a fully configured Integrated PC Server (IPCS) supporting two LANs (Token Ring or Ethernet) is installed, space remains for four additional adapters, two of which are dedicated for use by the 100/10 Mbps Ethernet IOA (#2838/#9738) and PCI Magnetic Media Controller (#2729). Therefore, a Model S20 should be considered.
5. The Model S10 supports PCI cards only. Therefore, when upgrading to this model all SPD cards have to be replaced. Most functions are supported with PCI format cards. However, the following are not supported with PCI cards and are not supported on the Model S10:

Cryptographic Processors	Fax Adapter
ASCII Adapters	ISDN Adapter
SDDI Adapter	FDDI Adapter
Wireless LAN	LocalTalk Adapter

6. All upgrades to Sxx models ship new system units.
7. Memory requirements should be planned with care due to the rule that on most Sxx processors memory must be installed in pairs or fours.
8. Disk requirements should be planned with care as these upgrades do not ship with any new disk unless ordered and Version 4 takes more space than Version 3 Release 6 or 7. Refer to *Software Installation Guide*, SC41-5120.
9. It is likely that conversion kits will be required for internal tapes and disk units. Therefore, the expected placement of such units should be checked to ensure the correct number of these kits are ordered. It should be noted that the same feature code kit may contain different parts depending in which AS/400e model it is placed.
10. No 988 MB or 1976 MB (dual) disk units are supported on the Sxx model range, and these must be replaced.
11. The CD-ROM on the Sxx models is not identified by a feature. This also applies to the base memory on the S10 and S20 models.
12. Be aware of Card Technology changes from PCI to SPD when upgrading a Model S20 to a S30 or S40.
13. The 525 MB ¼-inch cartridge tape drive and 840 MB ¼-inch mini-cartridge tape units are not supported on the Sxx models.
14. 9309 racks with features #9141 and #9171 can be attached to Model S20, S30, and S40 to attach external tape and disk.
15. Use of a configurator is mandatory for all upgrades.

Chapter 11. AS/400e 9402 Models

11.1 9402 400 Models Overview

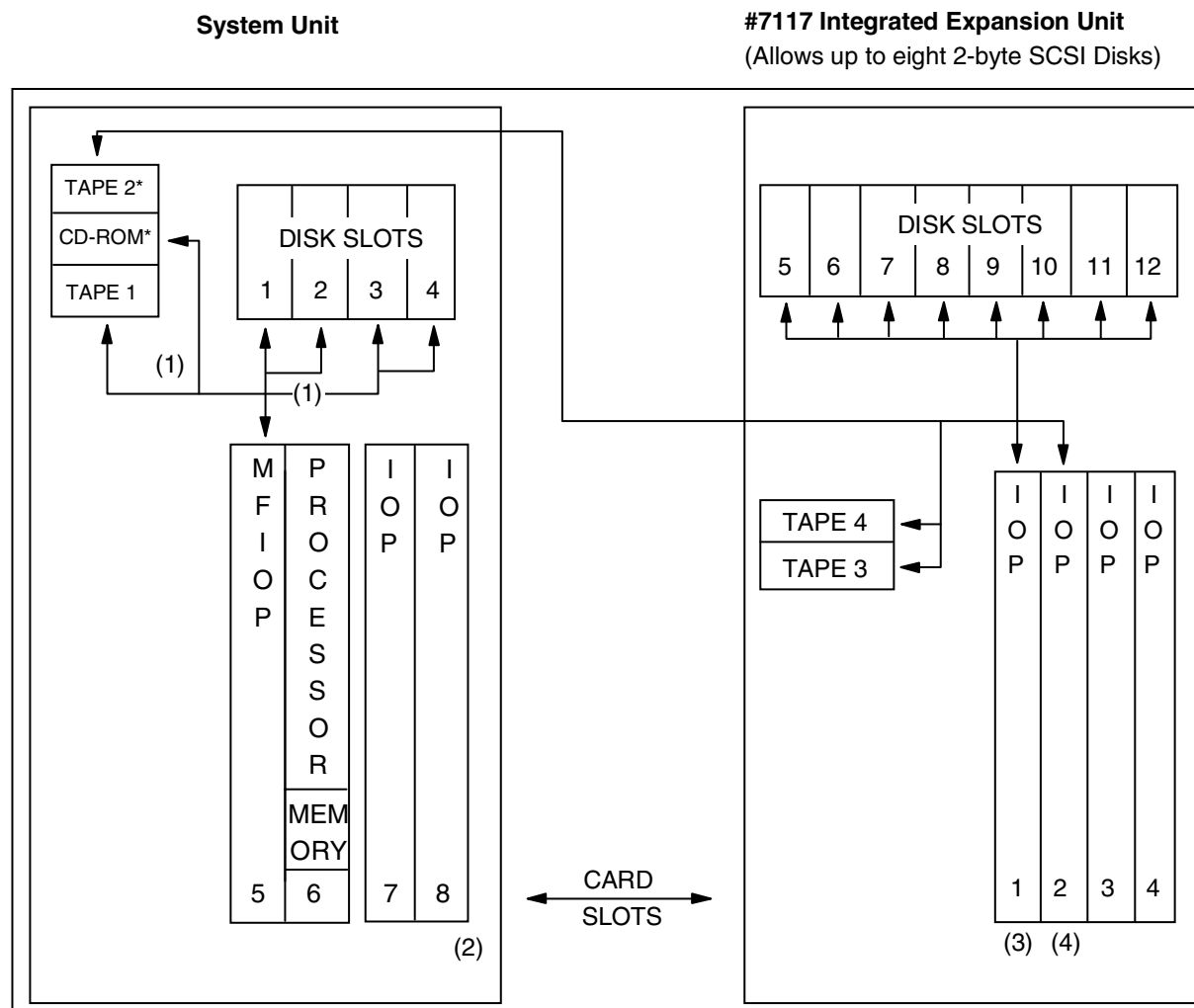
Processor Feature	400			
	#2130	#2131	#2132	#2133
Relative System Performance (CPW-CISC or V3R6 RISC) (See Note 1)	12.3	18.3	24.5	30.6
Relative System Performance (CPW - V3R7 RISC) (See Note 1)				
Relative System Performance (CPW - V4R1 RISC) (See Note 1)	13.8	20.6	27.0	33.3
Relative System Performance (RAMP-C) (See Note 2)				
Main Storage (MB)	13.8	20.6	27.0	35.0
	4.1	6.1	8.7	10.9
	32-160	32-224	32-224	32-224
Disk Storage (GB)				
(V3R1/R6)	1.96-23.6			
(V3R2/R7, V4R1/R2/R3)	1.96-50.3			
Maximum Feature Card Slots	6			
Communications Lines	1-20			
LAN Adapters (See Note 3)	0-2			
ATM Adapters	0-1			
Maximum Workstation Controllers	7			
Twinaxial	7			
ASCII	7			
LocalTalk	7			
Maximum Workstations				
Twinaxial	280			
ASCII	126			
LocalTalk	217			
¼-inch/8mm Cartridge Tape (Internal)	0-4			
½-inch Tape				
9348	0-4			
34xx/35xx	0-2			
8mm Cartridge Tape (External)	0-4			
Tape Libraries	0-2			
Optical Libraries	0-4			
Diskettes (5 ¼-inch or 8-inch)	0-2			
Fax Adapters	0-6			
Cryptographic Processors	0-1			
System I/O Buses	1			

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	The Relative System Performance (RAMP-C) ratios are estimated based on iSeries and AS/400e environment RAMP-C workload, with a 9404 B10 with 16 MB of Main Storage and 945 MB of disk equalling 1.0. The ratios shown were estimated at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments.
Note 3:	The Model 400 supports three LAN adapters if running Firewall for AS/400 (5769-FW1).

11.1.1 General 9402 Communications Considerations

Model	Lines per Model	High Speed Lines per Model	LAN Adapters
C04/C06	5	1	1
D02/E02	3	2	1
F02	8	2	1
D04/D06	8	4	1
E04/F04	8	4	1
E06/F06/20S	14	4	2
200	20	6	2
236	8	1	2
400	20	6	2
436 (SSP only)	8	1	2
436 (SSP and OS/400)	20	6	2
Note: <ul style="list-style-type: none">• Each ISDN line is counted as two high speed lines.• For D02/E02/F02, ISDN and X.21 adapters may co-reside, but not operate concurrently.			

11.2 9402 Model 400 System Unit with #7117 Expansion Unit



* CD-ROM is only available on Model 400. The second tape is driven by MFIOP on Model 200.

Diagram as viewed from the rear of a Model 200/400

Notes:

1. Power Feature #5135 is required if #7117 is not installed and there are three or four two-byte disk units; if #7117 is installed and there are three or four disk but no #6502, #6522, #6523, or #6530; if there are two internal tapes but no #2624; if there are four internal tapes; or if there are 11 or 12 disk units. It is also a prerequisite for the Migrated Disk Unit Package (#9320). Also it is required for certain high-power combinations of feature cards (when more than one of the following cards is in a #7108: #2617 with #7174/#9174 on the MFIOP, #2618, #2620, #2628, #2663, #2666, or if an Integrated PC Server is in a #7108).
2. Expansion Card Cage (#7108) provides two feature I/O card slots.
3. Feature I/O card slot 1 is occupied by the disk controller if disks are installed in the Integrated Expansion Unit (#7117).
4. Feature I/O card slot 2 is occupied by #2624 if tape drives are installed in the Integrated Expansion Unit (#7117).
5. The base 9402 Model 400 does not include a tape drive as standard.
6. Main Storage cards are installed on the processor and require one slot each. The Model 400 #2130 has two slots and the Model 400 #2131, #2132, and #2133 have three slots available in addition to the base 32 MB.

11.3 9402 Advanced System Model 400

See 11.2, “9402 Model 400 System Unit with #7117 Expansion Unit” on page 337, for a diagram of the Model 400. For details on Model 400 packages, see the Packages section.

PROCESSORS		System Unit	#7117 Expansion Unit
#2130	4.1 RSP RAMP-C, 12.3 RSP CPW (V3R6), 13.8 RSP CPW (V3R7, V4R1, V4R2, and V4R3) Processor. Base Memory 32 MB. 64 MB required to run V4.	1	-
#2131	6.1 RSP RAMP-C, 18.3 RSP CPW (V3R6), 20.6 RSP CPW (V3R7, V4R1, V4R2, and V4R3) Processor. Base Memory 32 MB. 64 MB required to run V4.	1	-
#2132	8.7 RSP RAMP-C, 24.5 RSP CPW (V3R6), 27.0 RSP CPW (V3R7, V4R1, V4R2, and V4R3) Processor. Base Memory 32 MB. 64 MB required to run V4.	1	-
#2133	10.7 RSP RAMP-C, 30.6 RSP CPW (V3R6), 33.3 RSP CPW (V3R7), 35.0 RSP CPW (V4R1, V4R2, and V4R3) Processor. Base Memory 32MB. 64 MB required to run V4.	1	-
POWER AND PACKAGING		System Unit	#7117 Expansion Unit
#5135	Feature Power Supply Feature Power Supply (#5135) is required in the following circumstances: If #7117 Expansion Unit is not selected and there are three or four disks installed. If #7117 Expansion Unit is selected and there are three or four disks installed but no #6502/#6522/#6523/#6530/#6534 disk controllers. If #7117 Expansion Unit is selected and there are 11 or 12 disk units. If there is more than one of #2618 (FDDI Adapter), #2620 (Full Cryptographic Processor), #2628 (Limited Cryptographic Processor), #2666 (High Speed Communication Adapter), or #2663 (I/O Attachment Processor) in the #7108 Expansion Card Cage. If there is a #6516 to #6519 or #6526 to #6529 (Integrated PC Server, formerly known as FSIOP) in the #7108 Expansion Card Cage. If there is more than one #2617 (Ethernet Adapter) in the #7108 Expansion Card Cage or #7174/#9174 (Ethernet IOA) in the MFIOP. #5135 Feature Power Supply replaces #9242 Base 175 watt power supply. Card slots used: None Maximum: One	1	-
#7000	Panel Keylock Feature Provides a keylock to secure the door covering the system panel. Card slots used: None Maximum: One	1	-
#7108	Expansion Card Cage This feature provides two feature I/O card slots in the system unit. The #5135 Expansion Unit Feature Power may be required in high power feature combinations (See #5135). Card Slots used: None Maximum: One	1	-
#7117	Integrated Expansion Unit This unit can be added to the Model 400. It provides space for adding: Four additional Feature Cards Up to two internal tape units (¼-inch or 8 mm) Up to eight two-byte SCSI disk units Maximum: One	1	-

#9116	Two Book Cage High Performance Card Enabler This feature provides a special backplane and cabling which is required for the following high performance cards when installed in a #7108: #2620 Cryptographic Processor #2628 Cryptographic Processor – Limited #2629 LAN/WAN/Workstation IOP #2810 LAN/WAN IOP #6501 Tape/Disk Device Controller #6534 Magnetic Media Controller #6616 Integrated PC Server #6516/7/8/9 Integrated PC Server #6526/7/8/9 Integrated PC Server #2663 I/O Attachment Processor Card slots used: None Maximum: One	1	-
#9242	Base Power Supply Base 175-watt power supply for systems without feature #5135.	1	-
#9244	320 Watt Power Supply Base 320-watt power supply for #7117.	1	-
#9319	Standard Disk Unit Package Provides four positions in the system unit for two-byte SCSI disk units. No one-byte SCSI disk units are supported. Card Slots used: none Maximum: One	1	-
#9320	Migrated Disk Unit Package Provides four positions in the system unit for migrated one-byte SCSI disk units. The #5135 is a prerequisite. Card Slots used: None Maximum: One	1	-
UPS	Uninterruptible Power Supply Provided instead of internal battery backup to minimize impact from power fluctuations and outages. A number of different models of the 9910 UPS are available. Specific models vary by country.		
MAIN STORAGE		System Unit	#7117 Expansion Unit
#3110	64 MB Main Storage Plugs directly onto the CPU. The #2130 Processor supports two additional memory features. The other Model 400 processors support three.	2/3	-
#3172 #4172 #8172	32 MB Main Storage Plugs directly onto the CPU. Supported for upgrades to Model 400 only. The #2130 Processor supports two additional memory features. The other Model 400 processors support three.	2/3	-
#3182	32 MB Main Storage Plugs directly onto the CPU. The #2130 Processor supports two additional memory features. The other Model 400 processors support three.	2/3	-
WORKSTATION CONTROLLERS		System Unit	#7117 Expansion Unit
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are #2699, #6149, #6180, and #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions. Requires V4R1. Card slots used: One	2	4

#6050	Enhanced Twinaxial Workstation Controller One eight-port workstation attachment is provided to support 40 5250-type displays or printers. Requires one I/O card slot	2	4
#6054	Workstation Adapter for Apple Macintosh (LocalTalk) See the Communications section	2	4
#6140	Twinaxial Workstation Controller Provides eight ports to support a maximum of 40 Twinaxial devices. Requires one I/O card slot.	2	4
#6141	ASCII Workstation Controller This six-port workstation controller and workstation adapter supports up to six ASCII devices. Requires one I/O card slot.	2	4
#6142	ASCII 12-Port Workstation Attachment The attachment plugs into the ASCII Workstation Controller #6141 providing an additional 12 ports. 18 ASCII devices can now be supported. One #6142 can be attached per #6141 or #9171. Requires no I/O card slot.	2	4
#6148	Eight-Port Twinaxial Expansion This replaces the two twinaxial ports on the base system with a 6m attachment cable providing eight twinaxial ports supporting up to 40 5250-type devices.	1	-
#6180	Twinaxial Workstation IOA One eight-port attachment is provided to support up to 40 twinaxial devices. Requires V4R1. Prerequisite for #6180: #2629 IOA slots required for #6180: One on #2629	-	-
#8054	Workstation Adapter for Apple Macintosh (LocalTalk) See the Communications and LAN sections.	1	-
#9171	MFIO/ASCII Workstation Controller Provides the MFIO that includes an ASCII workstation controller with six ASCII ports. Up to six ASCII displays and printers may be directly attached. This number can be increased to 18 by adding #6142.	1	-
#9172	MFIO/Twinaxial Workstation Controller Provides the MFIO that includes a two-port twinaxial workstation controller for attaching up to 14 5250-type devices. This number can be increased to 40 by adding #6148.	1	-
#9173	MFIO/LocalTalk Provides the MFIO that includes a LocalTalk workstation adapter for attaching to a LocalTalk network. 31 devices and 56 sessions are supported.	1	-
#9176	MFIO This specify selects the MFIO that does not include a workstation controller. Requires #9026 or #9027 client access console cable and a one-line communications adapter (#2612 or #9612) to attach a PC as a console.	1	-
#9177	MFIO/LAN Controller This specify selects the MFIO that includes a #9174 Ethernet Adapter or #9175 Token Ring Adapter. #9174 Ethernet IOA supports attachment to an Ethernet network. Order #7174 to replace base #9175 Token Ring IOA. The #9025 Ethernet cable or customer supplied RJ45 cable is required. #9175 Token Ring IOA supports attachment to a 4Mbps Token Ring network. Order #7175 to replace base #9174 Ethernet IOA. The #7175/#9175 now optionally supports 16Mbps Token Ring. The maximum frame size at 16 Mbps is 4 KB. A maximum of 16 active device addresses are supported. The #9024 Token Ring cable or customer supplied RJ45 cable is required. Diskette Adapter #6146 is not supported on #9177.	1	-

COMMUNICATIONS		System Unit	#7117 Expansion Unit
#2605	ISDN Basic Rate Adapter Connects to MFIOF and #2623 to support one communications line connecting to an ISDN network. Each adapter supports two 64 Kbps B channels and one 16 Kbps D channel. ISDN lines are full duplex. Requires no I/O card slots Note: This adapter cannot be attached to #2623 that also attaches V.24, X.21, or V.35 adapters.	2	2
#2609	EIA 232/V.24 Two-Line Adapter Connects to MFIOF and #2623 to support two communications lines using ASYNC, BSC, SDLC or X.25 protocol. Requires no I/O card slots. Two cables must be specified: #9023 EIA 232/V.24 enhanced cable 20ft (6m) #9835 EIA 232/V.24 enhanced cable 50ft (15m) #9022 EIA 232/V.24 cable 20ft (6m) #9836 EIA 232/V.24 cable 50ft (15m)	10	10
#2610	X.21 Two-Line Adapter Connects to MFIOF and #2623 to support two communications lines using X.21 or X.25 networks. Requires no I/O card slots. Two cables must be specified: #9021 X.21 cable 20ft (6m) #9839 X.21 cable 50ft (15m)	10	10
#2612	EIA 232/V.24 One-Line Adapter This adapter connects to the MFIOF and Six-Line Communications Controller (#2623) to support one communications line using ASYNC, BSC, SDLC or X.25 protocol. Requires no I/O card slots. One cable must be specified (see cable features for #2609).	8	12
#2613	V.35 One-Line Adapter Connects to MFIOF and #2623 supporting one V.35 line using either BSC, SDLC, or X.25 protocols. Requires no I/O card slots. One cable must be specified: #9020 V.35 cable 20ft (6m) #9838 V.35 cable 50ft (15m)	4	4
#2614	X.21 One-Line Adapter Connects to MFIOF and #2623 to attach one communications line to an X.21 or X.25 network. Requires no I/O card slots. One cable must be specified (see cable features for #2610).	8	12
#2620	Full Cryptographic Processor This feature provides full cryptographic support for encrypting and decrypting data. This feature consists of an I/O processor card and cable to attach an optional 4754-001. Distribution of this feature is restricted by US Government export regulations. In countries outside the USA and Canada, it may be marketed only to financial institutions and subsidiaries of US companies. Requires one I/O card slot. May require #5135 Power Supply.	1	1
#2623	Six-Line Communications Controller This controller provides basic control and common circuits for up to six lines. Requires one I/O card slot	2	4
#2628	Limited Cryptographic Processor Provides same functions as #2620 except for Data Encryption Standard based data scrambling. Instead it uses Commercial Data Masking Facility for data scrambling. Supports attachment of optional 4754-L01. Does not require US Customs clearance. Requires one I/O card slot. May require #5135 Power Supply. See #5135.	1	1

#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are #2699, #6149, #6180 and #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions. Requires V4R1. Card slots used: One	2	4
#2664	Integrated Fax Adapter Provides the iSeries or AS/400e with two ports capable of transmission and receipt of facsimile data to or from a Group 3 capable Fax, another iSeries or AS/400e with an integrated Fax adapter, or PCs with appropriately programmed Fax adapter.	2	4
#2666	High-Speed Communications Adapter Provides the iSeries or AS/400e with one communications port capable of high speed communication over public or private Frame Relay networks or point-to-point non-switched SDLC lines. Speeds up to 2.048 Mbps are possible. Requires one I/O card slot. One of the following cables must be specified: #9879 6m V.35 cable #9880 24m V.35 cable * #9882 6m V.36/EIA 449 cable #9883 24m V.36/EIA 449 cable ** #9884 45m V.36/EIA 449 cable ** #9885 6m X.21 cable * Line speeds up to 64Kbps only ** Use of these longer cables require that the attaching Data Communications Equipment (DCE) support the V.36 transmitter signal element timing Data Terminal Equipment (DTE) source signal. Note: The #2666 is classed as a communications line for purpose of maximum communications lines per model May require the #5135 Power Supply.	2	2
#6054 #8054	Workstation Adapter for Apple Macintosh (LocalTalk) Allows Apple Macintosh computer devices to attach directly to the iSeries or AS/400e. Also allows for connection to LocalTalk networks. Each adapter allows attachment of 31 Apple Macintosh devices with up to 56 sessions: #6054 attaches to the #2623 #8054 attaches to the MFIOP A maximum of 1 #6054/#8054 can be attached per #2623/MFIOP. A second adapter on the #2623 may be X.21, V.24 or V.35. The third adapter position <i>must not</i> be used. A single-line EIA 232/V.24 adapter may co-reside with #8054 on MFIOP. The #8054 cannot be added to MFIOP #9173.	2	4
#2699	Two-Line WAN IOA Supports up to two multiple protocol communications ports when any one or two (in any combination) of the following cables are attached: #0329 V.24/EIA 232 80ft (24m) cable #0330 V.24/EIA 232 20ft (6m) cable #0331 V.24/EIA 232 50ft (15m) cable #0332 V.24/EIA 232 20ft (6m) enhanced cable #0333 V.24/EIA 232 50ft (15m) enhanced cable #0334 V.24/EIA 232 80ft (24m) enhanced cable #0335 V.36/EIA 449 20ft (6m) cable #0336 V.36/EIA 449 50ft (15m) cable #0337 V.36/EIA 449 150ft (45m) cable #0338 V.35 20ft (6m) cable #0339 V.35 50ft (15m) cable #0340 V.35 80ft (24m) cable #0341 X.21 20ft (6m) cable #0342 X.21 50ft (15m) cable		

#2699 <i>continued</i>	There are some restrictions in communications using #2699. For full details, see the #2699 description in 9.13, "9406 Models 640 and 650" on page 251. Requires V4R1. Prerequisite for #2699: #2629 IOA slots required for #2699: One on #2629	-	-
LAN/ATM		System Unit	#7117 Expansion Unit
#2617	Ethernet/IEEE 802.3 Adapter/HP Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. The customer must procure the Attachment Unit Interface (AUI) cable which connects between the adapter and the Ethernet/IEEE 802.3 transceiver. Requires one I/O card slot. May require #5135 Power Supply. See the #5135.	2	2
#2618	Fiber Distributed Data Interface Adapter Provides one interface to connect an iSeries or AS/400e to an FDDI LAN, which complies with ANSI X3T9.5 and ISO 9314 standards. Requires one I/O card slot. Cables: Requires multi-mode (62.5/125) micron FDDI optical fiber jumper cables to connect the FDDI adapter into the FDDI ring. These must be separately ordered. May require #5135 Power Supply. See the #5135.	1	1
#2619	16/4 Mbps Token Ring Adapter/HP Provides a single attachment to a 16 Mbps or 4 Mbps IBM Token Ring Network. It consists of an adapter card, Internal Code, which supplies IEEE 802.5 Media Access Control and Logical Link Control functions, and an external 2.5m cable. Requires one I/O card slot.	2	2
#2626	16/4 Mbps Token Ring Adapter/A Provides a single attachment to either a 16 or 4 Mbps Token Ring network. Requires one I/O card slot.	2	2
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are the #2699, #6149, #6180, and #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions. Requires V4R1. Card slots used: One	2	4
#2663	I/O Attachment Processor Provides the communication hardware base for the iSeries or AS/400e Wireless LAN Adapter (#2668). The #2663 and #2668 are integrated in a single hardware package to operate as a unit. Prerequisite for feature #2668. Shares one I/O card slot with #2668 May require #5135 Power Supply. See the #5135.	2	2
#2665	Shielded Twisted-Pair Distributed Data Interface Adapter Provides one interface to connect an iSeries or AS/400e to an FDDI LAN, which is constructed of IBM Cabling System Type 1, 2, 6, or 9 shielded twisted pair wiring Requires one I/O card slot. Cables: The SDDI adapter requires IBM FDDI copper jumper cables to connect the adapter into the FDDI ring. These must be separately ordered.	1	1

#2668	Wireless LAN Adapter Provides wireless connectivity from iSeries or AS/400e servers to workstations or other systems connected to a wireless LAN network. The #2668 comes with an antenna and a cable for connecting the antenna to the adapter. One of the following antenna cables must be specified: #9814 20ft antenna cable #9815 50ft antenna cable One of the following antenna must be specified: #9890 Omni-directional antenna #9891 Hemispherical antenna #9892 Directional antenna Prerequisite: #2663	2	2
#2723	PCI Ethernet IOA Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. Has a RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B. Requires V4R2. Prerequisite: #6617 Integrated PC Server or #6618 Integrated Netfinity Server.	-	-
#2724	PCI 16/4 Mbps Token Ring IOA Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code, which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions and an external 8ft (2.4m) cable. Alternatively, a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. Requires V4R2. Prerequisite: #6617 Integrated PC Server or #6618 Integrated Netfinity Server.	-	-
#2810	LAN/WAN IOP This I/O processor is required to attach one #2838 PCI 100/10 Mbps Ethernet IOA or #2811/#2812/#2815/#2816/#2818/#2819 PCI ATM IOA. Prerequisite for the preceding features. Card slots required: One with any of the preceding features.		
#2811	25 PCI Mbps UTP ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Unshielded Twisted Pair (UTP) cabling. The #2811 will typically be used where 25 Mbps speed is required over distances of less than 100 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Requires V4R2. Card slots required: One (with #2810) Prerequisite: #2810	1	1
#2812	PCI 45 Mbps Coax T3/DS3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the T3/DS-3 interface. The #2812 will typically be used where 45 Mbps speed is required over distances of less than 1000 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Requires V4R2. Card slots required: One (with #2810) Prerequisite: #2810	1	1

#2815	155 Mbps UTP OC3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2815 will typically be used where 155 Mbps speed is required over distances of less than 100 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Requires V4R2. Card slots required: One (with #2810) Prerequisite: #2810	1	1
#2816	PCI 155 Mbps MMF ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2816 will typically be used where 155 Mbps speed is required over distances of less than 2 kilometers. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Requires V4R2. Card slots required: One (with #2810) Prerequisite: #2810	1	1
#2818	PCI 155 Mbps SMF OC3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Single Mode Fiber (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment, but can be used for local area switches. The #2818 will typically be used where 155 Mbps speed is required over distances of from 16 to 40 kilometers. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Requires V4R2. Card slots required: One (with #2810) Prerequisite: #2810	1	1
#2819	PCI 34 Mbps Coax E3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the E3 interface. The #2819 will typically be used where 34 Mbps speed is required over distances of less than 1000 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Requires V4R2. Card slots required: One (with #2810) Prerequisite: #2810	1	1
#2838	PCI 100/10 Mbps Ethernet IOA Provides attachment to a standard 100 Mbps high speed Ethernet LAN and also allows attachment to existing 10 Mbps Ethernet LAN. The adapter comes with an RJ45 connector for attachment to UTP-5 media. Requires V4R1 with #2810 or V4R2 with #6617. Maximum: One per system. Card slots required: One (with #2810) or three (with #6617 or #6618). Prerequisite: #2810 or #6617 or #6618	1	1
#6149	16/4 Mbps Token Ring IOA Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an IOA card, internal code (supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC)), and an external 8-foot (2.4m) Token Ring cable. Alternatively a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. The #6149 can operate in full or half-duplex mode. Requires V3R7 in the #6616 or V4R1 in the #2629. Card slots required: None Prerequisite: One #2629 or #6616 slot Maximum: Two	-	-

#6181	Ethernet/IEEE 802.3 IOA Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus 802.2 Logical Link Control (LLC) functions. Has a RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B. #6181 can operate in full or half-duplex mode. Requires V3R7 in #6616 or V4R1 in #2629. Card slots required: None Prerequisite: One #2629 or #6616 slot Maximum: Two	-	-
#6516 #6517 #6518 #6519 #6526 #6527 #6528 #6529	Integrated PC Server (formerly known as FSIOP) The Integrated PC Server connects to the iSeries or AS/400e server to provide high performance file serving to PCs attached through token-ring or Ethernet networks. The IOP consists of an INTEL 80486 66 MHZ processor and onboard Main Storage (16-64 MB). The following initial order configurations can be field upgraded using #6509 and #6520: 16 MB One-Port Integrated PC Server 32 MB One-Port Integrated PC Server 48 MB One-Port Integrated PC Server 64 MB One-Port Integrated PC Server 16 MB Two-Port Integrated PC Server 32 MB Two-Port Integrated PC Server 48 MB Two-Port Integrated PC Server 64 MB Two-Port Integrated PC Server The following cables need to be specified depending on the network attaching into a Integrated PC Server Port: #9024 Token Ring Cable (2.44m) #9025 Ethernet Cable (3m AUI) The Integrated PC Server requires two contiguous card slots. Requires #5135 Power Supply if installed in #7108.	1 1 1 1 1 1 1 1	2 2 2 2 1 1 1 1
#6509	Additional 16 MB for Integrated PC Server The #6509 is used for expanding the memory of an installed Integrated PC Server. One to three #6509s may be installed per Integrated PC Server up to a maximum of 64 MB.	6	6
#6520	Upgrade One-Port Integrated PC Server to Two-Port Integrated PC Server The #6520 cannot be used with a Two-Port Integrated PC Server.	1	1
#6616	Integrated PC Server Contains a 166 MHz Pentium Processor, two Main Storage slots, and two LAN IOA slots for higher performance serving to LAN attached PCs. The two main storage lots can each contain one of the following features, giving a maximum of 256 MB. At least one main storage feature is required: #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory Either one or two of the following LAN IOAs are supported: #6149 16/4 Mbps Token Ring IOA #6181 Ethernet/IEEE 802.3 IOA Requires V3R7 with cumulative PTF package C7029370 or later. Card slots required: Two contiguous slots	1	2

#6617	<p>Integrated PC Server Contains a 200 MHz Pentium Processor, four Main Storage slots and three LAN IOA slots for high performance serving to LAN attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 512 MB. At least one main storage feature is required: #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory</p> <p>Up to two of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of one of the LAN IOAs can be #2838. #2723 PCI Ethernet IOA #2724 PCI Token Ring IOA #2838 PCI 100/10 Mbps Ethernet IOA</p> <p>#0222 100/10 Mbps Ethernet on IPCS is required for the #2838 attached to the #6617 Integrated PC Server. If running Windows NT on the #6617, then: #0325 Integrated PC Server Extension cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT is the default in the USA. A display is required to support Windows NT on IPCS.</p> <p>For country-specific keyboard or mouse and display support, see the Web site at: http://www.ibm.com/eserver/iserries/ Requires V4R2. Card slots required: Three contiguous slots.</p>	-	1
#6618	<p>Integrated Netfinity Server for AS/400 Requires V4R2 (V4R2 and CUM C8342420 or V4R3 and CUM C8349430). Contains a 333 MHz Pentium Processor, four main storage slots, and three LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. At least one main storage feature is required: #2861 32 MB Integrated PC Server Memory Specify #is not required #2862 128 MB Integrated PC Server Memory Specify #is not required #2867 256 MB Integrated PC Server Memory Specify #0220 is required for each #2838 ordered</p> <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838. #2723 PCI Ethernet IOA Specify #is not required #2724 PCI Token Ring IOA Specify #is not required #2838 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required</p> <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6618. The #0222 100/10 Mbps Ethernet on IPCS is required for each #2838 attached to the #6618 Integrated PC Server. If running Windows NT on the #6618, then: A minimum of 64 MB IOP memory is required. #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT, the default in the USA. A display is required to support Windows NT on the IPCS.</p> <p>For country-specific keyboard/mouse and display support, see the Web site at: http://www.ibm.com/eserver/iserries/</p> <p>When running OS/2 on the #6618, then: #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838. A maximum of 512 MB IOP memory is supported.</p>		

#6618 <i>continued</i>	<p>When running Novell Netware on the #6618, then: #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838. A maximum of 256 MB IOP memory is supported.</p> <p>SPD slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack.</p>		
DISK UNITS		System Unit	#7117 Expansion Unit
#1105	320 MB Single Disk Unit Conversion Kit This feature provides the conversion kit required to migrate 320 MB one-byte SCSI disk units. Requires #9320 Migrated Disk Unit Package. 640 MB dual-disk units require <i>two</i> of these kits. Each kit occupies one disk unit position in the #9320. Cannot be installed in #7117 Expansion Unit.	4	-
#1107	400 MB Single Disk Unit Conversion Kit This feature provides the conversion kit required to migrate 400 MB one-byte SCSI disk units. Requires #9320 Migrated Disk Unit Package. 800 MB dual-disk units require <i>two</i> of these kits. Each kit occupies one disk unit position in the #9320. Cannot be installed in #7117 Expansion Unit.	4	-
#1109	988 MB Single Disk Unit Conversion Kit This feature provides the conversion kit required to migrate 988 MB one-byte SCSI disk units. Requires #9320 Migrated Disk Unit Package. 1976 MB dual-disk units require <i>two</i> of these kits. Each kit occupies one disk unit position in the #9320. Cannot be installed in #7117 Expansion Unit.	4	-
#1602	1.03 GB Single Disk Unit Conversion Kit This feature provides the conversion kit required to migrate 1.03 GB one-byte SCSI disk units. Requires #9320 Migrated Disk Unit Package. 2.06 GB dual-disk units require <i>two</i> of these kits. Each kit occupies one disk unit position in the #9320. Cannot be installed in #7117 Expansion Unit.	4	-
#1603	1.96 GB Single Disk Unit Conversion Kit This feature provides the conversion kit required to migrate 1.96 GB one-byte SCSI disk units. Requires #9320 Migrated Disk Unit Package. 3.93 GB dual-disk units require <i>two</i> of these kits. Each kit occupies one disk unit position in the #9320. Cannot be installed in #7117 Expansion Unit.	4	-
#6109	988 MB Additional One-Byte SCSI Disk Unit This feature provides a 3 ½-inch single disk unit with 988 MB capacity for additional disk storage. Requires #9320 Migrated Disk Unit Package. Occupies one disk unit position in the #9320. Cannot be used in #7117 Expansion unit.	4	-
#6602	1.03 GB Additional One-Byte SCSI Disk Unit This feature provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. Requires #9320 Migrated Disk Unit Package. Occupies one disk unit position in the #9320. Cannot be used in #7117 Expansion unit.	4	-
#6603	1.96 GB Additional One-Byte SCSI Disk Unit This feature provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. Requires #9320 Migrated Disk Unit Package. Occupies one disk unit position in the #9320. Cannot be used in #7117 Expansion unit.	4	-
#6605 #4605	1.03 GB Additional Two-Byte Disk Unit This feature provides a 3 ½-inch disk unit with 1.03 GB capacity for additional disk storage in the System Unit or #7117 Expansion Unit. Requires #9319 Standard Disk Unit Package or #9320 Migrated Disk Unit Package if installed in the System Unit. Occupies one disk unit position in either the #9319/#9320 or the #7117 Expansion Unit. The #4605 is the plant install version of the #6605.	3	8

#6606 #4606 #9606	1.96 GB Additional Two-Byte SCSI Disk Unit This feature provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage in the System Unit or the #7117 Expansion Unit. Requires the #9319 Standard Disk Unit Package or #9320 Migrated Disk Unit Package if installed in the System Unit. Occupies one disk unit position in either the #9319/#9320 or #7117 Expansion Unit. The #4606 is the plant install version of #6606. The #9606 is the base disk.	4	8
#6607 #7607	4.19 GB Additional Two-Byte SCSI Disk Unit This feature provides a 3 ½-inch single disk unit with 4.1 9GB capacity for additional disk storage in the System Unit or the #7117 Expansion Unit. Requires the #9319 Standard Disk Unit Package or #9320 Migrated Disk Unit Package if installed in the System Unit. Occupies one disk unit position in either the #9319/#9320 or #7117 Expansion Unit. The #7607 is replacement base disk. Requires V3R7.	4	8
#6652 #4652	1.03 GB Additional Two-Byte SCSI Disk Unit This feature provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage in System Unit or the #7117 Expansion Unit. Requires the #9319 Standard Disk Unit Package or #9320 Migrated Disk Unit Package. Occupies one disk unit position in either the #9319/#9320 or #7117 Expansion Unit. The #4652 is the plant install version of #6652.	3	8
#9606	1.9 6 GB Standard Two-Byte SCSI Disk Unit This feature provides a 3 ½-inch single disk unit with 1.96 GB capacity as the base disk unit on new Model 400s or on upgrades to Model 400.	1	-
INTERNAL TAPE UNITS AND CD-ROM		System Unit	#7117 Expansion Unit
#1378	525 MB ¼-inch Cartridge Tape Unit Conversion Kit This feature provides the conversion kit required to migrate 525 MB ¼-inch Cartridge Tape Units. Maximum: Four	2	2
#1379	1.2 GB ¼-inch Cartridge Tape Unit Conversion Kit This feature provides the conversion kit required to migrate 1.2 GB ¼-inch Cartridge Tape Units. Maximum: Four	2	2
#1380	2.5 GB ¼-inch Cartridge Tape Unit Conversion Kit This feature provides the conversion kit required to migrate 2.5 GB ¼-inch Cartridge Tape Unit. Maximum: Four	2	2
#6335	840 MB ¼-inch Cartridge Mini Tape Unit Using the QIC-3040-MC recording format, tape cartridge capacity is 840 MB. With hardware, data compression maximum capacity is up to 1.6 GB. Sustained data transfer rate is 300 Kbps. Maximum: Four	2	2
#6380	2.5 GB ¼-inch Cartridge Tape Unit It provides full interchange of data with all standard and optional ¼-inch cartridge tape units provided on the iSeries or AS/400e server, using the proper media and density. Maximum: Four	2	2
#6390	7 GB 8 mm Cartridge Tape Unit 8 mm Helical Scan tape drive which can be used for save and restore, program distribution, and Alternate IPL. Has sustained data rate of 500 KB per second. Maximum: Four	2	2
#9520	Base CD-ROM Used for program distribution.	1	-

MAGNETIC MEDIA CONTROLLERS		System Unit	#7117 Expansion Unit
#2621	Removable Media Device Attachment Required to support up to two #9348, #7208, #3995, or #9427 devices and provides the hardware data compression feature. If the #2621 is to support a #3995 or a dual port #7208, it must be dedicated to it. Card Slots used: One Maximum: Six	2	4
#2624	Storage Device Controller Required to support an internal tape unit in the #7117 Expansion Unit or a second internal tape unit in a system with no #7117 Expansion Unit. This feature can concurrently support a #6146 diskette adapter to attach a second external diskette unit. Card Slots used: One Maximum: One	1	1
#2644	3490 Magnetic Tape Attachment Card/HP Provides attachment for all 34xx Tape subsystem models, except SCSI attach 3490 models. May also require #9980 serpentine cable. Card Slots used: One Maximum: One	1	1
#6146	Diskette Adapter This feature provides support for one of the following external diskette types: 9331-011 8-inch Diskette Unit 9331-012 5 ¼-inch Diskette Unit It can attach to either the MFIOP or #2624 Card Slots used: None Maximum: Two	2	1
#6501	Tape/Disk Device Controller This feature allows attachment of up to two SCSI attach 3490/35xx tape units Card Slots used: One Maximum: Two	1	1
#6522 #6502	High Performance Controller—2 MB Cache (RAID/Mirrored/Unprotected) Provides RAID-5 protection and a 2 MB write-cache for up to eight disk units installed in the #7117 Expansion Unit. A minimum of four disk units are needed for a valid RAID-5 configuration and disk units not supported in the RAID-5 array can still be attached. Mutually exclusive with the #6523/#6530. The #7117 is a prerequisite. #6522 was announced in October 1994 and replaces the #6502. Card Slots used: One Maximum: One	-	1
#6523 #6530	Disk Unit Controller No Cache (Mirrored/Unprotected) Provides attachment for up to eight disk units installed in the #7117 Expansion Unit. Mutually exclusive with #6502/#6522. The #7117 is a prerequisite. The #6523 was announced in October 1994 and replaces the #6530. Card Slots used: One Maximum: One	-	1
#6534	Magnetic Media Controller Provides attachment for one 3490E Cxx with #5040, 3490E Exx, 3490 Fxx, 3570, 3575, 3494 L1x or D1x, 3590, 7208, 9348, or 9427 Tape Drive or 3995 C4x Optical Library Dataserver. Requires OS/400 V4R1. V4R2 is required to support 3995. Card slots required: One Maximum: Four	2	4
#9980	Serpentine Cable Required for attaching all #2644 supported devices (except 3490-Cxx when attached through "internal cables").	1	1

Chapter 12. AS/400e 9402 Model Packages

12.1 9402 Model AS/400-Based Hardware/Software Packages Summary

Package Name	Entry 40E	Entry 41E	Growth 40G	Growth 41G	Large 40L	Large 41L
Relative System Performance (CPW-V3R6) (See Note 1)	12.3	18.3-30.6	12.3	12.3	12.3	12.3
Relative System Performance (CPW-V3R7) (See Note 1)	13.8	20.6-33.3	13.8	20.6-33.3	13.8	20.6-33.3
Main Storage (MB)	64-160	64-224	96-180	96-224	160	160-224
Disk Storage (GB) (See Note 2)	3.93-23.6	3.93-23.6	7.86-23.6	7.86-23.6	11.80-23.6	11.80-23.6
Standard Tape	¼-inch Cartridge	¼-inch Cartridge	¼-inch Cartridge	¼-inch Cartridge	8mm Cartridge	8mm Cartridge
Twinaxial Devices	40-280	40-280	40-280	40-280	80-280	80-280
LAN Adapters (See Note 3)	0-2	0-2	0-2	0-2	0-2	0-2
Communications Lines	1-20	1-20	2-20	2-20	2-20	2-20
Software	P05	P10	P05	P05	P05	P10
Software	OS/400 Client Access for AS/400 Query for AS/400 DB2 Query Manager and SQL Development for AS/400					
Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.					
Note 2:	As of February 1997 with V3R7, the maximum disk capacity is 50.3 GB.					
Note 3:	The Model 436 supports three LAN adapters if running Firewall for AS/400 (5769-FW1).					

12.1.1 AS/400-Based Hardware/Software Package Features

Entry 40E			Entry 41E			Growth 40G		
9402	System Unit	1	9402	System Unit	1	9402	System Unit	1
0110	Packaged Configuration	1	0110	Packaged Configuration	1	0110	Packaged Configuration	1
0160	Software Package P05	1	0161	Software Package P10	1	0160	Software Package P05	1
2130	Processor (32 MB)	1	2131	Processor (32 MB)	1	2130	Processor (32 MB)	1
296x	Power Cord ¹	1	296x	Power Cord ¹	1	296x	Power Cord ¹	1
3182	32 MB Main Storage	1	3182	32MB Main Storage	1	3110	64 MB Main Storage	1
5000	Software Preload ¹	1	5000	Software Preload ¹	1	5000	Software Preload ¹	1
5517	Alt-IPL Specify	1	5517	Alt-IPL Specify	1	5517	Alt-IPL Specify	1
	QIC-2500			QIC-2500			QIC-2500	
5520	Complete System Specify	1	5520	Complete System Specify	1	5520	Complete System Specify	1
6148	8-Port Twinaxial Expansion	1	6148	8-Port Twinaxial Expansion	1	5135	Feature Power Supply	1
6380	2.5 GB ¼-inch Cartridge	1	6380	2.5G B ¼-inch Cartridge	1	6148	8-Port Twinaxial Expansion	1
	Tape Unit			Tape Unit		6380	2.5 GB ¼-inch Cartridge	1
6606	1.96 GB Disk Unit	1	6606	1.96 GB Disk Unit	1		Tape Unit	
7000	Panel Keylock Feature	1	7000	Panel Keylock Feature		6606	1.96 GB Disk Unit	1
9023	EIA 232/V.24 Enhanced	1	9023	EIA 232/V.24 Enhanced	1	7000	Panel Keylock Feature	1
	Cable			Cable	1	7108	Expansion Gate	1
9172	Standard MFIOF Twinaxial	1	9172	Standard MFIOF Twinaxial	1	8609	EIA 232/V.24 Two-Line	1
9242	Base 175W Power	1	9242	Base 175 W Power	1		Adapter	
	Supply			Supply		9023	EIA 232/V.24 Enhanced	2
9319	Standard DASD Package	1	9319	Standard DASD Package			Cable	
9520	Base CD-ROM	1	9520	Base CD-ROM	1	9172	Standard MFIOF Twinaxial	1
9606	Base 1.96 GB Disk Unit	1	9606	Base 1.96 GB Disk Unit	1	9319	Standard DASD Package	1
9612	EIA 232/V.24 One-Line	1	9612	EIA 232/V.24 One-Line	1	9520	Base CD-ROM	1
	Adapter			Adapter		9606	Base 1.96 GB Disk Unit	1
Allowable substitutions: In place of #3182: 3110 64 MB Main Storage In place of #9242: 5135 Feature Power Supply In place of #9612: 8609 EIA/V.24 Two-Line Adapter			Allowable substitutions: In place of #2131: 2132 Processor (32 MB) or 2133 Processor (32 MB) In place of #3182: 3110 64 MB Main Storage In place of #9242: 5135 Feature Power Supply In place of #9612: 8609 EIA/V.24 Two-Line Adapter			Allowable substitutions: None		
Note: 1. Country Specific Software: OS/400 (5716-SS1); Client Access for AS/400 (5716-XA1), Query for AS/400 (5716-QU1), DB2 Query Manager (5716-ST1), and SQL Development for AS/400. Additional no charge codes and configuration specify codes for hardware and software are added as required by the configurator. All packages can have optional hardware added up to the configuration limits.								

Growth 41G			Large 40L			Large 41L		
9402	System Unit	1	9402	System Unit	1	9402	System Unit	1
0110	Packaged Configuration	1	0044	Data Loss Protection	1	0044	Data Loss Protection	1
0161	Software Package P10	1	0110	Packaged Configuration	1	0110	Packaged Configuration	1
2131	Processor (32 MB)	1	0161	Software Package P10	1	0161	Software Package P10	1
296x	Power Cord ¹	1	2131	Processor (32 MB)	1	2131	Processor (32 MB)	1
3110	64 MB Main Storage	1	296x	Power Cord ¹	1	296x	Power Cord ¹	1
5000	Software Preload ¹	1	3110	64 MB Main Storage	2	3110	64MB Main Storage	2
5135	Feature Power Supply	1	5000	Software Preload ¹	1	5000	Software Preload ¹	1
5517	Alt-IPL Specify	1	5135	Feature Power Supply	1	5135	Feature Power Supply	1
	QIC-2500		5514	Alt-IPL Specify for 7208	1	5514	Alt-IPL Specify for 7208	1
5520	Complete System Specify	1	5520	Complete System Specify	1	5520	Complete System Specify	1
6148	8-Port Twinaxial Expansion	1	6050	Twinaxial Expansion	1	6050	Twinaxial Expansion	1
6380	2.5 GB ¼-inch Cartridge Tape Unit	1	6148	8-Port Twinaxial Expansion	1	6148	8-Port Twinaxial Expansion	1
			6390	7.0 GB 8mm Cartridge Tape Unit	1	6390	7.0 GB 8mm Cartridge Tape Unit	1
6606	1.96 GB Disk Unit	1						
7000	Panel Keylock Feature	1	6522	Disk Unit Controller for RAID	1	6522	Disk Unit Controller for RAID	1
7108	Expansion Gate	1	6606	1.96 GB Disk Unit	5	6606	1.96 GB Disk Unit	5
8609	EIA 232/V.24 Two-Line Adapter	1	7000	Panel Keylock Feature	1	7000	Panel Keylock Feature	1
			7108	Expansion Gate	1	7108	Expansion Gate	1
9023	EIA 232/V.24 Enhanced Cable	2	7117	Integrated Expansion Unit	1	7117	Integrated Expansion Unit	1
9172	Standard MFIOIP Twinaxial	1	8609	EIA 232/V.24 Two-Line Adapter	1	8609	EIA 232/V.24 Two-Line Adapter	1
9319	Standard DASD Package	1						
9520	Base CD-ROM	1	9023	EIA 232/V.24 Enhanced Cable	2	9023	EIA 232/V.24 Enhanced Cable	2
9606	Base 1.96 GB Disk Unit	1						
			9172	Standard MFIOIP Twinaxial	1	9172	Standard MFIOIP Twinaxial	1
			9244	300 W Power Supply	1	9244	300 W Power Supply	1
			9319	Standard DASD Package	1	9319	Standard DASD Package	1
			9520	Base CD-ROM	1	9520	Base CD-ROM	1
			9606	Base 1.96 GB Disk Unit	1	9606	Base 1.96 GB Disk Unit	1
Allowable substitutions: In place of #2131: 2132 Processor (32 MB) or 2133 Processor (32 MB)			Allowable substitutions: None			Allowable substitutions: In place of #2131: 2132 Processor (32 MB) or 2133 Processor (32 MB)		
Note: 1. Country Specific Software: OS/400 (5716-SS1), Client Access for AS/400 (5716-XA1), Query for AS/400 (5716-QU1), DB2 Query Manager (5716-ST1), and SQL Development for AS/400. Additional no charge codes and configurations specify codes for hardware and software are added as required by the configurator. All packages can have optional hardware added up to the configuration limits.								

12.2 9402 Model 40S-Based Hardware/Software Packages Summary

Package Name	Small Server 4SS	Entry Server 4SE	Growth Server 4SG	Growth Server 4TG	Large Server 4SL	Large Server 4TL
Relative System Performance (CPW-V3R6)) (See Note 2)						
Client/Server Environment	24.5-52.9	24.5-52.9	24.5-52.9	77.3	24.5-52.9	77.3
Interactive Environment	8.4-18.3	8.4-18.3	8.4-18.3	26.9	8.4-18.3	26.9
Relative System Performance (CPW-V3R7) (See Note 3)						
Client/Server Environment	27.0-59.8	27.0-59.8	27.0-59.8	87.3	27.0-59.8	87.3
Interactive Environment	9.4-20.6	9.4-20.6	9.4-20.6	30.7	9.4-20.6	30.7
Main Storage (MB) (See Note 2)	32-224/ 64-512	32-224/ 64-512	32-224/ 64-512	128-512	96-224/ 128-512	128-512
Disk Storage (GB)	3.93-23.6	3.93-23.6	7.86-23.6	7.86-23.6	11.0-23.6	11.80-23.6
Standard Tape	¼-inch Cartridge	¼-inch Cartridge	¼-inch Cartridge	¼-inch Cartridge	8mm Cartridge	8mm Cartridge
Twinaxial Devices	7	7	7	7	7	7
LAN Adapters	1-2	1-2	1-2	1-2	1-2	1-2
Communications Lines	2-20	2-20	2-20	2-20	2-20	2-20
Software Charge Group	P05	P05	P05	P10	P05	P10
Software	OS/400 Client Access for AS/400 Query for AS/400 DB2 Query Manager and SQL Development Kit for AS/400					

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	#2109 and #2110 Processors support 32 to 224 MB Main Storage. #2111 and #2112 Processors support 64 to 512MB.
Note 3:	As of February 1997 with V3R7, the maximum disk capacity is 50.3 GB.
Note 4:	The Model 40S packages support three LAN adapters if running Firewall for AS/400 (5769-FW1). Package 4SS has a base Ethernet or Token Ring Adapter. The other five packages have a base Integrated PC Server (formerly known as FSIOP).

12.2.1 9402 Model 40S-Based Hardware/Software Package Features

Small Server 4SS			Entry Server 4SE			Growth Server 4SG		
9402	System Unit	1	9402	System Unit	1	9402	System Unit	1
0110	Packaged Configuration	1	0110	Packaged Configuration	1	0110	Packaged Configuration	1
0160	Software Package P05	1	0160	Software Package P05	1	0160	Software Package P05	1
2109	Processor (32 MB)	1	2109	Processor (32 MB)	1	2109	Processor (32 MB)	1
296x	Power Cord ¹	1	296x	Power Cord ¹	1	296x	Power Cord ¹	1
5000	Software Preload ¹	1	5000	Software Preload ¹	1	3182	32 MB Main Storage	1
5135	Feature Power Supply	1	5135	Feature Power Supply	1	5000	Software Preload ¹	1
5517	Alt-IPL Specify	1	5517	Alt-IPL Specify	1	5135	Feature Power Supply	1
	QIC-2500			QIC-2500		5517	Alt-IPL Specify	1
5520	Complete System Specify	1	5520	Complete System Specify	1		QIC-2500	
			6380	2.5 GB ¼-inch Cartridge	1	5520	Complete System Specify	1
6380	2.5 GB ¼-inch Cartridge	1		Tape Unit		6380	2.5 GB ¼-inch Cartridge	1
	Tape Unit		6606	1.96 GB Disk Unit	1		Tape Unit	
6606	1.96 GB Disk Unit	1	7000	Panel Keylock Feature	1	6606	1.96 GB Disk Unit	1
7000	Panel Keylock Feature	1	8609	EIA 232/V.24 Two-Line	1	7000	Panel Keylock Feature	1
8609	EIA 232/V.24 Two-Line	1		Adapter		8609	EIA 232/V.24 Two-Line	1
	Adapter		8717	Base 32 MB 1-Port	1		Adapter	
9032	EIA 232/V.24 Enhanced	2		Integrated PC Server		8718	Base 48 MB 1-Port	1
	Cable			(formerly known as FSIOP)			Integrated PC Server	
9108	Standard Expansion Gate	1		EIA 232/V.24 Enhanced			(formerly known as FSIOP)	
9172	Standard MFIOF Twinaxial	1	9023	Cable	2	9023	EIA 232/V.24 Enhanced	2
9319	Standard DASD Package	1	9024	802.5 Token Ring Cable	1		Cable	
9520	Base CD-ROM	1		(2.44 M)		9024	802.5 Token Ring Cable	1
9606	Base 1.96 GB Disk Unit	1	9108	Standard Expansion Gate	1		(2.44 M)	
9617	Ethernet/IEEE 802.3	1	9172	Standard MFIOF Twinaxial	1	9108	Standard Expansion Gate	1
	CSMA/CD Adapter		9319	Standard DASD Package	1	9172	Standard MFIOF Twinaxial	1
			9520	Base CD-ROM	1	9319	Standard DASD Package	1
			9606	Base 1.96 GB Disk Unit	1	9520	Base CD-ROM	1
						9606	Base 1.96 GB Disk Unit	1
Allowable substitutions: In place of #2109: 2110 Processor or 2111 Processor (Requires two 9282 Base 32 MB or two 8210 64 MB Main Storage Features) In place of #9617: 9619 16/4Mbps Token Ring Adapter/HP			Allowable substitutions: In place of #2109: 2110 Processor or 2111 Processor (Requires two 9282 Base 32MB or two 8210 64MB Main Storage Features) In place of #8717: 8718 Base 48 MB 1-Port or 8719 Base 64 MB 1-Port or 8727 Base 32 MB 2-Port or 8728 Base 48 MB 2-Port or 8729 Base 64 MB 2-Port Integrated PC Server In place of #9024: 9025 Ethernet Cable (3 M) As of February 1997, #8717 was replaced by #6616 Integrated PC Server with #2861 32 MB Integrated PC Server Memory, #9249 Base Token Ring IOA and #9116 2 Book Cage High Performance Enabler. In place of #9249, #9381 Base Ethernet IOA can be ordered and in place of #2861, #2862 128 MB IPCS Memory can be ordered.			Allowable substitutions: In place of #2109: 2110 Processor or 2111 Processor (Requires two 9282 Base 32 MB or two 8210 64 MB Main Storage Features) In place of #3182: 3110 64 MB Main Storage In place of #8718: 8719 Base 64 MB 1-Port or 8728 Base 48 MB 2-Port or 8729 Base 64 MB 2-Port Integrated PC Server In place of #9024: 9025 Ethernet Cable (3M) As of February 1997, #8717 was replaced by #6616 Integrated PC Server with #2861 32 MB Integrated PC Server Memory, #9249 Base Token Ring IOA and #9116 2 Book Cage High Performance Enabler. In place of #9249, #9381 Base Ethernet IOA can be ordered and in place of either or both #2861, #2862 128 MB IPCS Memory can be ordered.		
Note: 1. Country Specific Software: OS/400 (5716-SS1), Client Access for AS/400 (5716-XA1), Query for AS/400 (5716-QU1), DB2 Query Manager (5716-ST1), and SQL Development for AS/400. Additional no charge codes and configurations specify codes for hardware and software are added as required by the configurator. All packages can have optional hardware added up to the configuration limits.								

Growth Server 4TG			Large Server 4SL			Large Server 4TL		
9402	System Unit	1	9402	System Unit	1	9402	System Unit	1
1001	Packaged Configuration	1	0044	Data Loss Protection	1	0044	Data Loss Protection	1
0161	Software Package P10	1	0110	Packaged Configuration	1	0110	Packaged Configuration	1
2112	Processor	1	0160	Software Package P05	1	0161	Software Package P10	1
296x	Power Cord ¹	1	2109	Processor (32 MB)	1	2112	Processor	1
3110	64 MB Main Storage	1	296x	Power Cord ¹	1	296x	Power Cord ¹	1
5000	Software Preload ¹	1	3110	64 MB Main Storage	1	3110	64 MB Main Storage	1
5135	Feature Power Supply	1	5000	Software Preload ¹	1	5000	Software Preload ¹	1
5517	Alt-IPL Specify	1	5135	Feature Power Supply	1	5135	Feature Power Supply	1
	QIC-2500		5514	Alt-IPL Specify for 7208	1	5514	Alt-IPL Specify for 7208	1
5520	Complete System Specify	1	5520	Complete System Specify	1	5520	Complete System Specify	1
6380	2.5 GB ¼-inch Cartridge Tape Unit	1	6390	7.0 GB 8 mm Cartridge Tape Unit	1	6390	7.0 GB 8 mm Cartridge Tape Unit	1
6606	1.96 GB Disk Unit	3	6522	Disk Init Controller for RAID	1	6522	Disk Init Controller for RAID	1
7000	Panel Keylock Feature	1	6606	1.96 GB Disk Unit	5	6606	1.96 GB Disk Unit	5
8609	EIA 232/V.24 Two-Line Adapter	1	7000	Panel Keylock Feature	1	7000	Panel Keylock Feature	1
			7117	Integrated Expansion Unit	1	7117	Integrated Expansion Unit	1
8718	Base 48 MB 1-Port Integrated PC Server (formerly known as FS10P)	1	8609	EIA 232/V.24 Two-Line Adapter	1	8609	EIA 232/V.24 Two-Line Adapter	1
			8718	Base 48 MB 1-Port Integrated PC Server (formerly known as FS10P)	1	8718	Base 48 MB 1-Port Integrated PC Server (formerly known as FS10P)	1
9023	EIA 232/V.24 Enhanced Cable	2						
9024	802.5 Token Ring Cable (2.44 M)	1	9023	EIA 232/V.24 Enhanced Cable	2	9023	EIA 232/V.24 Enhanced Cable	2
9108	Standard Expansion Gate	1	9024	802.5 Token Ring Cable (2.44 M)	1	9024	802.5 Token Ring Cable (2.44 M)	1
9110	Base 64 MB Main Storage	1						
			9108	Standard Expansion Gate	1	9108	Standard Expansion Gate	1
9172	Standard MF10P Twinaxial	1	9172	Standard MF10P Twinaxial	1	9110	Base 64 MB Main Storage	1
9319	Standard DASD Package	1	9244	300 W Power Supply	1			
9520	Base CD-ROM	1	9319	Standard DASD Package	1	9172	Standard MF10P Twinaxial	1
9606	Base 1.96 GB Disk Unit	1	9520	Base CD-ROM	1	9244	300 W Power Supply	1
			9606	Base 1.96 GB Disk Unit	1	9319	Standard DASD Package	1
						9520	Base CD-ROM	1
						9606	Base 1.96 GB Disk Unit	1
Allowable substitutions: In place of #8718: 8719 Base 64 MB 1-Port or 8728 Base 48 MB 2-Port or 8729 Base 64 MB 2-Port Integrated PC Server In place of #9024: 9025 Ethernet Cable (3 M) As of February 1997, #8718 was replaced by #6616 Integrated PC Server with #2861 32 MB Integrated PC Server Memory, #9249 Base Token Ring IOA and #9116 2 Book Cage High Performance Enabler. In place of #9249, #9381 Base Ethernet IOA can be ordered and in place of #2861, #2862 128 MB IPCS Memory can be ordered.			Allowable substitutions: In place of #2109: 2110 Processor or 2111 Processor (Requires one 9110 Base 64 MB Main Storage Feature) In place of #8718: 8719 Base 64 MB 1-Port or 8728 Base 48 MB 2-Port or 8729 Base 64 MB 2-Port Integrated PC Server In place of #9024: 9025 Ethernet Cable (3 M) As of February 1997, #8718 was replaced by #6616 Integrated PC Server with #2861 32 MB Integrated PC Server Memory, #9249 Base Token Ring IOA and #9116 2 Book Cage High Performance Enabler. In place of #9249, #9381 Base Ethernet IOA can be ordered and in place of either or both #2861, #2862 128 MB IPCS Memory can be ordered.			Allowable substitutions: In place of #8718: 8719 Base 64 MB 1-Port or 8728 Base 48 MB 2-Port or 8729 Base 64 MB 2-Port Integrated PC Server In place of #9024: 9025 Ethernet Cable (3 M) As of February 1997, #8718 was replaced by #6616 Integrated PC Server with #2861 32 MB Integrated PC Server Memory, #9249 Base Token Ring IOA and #9116 2 Book Cage High Performance Enabler. In place of #9249, #9381 Base Ethernet IOA can be ordered and in place of #2861, #2862 128 MB IPCS Memory can be ordered.		
Note: 1. Country Specific Software: OS/400 (5716-SS1), Client Access for AS/400 (5716-XA1), Query for AS/400 (5716-QU1), DB2 Query Manager (5716-ST1), and SQL Development for AS/400. Additional no charge codes and configurations specify codes for hardware and software are added as required by the configurator. All packages can have optional hardware added up to the configuration limits.								

12.3 9402 Model AS/400-Based Hardware Only Package Summary

Package name	Entry 42E	Growth 42G	Large 42L
Relative System Performance (CPW-V3R6) (See Note 1)	12.3-30.6	12.3-30.6	12.3-30.6
Relative System Performance (CPW-V3R7) (See Note 1)	13.8-33.3	13.8-33.3	13.8-33.3
Main Storage (MB) (See Note 2)	64-160/64-224	96-160/96-224	160/160-224
Disk Storage (GB) (See Note 3)	3.93-23.6	7.84-23.6	11.80-23.6
Standard Tape	¼-inch Cartridge	¼-inch Cartridge	8mm Cartridge
Twinaxial Devices	40-280	40-280	80-280
LAN Adapters (See Note 4)	0-2	0-2	0-2
Communications	1-20	2-20	2-20
Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.		
Note 2:	#2130 Processor supports 160 MB Main Storage. #2131 and #2132 and #2133 support a maximum of 224 MB.		
Note 3:	As of February 1997 with V3R7, the maximum disk capacity is 50.3 GB		
Note 4:	The Model 400 packages support three LAN adapters if running Firewall for AS/400 (5769-FW1).		

12.3.1 9402 Model AS/400-Based Hardware Only Package Features

Entry 42E			Growth 42G			Large 42L		
9402	System Unit	1	9402	System Unit	1	9402	System Unit	1
0110	Packaged Configuration	1	0110	Packaged Configuration	1	0044	Data Loss Protection	1
2130	Processor (32 MB)	1	2130	Processor (32 MB)	1	0110	Packaged Configuration	1
296x	Power Cord ¹	1	296x	Power Cord ¹	1	2130	Processor (32 MB)	1
3182	32 MB Main Storage	1	3110	64 MB Main Storage	1	296x	Power Cord ¹	1
5517	Alt-IPL Specify QIC-2500	1	5135	Feature Power Supply	1	3110	64 MB Main Storage	2
5520	Complete System Specify	1	5517	Alt-IPL Specify QIC-2500	1	5135	Feature Power Supply	1
6148	8-port Twinaxial Expansion 2.5 GB ¼-inch Cartridge Tape Unit	1	5520	Complete System Specify	1	5514	Alt-IPL Specify for 7208	1
6380	1.96 GB Disk Unit	1	6148	8-port Twinaxial Expansion	1	5520	Complete System Specify	1
6606	Panel Keylock Feature	1	6380	2.5 GB ¼-inch Cartridge Tape Unit	1	6050	Twinaxial Expansion	1
7000	EIA 232/V.24 Two-Line Adapter	1	6606	1.96 GB Disk Unit	1	6148	8-port Twinaxial Expansion	1
9023	Standard MFIOF Twinaxial Base 175 Watt Power Supply	1	7000	Panel Keylock Feature	1	6390	7.0 GB 8 mm Cartridge Tape Unit	1
9242	Standard DASD Package	1	7108	Expansion Gate	1	6522	Disk Unit Controller for RAID	1
9319	Base CD-ROM	1	8609	EIA 232/V.24 Two-Line Adapter	1	6606	1.96 GB Disk Unit	5
9520	Base 1.96 GB Disk Unit	1	9023	EIA 232/V.24 Enhanced Cable	2	7000	Panel Keylock Feature	1
9606	EIA 232/V.24 One-Line Adapter	1	9172	Standard MFIOF Twinaxial	1	7108	Expansion Gate	1
			9319	Standard DASD Package	1	7117	Integrated Expansion Unit	1
			9520	Base CD-ROM	1	8609	EIA 232/V.24 Two-Line Adapter	1
			9606	Base 1.96 GB Disk Unit	1	9023	EIA 232/V.24 Enhanced Cable	1
						9172	Standard MFIOF Twinaxial	1
						9244	Base 300 W Power Supply	1
						9319	Standard DASD Package	1
						9520	Base CD-ROM	1
						9606	Base 1.96 GB Disk Unit	1
Allowable substitutions: In place of #2130: 2131 Processor (32 MB) or 2132 Processor (32 MB) or 2133 Processor (32 MB) In place of #3182: 3110 64 MB Main Storage In place of #9242: 5135 Power Supply In place of #9612: 8609 EIA 232/V.24 Two-Line Adapter			Allowable substitutions: In place of #2130: 2131 Processor (32 MB) or 2132 Processor (32 MB) or 2133 Processor (32 MB)			Allowable substitutions: In place of #2130: 2131 Processor (32 MB) or 2132 Processor (32 MB) or 2133 Processor (32 MB)		
Note: 1. Country Specific. Additional no charge codes and configuration specify codes for hardware are added as required by the configurator. All packages can have optional hardware added up to the configuration limits.								

12.4 9402 Model 40S Based Hardware Only Packages Summary

Package Name	Small Server 4HS	Entry Server 4HE	Growth Server 4HG	Large Server 4HL
Relative System Performance (CPW-V3R6) (See Note 1)				
Client/Server Environment	24.5-77.3	24.5-52.9	24.5-52.9	24.5-52.9
Interactive Environment	8.4-26.9	8.4-18.3	8.4-18.3	8.4-18.3
Relative System Performance (CPW-V3R7) (See Note 1)				
Client/Server Environment	27.0-87.3	27.0-59.8	27.0-59.8	27.0-59.8
Interactive Environment	9.4-30.7	9.4-20.6	9.4-20.6	9.4-20.6
Main Storage (MB) (See Note 2)	32-224/64-512	32-224/64-512	64-224/128-512	96-224/128-512
Disk Storage (GB) (See Note 3)	3.93-23.6	3.93-23.6	7.84-23.6	11.0-23.6
Standard Tape	¼-inch Cartridge	¼-inch Cartridge	¼-inch Cartridge	8mm Cartridge
Twinaxial Devices (Maximum)	7	7	7	7
LAN Adapters (See Note 4)	1-2	1-2	1-2	1-2
Communications Lines	1-20	2-20	2-20	2-20

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	#2109 and #2110 Processor support a maximum of 224 MB Main Storage, #2111 and #2112 Processors support a maximum of 512 MB.
Note 3:	As of February 1997 with V3R7, the maximum disk capacity is 50.3 GB.
Note 4:	The Model 400 packages support three LAN adapters if running Firewall for AS/400 (5769-FW1). Package 4HS has a base Ethernet or Token Ring adapter. The other three packages have base Integrated PC Server (formerly known as FSIOP).

12.4.1 9402 Model 40S Based Hardware Only Package Features

Small Server 4HS			Entry Server 4HE			Growth Server 4HG		
9402	System Unit	1	9402	System Unit	1	9402	System Unit	1
0110	Packaged Configuration	1	0110	Packaged Configuration	1	0110	Packaged Configuration	1
2109	Processor (32 MB)	1	2109	Processor (32 MB)	1	2109	Processor (32 MB)	1
296x	Power Cord ¹	1	296x	Power Cord ¹	1	296x	Power Cord ¹	1
5135	Feature Power Supply	1	5135	Feature Power Supply	1	3182	32 MB Main Storage	1
5517	Alt-IPL Specify	1	5517	Alt-IPL Specify	1	5517	Alt-IPL Specify	1
	QIC-2500			QIC-2500			QIC-2500	
5520	Complete System Specify	1	5520	Complete System Specify	1	5520	Complete System Specify	1
6380	2.5 GB ¼-inch Cartridge	1	6380	2.5 GB ¼-inch Cartridge	1	6380	2.5 GB ¼-inch Cartridge	1
	Tape Unit			Tape Unit			Tape Unit	
6606	1.96 GB Disk Unit	1	6606	1.96 GB Disk Unit	1	6606	1.96 GB Disk Unit	1
7000	Panel Keylock Feature	1	7000	Panel Keylock Feature	1	7000	Panel Keylock Feature	1
8609	EIA 232/V.24 Two-Line	1	8609	EIA 232/V.24 Two-Line	1	8609	EIA 232/V.24 Two-Line	1
	Adapter	1		Adapter			Adapter	
9023	EIA 232/V.24 Enhanced	2	8717	Base 32 MB 1-Port	1	8717	Base 32 MB 1-Port	1
	Cable			Integrated PC Server			Integrated PC Server	
9108	Standard Expansion Gate	1		(formerly known as FSIOP)			(formerly known as FSIOP)	
9172	Standard MFIOF Twinaxial	1	9023	EIA 232/V.24 Enhanced	2	9023	EIA 232/V.24 Enhanced	2
9319	Standard DASD Package	1		Cable			Cable	
9520	Base CD-ROM	1	9024	802.5 Token Ring Cable	1	9024	802.5 Token Ring Cable	2
9606	Base 1.96 GB Disk Unit	1		(2.44 M)			(2.44 M)	
9617	Ethernet/IEEE 802.3	1	9108	Standard Expansion Gate	1	9108	Standard Expansion Gate	1
	CSMA/CD Adapter	1	9172	Standard MFIOF Twinaxial	1	9172	Standard MFIOF Twinaxial	1
			9319	Standard DASD Package	1	9319	Standard DASD Package	1
			9520	Base CD-ROM	1	9520	Base CD-ROM	1
			9606	Base 1.96 GB Disk Unit	1	9606	Base 1.96 GB Disk Unit	1
Allowable substitutions: In place of #2109: 2110 Processor or 2111 Processor or 2112 Processor (2111 or 2112 require two 9282 Base 32 MB Main Storage or two 8210 64 MB Main Storage features) In place of #9617: 9619 Base 16/4Mbps Token Ring Adapter/HP			Allowable substitutions: In place of #2109: 2110 Processor or 2111 Processor or 2112 Processor (2111 or 2112 require two 9282 Base 32MB Main Storage or two 8210 64MB Main Storage features) In place of #8717: 8718 Base 48 MB 1-Port or 8719 Base 64 MB 1-Port or 8727 Base 32 MB 2-Port or 8728 Base 48 MB 2-Port or 8729 Base 64 MB 2-Port Integrated PC Server In place of #9024: 9025 Ethernet Cable (3M) As of February 1997, #8717 was replaced by #6616 Integrated PC Server with #2861 32 MB Integrated PC Server Memory, #9249 Base Token Ring IOA and #9116 2 Book Cage High Performance Enabler. In place of #9249, #9381 Base Ethernet IOA can be ordered and in place of #2862, 128 MB IPCS Memory can be ordered.			Allowable substitutions: In place of #2109: 2110 Processor or 2111 Processor or 2112 Processor (2111 or 2112 require one 9110 Base 64 MB Main Storage and one 3110 64 MB Main Storage features) In place of #3182: 3110 64MB Main Storage In place of #8718: 8719 Base 64 MB 1-Port or 8728 Base 48 MB 2-Port or 8729 Base 64 MB 2-Port Integrated PC Server In place of #9024: 9025 Ethernet Cable (3M) As of February 1997, #8718 was replaced by #6616 Integrated PC Server with #2861 32 MB Integrated PC Server Memory, #9249 Base Token Ring IOA and #9116 2 Book Cage High Performance Enabler. In place of #9249, #9381 Base Ethernet IOA can be ordered and in place of either or both #2861, #2862, 128 MB IPCS Memory can be ordered.		
Note: 1. Country Specific. Additional no charge codes and configurations specify codes for hardware are added as required by the configurator. All packages can have optional hardware added up to the configuration limits.								

9402	System Unit	1
0044	Data Loss Protection	1
0110	Packaged Configuration	1
2109	Processor (32 MB)	1
296x	Power Cord ¹	1
3110	64 MB Main Storage	1
5135	Feature Power Supply	1
5514	Alt-IPL Specify for 7208	1
5520	Complete System Specify	
6390	7.0 GB 8 mm Cartridge Tap Unit	1
6522	Disk Unit Controller for RAID	1
6606	1.96 GB Disk Unit	5
7000	Panel Keylock Feature	1
7117	Integrated Expansion Unit	1
8609	EIA 232/V.24 Two-Line Adapter	1
8718	Base 48 MB 1-Port Integrated PC Server (formerly known as FSIOP)	1
9023	EIA 232/V.24 Enhanced Cable	2
9024	802.5 Token Ring Cable (2.44 M)	1
9108	Standard Expansion Gate	1
9172	Base MFIOF Twinaxial	1
9244	Base 300 W Power Supply	1
9319	Standard DASD Package	1
9520	Base CD-ROM	1
9606	Base 1.96 GB Disk Unit	1
<p>Allowable substitutions:</p> <p>In place of #2109:</p> <p>2110 Processor or</p> <p>2111 Processor or</p> <p>2112 Processor</p> <p>(2111 or 2112 require one 9110 Base 64 MB Main Storage feature). In place of #8718:</p> <p>8719 Base 64 MB 1-Port or</p> <p>8728 Base 48 MB 2-Port or</p> <p>8729 Base 64 MB 2-Port Integrated</p> <p>PC Server</p> <p>In place of #9024:</p> <p>9025 Ethernet Cable (3M)</p> <p>As of February 1997, #8718 was replaced by #6616 Integrated PC Server with #2861 32 MB Integrated PC Server Memory, #9249 Base Token Ring IOA and #9116 2 Book Cage High Performance Enabler. In place of #9249, #9381 Base Ethernet IOA can be ordered and in place of either or both #2861, #2862, 128 MB IPCS Memory can be ordered.</p>		
<p>Note: 1. Country Specific. Additional no charge codes and configurations specify codes for hardware are added as required by the configurator. All packages can have optional hardware added up to the configuration limits.</p>		

Chapter 13. AS/400e 5xx Models

13.1 9406 500, 510, and 530 Models Overview

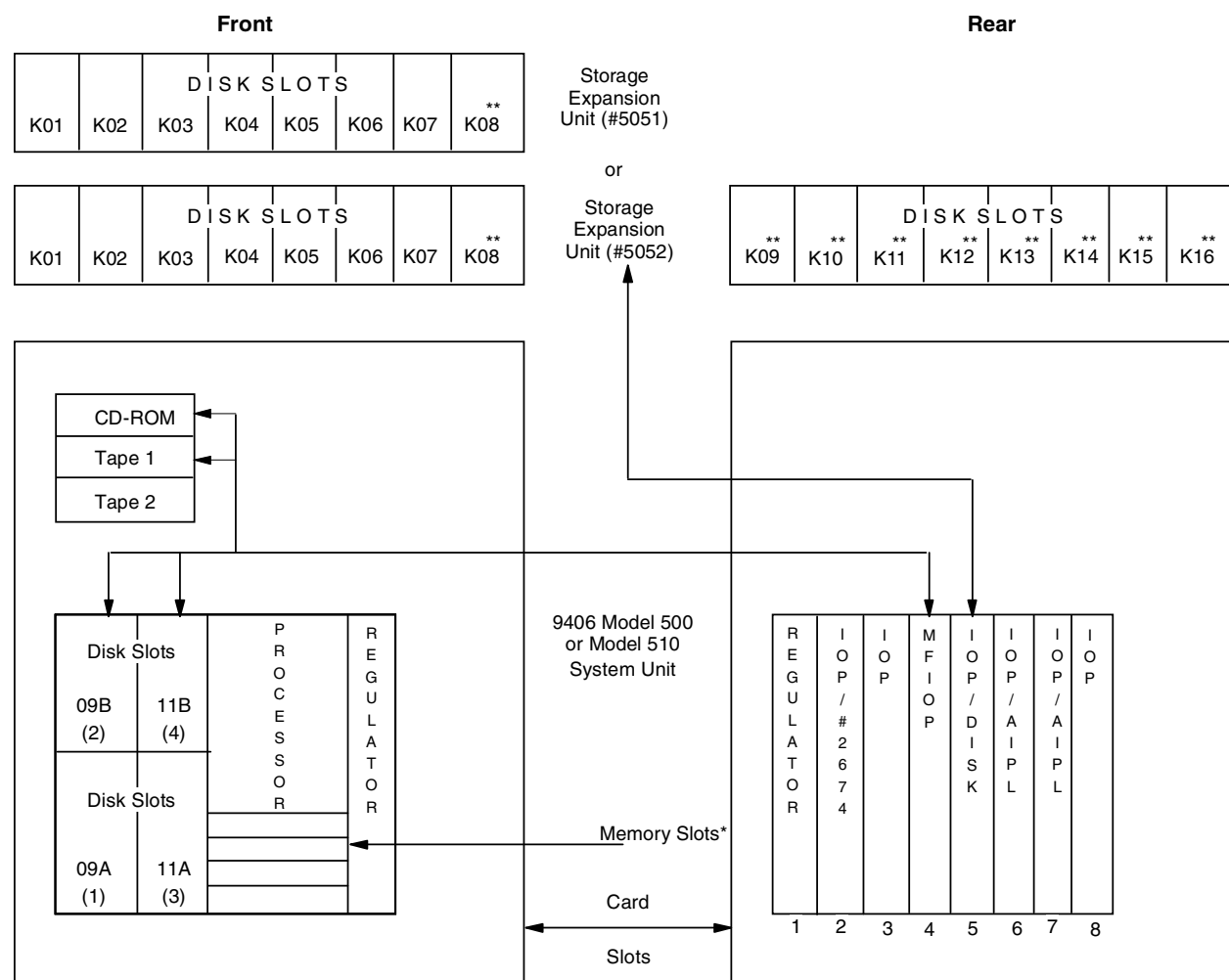
Model	500			510		530				
Processor Feature	#2140	#2141	#2142	#2143	#2144	#2150	#2151	#2152	#2153	#2162
Relative System Performance (CPW-V3R6) (See Note 1)	18.7	26.9	38.3	66.7	85.0	107.1	132.5	198.7	299.0	349.8
Relative System Performance (CPW-V3R7) (See Note 1)	21.4	30.7	43.9	77.7	104.2	131.1	162.7	278.8	459.3	509.9
Relative System Performance (CPW-V4) (See Note 1)	21.4	30.7	43.9	81.6	111.5	148.0	188.2	319.0	598.0	650.0
Relative System Performance (RAMP-C) (See Note 2)	6.4	9.3	12.6	21.6	28.5	37.4	48.9	74.0	119.2	†
Number of N-Way Multiprocessors	1	1	1	1	1	1	1	2	4	4
Main Storage (MB)	64-768	64-768	64-1024	256-1024	256-1024	512-4096	512-4096	512-4096	512-4096	512-4096
Disk Storage Base (GB)										
V3R6/R7		1.96			1.96			1.96		
V4		4.19			4.19			4.19		
Maximum Internal-GB										
V3R6/R7		150.99			318.76			520.09		
V4		652.80			652.80			996.40		
Maximum External-GB										
V3R6/R7		134.21			301.98			503.31		
V4		618.40			618.40			962.00		
Maximum Combined-GB										
V3R6/R7		150.99			318.76			520.09		
V4		652.80			652.80			996.40		
Disk Unit IOPS										
Internal		0-13			0-13					
External		0-16			0-28					
Minimum Feature Card Slots		6			6			4		
Maximum Feature Card Slots		83			83			238		
Communications Lines		1-33			1-96			1-200		
LAN Ports		0-16			0-16			0-32		
ATM Ports		0-8			0-8			0-16		
Maximum Workstation Controllers										
Twinaxial/ASCII/LocalTalk		35			60			175		
Maximum Workstations-1 minim.										
Twinaxial		1400			2400			7000		
ASCII		630			1080			3150		
LocalTalk		1085			1860			5425		
¼-Inch/8mm Cartridge Tape (Internal)		0-9			0-17			0-17		
½-Inch Tape										
9348/2440		0-4			0-4			0-4		
34xx/35xx		0-4			0-4			0-4		
8mm Cartridge Tape (External)		0-4			0-4			0-4		
Tape Libraries		0-2			0-2			0-2		
Optical Libraries		0-14			0-14			0-22		
Diskettes (5¼-inch or 8-inch)		0-2			0-2			0-2		
Fax Adapters		0-16			0-32			0-32		
Cryptographic Processors		0-1			0-1			0-1		
System I/O Buses		1-7			1-7			1-19		
System Expansion										
#507x/#508x		0-6			0-6			0-18		
Bus Extension										
#5044		0-3			0-3			0-9		
Storage Expansion										
#5051		0-1			0-1					
#5052/#5058		0-7			0-7			0-18		
#8052/#9051								1		

Note 1:

Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.

Note 2:	The relative system performance ratios are estimated based on iSeries and AS/400e environment RAMP-C workload, with a 9404 Model B10 with 16 MB of Main Storage and 945 MB of disk equalling 1.0. The ratios shown were estimated at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments.
†	Processors announced in September 1996 and later do not have RAMP-C performance measurements. See Note 1.

13.2 9406 Model 500 and 510 System Unit



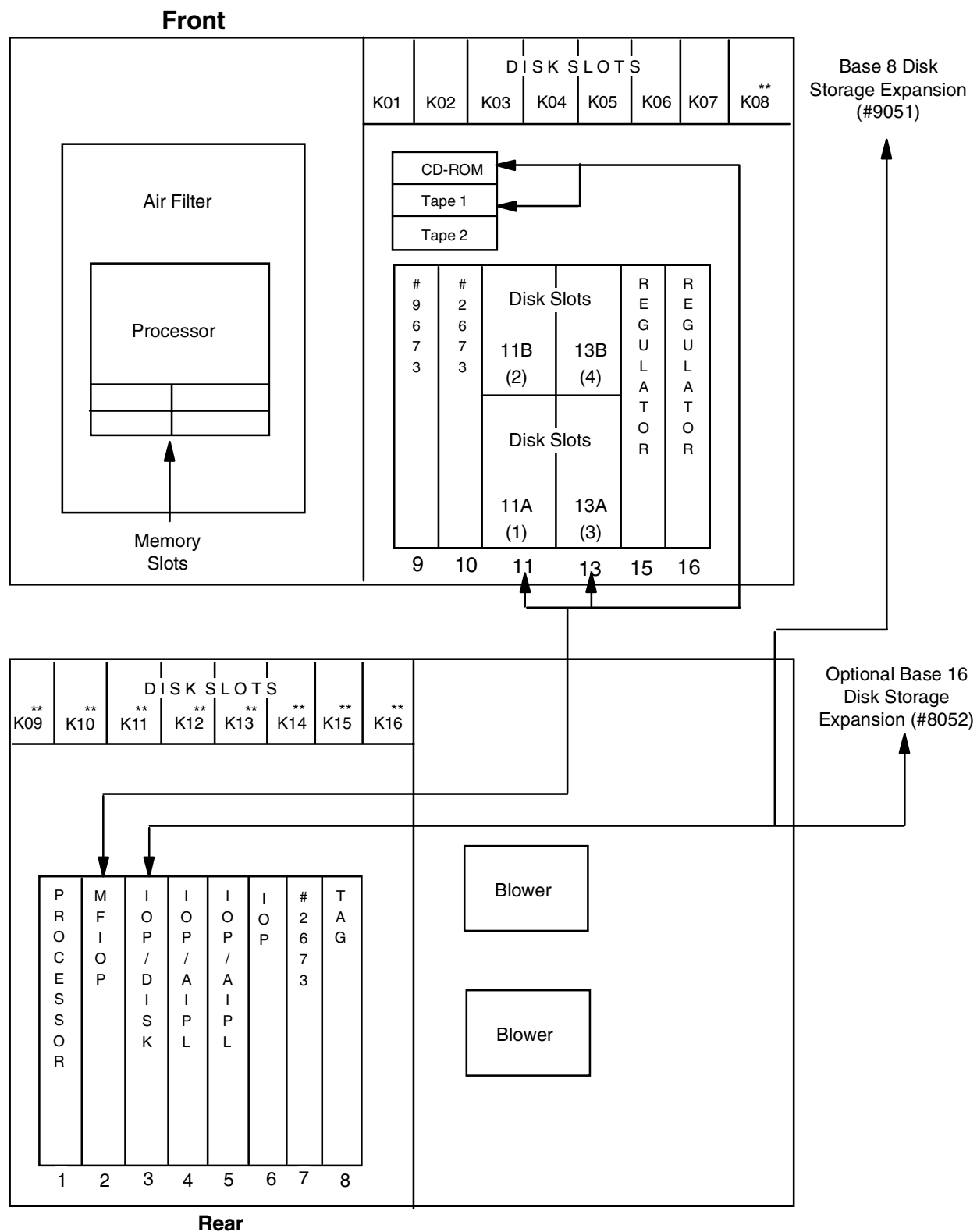
** One-byte DASD cannot be installed in disk slots 8 through 16

* Fourth memory slot available on Model 500-2142 and Model 510 only.

Notes:

1. If the #5051 or #5052 Storage Expansion Unit is installed, Slot 5 is occupied by the disk controller card (#6502, #6512, #6530, #6532, or #6533).
2. If the Optical Bus Adapter (#2674) is installed, it must occupy Slot 2.
3. If an external tape unit is used for alternate IPL, then the Tape Controller card to which it is attached would be in Slot 6 or Slot 7.
4. The base 9406 Model 500 and Model 510 does not include a tape drive as standard. The #2624 or #6513 is required to support the second internal tape.
5. Main storage cards are installed on the processor card and require one slot each. There are three slots on the Model 500 #2140 and #2141 and four on the Model 500 #2142 and Model 510. On the Model 500 #2142 and the Model 510, main storage cards must be added in pairs of equal capacity.

13.3 9406 Model 530 System Unit

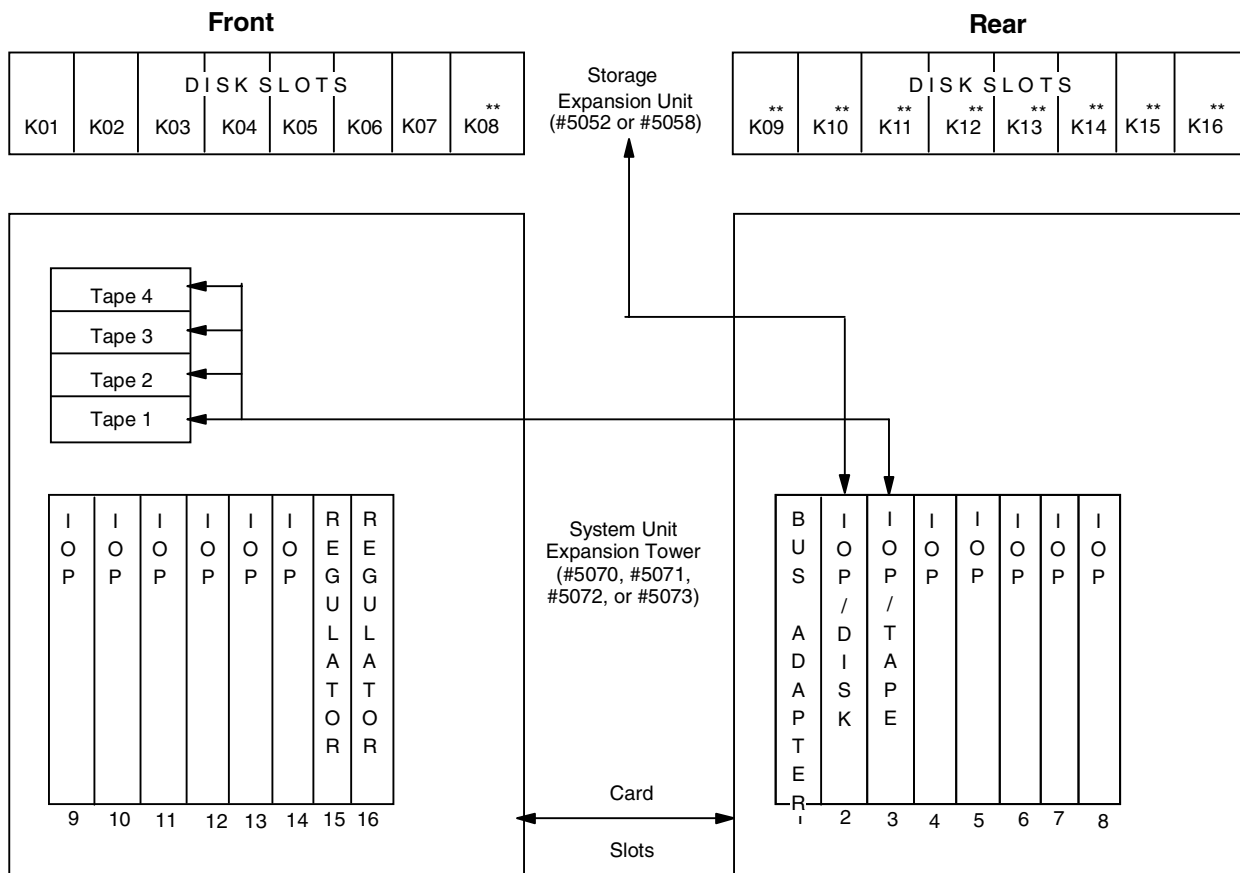


** One-byte disks cannot be installed in disk slots 8 through 16.

Notes:

1. The Optional Base 16 Disk Storage Expansion (#8052) increases the number of disks supported in the System Unit from 8 to 16.
2. The base and optional Optical Bus Adapters (#9673 and #2673) occupy Slot 9 and Slot 10.
3. If a 3590 Tape Device is attached to the System Unit Bus, no disk controller cards other than the MFIOP can be used on bus 0. This means that #9051 and #8052 are not supported.
4. If an external tape unit is used for alternate IPL, the Tape Controller card to which it is attached would be in Slot 4 or Slot 5.
5. The base 9406 Model 530 does not include a tape drive as standard. The #2624 or #6513 is required to support the second internal tape.
6. Main storage cards are installed on the processor board and require one slot each. There are four slots on the Model 530 and main storage cards must be added in pairs of equal capacity.

13.4 #507x System Unit Expansion Tower and Storage Expansion Unit



** One-byte disks cannot be installed in disk slots K08 through K16.

Notes:

1. The #5070 and #5071 are supported on 9406 Models 500 and 510. The #5072 and #5073 are supported on 9406 Model 530.
2. The #5071 and #5073 support the #5058, which is Ultra SCSI. The #5070 and #5072 are fast SCSI and support the #5052.
3. Slot 1 is occupied by the Bus adapter card.
4. Slot 2 is occupied by the disk controller card (#6502, #6512, #6530, #6532, or #6533) if #5052 or #5058 is attached.
5. Slot 3 is occupied by #2624 or #6513 if the #5070, #5071, #5072, or #5073 contains internal tape units.
6. Slots 4 through 14 are available for I/O feature cards.

5xx Models



1. The #5080 and #5081 are supported on 9406 Models 500 and 510. The #5082 and #5083 are supported on 9406 Model 530.
2. The #5081 and #5083 are used for Ultra SCSI disks and support the #5058, which is also Ultra SCSI. The #5080 and #5082 are fast SCSI and support the #5052.
3. Slot 3 is occupied by the disk controller (#6502, #6512, #6530, #6532, or #6533) that supports the disk slots in the #5080, #5082, or #5083.
4. Slot 4 is occupied by the disk controller (#6502, #6512, #6530, #6532, or #6533) that supports the disk slots in the #5052 or #5058 if attached.

13.6 9406 Advanced System Models 500, 510, and 530

PROCESSORS	
#2140	6.4 RSP RAMP-C, 18.7 RSP CPW (V3R6), 21.4 RSP CPW (V3R7, V4R1, V4R2, and V4R3) Processor. Base Memory 64 MB. Model 500 only.
#2141	9.3 RSP RAMP-C, 26.9 RSP CPW (V3R6), 30.7 RSP CPW (V3R7, V4R1, V4R2, and V4R3) Processor. Base Memory 6 MB. Model 500 only.
#2142	12.6 RSP RAMP-C, 38.3 RSP CPW (V3R6), 43.9 RSP CPW (V3R7, V4R1, V4R2, and V4R3) Processor. Base Memory 64 MB. Model 500 only.
#2143	21.6 RSP RAMP-C, 66.7 RSP CPW (V3R6), 77.7 RSP CPW (V3R7), 81.6 RSP CPW (V4R1, V4R2, and V4R3) Processor. Base Memory 256 MB. Model 510 only.
#2144	28.5 RSP RAMP-C, 85.0 RSP CPW (V3R6), 104.2 RSP CPW (V3R7), 111.5 RSP CPW (V4R1, V4R2, and V4R3) Processor. Base Memory 256 MB. Model 510 only.
#2150	37.4 RSP RAMP-C, 107.1 RSP CPW (V3R6), 131.1 RSP CPW (V3R7), 148.0 RSP CPW (V4R1, V4R2, and V4R3) Processor. Base Memory 512 MB. Model 530 only.
#2151	48.9 RSP RAMP-C, 132.5 RSP CPW (V3R6), 162.7 RSP CPW (V3R7), 188.2 RSP CPW (V4R1, V4R2, and V4R3) Processor. Base Memory 512 MB. Model 530 only.
#2152	74.0 RSP RAMP-C, 198.7 RSP CPW (V3R6), 278.8 RSP CPW (V3R7), 319.0 RSP CPW (V4R1, V4R2, and V4R3) 2-way Processor. Base Memory 512 MB. Model 530 only.
#2153	119.2 RSP RAMP-C, 299.0 RSP CPW (V3R6), 459.3 RSP CPW (V3R7), 598.0 RSP CPW (V4R1, V4R2, and V4R3) 4-way Processor. Base Memory 512 MB. Model 530 only.
#2162	349.8 RSP CPW (V3R6), 509.9 RSP CPW (V3R7), 650.0 RSP CPW (V4R1, V4R2, and V4R3) 4-way Processor. Base Memory 512 MB. Model 530 only. Prerequisite V3R6 with #1988, V3R7, V4R1, V4R2, or V4R3.
POWER AND PACKAGING	
#0090	Storage Expansion Unit (#5052) Located on System Unit This feature indicates that a Storage Expansion Unit (#5052) is located on the System Unit for Model 500 or 510. It is not supported on the Model 530.
#2673 #9673	Optical Bus Adapter (1063 Mbps) This feature allows for the addition of up to six optical buses on the Model 530. The #2686 or #2688 are required to attach the buses. The #9673 is the base optical bus adapter on the Model 530. Maximum: Two Card slots used: one
#2674	Optical Bus Adapter (266 Mbps) This feature allows for the addition of up to six optical buses on the Models 500 and 510. The #2686 is required to attach the buses. Maximum: One Card slots used: one
#2686	Optical Link Processor (266 Mbps) This is a daughter card that allows for the addition of up to two optical buses to an Optical Bus Adapter (#2674, #2673, or #9673). It can attach up to two #5070s or #5080s or one #5044. A maximum of three #2686 are allowed per optical bus adapter. Both #2686 and #2688 may be installed on the same optical bus adapter as long as the total number does not exceed three. Card slots used: None

#2688	Optical Link Processor (1063 Mbps) This is a daughter card that allows for the addition of up to two optical buses to an Optical Bus Adapter (#2673 or #9673) on the Model 530. It can attach up to two #5072s or #5082s. A maximum of three #2688s are allowed per optical bus adapter. Both #2686 and #2688 may be installed on the same optical bus adapter as long as the total number does not exceed three. Card slots used: None
#5043	Primary to Secondary Rack This feature provides for the conversion of a 9406 E or F Model System Unit rack to a 9309 #9171 type rack. The new rack retains the #5043. Only available when upgrading from 9406 E or F models to 9406 Model 5x0.
#5044	System Unit Expansion Rack This is a twelve I/O card slot cage in a rack enclosure. Each unit provides two buses with six I/O card slots per bus. The #5044 is not available as a new feature but is a conversion of the #5042 rack. Requires #2686 and #2673/#9673/#2674 to attach.
#5051 #9051	Storage Expansion Unit for System Unit This feature provides space for up to eight disk units. It attaches to the top of Model 500 and 510 System Units. The #5143 Power Feature is a prerequisite on all models. The #9051 is the base Storage Expansion Unit for the Model 530.
#5052	Storage Expansion Unit This feature provides space for up to sixteen disk units. It attaches to the top of Model 500 and 510 System Units and System Unit Expansion Towers #5070 and #5072 and Storage Expansion Towers #5080 and #5082. Only one #5052 per tower is supported and #5143 Power Supply may be required.
#5058	Storage Expansion Unit (Ultra SCSI) This feature provides space for up to 16 disk units. It attaches to System Unit Expansion Towers #5071 and #5073 and Storage Expansion Towers #5081 and #5083. Only one #5058 per tower is supported.
#5070	266 Mbps System Unit Expansion Tower This feature provides an I/O Tower for creating additional buses on Models 500 and 510. It includes a 266 Mbps optical bus card, thirteen I/O card slots, space for up to four internal tape units, one battery backup (#9245), and two power supplies (#9240 and #9243). The #2686 and #2674 are prerequisites. It can support one #5052 Storage Expansion Unit with #5143 Power Supply. Due to power restrictions there is a limitation on some high powered features based in a #5070. This may mean that an additional #5070 is required.
#5071	266 Mbps System Unit Expansion Tower (Ultra SCSI) This feature provides an I/O Tower for creating additional buses on Models 500 and 510. It includes a 266 Mbps optical bus card, thirteen I/O card slots, space for up to four internal tape units, one battery backup, and two power supplies. The #2686 and #2674 are prerequisites. It can support one #5058 Storage Expansion Unit. Due to power restrictions, there is a limitation on some high powered features based in a #5071. This may mean that an additional #5071 is required. The #5071 supports Ultra SCSI disks in the #5058 and replaces the #5070 for new orders.
#5072	1063 Mbps System Unit Expansion Tower This feature provides an I/O Tower for creating additional buses on Model 530. It includes a 1063 Mbps optical bus card, thirteen I/O card slots, space for up to four internal tape units, one battery backup (#9245), and two power supplies (#9240 and #9243). The #2688 and #2673/#9673 are prerequisites. It can support one #5052 Storage Expansion Unit with #5143 Power Supply. Due to power restrictions, there is a limitation on some high powered features based in a #5072. This may mean that an additional #5072 is required.
#5073	1063 Mbps System Unit Expansion Tower (Ultra SCSI) This feature provides an I/O Tower for creating additional buses on Model 530. It includes a 1063 Mbps optical bus card, thirteen I/O card slots, space for up to four internal tape units, one battery backup, and two power supplies. The #2688 and #2673/#9673 are prerequisites. It can support one #5058 Storage Expansion Unit. Due to power restrictions, there is a limitation on some high powered features based in a #5073. This may mean that an additional #5073 is required. The #5073 supports Ultra SCSI disks in the #5058 and replaces the #5072 for new orders.
#5080	266 Mbps Storage Expansion Tower This feature provides a DASD Tower on Models 500 and 510 for adding up to 16 disk units (a total of 32 disk units are possible with the addition of #5052). It includes a 266 Mbps optical bus card, two I/O card slots for the disk IOPs (#6052, #6512, #6530, #6532, or #6533), one battery backup (#9245), and two power supplies (#9240 and #9243). The #2686 and #2674 are prerequisites.
#5081	266 Mbps Storage Expansion Tower (Ultra SCSI) This feature provides a DASD Tower on Models 500 and 510 for adding up to 16 disk units (a total of 32 disk units are possible with the addition of #5058). It includes a 266 Mbps optical bus card, two I/O card slots for the disk IOPs (#6502, #6512, #6530, but the new #6532 or #6533 is recommended), one battery backup, and two power supplies. The #2686 and #2674 are prerequisites. The #5081 supports Ultra SCSI disk units and replaces the #5080 for new orders.

#5082	1063 Mbps Storage Expansion Tower This feature provides a DASD Tower on Model 530 for adding up to 16 disk units (a total of 32 disk units are possible with the addition of #5052). It includes a 1063 Mbps optical bus card, two I/O card slots for the disk IOPs (#6502, #6512, #6530, #6532, or #6533), one battery backup (#9245), and two power supplies (#9240 and #9243). The #2688 and #2673/#9673 are prerequisites.
#5083	1063 Mbps Storage Expansion Tower (Ultra SCSI) This feature provides a DASD Tower on Model 530 for adding up to 16 disk units (a total of 32 disk units are possible with the addition of #5058). It includes a 1063 Mbps optical bus card, two I/O card slots for the disk IOPs (#6502, #6512, #6530, but the new #6532 or #6533 is recommended), one battery backup, and two power supplies. The #2688 and #2673/#9673 are prerequisites. The #5083 supports Ultra SCSI disk units and replaces the #5082 for new orders.
#5143	Feature Power Supply This is a 400-watt power supply feature required when one of the following conditions applies: Adding the second internal tape unit into the System Unit of Model 500 Adding Storage Expansion Unit #5051 to Model 500 System Unit Adding Storage Expansion Unit #5052 to a System Unit Expansion Tower (#5070 or #5072) or to a Model 500 System Unit Adding a Storage Expansion Unit to a Storage Expansion Tower (#5080 or #5082). Certain combinations of high powered features may also mean that #5143 is required in a Model 500. Only one #5143 is allowed per tower. Card slots used: None
#5144	Additional Battery Back-up (External) This feature is required when the Main Storage capacity exceeds 384 MB on Models 310 and 320. It involves the removal of the #9245 Base Battery Backup. It is allowed on Models 500 and 510 when upgrading from a 310 or 320 that required it. The #5144 is not required on new Model 500 or 510. It is not supported at all on a Model 530. Card slots used: None
#5145	Additional Battery Back-up (Internal) This feature is available for Models 500 and 510 where additional Continuously Powered Main Storage (CPM) time is desired, in the event of a system failure. Card slots used: None
#8052	Optional Base 16 Disk Storage Expansion Unit This feature provides space for up to sixteen disk units and is available only on the System Unit of the Model 530. Replaces the #9051. The #8052 is not allowed when the 3590 tape is the alternate IPL device. Maximum: one
#9240	400 Watt Power Supply This feature is required on all Model 500, 510, and 530 System Units and on Expansion Towers (#5070, #5072, #5080 and #5082). Card slots used: None
#9243	Base Feature Power Supply This feature provides a 400-watt power supply that is required on all Model 500, 510, and 530 System Units, and on Expansion Towers (#5070, #5072, #5080, and #5082). Model 510 and 530 System Unit require two #9243s Card slots used: None
#9245	Base Battery Backup This feature is the base battery backup used on all Model 500, 510, and 530 System Units and on Expansion Towers (#5070, #5072, #5080, and #5082). Models 530 System Unit requires two #9245s. Card slots used: None
MAIN STORAGE	
#3152	32 MB Main Storage Supported on Model 510. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair.
#3153	64 MB Main Storage Supported on Model 510. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair.
#3154	128 MB Main Storage Supported on Model 510. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair.
#3155	256 MB Main Storage Supported on Model 510. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair.

#3162	128 MB Main Storage Supported on Model 530 on processors #2150, #2151, #2152, and #2153 only. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair.
#3163	256 MB Main Storage Supported on Model 530 on processors #2150, #2151, #2152, and #2153 only. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair.
#3164	512 MB Main Storage Supported on Model 530 on all processors. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair.
#3165	1024 MB Main Storage Supported on Model 530 on all processors. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair.
#3166	256 MB Main Storage Supported on Model 530 processor #2162 only. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair.
#3184	32 MB Main Storage Supported by Model 500 processor. Must be added in pairs on processor #2142. Requires one dedicated memory card slot. Maximum: Two on processor #2140 and #2141; one pair on processor #2142.
#3185	64 MB Main Storage Supported by Model 500 processor. Must be added in pairs on processor #2142. Requires one dedicated memory card slot. Maximum: Two on processor #2140 and #2141; one pair on processor #2142.
#3186	128 MB Main Storage Supported by Model 500 processor. Must be added in pairs on processor #2142. Requires one dedicated memory card slot. Maximum: Two on processor #2140 and #2141; one pair on processor #2142.
#3187	256 MB Main Storage Supported by Model 500 processor. Must be added in pairs on processor #2142. Requires one dedicated memory card slot. Maximum: Two on processor #2140 and #2141; one pair on processor #2142.
#7186	Optional Base 128 MB Main Storage Supported on Model 500 processors #2140 and #2141. It provides an optional 128 MB Main Storage card in place of the base 64MB card. Requires one dedicated memory card slot.
#7187	Optional Base 256 MB Main Storage Supported on Model 500 processors #2140 and #2141. It provides an optional 256 MB Main Storage card in place of the base 64 MB card. Requires one dedicated memory card slot.
#7255	Optional Base 256 MB Main Storage Supported on Model 510. It provides an optional 256 MB Main Storage card in place of the base 128 MB card. Must be added in pairs. Requires one dedicated memory card slot.
#8185	Optional Base 64 MB Main Storage Supported on Model 500 processor #2142. It provides an optional 64 MB Main Storage card in place of a base 32 MB card. Must be added in pairs. Requires one dedicated memory card slot.
#8186	Optional Base 128 MB Main Storage Supported on Model 500 processor #2142. It provides an optional 128 MB Main Storage card in place of a base 32 MB card. Must be added in pairs. Requires one dedicated memory card slot.
#8187	Optional Base 256 MB Main Storage Supported on Model 500 processor #2142. It provides an optional 256 MB Main Storage card in place of a base 32 MB card. Must be added in pairs. Requires one dedicated memory card slot.

#8264	Optional Base 512 MB Main Storage Supported on Model 530 on all processors. It provides an optional 512 MB Main Storage card in place of a base 256 MB card. Must be added in pairs. Required one dedicated memory card slot.
#8265	Optional Base 1024 MB Main Storage Supported on Model 530 on all processors. It provides an optional 1024 MB Main Storage card in place of a base 256 MB card. Must be added in pairs. Requires one dedicated memory card slot.
#9184	Base 32 MB Main Storage Supported on Model 500 processor #2142. Must be added in pairs. Requires one dedicated memory card slot.
#9185	Base 64 MB Main Storage Supported on Model 500 processors #2140 and #2141. Requires one dedicated memory card slot.
#9254	Base 128 MB Main Storage Supported on Model 510. Must be added in pairs. Requires one dedicated memory card slot.
#9263	Base 256 MB Main Storage Supported on Model 530 on processors #2150, #2151, #2152, and #2153 only. Must be added in pairs. Requires one dedicated memory card slot.
#9266	Base 256 MB Main Storage Supported on Model 530 on processor #2162 only. Must be added in pairs. Requires one dedicated memory card slot.
WORKSTATION CONTROLLERS	
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are #2699, #6149, #6180 and #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions. No more than seven #2629s can be placed in one #5070 or #5072 System Unit Expansion Tower. The #2629 cannot be placed in slot 14 of a #5070 or #5072. There is no restriction on placing the #2629 in #5071 or #5073 System Unit Expansion Tower. Requires V4R1. Card slots required: One
#5540	Console attached to Twinaxial Workstation Controller Specify Prerequisite is #9162 MFIOP.
#5541	Console attached to ASCII Workstation Controller Specify Prerequisite is #9163 MFIOP. An ASCII controller #6141/#9141 is automatically included when #5541 is specified to control the ASCII system console.
#5542	Console attached to LocalTalk Workstation Adapter Specify
#5543	Client Access/400 Console Specify Specifies a PC workstation to act as the system console. Prerequisites include a one-line communications adapter (#2612 or #9612) and a console attachment cable (#9026 or #9027). #9026 Console attachment cable (6m) #9027 Console attachment cable (2.5m)
#6050	Enhanced Twinaxial Workstation Controller One eight-port workstation attachment is provided to support 40 5250-type displays or printers. Requires one I/O card slot.
#6054 #9054	Workstation Adapter for Apple Macintosh (LocalTalk) See Communications section.
#6140	Twinaxial Workstation Controller Provides eight ports to support a maximum of 40 twinaxial devices. Requires one I/O card slot.
#6141 #9141	ASCII Workstation Controller This six-port workstation controller and workstation adapter supports up to six ASCII devices. Requires one I/O card slot.

#6142	ASCII 12-Port Workstation Attachment This attachment plugs into the ASCII Workstation controller #6141/#9141 providing an additional 12 ports. One #6142 can be attached per #6141/#9141. 18 ASCII devices can now be support. Requires no I/O card slot.
#6180	Twinaxial Workstation IOA One eight-port attachment is provided to support up to 40 twinaxial devices. Requires V4R1. Prerequisite for #6180: #2629. IOA slots required for #6180: One #2629 slot
#9149	Twinaxial Passthru Adapter #9149 adapts a twinaxial cable to the twinaxial function that resides inside the #9162/#8162. It is a prerequisite of #9162/#8162. When an external diskette drive is required on the system #9149 is replaced by #6147 Diskette Adapter.
#9162 #8162	MFIO with Twinaxial Support Both the #9152 and #8162 allow the attachment of 40 5250-type devices and provides support for a twinaxial console. They also support one #9149 is a prerequisite. The #8162 is not available for new orders.
#9163	MFIO without Twinaxial Support The #9163 does not support any 5250-type devices. When one #6054/#9054 is attached, #9163 controls a LocalTalk system console. Without #6054/#9054 attached, the system console is driven by the first workstation controller found when the system searches along the bus.
COMMUNICATIONS	
MFIO	Base Communications The Multifunction I/O Processor comes as standard on the Model 500, 510, or 530. The MFIO (#9162, #8162, or #9163) can support two communications lines. The first line (with an EIA 232/V.24 adapter) is supplied as standard (#9612) for use with IBM Electronic Customer Support. One cable must be specified: #9023 EIA 232/V.24 20ft (6m) enhanced cable #9835 EIA 232/V.24 50ft (15m) enhanced cable Maximum aggregate data rate: 83.2Kbps
#2605	ISDN Basic Rate Adapter Connects to the #2623 to support one communications line to an ISDN network. Each adapter supports two 64 Kbps B channels and one 16 Kbps D channel. ISDN lines are full duplex. Requires no I/O card slots. Not supported in Canada. Note: This adapter cannot be attached to #2623 that also attaches V.24, X.21, or V.35 adapters.
#2609	EIA 232/V.24 Two-Line Adapter Connects to the #2623 to support two communications lines using ASYNC, BSC, SDLC or X.25 protocol. Requires no I/O card slots. Two cables must be specified: #9023 EIA 232/V.24 20ft (6m) enhanced cable #9835 EIA 232/V.24 50ft (15m) enhanced cable #9022 EIA 232/V.24 20ft (6m) cable #9836 EIA 232/V.24 50ft (15m) cable
#2610	X.21 Two-Line Adapter Connects to the #2623 to support two communications lines using X.21 or X.25 networks. Requires no I/O card slots. Two cables must be specified: #9021 X.21 20ft (6m) cable #9839 X.21 50ft (15m) cable
#2612	EIA 232/V.24 One-Line Adapter This adapter connects to the MFIO and Six-Line Communications Controller (#2623) to support one communications line using ASYNC, BSC, SDLC or X.25 protocol. Requires no I/O card slots. One cable must be specified (see cable features for #2609)
#2613	V.35 One-Line Adapter Connects to MFIO and #2623 supporting one V.35 line using either BSC, SDLC, or X.25 protocols. Requires no I/O card slots. One cable must be specified: #9020 V.35 20ft (6m) cable #9838 V.35 50ft (15m) cable
#2614	X.21 One-Line Adapter Connects to MFIO and #2623 to attach one communications line to an X.21 or X.25 network. Requires no I/O card slots One cable must be specified (see cable features for #2610).

#2620	Full Cryptographic Processor This feature provides full cryptographic support for encrypting and decrypting data. This feature consists of an I/O processor card and cable to attach an optional 4754-001. Distribution of this feature is restricted by US Government export regulations. In countries outside the USA and Canada, it may be marketed only to financial institutions and subsidiaries of US companies. Requires one I/O card slot
#2623	Six-Line Communications Controller This controller provides basic control and common circuits for up to six lines. Requires one I/O card slot
#2628	Limited Cryptographic Processor Provides same functions as #2620 except for Data Encryption Standard based data scrambling. Instead it used Commercial Data Masking Facility for data scrambling. Supports attachment of optional 4754-L01. Does not require US Customs clearance. Requires one I/O card slot
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are #2699, #6149, #6180 and #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions. No more than seven #2629s can be placed in one #5070 or #5072 System Unit Expansion Tower. The #2629 cannot be placed in slot 14 of a #5070 or #5072. There is no restriction on placing the #2629 in the #5071 or #5073 System Unit Expansion Tower. Requires V4R1. Card slots required: One
#2664	Integrated Fax Adapter Provides the iSeries or AS/400e with two ports capable of transmission and receipt of facsimile data to or from a Group 3 capable Fax, another iSeries or AS/400e with an integrated Fax adapter, or PCs with appropriately programmed Fax adapters. Requires one I/O card slot.
#2666	High-Speed Communications Adapter Provides the iSeries or AS/400e with one communications port capable of high speed communication over public or private Frame Relay networks or point-to-point non-switched SDLC lines. Speeds up to 2.048 Mbps are possible. Requires one I/O card slot. One of the following cables must be specified: #9879 6m V.35 cable #9880 24m V.35 cable * #9882 6m V.36/EIA 449 cable #9883 24m V.36/EIA 449 cable ** #9884 45m V.36/EIA 449 cable ** #9885 6m X.21 cable * Line speeds up to 64Kbps only ** Use of these longer cables require that the attaching Data Communications Equipment (DCE) support the V.36 transmitter signal element timing Data Terminal Equipment (DTE) source signal. #2666 is classed as a communications line for purpose of maximum comms lines per model.
#2699	Two-Line WAN IOA Supports up to two multiple protocol communications ports when any one or two (in any combination) of the following cables are attached: #0329 V.24/EIA 232 80ft (24m) cable #0330 V.24/EIA 232 20ft (6m) cable #0331 V.24/EIA 232 50ft (15m) cable #0332 V.24/EIA 232 20ft (6m) enhanced cable #0333 V.24/EIA 232 50ft (15m) enhanced cable #0334 V.24/EIA 232 80ft (24m) enhanced cable #0335 V.36/EIA 449 20ft (6m) cable #0336 V.36/EIA 449 50ft (15m) cable #0337 V.36/EIA 449 150ft (45m) cable #0338 V.35 20ft (6m) cable #0339 V.35 50ft (15m) cable #0340 V.35 80ft (24m) cable #0341 X.21 20ft (6m) cable #0342 X.21 50ft (15m) cable There are some restrictions on communications using the #2699. For full details, see the #2699 description in 9.13, "9406 Models 640 and 650" on page 251. Requires V4R1. Prerequisite for #2699: #2629 IOA slots required for #2699: One on #2629

#6054 #9054	Workstation Adapter for Apple Macintosh (LocalTalk) Allows Apple Macintosh computer devices to attach directly to the iSeries or AS/400e. Also allows for connection to LocalTalk networks. Each adapter allows attachment of 31 Apple Macintosh devices with up to 56 sessions. The #6054 attaches to the #2623 The #9054 attaches to the MFIOF A maximum of one #6054/#9054 can be attached per #2623/MFIOF. A second adapter on the #2623 may be X.21, V.24 or V.35. The third adapter position <i>must not</i> be used. A single-line EIA 232/V.24 adapter may co-reside with #9054 on MFIOF. The #9054 cannot be added to MFIOF #9173.
#9612	Standard EIA 232/V.24 One-Line Adapter This adapter provides support for one communications line using either ASYNC, BSC, SDLC or X.25 protocol. Specify one of the following cables for ECS: #9023 EIA 232/V.24 enhanced cable (20ft) #9835 EIA 232/V.24 enhanced cable (50ft) #9612 may also be used in conjunction with Client Access/400 console (#5543) and requires #9026/#9027 cables.
LANS/ATM	
#2617	Ethernet/IEEE 802.3 Adapter/HP Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. The customer must procure the Attachment Unit Interface (AUI) cable which connects between the adapter and the Ethernet/IEEE 802.3 transceiver. Requires one I/O card slot.
#2618	Fiber Distributed Data Interface Adapter Provides one interface to connect an iSeries or AS/400e to an FDDI LAN which complies with ANSI X3T9.5 and ISO 9314 standards. Requires one I/O card slot. Cables: requires multi-node (62.5/125) micron FDDI optical fiber jumper cables to connect the FDDI adapter into the FDDI ring. These must be separately ordered.
#2619	16/4 Mbps Token Ring Adapter/HP Provides a single attachment to a 16 Mbps or 4 Mbps IBM Token Ring Network. It consists of an adapter card, Internal Code, which supplies IEEE 802.5 Media Access Control and Logical Link Control functions, and an external 2.5m cable. Requires one I/O card slot.
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are the #2699, #6149, #6180 and #6181. LAN IOAs (#6149 and #6181) cannot occupy all three positions. No more than seven #2629s can be placed in one #5070 or #5072 System Unit Expansion Tower. The #2629 cannot be placed in slot 14 of a #5070 or #5072. There is no restriction on placing #2629 in #5071 or #5073 System Unit Expansion Tower. Card slots required: One
#2663	I/O Attachment Processor Provides the communications hardware base for the iSeries or AS/400e Wireless LAN Adapter (#2668). The #2663 and #2668 are integrated in a single hardware package to operate as a unit. Prerequisite for feature #2668. Shares one I/O card slot with #2668.
#2665	Shielded Twisted-Pair Distributed Data Interface Adapter Provides one interface to connect an iSeries or AS/400e to an FDDI LAN, which is constructed of IBM Cabling System Type 1, 2, 6, or 9 shielded twisted pair wiring. Requires one I/O card slot. Cables: The SDDI adapter requires IBM FDDI copper jumper cables to connect the adapter into the FDDI ring. These must be separately ordered.
#2668	Wireless LAN Adapter Provides wireless connectivity from iSeries or AS/400e servers to workstations or other systems connected to a wireless LAN network. The #2668 comes with an antenna and a cable for connecting the antenna to the adapter. One of the following antenna cables must be specified: #9814 20ft antenna cable #9815 50ft antenna cable One of the following antenna must be specified: #9890 Omni-directional antenna #9891 Hemispherical antenna #9892 Directional antenna Prerequisite: #2663

#2723	PCI Ethernet IOA Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. Has an RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Requires V4R2. Requires #6617 Integrated PC Server or #6618 Integrated Netfinity Server as a prerequisite.
#2724	PCI 16/4 Mbps Token Ring IOA Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code (supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions), and an external 8-foot (2.4m) cable. Alternatively, a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. Requires V4R2. Requires #6617 Integrated PC Server or #6618 Integrated Netfinity Server as a prerequisite.
#2810	LAN/WAN IOP This I/O processor is required to attach one #2838 PCI 100/10 Mbps Ethernet IOA or #2811/#2812/#2815/#2816/#2818/#2819 PCI ATM IOA. Prerequisite for the preceding features. Requires V4R1 to support #2838 or V4R2 to support any ATM IOA. Card slots required: One with any of the preceding features.
#2811	PCI 25 Mbps UTP ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Unshielded Twisted Pair (UTP) cabling. The #2811 is typically used where 25 Mbps speed is required over distances of less than 100 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Requires V4R2. Card slots required: One (with #2810) Prerequisite: #2810
#2812	PCI 45 Mbps Coax T3/DS3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the T3/DS-3 interface. The #2812 is typically used where 45 Mbps speed is required over distances of less than 1000 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Requires V4R2. Card slots required: One (with #2810) Prerequisite: #2810
#2815	PCI 155 Mbps UTP OC3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2815 is typically used where 155 Mbps speed is required over distances of less than 100 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Requires V4R2. Card slots required: One Prerequisite: #2810
#2816	PCI 155 Mbps MMF ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Multi-Mode Fibre (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2816 is typically used where 155 Mbps speed is required over distances of less than 2 kilometers. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Requires V4R2. Card slots required: One (with #2810) Prerequisite: #2810
#2818	PCI 155 Mbps SMF OC3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Single Mode Fibre (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment, but can be used for local area switches. The #2818 is typically used where 155 Mbps speed is required over distances of from 16 to 40 kilometers. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Requires V4R2. Card slots required: One (with #2810) Prerequisite: #2810

#2819	PCI 34 Mbps Coax E3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the E3 interface. #2819 is typically used where 34 Mbps speed is required over distances of less than 1000 meters. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Requires V4R2. Card slots required: One (with #2810) Prerequisite: #2810
#2838	PCI 100/10 Mbps Ethernet IOA Provides attachment to a standard 100 Mbps high speed Ethernet LAN and also allows attachment to existing 10 Mbps Ethernet LAN. The adapter comes with an RJ45 connector for attachment to UTP-5 media. Requires V4R1 with #2810 or V4R2 with #6617. Card slots required: One (with #2810) or three (with #6617 or #6618). Prerequisite: #2810 or #6617 or #6618
#6149	16/4 Mbps Token Ring IOA Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an IOA card, internal code which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) and an external 8ft (2.4m) Token Ring cable. Alternatively a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. The #6149 can operate in full or half-duplex mode. Requires V3R7 in #6616 or V4R1 in #2629. Card slots required: None Prerequisite: One #2629 or #6616 slot
#6181	Ethernet/IEEE 802.3 IOA Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus 802.2 Logical Link Control (LLC) functions. Has an RJ45 connector and a 15 pin D-shell connector for attachment of customer supplies cabling. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B. The #6181 can operate in full or half-duplex mode. Requires V3R7 in #6616 or V4R1 in #2629. Card slots required: None Prerequisite: One #2629 or #6616 slot
IPCS #6516 #6517 #6518 #6519 #6526 #6527 #6528 #6529	Integrated PC Server (formerly known as FSIOP) The Integrated PC Server connects to the iSeries or AS/400e to provide high performance serving to PCs attached through Token Ring or Ethernet networks. The IOP consists of an INTEL 80486 66MHZ processor and on board Main Storage (16 to 64 MB). The following initial order configurations can be field upgraded using #6509 and #6520: 16 MB One-Port Integrated PC Server 32 MB One-Port Integrated PC Server 48 MB One-Port Integrated PC Server 64 MB One-Port Integrated PC Server 16 MB Two-Port Integrated PC Server 32 MB Two-Port Integrated PC Server 48 MB Two-Port Integrated PC Server 64 MB Two-Port Integrated PC Server The following cables need to be specified depending on the network attaching into a Integrated PC Server Port: #9024 Token Ring Cable (2.44m) #9025 Ethernet Cable (3m AUI) The Integrated PC Server requires two contiguous card slots
#6509	Additional 16 MB for Integrated PC Server #6509 is used for expanding the memory of an installed Integrated PC Server. One to three #6509s may be installed per Integrated PC Server up to a maximum of 64 MB
#6520	Upgrade One-Port Integrated PC Server to Two-Port Integrated PC Server #6520 cannot be used with a Two-Port Integrated PC Server.
#6616	Integrated PC Server Contains a 166 MHz Pentium Processor, two Main Storage slots, and two LAN IOA slots for higher performance serving to LAN attached PCs. The two main storage slots can each contain one of the following features, giving a maximum of 256 MB. At least one main storage feature is required: #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory Either one or two of the following LAN IOAs are supported: #6149 16/4 Mbps Token Ring IOA #6181 Ethernet/IEEE 802.3 IOA Requires OS/400 V3R7 with cumulative PTF package C7029370 or later. Card slots required: Two contiguous slots

#6617	<p>Integrated PC Server</p> <p>Contains a 200 MHz Pentium Processor, four main storage slots and three LAN IOA slots for high performance serving to LAN attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 512 MB. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838.</p> <ul style="list-style-type: none"> #2723 PCI Ethernet IOA #2724 PCI Token Ring IOA #2838 PCI 100/10 Mbps Ethernet IOA <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6617. The #0222 100/10 Mbps Ethernet on IPCS is required for each #2838 attached to the #6617 Integrated PC Server. If running Windows NT on the #6617, then:</p> <ul style="list-style-type: none"> #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT is the default in the USA. <p>A display is required to support Windows NT on IPCS.</p> <p>For country-specific keyboard or mouse and display support, refer to the Web site at: http://www.ibm.com/eserver/iseries/</p> <p>Requires V4R2.</p> <p>Card slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack.</p>						
#6618	<p>Integrated Netfinity Server for AS/400</p> <p>Requires V4R2 (V4R2 and CUM C8342420 or V4R3 and CUM C8349430).</p> <p>Contains a 333 MHz Pentium Processor, four main storage slots, and three LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory Specify # is not required #2862 128 MB Integrated PC Server Memory Specify # is not required #2867 256 MB Integrated PC Server Memory Specify #0220 is required for each #2838 ordered <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838.</p> <table> <tr> <td>#2723 PCI Ethernet IOA</td><td>Specify # is not required</td></tr> <tr> <td>#2724 PCI Token Ring IOA</td><td>Specify # is not required</td></tr> <tr> <td>#2838 PCI 100/10 Mbps Ethernet IOA</td><td>Specify #0222 is required</td></tr> </table> <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6618. The #0222 100/10 Mbps Ethernet on IPCS is required for each #2838 attached to the #6618 Integrated PC Server. If running Windows NT on the #6618, then:</p> <ul style="list-style-type: none"> A minimum of 64 MB IOP memory is required. #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT, the default in the USA. <p>A display is required to support Windows NT on the IPCS.</p> <p>For country-specific keyboard or mouse and display support, refer to the Web site at: http://www.ibm.com/eserver/iseries/</p> <p>When running OS/2 on the #6618, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838. A maximum of 512 MB IOP memory is supported. <p>When running Novell Netware on the #6618, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838. A maximum of 256 MB IOP memory is supported. <p>SPD slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack.</p>	#2723 PCI Ethernet IOA	Specify # is not required	#2724 PCI Token Ring IOA	Specify # is not required	#2838 PCI 100/10 Mbps Ethernet IOA	Specify #0222 is required
#2723 PCI Ethernet IOA	Specify # is not required						
#2724 PCI Token Ring IOA	Specify # is not required						
#2838 PCI 100/10 Mbps Ethernet IOA	Specify #0222 is required						
DISK UNITS							
#1105	<p>320 MB Single Disk Unit Conversion Kit</p> <p>This feature provides the conversion kit required to migrate 320 MB one-byte SCSI disk units to Models 500, 510, and 530. 640 MB dual-disk units require two of these kits. Each kit occupies one disk slot.</p>						

#1107	400 MB Single Disk Unit Conversion Kit This feature provides the conversion kit required to migrate 400 MB one-byte SCSI disk units to Models 500, 510, and 530. 800 MB dual-disk units require two of these kits. Each kit occupies one disk slot.
#1109	98 8MB Single Disk Unit Conversion Kit This feature provides the conversion kit required to migrate 988 MB one-byte SCSI disk units to Models 500, 510, and 530. 1976 MB dual-disk units require two of these kits. Each kit occupies one disk slot.
#1602	1.03 GB Single Disk Unit Conversion Kit This feature provides the conversion kit required to migrate 1.03 GB one-byte SCSI disk units to Models 500, 510, and 530. 2.06 GB dual-disk units require two of these kits. Each kit occupies one disk slot.
#1603	1.96 GB Single Disk Unit Conversion Kit This feature provides the conversion kit required to migrate 1.96 GB one-byte SCSI disk units to Models 500, 510, and 530. 3.93 GB dual-disk units require two of these kits. Each kit occupies one disk slot.
#6109	988 MB Additional Disk Unit This feature provides a 3 ½-inch single disk unit with 988 MB capacity for additional disk storage.
#6605	1.03 GB Additional Two-Byte Disk Unit This feature provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage.
#6606	1.96 GB Additional Two-Byte Disk Unit This feature provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage.
#6607 #7607	4.1 9GB Additional Two-Byte Disk Unit This feature provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. The #7607 is the base disk. It is the default base disk with V4R1.
#6650	1.96 GB Additional Two-Byte Disk Unit This feature provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage.
#6652	1.03 GB Additional Two-Byte Disk Unit This feature provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage.
#6713 #7713	8.58 GB Additional 8.58 GB Disk Unit (Ultra SCSI) This feature provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. For best performance, use attached to the #6532 or #6533 RAID Disk Unit controller (Ultra SCSI) in the #5058 Storage Expansion Unit; or #5083 Storage Expansion Tower. The #7713 is an optional 8.58 GB base disk. Requires OS/400 V3R7.
#6714	17.54 GB Additional Two-Byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 17.54 GB capacity for additional disk storage. For best performance, use attached to the #6532 or #6533 RAID Disk Unit controller (Ultra SCSI) in the #5058 Storage Expansion Unit; or #5083 Storage Expansion Tower. This disk is not supported for attachment to the MF10P. Requires OS/400 V4R2. Integrated hardware disk compression is supported at OS/400 V4R4.
#6906	1.96 GB Additional Two-Byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. For best performance, use attached to the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in #5058 Storage Expansion Unit or #5081 or #5083 Storage Expansion Tower.
#6907	4.19 GB Additional Two-Byte Disk Unit (Ultra SCSI) Provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. For best performance, use attached to the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in the #5058 Storage Expansion Unit; or the #5081 or #5083 Storage Expansion Tower.
#9606	1.96 GB Base Two-Byte Disk Unit This feature provides a 3 ½-inch single disk unit with 1.96 GB capacity as the base disk unit on new Models 500, 510, and 530 or on upgrades to Models 500, 510, and 530.
INTERNAL TAPE UNITS AND CD-ROM	
#1378	525 MB ¼-inch Cartridge Tape Unit Conversion Kit This feature provides the conversion kit required to migrate 525 MB ¼-inch Cartridge Tape Units.
#1379	1.2 GB ¼-inch Cartridge Tape Unit Conversion Kit This feature provides the conversion kit required to migrate 1.2 GB ¼-inch Cartridge Tape Units.
#1380	2.5 GB ¼-inch Cartridge Tape Unit Conversion Kit This feature provides the conversion kit required to migrate 2.5 GB ¼-inch Cartridge Tape Unit.

#5032	Removable Media Cluster Box This is a rack-mounted box which allows the attachment of one to four 1.2 GB or 2.5 GB ¼-inch Cartridge Tape Units (#6368 or #6369). It attaches to a #2621. This is supported for migration only, it is not orderable on a new iSeries or AS/400e.
#6335	840 MB ¼-inch Cartridge Mini Tape Unit Using the QIC-3040-MC recording format, tape cartridge capacity is 840 MB. With hardware, data compression maximum capacity is up to 1.6 GB. Sustained data transfer rate is 300 KB per second.
#6368	1.2 GB ¼-inch Cartridge Tape Provides full interchange of data with appropriate ¼-inch cartridge tape units provided with the iSeries or AS/400e server using the proper media and density. This tape is installed in the #5032. This is supported for migration only. It is not available on a new iSeries or AS/400e.
#6369	2.5 GB ¼-inch Cartridge Tape Provides full interchange of data with appropriate ¼-inch cartridge tape units provided with the iSeries or AS/400e server using the proper media and density. This tape is installed in the #5032. This is supported for migration only. It is not available on a new iSeries or AS/400e.
#6380	2.5 GB ¼-inch Cartridge Tape Unit It provides full interchange of data with all standard and optional ¼-inch cartridge tape units provided on the iSeries or AS/400e server, using the proper media and devices. Sustained data transfer rate is 300 KB per second. With hardware, data compression maximum capacity is up to 5 GB. Supported as an alternate IPL device.
#6385	13.0 GB ¼-inch Cartridge Tape Unit It provides full interchange of data with all standard and optional ¼-inch cartridge tape units provided on the iSeries or AS/400e server, using the proper media and devices. Sustained data transfer rate is 1.5 MB per second. With hardware, data compression maximum capacity is up to 26 GB. Supported as an alternate IPL device. Requires #6513 Internal Tape Device Controller.
#6390	7 GB 8 mm Cartridge Tape Unit 8mm Helical Scan tape drive which can be used for save and restore, program distribution and Alternate IPL. Has sustained data rate of 500KB per second. With hardware, data compression maximum capacity is up to 14GB.
#9520	Base CD-ROM Drive Used for code distribution.
MAGNETIC MEDIA CONTROLLERS	
#2621	Removable Media Device Attachment This feature provides attachment capability for up to two of the following devices with hardware data compression: 2440, 9348, 7208, 3995, 9427, and #5032. If #2621 is to support dual drive 7208, 3995, or 9427, it must be dedicated to it. Card Slots used: One
#2624	Storage Device Controller This feature can support up to two internal tape units in the System Unit. As a feature on #507x it can support up to three internal tape units. The #2624 can concurrently support a #6146 Diskette adapter to attach an external diskette unit. Under V3R7, the hardware configurators defaults to the #6513 Internal Tape Device Controller, unless the tape is a #1378 (525MB QIC) or if a #2624 is available to attach to the tape. Card Slots used: One. Maximum: One per tower
#2644	34xx Magnetic Tape Attachment Card/HP Provides attachment for all 34xx Tape subsystem models (except for SCSI attach 3490 models). May also require #9980 Serpentine cable. Card Slots used: One
#6112	Magnetic Storage Device Controller Provides attachment of up to two 9336 Disk Units, up to two 9331-00x Diskettes or up to two 9347 tape units. If a #6112 has a 9336 Disk Unit attached to it, it cannot simultaneously attach a 9331 or a 9427 on 5x0 models. It must be dedicated to 9336. Maximum number of #6112s supported is two for 9331 on 5x0 models; two for 9427 on 5x0 models and 16, 28, and 35 for 9336 on 500, 510, and 530 models respectively. The maximum combined number of the #6112 is 20, 32, and 35 respectively. Card Slots used: One. See the model overview tables at the beginning of this chapter for the maximum disk unit IOPs.
#6146	Diskette Adapter This feature provides support for one of the following external diskette types: 9331-011 8-inch Diskette Unit 9331-012 5 ¼-inch Diskette Unit It requires #2624 to attach. Card Slots used: None. Maximum: One

#6147	Diskette Adapter This feature provides support for one of the following external diskette types: 9331-011 8-inch Diskette Unit 9331-012 5 ¼-inch Diskette Unit It attaches to MFLOP #9162 or #9163 Card Slots used: None. Maximum: One It also supports Twinaxial Passthru (see #9149).
#6500	Direct Access Storage Device Controller This feature provides for the attachment of one 9337-0xx or 9337-1xx models. Card Slots used: One. See the model overview tables at the beginning of this chapter for the maximum disk unit IOPs.
#6501	Tape/Disk Device Controller This feature allows attachment of up to two 9337-2xx/4xx/5xx DASD units. Provides attachment for the 2105 Versatile Storage Server. This feature provides improved performance through its unique two-byte wide data path and increased transfer rate over #6500. This feature also allows attachment of up to two SCSI attach 3490 or 35xx tape units. DASD and tape units cannot be mixed on the same #6501. Card Slots used: One. See the model overview tables at the beginning of this chapter for the maximum disk unit IOPs
#6502	High Performance Controller 2 MB Cache—(RAID/Mirrored/Unprotected) Card Slots used: One. See the model overview tables at the beginning of this chapter for the maximum disk unit IOPs.
#6512	High Performance Controller 4 MB Cache—(RAID/Mirrored/Unprotected) Card Slots used: One. See the model overview tables at the beginning of this chapter for the maximum disk unit IOPs.
#6513	Internal Tape Device Controller Provides support for up to two internal tape devices when installed in the System Unit or up to four internal tape devices when installed in a System Unit Expansion Tower (#507x). This is the default on the hardware configurators except for #1378, (525MB QIC) or if a #2624 Storage Device Controller is available for attaching a required tape. The following internal tape feature are supported: #1379, #1380, #6335, #6380, #6385, and #6390. Requires V3R7. Card Slots used: One.
#6530	Disk Unit Controller No Cache—(Mirrored/Unprotected) Provides attachment for up to sixteen internal disk units installed in a Storage Expansion Unit (#505x, #8052 or #9051) or installed in a Storage Expansion Tower (#508x). Mutually exclusive with #6502, #6512, #6532, and #6533. Card Slots used: one. See the model overview tables at the beginning of this chapter for the maximum disk unit IOPs.
#6532	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) Ultra SCSI Controller for up to 16 disks installed in #5058 Storage Expansion Units or #5081 or #5083 Storage Expansion Tower. Also supports disks located in #5051, #5052, #8052 or #9051 Storage Expansion Unit, or #5080 or #5082 Storage Expansion Tower, but these are not at Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of four arrays are allowed for each #6532. #6532 is not capable of compression. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter for maximum disk unit IOPs.
#6533	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) Ultra SCSI Controller for up to 16 disks installed in #5058 Storage Expansion Units or #5081 or #5083 Storage Expansion Tower. Also supports disks located in #5051, #5052, #8052 or #9051 Storage Expansion Unit, or #5080 or #5082 Storage Expansion Tower, but these are not at Ultra SCSI speeds. Offers performance improvements over #6502, #6512 and #6530. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of four arrays are allowed for each #6533. Requires V4R2. Supports disk compression with V4R3 installed. Integrated hardware disk compression on #6714 (17.54GB Disk Unit) is not currently supported. IBM intends to provide disk compression for #6714 in a future release of OS/400. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter for the maximum disk unit IOPs.
#6534	Magnetic Media Controller (Ultra SCSI) Provides attachment for one 3490E Cxx with #5040, 3490E Exx, 3490E Fxx, 3494 L1x or D1x, 3570, 3575, 3590, 7208, 9348 or 9427 Tape Drive or 3995 C4x Optical Library Dataserver. Requires OS/400 V4R1. V4R2 is required to support 3995. Card slots required: One Maximum: Four
#9980	Serpentine Cable Required for attaching all #2644 supported devices (except 3490-Cxx when attached using “internal cables”).

Chapter 14. 940x xxS Server Models

Processor	9402 40S	9402 40S	9402 40S	9402 40S	9406 50S	9406 50S	9406 50S	9406 53S	9406 53S	9406 53S	9406 53S
Feature	#2109	#2110	#2111	#2112	#2120	#2121	#2122	#2154	#2155	#2156	#2157
Relative System Performance (CPW-V3R6) (See Note 1)											
Client/Server Environment	24.5	30.6	52.9	77.3	66.7	85.0	106.8	132.5	198.7	299.0	349.8
Interactive Environment	8.4	12.3	18.3	26.9	18.7	26.9	26.9	26.9	26.9	26.9	26.9
Relative System Performance (CPW-V3R7) (See Note 1)											
Client/Server Environment	27.0	33.3	59.8	87.3	77.7	104.2	130.7	162.7	278.8	459.3	509.9
Interactive Environment	9.4	13.8	20.6	30.7	21.4	30.7	30.7	30.7	30.7	30.7	30.7
Relative System Performance (CPW-V4) (see Note 1)											
Client/Server Environment	27.0	35.0	63.0	91.0	81.6	111.5	138.0	188.2	319.0	598.0	650.0
Interactive Environment	9.4	14.5	21.6	32.2	22.5	32.8	32.8	32.8	32.8	32.8	32.8
Relative System Performance (RAMP-C) (see Note 2)											
Client/Server Environment	8.3	10.6	†	†	19.7	26.6	†	43.4	66.6	101.4	†
Interactive Environment	2.6	3.8	†	†	5.7	8.3	†	8.3	8.3	8.3	†
Number of N-Way Multiprocessors	1	1	1	1	1	1	1	1	2	4	4
Main Storage (MB)	32-224		64-512		64-1024			256-4096			512-4096
Disk Storage (GB)											
V3R6	1.96 -23.6				1.96 -318.7			1.96 -520.0			
V3R7	1.96 -50.3				1.96 -318.7			1.96 -520.0			
V4	1.96 -50.3				4.19 -652.8			4.19 -996.4			
Maximum Feature Card Slot	5				82			237			
Communications Lines	1-20				1-96			1-200			
LAN Ports	1-2				1-16			1-32			
ATM Ports	0-1				0-8			0-16			
Maximum Workstation Controllers											
Twinax	1				1			1			
ASCII	1				1			1			
LocalTalk	1				2			4			
Maximum Workstations (1 minimum)											
Twinax	7				7			7			
ASCII	6				6			6			
LocalTalk Devices	31				62			124			
¼-inch Cartridge Tape/8mm Cartridge Tape (Internal)	0-4				17			0-17			
½-inch Tape 9348/2440 (The 2440 is not supported the Model 40S)	0-4				0-4			0-4			
34xx/35xx	0-2				0-4			0-4			
8mm Cartridge Tape (External)	0-4				0-4			0-4			
Tape Libraries	0-2				0-2			0-2			
Optical Libraries	0-4				0-14			0-22			
Diskettes (5 ¼-inch or 8-inch)	0-2				0-2			0-2			
Fax Adapters	0-5				0-32			0-32			
Cryptographic Processors	0-1				0-1			0-1			
System I/O Buses	1				1-7			0-19			

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	The Relative System Performance ratios are estimated based on iSeries and AS/400e environment RAMP-C workload, with a 9404 B10 with 16 MB of Main Storage and 945 MB of disk equalling 1.0. The ratios shown were estimated at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments.
Note 3:	The Model 40S supports three LAN adapters if running Firewall for AS/400 (5769-FW1).
†	Processors announced in September 1996 and later do not have any RAMP-C performance measurements.

14.1 9402 Advanced Server Model 40S

See 11.1, “9402 400 Models Overview” on page 335, for details on the layout of the Model 40S. For details on Model 40S packages, see Chapter 12, “AS/400e 9402 Model Packages” on page 351.

PROCESSOR		40S SYSTEM UNIT	#7117 Expansion Units
#2109	8.3 RP RAMP-C Processor in Client/Server Environment, 2.6 RSP RAMP-C Processor in Interactive Environment; 24.5 RSP CPW Client/Server (OS/400 V3R6); 8.4 RSP Interactive (OS/400 VR36; 27.0 RSP CPW Client/Server (OS/400 V3R7, V4R1, V4R2, and V4R3). 9.4 RSP CPW Interactive (OS/400 V3R7, V4R2, and V4R3). Base Memory 32 MB.	1	-
#2110	10.6 RSP RAMP-C Processor in Client/Server Environment, 3.8 RSP RAMP-C Processor in Interactive Environment; 30.6 RSP CPW Client/Server (OS/400 V3R6), 12.3 RSP CPW Interactive (V3R6); 33.3 RSP CPW Client/Server (OS/400 V3R7), 13.8 RSP CPW Interactive (V3R7), 35.0 RSP CPW Client Server (OS/400 V4R1, V4R2, and V4R3), 14.5 RSP CPW Interactive (OS/400 V4R1, V4R2, and V4R3). Base Memory 32 MB.	1	-
#2111	52.9 RSP CPW Processor Client/Server Environment (OS/400 V3R6), 18.3 RSP CPW Processor in Interactive Environment (V3R6); 59.8 RSP CPW Client/Server (V3R7), 20.6 RSP CPW Interactive (V3R7), 63.0 RSP CPW Client Server (OS/400 V4R1, V4R2, and V4R3), 21.6 RSP CPW Interactive (OS/400 V4R1, V4R2, and V4R3). Base Memory 64 MB. Prerequisite V3R6 with #1988, OS/400 V3R7, V4R1, V4R2, or V4R3.	1	-
#2112	77.7 RSP CPW Processor in Client/Server Environment (V3R6), 26.9 RSP CPW Processor in Interactive Environment (V3R6); 87.3 RSP CPW Client/Server (V3R7), 30.7 RSP CPW Interactive (V3R7), 91.0 RSP CPW Client Server (OS/400 V4R1, V4R2, and V4R3), 32.2 RSP CPW (OS/400 V4R1, V4R2, and V4R3). Base Memory 64 MB. Prerequisite OS/400 V3R6 with #1988, V3R7, V4R1, V4R2, or V4R3.	1	-

POWER AND PACKAGING		40S SYSTEM UNIT	#7117 Expansion Units
#5135	Feature Power Supply Feature Power Supply (#5135) is required in the following circumstances: <ul style="list-style-type: none"> • If Processor #2111 or #2112 is selected. • If #9320 Migrated Disk Unit Package is selected. • If #7117 Expansion Unit is not selected and there are three or four disks installed. • If #7117 Expansion Unit is selected and there are three or four disks installed but no #6502/#6522/#6523/#6530/#6534 Disk Controller. • If there are four Internal Tape units. • If #7117 Expansion Unit is selected and there are 11 or 12 disk units. • If there is more than one of #2618/#8664 (FDDI Adapter), #2620 (Full Cryptographic Processor), #2628 (Limited Cryptographic Processor), #2666 (High Speed Communication Adapter) or #2663 (I/O Attachment Processor) in the #9708 Expansion Card Cage. • If there is #6516 to #6519, or #6529 to #6529 (Integrated PC Server, formerly known as FSIO) in the #9108 Expansion Card Cage. • If there is more than one #2617/#9617 (Ethernet Adapter) in the #9108 Expansion Card Cage. The #5135 Feature Power Supply replaces #9242 Base 175W Power Supply. Card slots used: None Maximum: One	1	-
#7000	Panel Keylock Feature Provides a keylock to secure the door covering the system panel. Card slots used: None Maximum: One	1	-
#7117	Integrated Expansion Unit This unit can be added to the Model 40S. It provides space for adding: <ul style="list-style-type: none"> Four additional Feature Card Slots Up to two internal tape units (¼-inch or 8mm) Up to eight two-byte SCSI disk units Card slots used: None Maximum: One	1	-
#9108	Expansion Card Cage This feature is standard and provides two feature I/O card slots in the System Unit. The #5135 Expansion Unit Feature Power may be required in high power feature combinations. See #5153. Card slots used: None Maximum: One	1	-
#9116	Two Book Cage High Performance Card Enabler This feature provides a special backplane and cabling which is required for the following high performance cards when installed in a #9108: <ul style="list-style-type: none"> • #2620 Cryptographic Processor • #2628 Cryptographic Processor - Limited • #2629 LAN/WAN/Workstation IOP • #2810 LAN/WAN IOP • #6501 Tape/Disk Device Controller • #6534 Magnetic Media Controller • #6616 Integrated PC Server • #6516/7/8/9 Integrated PC Server • #6526/7/8/9 Integrated PC Server • #8716/7/8/9 Integrated PC Server • #8726/7/8/9 Integrated PC Server • #2663 I/O Attachment Process Card slots used: None Maximum: One	1	0

#9242	Base Power Supply: Base 175-watt power supply for systems without feature #5135	1	-
#9244	320 Watt Power Supply: Base 320-watt power supply for #7117	1	-
#9139	Standard Disk Unit Package: Provides four positions in the system unit for two-byte SCSI disk units. No one-byte SCSI disk units are supported. Card slots used: none Maximum: One	1	-
#9320	Migrated Disk Unit Package; Provides four positions in the system unit for the migrated one-byte SCSE disk units. The #5135 is a prerequisite. Card slots used: none Maximum: One	1	-
UPS	Uninterruptible Power Supply Provided instead of internal battery backup to minimum impact from power fluctuation and outages. A number of different models of the 9910 UPS are unavailable. Specific models vary by country.		
MAIN STORAGE		40S SYSTEM UNIT	#7117 Expansion Units
#3110 #8210 #9110	64 MB Main Storage Plugs directly into the CPU. The #2109 and #2110 Processors support three additional memory features. The #2111 and #2112 Processors support eight. On the #2111 and #2112 Processors, memory cards must be installed in pairs. The #8210 and #9110 and for #2109 and #2110 processors only.	3 or 8	-
#3172 #4172 #8172	32 MB Main Storage Plugs directly into the CPU. The #2109 and #2110 Processors support three additional memory features. The #2111 and #2112 Processors support eight. On the #2111 and #2112 processors, Memory Cards must be installed in pairs. These are not supported on #2109 processor.	3 or 8	
#3182 #9282	32 MB Main Storage Plugs directly into the CPU. The #2109 and #2110 Processors support three additional memory features. The #2111 and #2112 Processors support eight. On the #2111 and #2112 Processors, memory cards must be installed in pairs. The #9282 is supported on #2111 and #2112 processors only.	3 or 8	
WORKSTATION CONTROLLERS		40S SYSTEM UNIT	#7117 Expansion Units
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are #2669, #6149, #6181, #9249 and #9381. LAN IOAs (#6149, #6181, #9249 and #9381) cannot occupy all three positions. Requires OS/400 V4R1. Card slots required: one	1	4
#6054	Workstation Adapter for Apple Macintosh (LocalTalk)	1	1
#6141	ASCII Workstation Controller	1	1
#8054	Workstation Adapter for Apple Macintosh (LocalTalk)	1	-
#9171	MFIOP/ASCII Workstation Controller	1	-
#9172	MFIOP/Twinaxial Workstation Controller	1	-
#9173	MFIOP/LocalTalk	1	-

#9176	MFIOP MFIOP that does not include a workstation controller. Requires #9026 or #9027 Client Access Console cable and a one-line communications adapter (#2612 or #9162) to attach a PC as a console.	1	-
COMMUNICATIONS		40S SYSTEM UNIT	#7117 Expansion Units
#2605	ISDN Basic Rate Interface Adapter	2	2
#2609	EIA 232/V.24 Two-Line Interface Adapter #9023 EIA 232/V.24 20ft (6m) enhanced cable #9835 EIA 232/V.24 50ft (15m) enhanced cable #9022 EIA 232/V.24 20ft (6m) cable #9836 EIA 232/V.24 50ft (15m) cable	3	3
#2610	X.21 Two-Line Interface Adapter #9021 X.21 20ft (6m) cable #9839 X.21 50ft (15m) cable	3	3
#2612	EIA 232/V.24 One-Line Interface Adapter One cable must be specified (see cable features for #2609).	7	7
#2613	V.35 One-Line Interface Adapter #9020 V.35 20ft (6m) cable #9838 V.35 50ft (15m) cable	4	4
#2614	X.21 One-Line Interface Adapter One cable must be specified (see cable features for #2610).	7	7
#2620	Full Cryptographic Processor	1	1
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are #2699, #6149, #6181, #9249 and #9381. LAN IOAs (#6149, #6181, #9249 and #9381) cannot occupy all three positions. Card slots required: One	1	4
#2623	Six-Line Communications Controller	1	4
#2628	Limited Cryptographic Processor	1	1
#2664	Integrated Fax Adapter	1	4
#2666	High-speed Communications Adapter #9879 6m V.35 cable #9880 24m V.35 cable* #9882 6m V.36/EIA 449 cable #9883 24m V.36/EIA 449 cable** #9884 45m V.36/EIA 449 cable** #9885 6m X.21 cable *Line speeds up to 64 Kbps only. **Using these longer cables requires that the #0329 V.24/EIA 232 80ft (24m) cable attaching Data Communications Equipment (DCE) support the V.36 transmitter signal element timing Data Terminal Equipment (DTE) source signal.	1	1

#2699	Two-Line WAN IOA Supports up to two multiple protocol communications ports when any one or two (in any combination) of the following cables are attached: #0329 V.24/EIA 232 80ft (24m) cable #0330 V.24/EIA 232 20ft (6m) cable #3331 V.24/EIA 232 50ft (15m) cable #0332 V.24/EIA 232 20ft (6m) enhanced cable #0333 V.24/EIA 232 50ft (15m) enhanced cable #0334 V.24/EIA 232 80ft (24m) enhanced cable #0335 V.24/EIA 449 20ft (6m) cable #0336 V.24/EIA 449 50ft (15m) cable #0337 V.24/EIA 449 150ft (45m) cable #0338 V.35 20ft (6m) cable #0339 V.35 50ft (15m) cable #0340 V.35 80ft (24m) cable #0341 X.21 20ft (6m) cable #0342 X.21 50ft (15m) cable There are some restrictions on communications using #2699. For full details, see the #2699 description in 9.13, "9406 Models 640 and 650" on page 251. Requires OS/400 V4R1. Prerequisite for #2699: #2629 IOA slots required for #2699: One on #2629	-	-
#6054 #8054	Workstation Adapter for Apple Macintosh (Local Talk) #6054 attaches to the #2623 #8054 attaches to the MFIOF	1	1
#9612	Standard EIA 232/V.24 One-Line Adapter #9023 EIA 232/V.24 20ft (6m) enhanced cable #9835 EIA 232/V.24 50ft (15m) enhanced cable	1	-
MFIOF #9171	Base Communications MFIOF/ASCII Workstation Controller Supports two communications adapters. One communications line, with an EIA 232/V.24 adapter, is supplied as standard for use with IBM Electronic Customer Support. Further adapters are optional. Maximum communications lines for #9171: Three		
#9172	MFIOF/Twinaxial Workstation Controller As for feature #9171. Maximum communications lines for #9172: Three	1	-
#9173	MFIOF/LocalTalk Workstation Controller Supports one communications adapter. One communications line, with an EIA 232/V.23 adapter, is supplied as standard for use with IBM Electronic Customer Support. Further adapters are optional. Maximum communications lines for #9173: Two	1	-
#9176	MFIOF Supports two communications adapters. A Two-Line EIA 232/V.24 adapter is supplied as standard. One line is for use with ECS and the other for attach to a Client Access or Operations Console (OS/400 V4R3). Further adapters are optional. Maximum communications lines for #9176: Two	1	-
LANS/ATM		40S SYSTEM UNIT	#7117 Expansion Units
#2617 #9617	Ethernet/IEEE 802.3 Adapter/HP	2	2
#2618 #8664	Fiber Distributed Data Interface Adapter	1	1
#2619 #2619	16/4 Mbps Token Ring Adapter/HP	2	2

#2629	LAN/WAN/Workstation IOAs Those supported are #2699, #6149, #6181, #9249 and #9381. LAN IOAs (#6149, #6181, #9249 and #9381) cannot occupy all three positions. Requires OS/400 V4R1. Card slots required: One	2	4
#2663	I/O Attachment Processor	1	1
#2665 #8665	Shielded Twisted-Pair Distributed Data Interface Adapter	1	1
#2668	Wireless LAN Adapter One of the following antenna cables must be specified: #9814 20ft antenna cable #9815 50ft antenna cable One of the following antenna must be specified: #9890 Omni-directional antenna #9891 Hemispherical antenna #9892 Directional antenna Prerequisite #2663.	1	1
#2723	PCI Ethernet IOA (PCI) Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. Has an RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied Cabling must meet or exceed Industry Standard EIA/TIA T568B. cabling. AU1 Ethernet or RJ45 twisted pair cable must be ordered separately. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. Requires OS/400 V4R2. Requires #6617 Integrated PC Server or #6618 Integrated Netfinity Server as a prerequisite.	-	-
#2724	PCI 16/4 Mbps Token Ring IOA (PCI) Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code (supplies IEEE 802.2 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions), and an external 8-foot (2.4m) cable. Alternatively a twisted pair of cable for attachment to the RJ45 connector on the IOA can be ordered separately. The IOA is capable of operating in half or full duplex mode. Requires OS/400 V4R2. Requires #6617 Integrated PC Server or #6618 Integrated Netfinity Server as a prerequisite.	-	-
#2810	LAN/WAN IOP This I/O processor is required to attach one #2838/#9738 PCI 100/10 Mbps Ethernet IOA or #2811/#2812/#2815/#2816/#2818/#2819 PCI ATM IOA. Prerequisite for the preceding features. Requires OS/400 V4R1 to support #2838/#9738 and OS/400 V4R2 to support any ATM IOA. Maximum: One Card slots required: One with any of the preceding features.	1	1
#2811	PCI 25 Mbps UTP ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Unshielded Twisted Pair (UTP) cabling. The #2811 Fax typically used where 25 Mbps speed is required over distances of less than 100 meters. Requires OS/400 V4R2. Card slots required: One (with #2810) Prerequisite: #2810	1	1

#2812	PCII 45 Mbps Coax T3/DS3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the T3/DS-3 interface. The #2812 Fax typically used where 45 Mbps speed is required over distances of less than 1000 meters. Requires OS/400 V4R2. Card slots required: One (with #2810) Prerequisite: #2810	1	1
#2815	PCI 155 Mbps UTP OC3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2815 is typically used where 155 Mbps speed is required over distances of less than 100 meters. Requires OS/400 V4R2. Card slots required: One (with #2810) Prerequisite: #2810	1	1
#2816	PCI 155 Mbps MMF ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2816 is typically used where 155 Mbps speed is required over distances of less than 2 kilometers. Requires OS/400 V4R2. Card slots required: One (with #2810) Prerequisite: #2810	1	1
#2818	PCI 155 Mbps SMF OC3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Single Mode Fibre (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment, but can be used for local area switches. The #2818 is typically used where 155 Mbps speed is required over distances of from 16 to 40 kilometers. Requires OS/400 V4R2. Card slots required: One (#2810) Prerequisite: #2810	1	1
#2819	PCI 34 Mbps Coax E3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the E3 interface. The #2819 is typically used where 34 Mbps speed is required over distances of less than 1000 meters. Requires OS/400 V4R2 Prerequisite: #2810	11	1
#2838 #9738	PCI 100/10 Mbps Ethernet IOA Provides attachment to a standard 100 Mbps high speed Ethernet LAN and also allows attachment to existing 10 Mbps Ethernet LAN. The adapter comes with an RJ45 connector for attachment to UTP-5 media. The #9738 specifies the base LAN. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. Requires OS/400 V4R1 with #2810 or V4R2 with #6617. Maximum: One Card slots required: One (with #2810) or three (with #6617) Prerequisite: #2810, #6617 Integrated PC Server or #6618 Integrated Netfinity Server as a prerequisite.	1	1
#6149 #9249	16/4 Mbps Token Ring IOA Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an IOA card, internal code (supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC)), and an external 8-foot (2.4m) Token Ring Cable. Alternatively, a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. The #6419 can operate in full or half-duplex mode. The #9249 specifies the base LAN. Requires OS/400 V3R7 in #6616; V4R1 in #2629. Card slots required: None Prerequisite: One #2629 or #6616 slot Maximum: Two	-	-

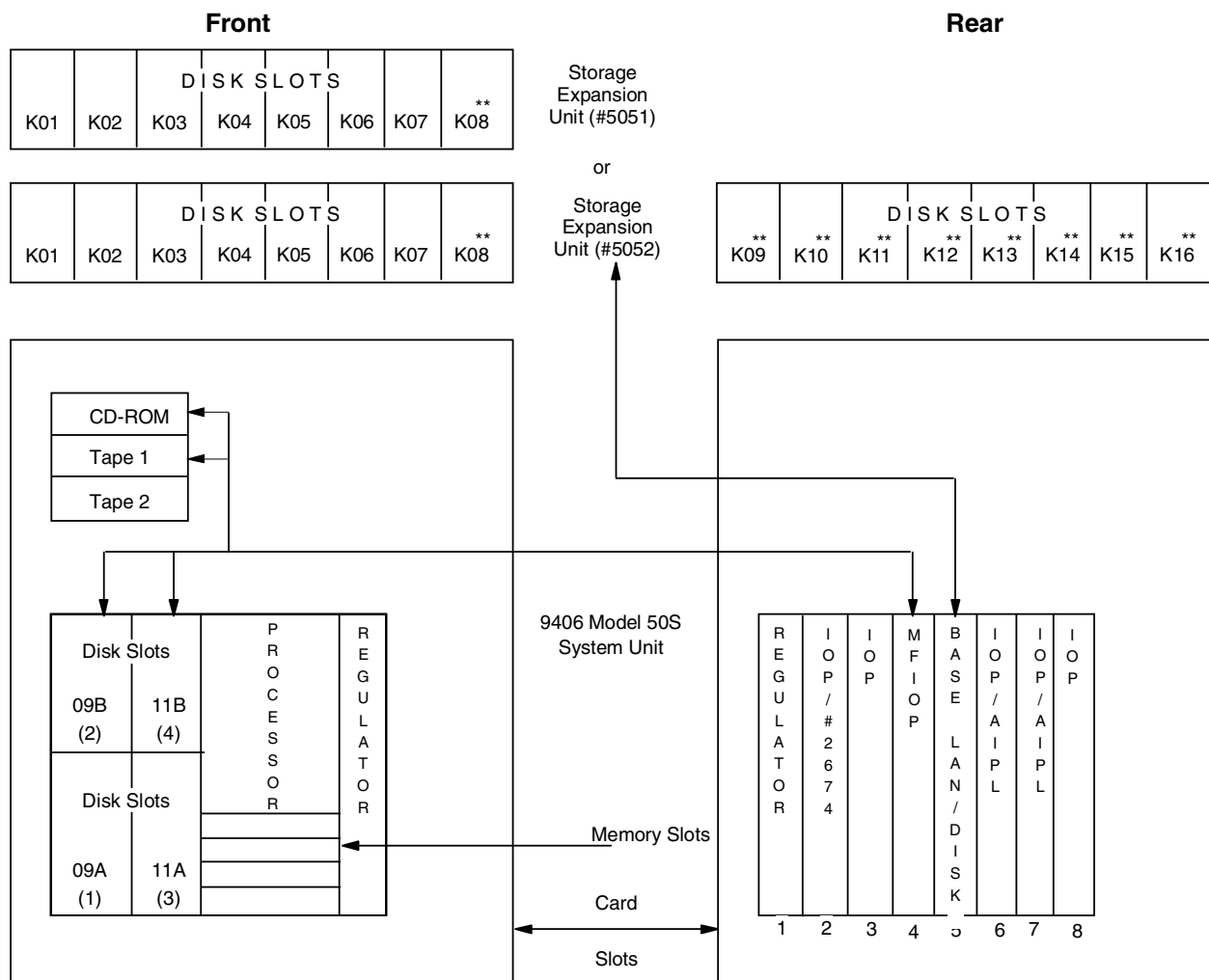
#6181 #9381	Ethernet/IEEE 802.3 IOA Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code, which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus 802.2 Logical Link Control (LLC) functions. Has an RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B. The #6181 can operate in full or half-duplex mode. The #9381 specifies the base LAN. Requires OS/400 V3R7 in #6616, and V4R1 in the #2629. Card slots required: None Prerequisite: One #2629 or #6616 slot Maximum: Two	-	-
#6516 #6517 #6518 #6519 #8716 to #8719 #8726 to #8729	Integrated PC Server (formerly known as FSIOP) 16 MB One-Port Integrated PC Server 32 MB One-Port Integrated PC Server 48 MB One-Port Integrated PC Server 64 MB One-Port Integrated PC Server Specify for One-Port Integrated PC Server as base LAN Specify for Two-Port Integrated PC Server as base LAN The following cables need to be specified depending on the network attaching into a Integrated PC Server Port: #9024 Token Ring Cable (2.44m) #9025 Ethernet Cable (3m AUI)	- - - - 1 1	1 1 1 1 - -
#6509 #6520	Additional 16 MB for Integrated PC Server Upgrade One-Port Integrated PC Server to Two-Port Integrated PC Server	6 1	3 -
#6616	Integrated PC Server Contains a 166 MHz Pentium Processor, two Main Storage slots, and two LAN slots for higher performance serving to LAN attached PCs. The two main storage slots can each contain one of the following features, giving a maximum of 256 MB. At least one main storage feature is required: #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory Either one or two of the following LAN IOAs are supported: #6149/#9249 16/4 Mbps Token Ring IOA #6181/#9381 Ethernet/IEEE 802.3 IOA The #9249 and #9381: one of these can be specified as the base LAN Requires V3R7 with cumulative PTF package C7029370 or later. Card slots required: Two contiguous slots	1	1
#6617	Integrated PC Server Contains a 200 MHz Pentium Processor, four Main Storage slots, and two LAN slots for higher performance serving to LAN attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 512 MB. At least one main storage feature is required: #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be the #2838/#9738. #2723 PCI Ethernet IOA #2724 PCI Token Ring IOA #2838/#9738 PCI 100/10 Mbps Ethernet IOA The #9738 is the base LAN. The third LAN and the second #2838/#9738 can only be used if running Windows NT on the #6617. The #0022 100/10 Mbps Ethernet on IPCS is required for each #2838/#9738 attached to the #6617 Integrated PC Server. If running Windows NT on the #6617, then:		

#6617 <i>continued</i>	<p>#0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard/Mouse for Windows NT, the default in the USA.</p> <p>A display must be connected to the IPCS to support Windows NT. For country-specific Keyboard/Mouse and display support, refer to the Web site at: http://www.ibm.com/eserver/series/windowsintegration/ Requires OS/400 V4R2. Card slots required: Three contiguous slots.</p>	-	1
#6618	<p>Integrated Netfinity Server for AS/400 (SPD) Requires OS/400 V4R2 and CUM C8342420, V4R3 and CUM C8349430 or later OS/400 versions. Contains a 333 MHz Pentium Processor, four main storage slots, and three LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. At least one main storage feature is required:</p> <p>#2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory #2867 256 MB Integrated PC Server Memory</p> <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838/#9738.</p> <p>#2723 PCI Ethernet IOA Specify #0221 is required for each #2723 ordered. #2724 PCI Token Ring IOA Specify #0220 is required for each #2724 ordered. #2838 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each #2838 ordered.</p> <p>Only one of the following Base LAN IOAs is supported:</p> <p>#9723 PCI Ethernet IOA Specify #0221 is required for each #9723 ordered. #9724 PCI Token Ring IOA Specify #0220 is required for each #9724 ordered. #9738 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each #9738 ordered.</p> <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6618. The #0222 100/10 Mbps Ethernet on IPCS is required for each #2838 attached to the #6618 Integrated PC Server. When running Windows NT on the #6618, then:</p> <p>A minimum of 64 MB IOP memory is required. #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT, the default in the USA. A display is required to support Windows NT on the IPCS. For country-specific keyboard or mouse and display support, refer to the Web site at: http://www.ibm.com/eserver/series/windowsintegration/</p> <p>When running OS/2 on the #6618, then:</p> <p>#0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738. A maximum of 512 MB IOP memory is supported.</p> <p>When running Novell Netware on the #6618, then:</p> <p>#0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738. A maximum of 256 MB IOP memory is supported. SPD slots required: Three contiguous slots.</p>		1
DISK UNITS		40S SYSTEM UNIT	#7117 Expansion Units
#1109	988 MB Single Disk Unit Conversion Kit	4	-

#1602	1.03 GB Single Disk Unit Conversion Kit	4	-
#1603	1.96 GB Single Disk Unit Conversion Kit	4	-
#6109	988 MB Additional One-Byte SCSI Disk Unit	4	-
#6602	1.03 GB Additional One-Byte SCSI Disk Unit This feature provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage. Requires #9320 Migrated Disk Unit Package. Occupies one disk unit position in the #9320. Cannot be used in #7117 Expansion Unit.	4	-
#6603	1.96 GB Additional Two-Byte SCSI Disk Unit This feature provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. Requires #9320 Migrated Disk Unit Package. Occupies one disk unit position in the #9320. Cannot be used in #7117 Expansion Unit.	4	-
#6605 #4605	1.03 GB Additional Two-Byte SCSI Disk Unit #4605 is the plant install version of #6605.	3	8
#6606 #4606	1.96 GB Additional Two-Byte Disk Unit #4606 is the plant install version of #6606.	3	8
#6607 #7607	4.19 GB Additional Two-Byte SCSI Disk Unit This feature provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage in the System Unit or #7117 Expansion Unit. Requires #9319 Standard Disk Unit Package or #9320 Migrated Disk Unit Package if installed in the System Unit. Occupies one disk unit position in either #9319/#9320 or #7117 Expansion Unit. #7606 is replacement base disk. Requires V3R7.	4	8
#6652 #4652	1.03 GB Additional Two-Byte SCSI Disk Unit #4652 is the plant installed version of #6652.	3	8
#8606	1.9 GB Optional Base Two-Byte Disk Unit	1	-
#9606	1.96 GB Standard Two-Byte SCSI Disk Unit This feature provides a 3 ½-inch single disk unit with 1.96 GB capacity as the base disk unit on new Model 40S or an upgrade to Model 40S.	1	-
INTERNAL TAPE UNITS AND CD-ROM		40S SYSTEM UNIT	#7117 Expansion Units
#1378	525 MB ¼-inch Cartridge Tape Unit Conversion Kit	1	3
#1379	1.2 GB ¼-inch Cartridge Tape Unit Conversion Kit	1	3
#1380	12.5 GB ¼-inch Cartridge Tape Unit Conversion Kit	1	3
#6335	840 MB ¼-inch Cartridge Mini Tape Unit	1	3
#6380	2.5 GB ¼-inch Cartridge Tape Unit	1	3
#6390	7 GB 8mm Cartridge Tape Unit	1	3
#9520	Base CD-ROM	1	-
MAGNETIC MEDIA CONTROLLERS		40S SYSTEM UNIT	#7117 Expansion Units
#2621	Removable Media Device Attachment	2	4
#2624	Storage Device Controller	1	1
#2644	34xx Magnetic Tape Attachment Card/HP	1	1
#6146	Diskette Adapter	2	1

#6501	Tape/Disk Device Controller	1	1
#6502 #6522	High Performance Controller 2 MB Cache—(RAID/Mirrored/Protected) #6522 was announced in October 1994 and replaces #6502.	-	1
#6530 #6523	Disk Unit Controller No Cache—Mirrored/Unprotected)	-	1
#6534	Magnetic Media Controller (Ultra SCSI) Provides attachment for one 3490E Cxx with #5040, 3490Exx, 3490Fxx, 3570, 3575, 3494 D1x or L1x, 3590, 7208, 9348, or 9427 Tape Drive or 3995 C4x Optical Library Dataserver. Requires OS/400 V4R1. OS/400 V4R2 is required to support 3995. Card slots required: One Maximum: Four	1	4
#9980	Serpentine Cable	1	1

14.2 9406 Advanced Server Model 50S System Unit



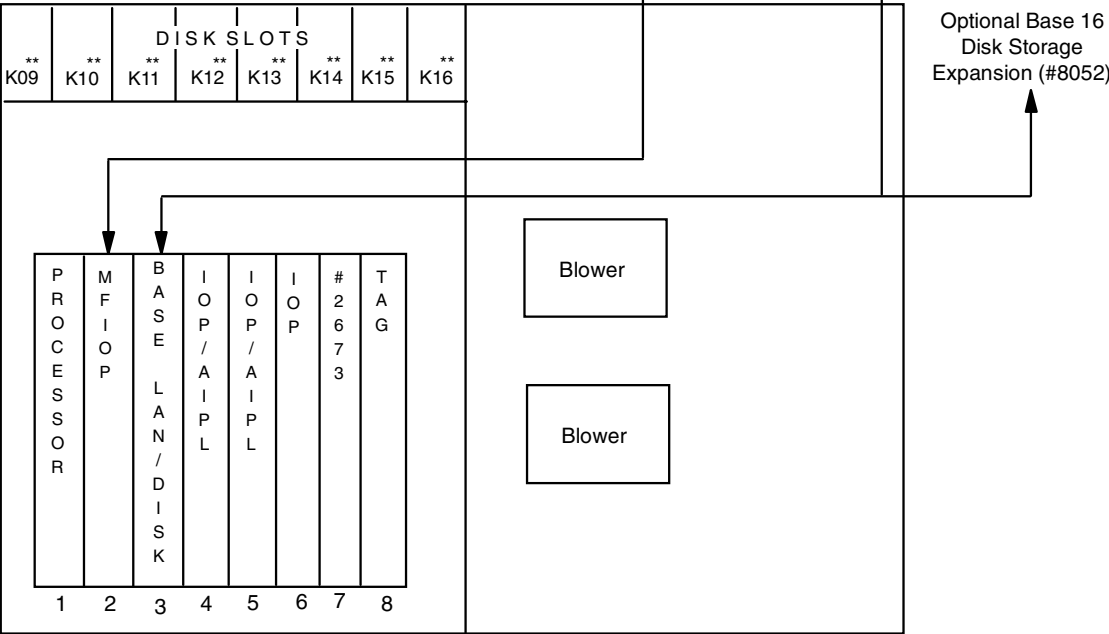
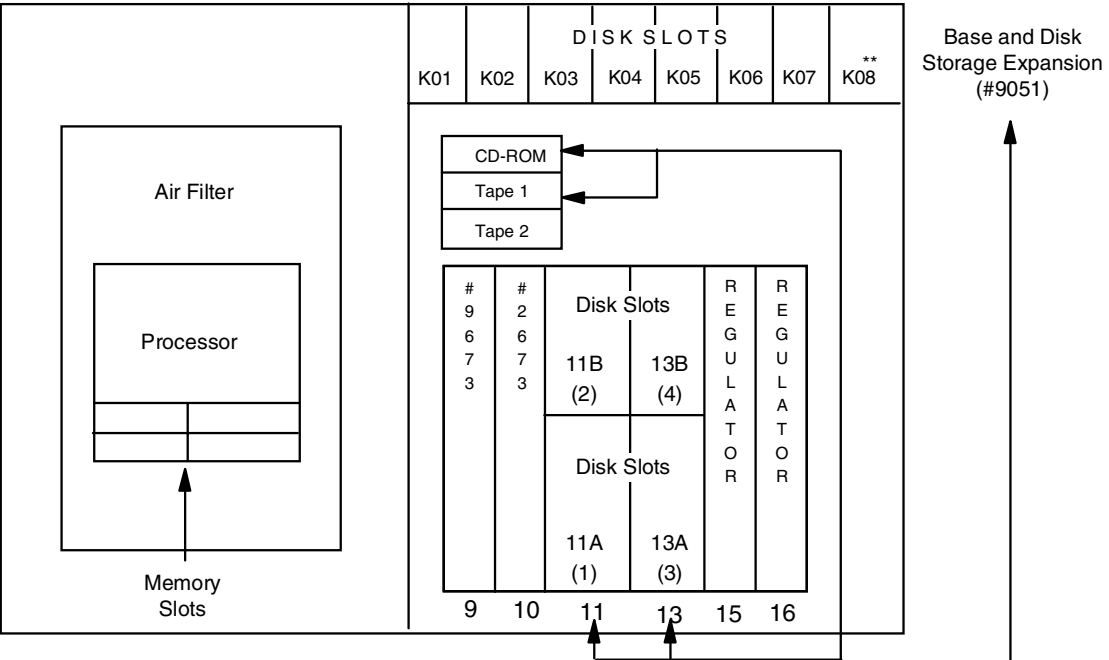
** One-byte DASD cannot be installed in disk slots 8 through 16.

Notes:

1. Slots 1 and 16 are occupied by #5142 Power Regulator. If Power Supply #9142 is specified, these slots are not used.
2. If #5051/#5052 Storage Expansion Unit is installed, Slot 5 is occupied by the disk controller card (#6502, #6512, #6530, #6532, or #6533).
3. If the Optical Bus Adapter (#2674) is installed, it must occupy Slot 2.
4. If an external tape unit is used for Alternate IPL, the Tape Controller card to which it is attached would be in Slot 6 or Slot 7.
5. The base 9406 Model 50S does not include a tape drive as standard. If a second internal tape is installed, a #2624 or #6513 in Slot 6 is required to support it.
6. Main Storage cards are installed on the processor card and require on slot each. There are four slots on the Model 50S, and main storage cards must be added in pairs of equal capacity.

14.3 9406 Advanced Server Model 53S System Unit

Front



Rear

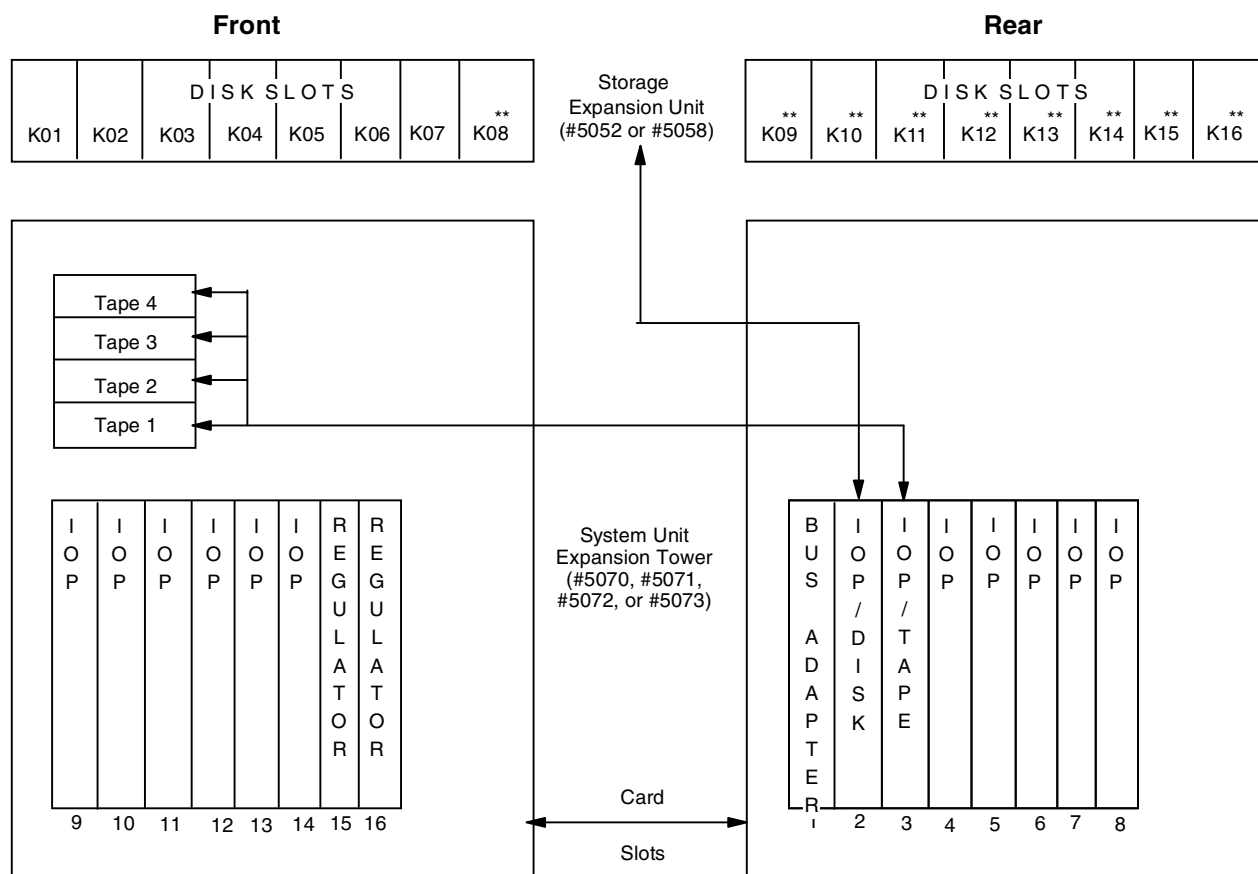
** One-byte disks cannot be installed in disk slots 8 through 16.

Notes:

1. The Optional Base 16 Disk Storage Expansion (#8052) increases the number of disks supported in the System Unit from 8 to 16.
2. The base and optional Optical Bus Adapters (#9673 and #2673) occupy Slot 9 and Slot 10.

3. If a 3690 Tape Device is attached to the System Unit Bus, no disk controller cards other than MFIO P would be used on Bus 0. This means that #9051 and #8052 are not supported.
4. If an external tape unit is used for Alternate IPL, the Tape Controller card to which it is attached would be in Slot 4 or Slot 5.
5. The base 9406 Model 53S does not include a tape drive as standard. The #2624 or #6513 is required to support the second internal tape.
6. Main storage cards are installed on the processor card and require one slot each. There are four slots on the Model 53S, and main storage cards must be added in pairs of equal capacity.

14.4 #5070 and #5071, #5072 and #5073 9406 Model 50S and 53S System Unit Expansion Tower and Storage Expansion Unit

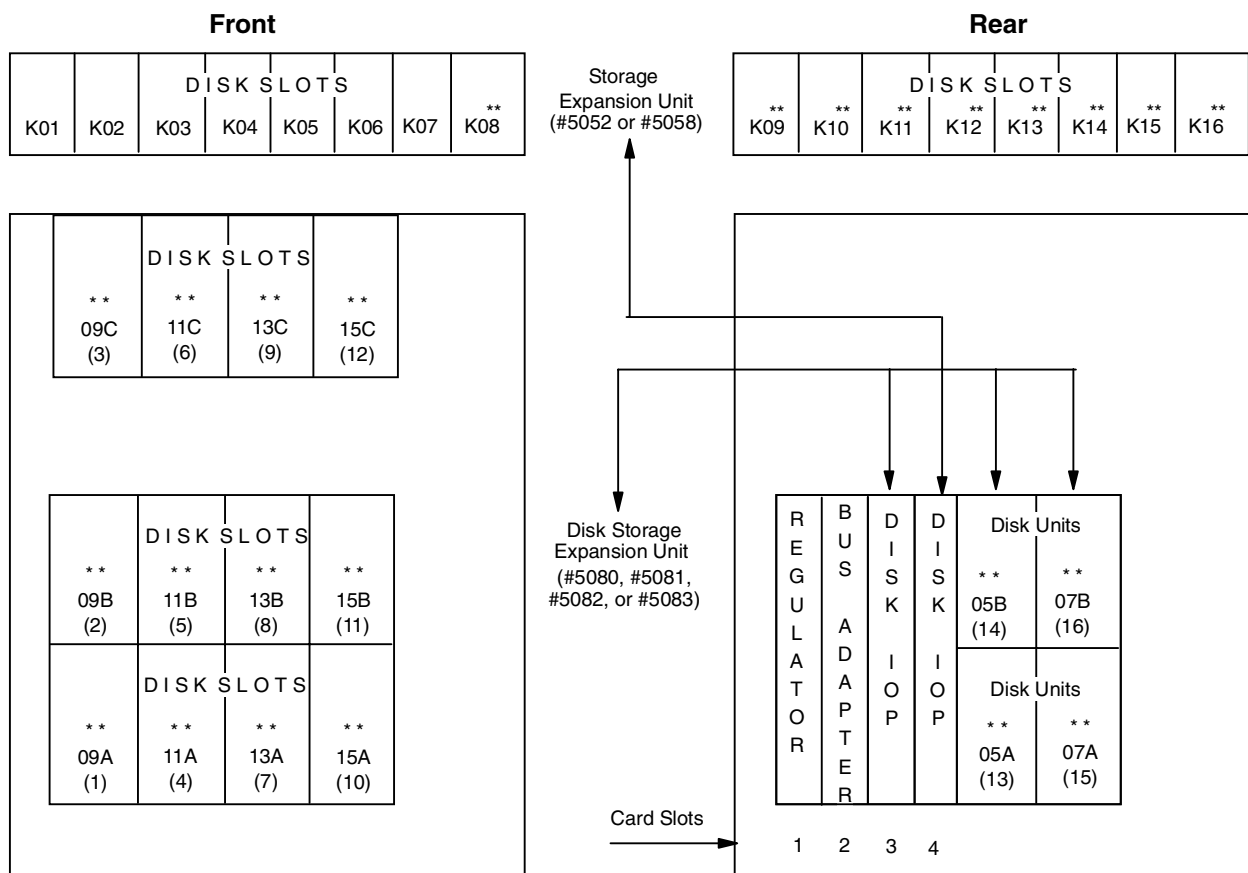


** One-byte disks cannot be installed in disk slots K08 through K16.

Notes:

1. The #5070 and #5071 are supported on 9406 Models 500 and 510. The #5072 and #5073 are supported on 9406 Model 530.
2. The #5071 and #5073 support the #5058, which is Ultra SCSI. The #5070 and #5072 are fast SCSI and support the #5052.
3. Slot 1 is occupied by the Bus adapter card.
4. Slot 2 is occupied by the disk controller card (#6502, #6512, #6530, #6532) if #5052 or #5058 is attached.
5. Slot 3 is occupied by #2624 or #6513 if the #5070, #5071, #5072, or #5073 contains internal tape units.
6. Slots 4 through 14 are available for I/O feature cards.

14.5 #5080, #5081, or #5083 9406 Model 500, 510, and 530 Storage Expansion Unit



** One-byte disks are not supported in these disk slots.

Notes:

1. The #5080 and #5081 are supported on 9406 Models 500 and 510. The #5082 and #5083 are supported on 9406 Model 530.
2. The #5081 and #5083 are used for Ultra SCSI disks and support the #5058, which is also Ultra SCSI. The #5080 and #5082 are fast SCSI and support the #5052.
3. Slot 3 is occupied by the disk controller (#6502, #6512, #6530, #6532, or #6533) that supports the disk slots in the #5080, #5082, or #5082.
4. Slot 4 is occupied by the disk controller (#6502, #6512, #6530, #6532, #6533) that supports the disk slots in the #5052 or #5058 if attached.

14.6 9406 Advanced Server Model 50S and 53S

PROCESSORS	
#2120	19.7 RSP RAMP-C Processor in Client/Server Environment, 5.7 RSP RAMP-C Processor in Interactive Environment; 66.7 RSP CPW Client/Server (V3R6), 18.7 RSP CPW Interactive (V3R6); 77.7 RSP CPW Client/Server (V3R7), 21.4 RSP CPW Interactive (V3R7); 81.6 RSP CPW Client/Server (V4), 22.5 RSP CPW Interactive (V4). Base Memory 64 MB. Model 50S only.
#2121	26.6 RSP RAMP-C Processor in Client/Server Environment, 8.3 RSP RAMP-C Processor in Interactive Environment; 85.0 RSP CPW Client/Server (V3R6), 26.9 RSP CPW Interactive (V3R6); 104.2 RSP CPW Client/Server (V3R7), 30.7 RSP CPW Interactive (V3R7); 111.1 RSP CPW Client/Server (V4), 32.8 RSP CPW Interactive (V4). Base Memory 64 MB. Model 50S only.
#2122	106.8 RSP CPW Processor in Client/Server Environment (V3R6), 26.9 RSP CPW Processor in Interactive Environment (V3R6); 130.7 RSP CPW Client/Server (V3R7), 30.7 RSP CPW Interactive (V3R7); 138.0 RSP CPW Client/Server (V4), 32.8 RSP CPW Interactive (V4). Base Memory 64 MB. Model 50S only. Prerequisite OS/400 V3R6 with #1988, V3R7, V4R1, V4R2, V4R3.
#2154	43.4 RSP RAMP-C Processor in Client/Server Environment, 8.3 RSP RAMP-C Processor in Interactive Environment; 132.5 RSP CPW Client/Server (V3R6), 26.9 RSP CPW Interactive (V3R6); 162.7 RSP CPW Client/Server (V3R7), 30.7 RSP CPW Interactive (V3R7); 188.2 RSP CPW Client/Server (V4), 32.8 RSP CPW Interactive (V4). Base Memory 256 MB. Model 53S only.
#2155	66.6 RSP RAMP-C 2-Way Processor in Client/Server Environment, 8.3 RSP RAMP-C 2-Way Processor in Interactive Environment; 198.7 RSP CPW Client/Server (V3R6), 26.9 RSP CPW Interactive (V3R6); 278.8 RSP CPW Client/Server (V3R7), 30.7 RSP CPW Interactive (V3R7); 319.0 RSP CPW Client/Server (V4), 32.8 RSP CPW Interactive (V4). Base Memory 256 MB. Model 53S only.
#2156	101.4 RSP RAMP-C 4-Way Processor in Client/Server Environment, 8.3 RSP RAMP-C 4 Way Processor in Interactive Environment; 299.0 RSP CPW Client/Server (V3R6), 26.9 RSP CPW Interactive (V3R6); 459.3 RSP CPW Client/Server (V3R7), 30.7 RSP CPW Interactive (V3R7); 598.0 RSP CPW Client/Server (V4), 32.8 RSP CPW Interactive (V4). Base Memory 256 MB. Model 53S only.
#2157	349.8 RSP CPW 4-Way Processor in Client/Server Environment (V3R6), 26.9 RSP CPW 4-Way Processor in Interactive Environment (V3R6); 509.9 RSP CPW Client/Server (V3R7), 30.7 RSP CPW Interactive (V3R7); 650.0 RSP CPW Client/Server (V4), 32.8 RSP CPW Interactive (V4). Base Memory 512 MB. Model 53S only. Prerequisite OS/400 V3R6 with #1988, V3R7, V4R1, V4R2, V4R3.
POWER AND PACKAGING	
#0090	Storage Expansion Unit (#5052) Located on System Unit This feature indicates that a Storage Expansion Unit (#5052) is located on the System Unit of a Model 50S. It is not supported on the Model 53S.
#2673 #9693	Optical Bus Adapter (1063Mbps) This feature allows for the addition of up to six optical buses on the Model 53S. The #2688 and/or #2688 are required to attach the buses. #9673 is the base optical bus adapter on the Model 53S. Maximum: Two Card slots used: One
#2674	Optical Bus Adapter (266Mbps) This feature allows for the addition of up to six optical buses on the Model 50S. The #2686 is required to attach the buses. Maximum: One Card slots used: One

#2686	Optical Link Processor (266 Mbps) This is a daughter card that allows for the addition of up to two optical buses to an Optical Bus Adapter (#2674, #2673 or #9673). It can attach up to two #5070/#5071 or #5080/#5081 or one #5044. A maximum of three #2686 are allowed per optical bus adapter. Both #2686 and #2688 may be installed on the same optical bus adapter as long as the total number does not exceed three. Card slots used: None
#2688	Optical Link Processor (1063 Mbps) This is a daughter card that allows for the addition of up to two optical buses to an Optical Bus Adapter (#2673 or #9673). It can attach up to two #5072/#5073 or #5082/#5083. A maximum of three #2688 are allowed per optical bus adapter. Both #2686 and #2688 may be installed on the same optical bus adapter as long as the total number does not exceed three. Card slots used: None
#5051 #9051	Storage Expansion Unit for System Unit This feature provides space for up to eight disk units. It attaches to the top of Model 50S System Unit. The #5143 Power Feature is a prerequisite. The #9051 is the Base Storage Expansion Unit for the Model 53S.
#5052	Storage Expansion Unit This feature provides space for up to sixteen disk units. It attaches to the top of Model 50S System Units and System Unit Expansion Towers #5070 and #5072 and Storage Expansion Towers #5080 and #5082. Only one #5052 per tower is supported and #5143 Power Supply may be required.
#5058	Storage Expansion Unit (Ultra SCSI) This feature provides space for up to 16 disk units. It attaches to System Unit Expansion Towers #5071 and #5073 and Storage Expansion Towers #5081 and #5083. Only one #5058 per tower is supported.
#5070	266 Mbps System Unit Expansion Tower This feature provides an I/O Tower for creating additional buses on Model 50S. It includes a 266 Mbps optical bus card, thirteen I/O card slots, space for up to four internal tape units, one battery backup (#9245), and two power supplies (#9240 and #9243). The #2686 and #2674 are prerequisites. It can support one #5052 Storage Expansion Unit with #5143 Power Supply. Due to power restrictions, there is a limitation on some high powered features housed in a #5070. This may mean that an additional #5070 is required.
#5071	266 Mbps System Unit Expansion Tower (Ultra SCSI) This feature provides an I/O Tower for creating additional buses on Model 50S. It includes a 266 Mbps optical bus card, thirteen I/O card slots, space for up to four internal tape units, one battery backup, and two power supplies. The #2686 and #2674 are prerequisites. It can support one #5058 Storage Expansion Unit. Due to power restrictions, there is a limitation on some high powered features housed in a #5071. This may mean that an additional #5071 is required. The #5071 supports Ultra SCSI disks in the #5058 and replaces the #5070 for new orders.
#5072	1063 Mbps System Unit Expansion Tower This feature provides an I/O Tower for creating additional buses on Model 53S. It includes a 1063 Mbps optical bus card, thirteen I/O card slots, space for up to four internal tape units, one battery backup (#9245), and two power supplies (#9240 and #9243). The #2688 and #2673 are prerequisites. It can support one #5052 Storage Expansion Unit with #5143 Power Supply. Due to power restrictions, there is a limitation on some high powered features housed in a #5072. This may mean that an additional #5072 is required.
#5073	1063 Mbps System Unit Expansion Tower (Ultra SCSI) This feature provides an I/O Tower for creating additional buses on Model 53S. It includes a 1063 Mbps optical bus card, thirteen I/O card slots, space for up to four internal tape units, one battery backup, and two power supplies. The #2688 and #2673/#9673 are prerequisites. It can support one #5058 Storage Expansion Unit. Due to power restrictions, there is a limitation on some high powered features housed in a #5073. This may mean that an additional #5073 is required. The #5073 supports Ultra SCSI disks in the #5058 and replaces the #5072 for new orders.
#5080	266 Mbps Storage Expansion Tower This feature provides a DASD Tower on Model 50S for adding up to 16 disk units (a total of 32 disk units are possible with the addition of #5052). It includes a 266 Mbps optical bus card, two I/O card slots for the disk IOPs (#6052, #6512, #6530, #6532, or #6533), one battery backup (#9245), and two power supplies (#9240 and #9243). The #2686 and #2674 are prerequisites.
#5081	266 Mbps Storage Expansion Tower (Ultra SCSI) This feature provides a DASD Tower on Model 50S for adding up to 16 disk units (a total of 32 disk units are possible with the addition of #5058). It includes a 266 Mbps optical bus card, two I/O card slots for the disk IOPs (#6502, #6512, #6530, but the new #6532, or #6533 is recommended), one battery backup, and two power supplies. The #2686 and #9673 or #2674 are prerequisites. The #5081 supports Ultra SCSI disk units and replaces the #5080 for new orders.

#5082	1063 Mbps Storage Expansion Tower This feature provides a DASD Tower on Model 53S for adding up to 16 disk units (a total of 32 disk units are possible with the addition of #5052). It includes a 1063 Mbps optical bus card, two I/O card slots for the disk IOPs (#6502, #6512, #6530, but the new #6532, or #6533 is recommended), one battery backup (#9245), and two power supplies (#9240 and #9243). The #2688 and #9673 or #2673 are prerequisites.
#5083	1063 Mbps Storage Expansion Tower (Ultra SCSI) This feature provides a DASD Tower on Model 53S for adding up to 16 disk units (a total of 32 disk units are possible with the addition of #5058). It includes a 1063 Mbps optical bus card, two I/O card slots for the disk IOPs (#6502, #6512, #6530, but the new #6532, or #6533 is recommended), one battery backup, and two power supplies. The #2688 and #2673/#9673 are prerequisites. The #5083 supports Ultra SCSI disk units and replaces the #5083 for new orders.
#5143	Feature Power Supply This is a 400-watt power feature required when adding a Storage Expansion Unit #5052 to a System Unit Expansion Tower (#5070 or #5072) or to a Storage Expansion Tower (#5080 or #5082). Only one #5143 is allowed per tower. Card slots used: None
#5144	Additional Battery Backup (External) This feature is required when the Main Storage capacity exceeds 384 MB on the Model 30S. It is allowed on the 50S when upgrading from a 30S. It is not required on new Model 50S. It is not supported at all on a Model 53S. Card slots used: None
#5145	Additional Battery Backup (Internal) This feature is available for the Model 50S where additional Continuously Powered Main Storage (CPM) time is desired, in the event of a system failure. Card slots used: None
#5146	Redundant Power This feature is a prerequisite to the installation of #5144. Not required on new Model 50S. Card slots used: None
#5149	Redundant Power This is a 400-watt power supply that increases the availability of the Model 50S. Card slots used: None
#8052	Optional Base 16 Disk Storage Expansion Unit This feature provides space for up to sixteen disk units and is available only on the System Unit of the Model 53S. Replaces #9051. The #8052 is not allowed when the 3590 Tape is the Alternate IPL device.
#9240	400 Watt Power Supply This feature is required on Model 50S and 53S System Unit and Expansion Towers #5070, #5072, #5080, and #5082. Card slots used: None
#9243	Base Feature Power Supply This feature is the base battery back-up used on Models 50S and 53S System Units and Expansion Towers #5070, #5072, #5080 and #5082. Model 53S System Unit requires two #9243s. Card slots used: None
#9245	Base Battery Backup This feature is the base battery backup used on Models 50S and 53S System Units and Expansion Towers #5070, #5072, #5080 and #5082. Model 53S System Unit requires two #9245s. Card slots used: None
MAIN STORAGE	
#3152	32 MB Main Storage Supported by Model 50S. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair
#3153	64 MB Main Storage Supported by Model 50S. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair

#3154	128 MB Main Storage Supported by Model 50S. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair
#3155	256 MB Main Storage Supported by Model 50S. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair
#3162	128 MB Main Storage Supported by Model 53S on processors #2154, #2155, or #2156. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair
#3163	256 MB Main Storage Supported by Model 53S on processors #2154, #2155, or #2156. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair
#3164	512 MB Main Storage Supported by Model 53S on all processors. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair
#3165	1024 MB Main Storage Supported by Model 53S on all processors. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair
#3166	256 MB Main Storage Supported by Model 53S on processor #2157 only. Must be added in pairs. Requires one dedicated memory card slot. Maximum: One pair
#7263	Optional Base 256 MB Main Storage Supported by Model 53S on processors #2154, #2155, or #2156. It provides an optional 256 MB Main Storage Card in place of a base 128 MB card. Must be added in pairs. Requires one dedicated memory card slot.
#7264	Optional Base 512 MB Main Storage Supported by Model 53S on processors #2154, #2155, or #2156 or #2157. It provides an optional 512 MB Main Storage Card in place of a base 128 MB card. Must be added in pairs. Requires one dedicated memory card slot.
#7265	Optional Base 1024 MB Main Storage Supported by Model 53S on processors #2154, #2155, or #2156 or #2157. It provides an optional 1024 MB Main Storage Card in place of a base 128 MB card. Must be added in pairs. Requires one dedicated memory card slot.
#7266	Base 256 MB Main Storage Supported by Model 53S on processor #2157 only. Two of these features are required to reach the system minimum main storage or 512 MB. Must be added in pairs. Requires one dedicated memory card slot.
#8253	Optional Base 64 MB Main Storage Supported by Model 50S. It provides an optional 64 MB Main Storage card in place of a base 32 MB card. Must be added in pairs. Requires one dedicated memory card slot.
#8254	Optional Base 128 MB Main Storage Supported by Model 50S. It provides an optional 128 MB Main Storage card in place of a base 32 MB card. Must be added in pairs. Requires one dedicated memory card slot.
#8255	Optional Base 256 MB Main Storage Supported by Model 50S. It provides an optional 256 MB Main Storage card in place of a base 32 MB card. Must be added in pairs. Requires one dedicated memory card slot.
#9252	Base 32 MB Main Storage Supported on Model 50S. Must be added in pairs. Requires one dedicated memory card slot.

#9262	Base 32 MB Main Storage Supported by Model 53S on processors #2154, #2155, or #2156. Must be added in pairs. Requires one dedicated memory card slot.
WORKSTATION CONTROLLERS	
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are #2699, #6149, #6180, #6181, #9249 and #9381. LAN IOAs (#6149, #6180, #6181, #9249, and #9381) cannot occupy all three positions. No more than seven #2629s can be placed in one #5070 or #5072 System Unit Expansion Tower. The #2629 cannot be placed in slot 14 of a #5072. There is no restriction on placing #2629 in #5071 or #5073 System Unit Expansion Tower. Requires OS/400 V4R1. Card slots required: One
#5540	Console attached to Twinaxial Workstation Controller Specify Prerequisite is #9162 MFIOp.
#5541	Console attached to ASCII Workstation Controller Specify Prerequisite is #9163 MFIOp. An ASCII controller #9141/#6141 is automatically included when #5541 is specified to control the ASCII system console.
#5542	Console attached to LocalTalk Workstation Controller Specify
#5543	Client Access/400 Console Specify Specifies a PC workstation to act as the system console. Prerequisites include a one-line communications adapter (#2612 or #9612) and a console attachment cable (#9026 or #9027). #9026 Console Attachment Cable (6m) #9027 Console Attachment Cable (2.5m)
#6050	Enhanced Twinaxial Workstation Controller One eight-port workstation attachment is provided to support seven 5250-type displays or printers. Requires one I/O card slot.
#6054 #9054	Workstation Adapter for Apple Macintosh (LocalTalk) See Communications section. The #9054 is plant installed only.
#6141 #9141	ASCII Workstation Controller This six-port workstation controller and workstation adapter supports up to six ASCII devices. Requires one I/O card slot
#6180	Twinaxial Workstation IOA One eight-port attachment is provided to support up to seven twinaxial devices. The #6180 must be placed in a #2629 LAN/WAN/Workstation IOP. Requires OS/400 V4R1. Prerequisite: #2629
#9149	Twinaxial Passthru Adapter #9149 adapts a twinaxial cable to the twinaxial function that resides inside the #9612/#8162. It is a prerequisite of #9162/#8162. When an external diskette drive is required on the system, #9149 is replaced by #6147 Diskette Adapter.
#9162 #8162	MFIOp with Twinaxial Support Both #9152 and #8162 allow the attachment of seven 5250-type devices and provide support for a twinaxial console. The #9149 is a prerequisite. The #8162 not available on new orders.
#9163	MFIOp #9163 does not support any 5250 type devices. When one #6054/#9054 is attached, #9163 controls a LocalTalk system console. Without #6054/#9054 attached, the system console is driven by the first workstation controller found when the system searches along the bus.

COMMUNICATIONS	
MFIOP	<p>Base Communications</p> <p>The Multifunction I/O Processor comes as standard on the Model 50S and 53S. The MFIOP (#9162, #8162 or #9163) can support two communications lines. The first line (with an EIA 232/V.24 adapter) is supplied as standard (#9612) for use with IBM Electronic Customer Support.</p> <p>One Cable must be specified:</p> <ul style="list-style-type: none"> #9023 EIA 232/V.24 enhanced cable (20ft) #9835 EIA 232/V.24 enhanced cable (50ft) <p>Maximum aggregate data rate = 83,200 bps.</p>
#2605	<p>ISDN Basic Rate Interface Adapter</p> <p>Connects to the #2623 to support one communications line to an ISDN network. Each adapter supports two 64Kbps B channels and one 16Kbps D channel. ISDN lines are full duplex. Requires no I/O card slots.</p> <p>Note: This adapter cannot be attached to #2623 that also attaches V.24, X.21 or V.35 adapter.</p>
#2609	<p>EIA 232/V.24 Two-Line Adapter</p> <p>Connects to the #2623 to support two communications lines using ASYNC, BSC, SDLC or X.25 protocol. Requires no I/O card slots. Two cables must be specified:</p> <ul style="list-style-type: none"> #9023 EIA/V.24 enhanced cable (20ft) #9835 EIA/V.24 enhanced cable (50ft) #9022 EIA/V.24 cable (20ft) #9836 EIA/V.24 cable (50ft)
#2610	<p>X.21 Two-Line Adapter</p> <p>Connects to the #2623 to support two communications lines running X.21 or X.25 networks. Requires no I/O card slots. Two cables must be specified:</p> <ul style="list-style-type: none"> #9021 X.21 cable (20ft) #9839 X.21 cable (50ft)
#2612	<p>EIA 232/V.24 One-Line Adapter</p> <p>Connects to MFIOP and Six-Line Communications Controller (#2623) to support one communications line using ASYNC, BSC, SDLC or X.25 protocol. Requires no I/O card slots. One cable must be specified (see cable features for #2609).</p>
#2613	<p>V.35 One-Line Adapter</p> <p>Connects to MFIOP and #2523 supporting one V.35 line using either BSC, SDLC, or X.25 protocols. Requires no I/O card slot #9020 V.35 cable (20ft).</p> <ul style="list-style-type: none"> #9020 V.35 cable (20ft) #9838 V.35 cable (50ft)
#2614	<p>X.21 One-Line Adapter</p> <p>Connects to MFIOP and #2623 to attach one communications line to an X.21 or X.25 network. Requires no I/O card slots. One cable must be specified (see cable features for #2610).</p>
#2620	<p>Full Cryptographic Processor</p> <p>This feature provides full cryptographic support for encrypting and decrypting data. This feature consists of an I/O processor card and cable to attach an optional 4754-001. Distribution of this feature is restricted by US Government export regulations. In countries outside the USA and Canada, it may be marketed only to financial institutions and subsidiaries of US companies. Requires one I/O card slot.</p>
#2623	<p>Six-Line Communications Controller</p> <p>This controller provides basic control and common circuits for up to six lines. Requires one I/O card slot.</p>
#2628	<p>Limited Cryptographic Processor</p> <p>Provides same functions as #2620 except for Data Encryption Standard based data scrambling. Instead, it used Commercial Data Marketing Facility for data scrambling. Supports attachment of optional 4754-L01. Does not require US Customs clearance. Requires one I/O card slot.</p>
#2629	<p>LAN/WAN/Workstation IOP</p> <p>Supports up to three IOAs. Those supported are #2699, #6149, #6180, #6181, #9249, and #9381. LAN IOAs (#6149, #6181, #9249, and #9381) cannot occupy all three positions. No more than seven #2629s can be placed in one #5070 or #5072 System Unit Expansion Tower. The #2629 cannot be placed in slot 14 or a #5072. There is no restriction on placing #2629 in #5071 or #5073 System Unit Expansion Tower. Requires OS/400 V4R1.</p> <p>Card slots required: One</p>

#2664	<p>Integrated Fax Adapter</p> <p>Provides the iSeries or AS/400e with two ports capable of transmission and receipt of facsimile data to or from a Group 3 capable Fax, another iSeries or AS/400e with an integrated Fax adapter, or PCs with approximately programmed Fax adapters.</p> <p>Requires one I/O card slot.</p>
#2666	<p>High-Speed Communications Adapter</p> <p>Provides the iSeries or AS/400e with one communications port capable of high speed communication over public or private Frame Relay networks or point-to-point non-switched SDLC lines. Speeds up to 2.048 Mbps are possible.</p> <p>Requires one I/O card slot.</p> <p>One of the following cables must be specified:</p> <ul style="list-style-type: none"> #9879 6m V.35 cable #9880 24m V.35 cable* #9882 6m V.36/EIA 449 cable #9883 24m V.36/EIA 449 cable** #9884 45m V.36/EIA 449 cable** #9885 6m X.21 cable <p>* Line speeds up to 64 Kbps only.</p> <p>** Use of the longer cables require that the attaching Data Communications Equipment (DCE) support the V.36 transmitter signal element timing Data Terminal Equipment (DTE) source signal.</p> <p>Note: #2666 is classed as a communications line for purpose of maximum communications lines per model.</p>
#2699	<p>Two-Line WAN IOA</p> <p>Supports up to two multiple protocol communications ports when any one or two (in any combination) of the following cables are attached:</p> <ul style="list-style-type: none"> #0329 V.24/EIA 232 80 ft (24m) cable #0330 V.24/EIA 232 20 ft (24m) cable #0331 V.24/EIA 232 50 ft (24m) cable #0332 V.24/EIA 232 80 ft (20m) enhanced cable #0333 V.24/EIA 232 80 ft (50m) enhanced cable #0334 V.24/EIA 232 80 ft (24m) enhanced cable #0335 V.36/EIA 232 449 20ft (6m) cable #0336 V.36/EIA 232 449 50ft (15m) cable #0337 V.36/EIA 232 449 150ft (45m) cable #0338 V.35 20 ft (6m) cable #0338 V.35 50 ft (15m) cable #0338 V.35 80 ft (24m) cable #0338 X.21 20 ft (6m) cable #0338 X.21 50 ft (15m) cable <p>There are some restrictions on communications using #2699. For full details, see the #2699 description in 9.13, "9406 Models 640 and 650" on page 251. Requires OS/400 V4R1.</p> <p>Prerequisite for #2699: #2629</p> <p>IOA slots required for #2699: One on #2629</p>
#6054 #9054	<p>Workstation Adapter for Apple Macintosh (LocalTalk)</p> <p>Allows Apple Macintosh computer devices to attach directly to the iSeries or AS/400e. Also allows for connection to LocalTalk networks. Each adapter allows attachment of 31 Apple Macintosh devices with up to 56 sessions.</p> <ul style="list-style-type: none"> #6054 attaches to the #2623 #9054 attaches to the MFIOP <p>A maximum of one #6054/#9054 can be attached per #2623/MFIOP. A second adapter on the #2623 may be X.21, V.24, or V.35. The third adapter position <i>must not</i> be used.</p> <p>A single-line EIA 232/V.24 adapter may co-reside with #9054 on MFIOP.</p>
#9612	<p>Standard EIA 232/V.24 One-Line Adapter</p> <p>This adapter provides support for one communication line using either ASYNC, BSC, SDLC, or X.25 protocol.</p> <p>Specify one of the following cables for ECS:</p> <ul style="list-style-type: none"> #9023 EIA232/V.24 enhanced cable (20ft) #9835 EIA232/V.24 enhanced cable (50ft) <p>#9612 may also be used in conjunction with Client Access/400 console (#5543) and requires #9026/#9027 cables.</p>

LANS/ATM	
#2617 #9617	Ethernet/IEEE 802.3 Adapter/HP Provides a single attachment on one Carrier Sense Multiple Access/Collision Detect Local Area Network. The #9617 would be the base LAN. The customer must procure the Attachment Unit Interface (AUI) cable, which connects between the adapter and the Ethernet/IEEE 802.3 transceiver. Requires one I/O card slot.
#2618 #8664	Fiber Distributed Data Interface Adapter Provides one interface to connect an iSeries or AS/400e to an FDDI LAN, which complies with ANSI X3T9.5 and ISO 9314 standards. The #8664 would be the base LAN. Requires one I/O card slot. Cables: Requires multi-mode (62.5/125) micron FDDI optical fiber jumper cables to connect the FDDI adapter into the FDDI ring. These must be separately ordered.
#2619 #9619	16/4 Mbps Token Ring Adapter/HP Provides a single attachment to a 16 Mbps or 4 Mbps IBM Token Ring Network. It consists of an adapter card, Internal Code, which supplies IEEE 802.5 Media Access Control and Logical Link Control functions, and an external 2.5m cable. The #9619 would be the base LAN. Requires one I/O card slot.
#2629	LAN/WAN/Workstation IOP Supports up to three IOAs. Those supported are #2699, #6149, #6180, #6181, #9249 and #9381. LAN IOAs (#6149, #6181, #9249, and #9381) cannot occupy all three positions. No more than seven #2629s can be placed in one #5070 or #5072 System Unit Expansion Tower. There is no restriction on placing #2629 in #5071 or #5073 System Unit Expansion Tower. The #2629 cannot be placed in slot 14 of a #5072. Requires OS/400 V4R1. Card slots required: One
#2663	I/O Attachment Processor Provides the communications hardware base for the iSeries or AS/400e Wireless LAN Adapter (#2688). The #2663 and #2668 are integrated in a single hardware package to operate as a unit. Prerequisite for feature #2668. Shares one I/O card slot with #2668.
#2665 #8665	Shielded Twisted-Pair Distributed Data Interface Adapter Provides one interface to connect an iSeries or AS/400e to an FDDI LAN which is constructed of IBM Cabling System Type 1, 2, 6, or 9 shielded twisted pair wiring. The #8665 would be the base LAN. Requires one I/O card slot. Cables: The SDDI adapter requires IBM FDDI copper jumper cables to connect the adapter into the FDDI ring. These must be separately ordered.
#2668	Wireless LAN Adapter Provides wireless connectivity from iSeries or AS/400e servers to workstations or other systems connected to a wireless LAN network. The #2668 comes with an antenna and a cable for connecting the antenna to the adapter. One of the following antenna cables must be specified: #9814 20 ft antenna cable #9815 50ft antenna cable One of the following antenna must be specified: #9890 Omni-directional antenna #9891 Hemispherical antenna #9892 Directional antenna Prerequisite #2663. Shares one I/O card slot with #2663.
#2723	PCI Ethernet IOA Provides a single attachment to one Carrier Sense Multiple Access/Collision Detect Local Area Network. Consists of an adapter card and internal code which supplies Ethernet Version 2 and IEEE 802.3 Media Access Control (MAC) plus IEEE 802.2 Logical Link Control (LLC) functions. Has an RJ45 connector and a 15 pin D-shell connector for attachment of customer supplied cabling. AUI Ethernet or RJ45 twisted pair cable must be ordered separately. Cabling must meet or exceed Industry Standard EIA/TIA T568B. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. Requires OS/400 V4R2. Requires #6617 Integrated PC Server or #6618 Integrated Netfinity Server as a prerequisite.

#2724	PCI 16/4 Mbps Token Ring IOA Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an adapter card, internal code (supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC) functions), and an external 8-foot (2.4m) cable. Alternatively, a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. The IOA is capable of operating in half or full duplex mode. Requires OS/400 V4R2. Requires #6617 Integrated PC Server or #6618 Integrated Netfinity Server as a prerequisite.
#2810	LAN/WAN IOP This I/O processor is required to attach one #2838/#9738 PCI 100/10 Mbps Ethernet IOA or the #2811/#2812/#2815/#2816/#2818/#2819 PCI ATM IOA. Prerequisite for the preceding features. Requires OS/400 V4R1 to support #2838/#9738 or OS/400 V4R2 to support any ATM/IOA. Card slots required: One with any of the preceding features.
#2811	PCI 25 Mbps UTP ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Unshielded Twisted Pair (UTP) cabling. The #2811 is typically used where 25 Mbps speed is required over distances of less than 100 meters. Requires OS/400 V4R2. Card slots required: One (with #2810) Prerequisite: #2810
#2812	PCI 45 Mbps Coax T3/DS3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the T3/DS-3. The #2812 typically used where 45 Mbps speed is required over distances of less than 1000 meters. Requires OS/400 V4R2. Card slots required: One (with #2810) Prerequisite: #2810
#2815	PCI 155 Mbps UTP OC3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Unshielded Twisted Pair (UTP-5) interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2815 is typically used where 155 Mbps speed is required over distances of less than 100 meters. Requires OS/400 V4R2. Card slots required: One (with #2810) Prerequisite: #2810
#2816	PCI 155 Mbps MMF ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Multi-Mode Fiber (MMF) 62.5 micron interface. This interface is intended for connection to both local area switches and direct connection to service provider equipment. The #2816 is typically used where 155 Mbps speed is required over distances of less than 2 kilometers. Requires OS/400 V4R2. Card slots required: One (with #2810) Prerequisite: #2810
#2818	PCI 155 Mbps SMF ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using the Single Mode Fiber (SMF) 9 micron interface. This interface is intended primarily for direct connection to service provider equipment, but can be used for local area switches. The #2818 is typically used where 155 Mbps speed is required over distances of from 16 to 40 kilometers. Requires OS/400 V4R2. Card slots required: One (with #2810) Prerequisite: #2810
#2819	PCI 34 Mbps Coax E3 ATM IOA Provides attachment into an Asynchronous Transfer Mode (ATM) network using Coax cabling and the E3 interface. The #2819 is typically used where 34 Mbps speed is required over distances of less than 1000 meters. Requires OS/400 V4R2. Card slots required: One (with #2810) Prerequisite: #2810
#2838 #9738	PCI 100/10 Mbps Ethernet IOA Provides attachment to a standard 100 Mbps high speed Ethernet LAN and also allows attachment to existing 10 Mbps Ethernet LAN. The adapter comes with an RJ45 connector for attachment to UTP-5 media. The #9738 specifies the base LAN. The Ethernet/IEEE 802.3 IOA is capable of operating in half or full duplex mode. Requires OS/400 V4R1 with the #2810 or OS/400 V4R2 with the #6617 or #6618. Card slots required: One (with #2810) or three (with #6617 or #6618). Prerequisite: #2810, #6617, or #6618.

#6149 #9249	16/4 Mbps Token Ring IOA Provides a single attachment to a 16 Mbps or a 4 Mbps Token Ring Network. It consists of an IOA car, internal code, which supplies IEEE 802.5 Media Access Control (MAC) and IEEE 802.2 Logical Link Control (LLC), and an external 8-foot (2.4m) Token Ring cable. Alternatively a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. The #6149 can operate in full or half-duplex mode. The #9249 specifies the base LAN. Requires V3R7 in the #6616, OS/400 V4R1 in the #2629. Card slots required: None Prerequisite: One #2629 or #6616 slot
#6516 #6517 #6518 #6519 #6526 #6527 #6528 #6529 #8716 to #8719 #8726 to #8729	Integrated PC Server (formerly known as FSIOP) The Integrated PC Server connects to the iSeries or AS/400e to provide high performance file serving to PCs attached using Token Ring or Ethernet networks. The IOP consists of an INTEL 80486 66MHZ processor and onboard Main Storage (16 to 64 MB). The following initial order configurations can be field upgraded using #6509 and #6520. 16 MB One-Port Integrated PC Server 32 MB One-Port Integrated PC Server 48 MB One-Port Integrated PC Server 64 MB One-Port Integrated PC Server 16 MB Two-Port Integrated PC Server 32 MB Two-Port Integrated PC Server 48 MB Two-Port Integrated PC Server 64 MB Two-Port Integrated PC Server Specify for One-Port Integrated PC Server as base LAN Specify for Two-Port Integrated PC Server as base LAN The following cables need to be specified depending on the network attaching into a Integrated PC Server Port: #9024 Token Ring Cable (2.44m) #9025 Ethernet Cable (3m AUI) The Integrated PC Server requires two contiguous I/O card slots Additional 16 MB for Integrated PC Server #6509 is used for expanding the memory of an installed Integrated PC Server. One to three #6509s may be installed per Integrated PC Server up to a maximum of 64MB. Upgrade One-Port Integrated PC Server to Two-Port Integrated PC Server #6520 cannot be used with a Two-Port Integrated PC Server
#6616	Integrated PC Server Contains a 166 MHz Pentium Processor, two Main Storage slots, and two LAN slots for higher performance serving to LAN attached PCs. The two main storage slots can each contain one of the following features, giving a maximum of 256 MB. At least one main storage feature is required: #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory Either one or two of the following LAN IOAs are supported: #6149/#9249 16/4 Mbps Token In IOA #6181/#9831 Ethernet/IEEE 802.3 IOA #9249 and #9381: One of these can be specified as the base LAN. Requires V3R7 with cumulative PTF package C7029370 or later. Card slots required: Two contiguous slots
#6617	Integrated PC Server Contains a 200 MHz Pentium Processor, four Main Storage slots, and two LAN slots for higher performance serving to LAN attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 512 MB. At least one main storage feature is required: #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838/#9738. #2723 PCI Ethernet IOA #2724 PCI Token Ring IOA #2838/#9738 PCI 100/10 Mbps Ethernet IOA The #9738 is the base LAN. The third LAN and the second #2838/#9738 can only be used if running Windows NT on the #6617. The #0022 100/10 Mbps Ethernet on IPCS is required for each #2838/#9738 attached to the #6617 Integrated PC Server. If running Windows NT on the #6617, then: #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT, the default in the USA. A display must be connected to the IPCS to support Windows NT.

#6617 <i>continued</i>	<p>For country-specific keyboard or mouse and display support, refer to the Web site at: http://www.ibm.com/eserver/iseriess/windowsintegration/ Requires OS/400 V4R2. Card slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack.</p>
#6618	<p>Integrated Netfinity Server for AS/400 (SPD) Requires OS/400 V4R2 and CUM C8342420, V4R3 and CUM C8349430 or later OS/400 versions. Contains a 333 MHz Pentium Processor, four main storage slots, and three LAN IOA slots for high performance serving to LAN-attached PCs. The four main storage slots can each contain one of the following features, giving a maximum of 1024 MB. At least one main storage feature is required:</p> <ul style="list-style-type: none"> #2861 32 MB Integrated PC Server Memory #2862 128 MB Integrated PC Server Memory #2867 256 MB Integrated PC Server Memory <p>Up to three of the following LAN IOAs are supported. At least one LAN IOA is required. A maximum of two of the LAN IOAs can be #2838/#9738.</p> <ul style="list-style-type: none"> #2723 PCI Ethernet IOA Specify #0221 is required for each #2723 ordered. #2724 PCI Token Ring IOA Specify #0220 is required for each #2724 ordered. #2838 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each #2838 ordered. <p>Only one of the following Base LAN IOAs is supported:</p> <ul style="list-style-type: none"> #9723 PCI Ethernet IOA Specify #0221 is required for each #9723 ordered. #9724 PCI Token Ring IOA Specify #0220 is required for each #9724 ordered. #9738 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required for each #9738 ordered. <p>The third LAN and the second #2838 can only be used if running Windows NT on the #6618. The #0222 100/10 Mbps Ethernet on IPCS is required for each #2838 attached to the #6618 Integrated PC Server. When running Windows NT on the #6618, then:</p> <ul style="list-style-type: none"> A minimum of 64 MB IOP memory is required. #0325 Integrated PC Server Extension Cable for Windows NT is required. #1700 Integrated PC Server Keyboard or Mouse for Windows NT, the default in the USA. A display is required to support Windows NT on the IPCS. <p>For country-specific keyboard or mouse and display support, refer to the Web site at: http://www.ibm.com/eserver/iseriess/windowsintegration/</p> <p>When running OS/2 on the #6618, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738. A maximum of 512 MB IOP memory is supported. <p>When running Novell Netware on the #6618, then:</p> <ul style="list-style-type: none"> #0325 and #1700 are not allowed. Only two of the LAN IOA slots can be used and only one can contain a #2838/#9738. A maximum of 256 MB IOP memory is supported. <p>SPD slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack.</p>
DISK UNITS	
#1109	<p>988 MB Single Disk Unit Conversion Kit This feature provides the conversion kit required to migrate 988MB one-byte SCSI disk units. 2.06 GB dual-disk units require two of these kits. Each kit occupies one disk slot.</p>
#1602	<p>1.03 GB Single Disk Unit Conversion Kit This feature provides the conversion kit required to migrate 1.03GB one-byte SCSI disk units. 1976 MB dual-disk units require two of these kits. Each kit occupies one disk slot.</p>
#1603	<p>1.96 GB Single Disk Unit Conversion Kit This feature provides the conversion kit required to migrate 1.96 GB one-byte SCSI disk units. 3.93GB dual-disk units require two of these kits. Each kit occupies one disk slot.</p>
#6109	<p>988 MB Additional Disk Unit This feature provides a 3 ½-inch single disk unit with 988 MB capacity for additional disk storage.</p>
#6605	<p>1.03 GB Additional Two-Byte Disk Unit This feature provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage.</p>
#6606	<p>1.96 GB Additional Two-Byte Disk Unit This feature provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage.</p>
#6607	<p>4.19 GB Additional Two-Byte Disk Unit This feature provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage.</p>

#6713 #7713	8.58 GB Additional Two-Byte Disk Unit This feature provides a 3 ½-inch single disk unit with 8.58 GB capacity for additional disk storage. The #7713 is an optional 8.58 GB base disk. Requires V3R7.
#6650	1.96 GB Additional Two-Byte Disk Unit This feature provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage.
#6652	1.03 GB Additional Two-Byte Disk Unit This feature provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage.
#6906	1.96 GB Additional Two-Byte Disk Unit (Ultra SCSI) This feature provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage. For best performance, use attached to the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in #5058 Storage Expansion Unit or #5081 or #5083 Storage Expansion Tower.
#6907	4.19 GB Additional Two-Byte Disk Unit (Ultra SCSI) This feature provides a 3 ½-inch single disk unit with 4.19 GB capacity for additional disk storage. For best performance, use attached to the #6532 or #6533 RAID Disk Unit Controller (Ultra SCSI) in #5058 Storage Expansion Unit or #5081 or #5083 Storage Expansion Tower.
#7607	4.19 GB Optional Two-Byte Disk Unit This feature is only available from plant. It provides a 3 ½-inch single disk unit with 4.19 GB capacity as the base disk unit in place of the #9606. This is the default base disk with OS/400 V4R1.
#9606	1.96 GB Base Two-Byte Disk Unit This feature provides a 3 ½-inch single disk unit with 1.96 GB capacity as the base disk unit on new Models 50S and 53S or as upgrades to Models 50S and 53S.
#1378	525 MB ¼-inch Cartridge Tape Unit This feature provides the conversion kit required to migrate 525 MB ¼-inch Cartridge Tape Units. Maximum: 17
#1379	1.2 GB ¼-inch Cartridge Tape Unit This feature provides the conversion kit required to migrate 1.2 GB ¼-inch Cartridge Tape Units. Maximum: 17
#1380	2.5 GB ¼-inch Cartridge Tape Unit This feature provides the conversion kit required to migrate 2.5 GB ¼-inch Cartridge Tape Units. Maximum: 17
#6335	840 MB ¼-inch Cartridge Mini Tape Unit Using QIC-3040-M recording format, tape cartridge capacity is 840 MB. With hardware, data compression maximum capacity is up to 1.6GB. Sustained data transfer rate is 300 KB per second. Maximum: 17
#6380	2.5 GB ¼-inch Cartridge Tape Unit It provides full interchange of data with all standard ¼-inch cartridge tape units provided on the iSeries or AS/400e server, using the proper media and density. With hardware, data compression maximum capacity is up to 5 GB. Sustained data transfer rate is 300KB per second. Maximum: 17
#6285	13.0 GB ¼-inch Cartridge Tape Unit It provides full interchange of data with all standard and optional ¼-inch cartridge tape units provided on the iSeries or AS/400e server, using the proper media and density. Sustained data transfer rate is 1.5 MB per second. With hardware, data compression maximum capacity is up to 26 GB. Supported as an Alternate IPL device. Requires #6513 Internal Tape Device Controller. Maximum: 17
#6390	7 GB 8 mm Cartridge Tape Unit 8 mm Helical Scan tape drive which can be used for save and restore, program distribution and Alternate IPL. Has sustained data rate of 500 KB per second. With hardware, data compression maximum capacity is up to 14 GB, and data transfer rate is up to 1 MB per second. Maximum: 17
#9520	Base CD-ROM Drive Used for code distribution.

MAGNETIC MEDIA CONTROLLERS	
#2621	Removable Media Device Attachment This feature provides attachment capability for up to two of the following devices with hardware data compression: 2440, 9348, 9427, 7208 and 3995. If #2621 is to support 3995 or 9427, it must be dedicated to it. Card slots used: One
#2624	Storage Device Controller This feature can support up to two internal tape units in the System Unit. As a feature on #507x, it can support up to three internal tape units. The #2624 can concurrently support a #6146 Diskette adapter to attach an external diskette unit. Under V3R7 and later, the hardware configurators defaults to the #6513 Internal Tape Device Controller, unless the tape is a #1378 (525MB QIC) or if a #2624 is available to attach to required tape. Card Slots used: One Maximum: One per tower
#2644	3490 Magnetic Tape Attachment Card/HP Provides attachment for all 34xx Tape subsystem models (except SCSI attach 3490 models). May also require #9980 Serpentine Cable. Card Slots used: One
#6146	Diskette Adapter This feature provides support for one of the following external diskette types: 9331-011 8-inch Diskette Unit 9331-012 ¼-inch Diskette Unit It requires #2624 to attach. Card Slots used: none Maximum: One
#6147	Diskette Adapter This feature provides support for one of the following external diskette types: 9331-011 8-inch Diskette Unit 9331-012 5 ¼-inch Diskette Unit It attaches to MFIOP #9162 or #9163 Card Slots used: None Maximum: One It also supports Twinaxial Passthru (see #9149).
#6501	Tape/Disk Device Controller This feature allows attachment of up to two SCSI attach 3490 or 35xx units. Card slots used: One
#6502	High Performance Controller 2 MB Cache—(RAID/Mirrored/Unprotected) Provides RAID-5 protection and a 2 MB write-cache for internal disk units installed in a single Storage Expansion Unit (#505x, #8052 or #9051) or installed in the Storage Expansion Tower (#508x). Supports up to 16 disk units. A maximum of two RAID-5 arrays are allowed per #6502 with a maximum of ten disk units per array. All disk units in an array must be of the same capacity. A minimum of four disk units are needed for a valid RAID-5 configuration and disk units not supported in a RAID-5 array can still be attached in base or mirrored mode. Only 1.03 GB, 1.96 GB, and 4.19 GB disk units can be RAID-5 protected with this controller and parity is spread across four or eight disk units. Mutually exclusive with #6512, #6530, #6532 and #6533. One #6502/#6512/#6530/#6532/#6533 is required for each Storage Expansion Unit (#505x, #8052, or #9051) or Storage Expansion Tower (#508x). The #6502 does not support integrated hardware disk compression. Card Slots used: One See the model overview tables at the beginning of this chapter for the maximum disk unit IOPs.
#6512	High Performance Controller 4 MB Cache—(RAID/Mirrored/Unprotected) Provides RAID-5 protection and a 4 MB write-cache for internal disk units installed in a single Storage Expansion Unit (#505x, #8052 or #9051) or installed in the Storage Expansion Tower (#508x). Supports up to 16 disk units. A maximum of two RAID-5 arrays are allowed per #6512 with a maximum of ten disk units per array. All disk units in an array must be of the same capacity. A minimum of four disk units are needed for a valid RAID-5 configuration and disk units not supported in a RAID-5 array can still be attached in base or mirrored mode. Only 1.03 GB, 1.96 GB, and 4.19 GB disk units can be RAID-5 protected with this controller and parity is spread across four or eight disk units. Mutually exclusive with #6502, #6530, #6532 and #6533. One #6502/#6512/#6530/#6532/#6533 is required for each Storage Expansion Unit (#505x, #8052, or #9051) or Storage Expansion Tower (#508x). The #6512 does not support integrated hardware disk compression. Card Slots used: One See the model overview tables at the beginning of this chapter for the maximum disk unit IOPs.

#6513	Internal Tape Device Controller Provides support for up to two internal tape devices when installed in the System Unit or up to four internal tape devices when installed in a System Unit Expansion Tower (#507x). This is the default on the hardware configurators except for #1378, (525 MB QIC) or if a #2624 Storage Device Controller is available for attaching a required tape. The following internal tape features are supported: #1379, #1380, #6335, #6380, #6385, #6390. Requires V3R7 Card Slots used: One
#6530	Disk Unit Controller No Cache (Mirrored/Unprotected) Provides attachment for up to two internal tape devices when installed in the System Unit or up to four internal tape devices when installed in a System Unit Expansion Tower (#507x) in either base or mirrored mode. Mutually exclusive with #6502, #6512, #6532, and #6533. One #6502/#6512/#6530/#6532/#6533 is required for each Storage Expansion Unit (505x, #8052 or #9051) or Storage Expansion Tower (508x). The #6530 does not support integrated hardware disk compression. Card Slots used: One See the model overview tables at the beginning of this chapter for the maximum disk unit IOPs.
#6532	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) Ultra SCSI Controller for up to 16 disks installed in #5058 Storage Expansion Units or #5081 or #5083 Storage Expansion Tower. Also supports disks located in #5051, #5052, #8052 or #9051 Storage Expansion Unit, or #5080 or #5082 Storage Expansion Tower, but these are not at Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of four arrays are allowed for each #6533. Requires OS/400 V4R1. The #6532 does not support of integrated hardware disk compression. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter.
#6533	RAID Disk Unit Controller—4 MB Cache (RAID/Mirrored/Unprotected) (Ultra SCSI) Ultra SCSI Controller for up to 16 disks installed in #5058 Storage Expansion Units or #5081 or #5083 Storage Expansion Tower. Also supports disks located in #5051, #5052, #8052 or #9051 Storage Expansion Unit, or #5080 or #5082 Storage Expansion Tower, but these are not at Ultra SCSI speeds. Offers performance improvements over #6502, #6512, and #6530. A minimum of four drives and a maximum of ten drives are supported in each array. A maximum of four arrays are allowed for each #6533. Requires OS/400 V4R2. Supports disk compression with V4R3 installed. Integrated hardware compression on #6714 17.54 GB Disk Unit is not currently supported. IBM intends to provide disk compression for #6714 in a future release of OS/400. Card slots required: One Maximum: See the model overview tables at the beginning of this chapter for maximum disk units IOPs.
#6534	Magnetic Media Controller (Ultra SCSI) Provides attachment for one 3490E Cxx with #5040, 3490E Exx, 3490E Fxx, 3494 D1x or L1x, 3570, 3575, 3590, 7208, 9348, or 9427 Tape Drive or 3995 C4x Optical Library Server. Requires OS/400 V4R1. V4R2 is required to support 3995. Card slots required: One Maximum: Four
#9980	Serpentine Cable Required for attaching all #2644 supported devices (except 3490-Cxx when attached using “internal cables”). This is a 3490 feature.

Chapter 15. External Storage Devices

15.1 Disk Model Identifier

The system configuration list (rack configuration) shows the disk type and model in the format XXXX-YYY, where the XXXX identifies the CCIN number of the disk and YYY identifies the potential or actual disk protection and compression. Refer to Chapter 16, "CCIN Numbers" on page 441, for a listing of the AS/400 CCIN numbers. The YYY identifiers are:

- **030:** Unprotected or mirrored unit attached to a non-RAID capable controller.
- **050:** Unprotected or mirrored unit attached to a RAID capable controller.
- **060:** Unprotected or mirrored unit attached to a RAID capable controller. Data compression is active.
- **070:** Non-parity member of a parity (RAID) set. Full capacity. Data compression is inactive.
- **072:** Parity member of a parity (RAID) set with eight parity members. Seven-eighths capacity. Data compression is inactive.
- **074:** Parity member of a parity (RAID) set with four parity members. Three-fourths capacity. Data compression is inactive.
- **080:** Non-parity member of a parity (RAID) set. Full capacity. Data compression is active.
- **082:** Parity member of a parity (RAID) set with eight parity members. Seven-eighths capacity. Data compression is active.
- **084:** Parity member of a parity (RAID) set with four parity members. Three-fourths capacity. Compression is active.

15.2 9406 External Disk

Machine	Model	Description	9406 Model
9336	010	Direct Access Storage Device Provides 942 MB of DASD with two disk drives (471 MB each) with one actuator.	B, D, E, F 3x0, 5x0
9336	020	Direct Access Storage Device Provides 1714 MB of DASD with two disk drives (857 MB each) with one actuator. These devices are housed in 9309 racks. Four optional features are offered with the 9336: #1201 adds a single 471 MB disk drive #1202 adds two 471 MB disk drives (942 MB) #1203 adds a single 857 MB disk drive #1204 adds two 857 MB disk drives (1714 MB) A maximum of two additional disk drives per model can be installed.	
9336	025	Direct Access Storage Device Provides 3428 MB of DASD with four disk drives (857 MB each) as standard. 9336 attaches to 9406 using #6112.	

Type-Mod (See Note 1) and Note 2)	RAID (See Note 3)	MB per disk	No. of disks Min/Max	Max Capacity			9406 Models (See Note 5)	Upgrade from
				Feature	Base	HA		
9337-010	N	542	2/7	#1206	3.79		B,D,E,F, 3x0, 5x0, 6x0, Sx0, 7x0 8xx	None
9337-110	Y	542	4/7	#1206		3.25		010
9337-020	N	970	2/7	#1212	6.79			None
9337-120	Y	970	4/7	#1212		5.82		020
9337-040	N	1967	4/7	#1220	13.76			None
9337-140	Y	1967	4/7	#1220		11.80		040
9337-015	N	542	2/7	#1207	3.79		B,D,E,F, 3x0, 5x0, 6x0, Sx0, 7x0 8xx	None
9337-115	Y	542	4/7	#1207		3.25		015
9337-025	N	970	2/7	#1213	6.79			None
9337-125	Y	970	4/7	#1213		5.82		020
9337-210	S	542	2/8	#1206	4.33	3.79	D,E,F, 3x0, 5x0, 6x0, Sx0, 7x0, 8xx	010, 110
9337-220	S	970	2/8	#1212	7.76	6.79		020, 120
9337-215	S	542	2/8	#1207	4.33	3.79	D,E,F, 3x0, 5x0, 6x0, Sx0, 7x0	015, 115
9337-225	S	970	2/8	#1213	7.76	6.79		025, 125
9337-240	S	1967	4/8	#1220	15.73	13.76		040, 140
9337-420	S	970	4/8	#1228	7.76	6.79	D,E,F, 3x0, 5x0, 6x0, Sx0, 7x0, 8xx	(See Note 4)
9337-440	S	1967	4/8	#1248	15.73	13.76		
9337-480	S	4194	4/8	#1288	33.55	29.35		
9337-540	S	1967	4/8	#1249	15.73	13.76	D,E,F, 3x0, 5x0, 6x0, Sx0, 7x0, 8xx	None
9337-545	S	1967	4/8	#1249	15.73	13.76		
9337-580	S	4194	4/8	#1289	33.55	29.35		
9337-585	S	4194	4/8	#1289	33.55	29.35		
9337-590	S	8589	4/8	#1290	68.71	60.12		
9337-595		8589	4/8	#1290	68.71	60.12		

Note 1 All models of the 9337 were withdrawn from marketing effective 30 September 1998.

Note 2

Models 0xx and 1xx	Attach to 9406 D, E, F, 3x0, 5x0, 620, 640, 650, S20, S30, S40, 7x0 models using IOP #6500
Models 2xx/4xx	Attach to 9406 B using IOP #2611
Models 4xx	Attach to 9406 D, E, F, 3x0, 5x0, 620, 640, 650, S20, S30, S40 and 7x0 models using DASD Controller #6501
Models 545/585/595	These are also available as Stand-Alone Towers by specifying #2400 for black covers or #2410 for white covers. Attach using #6501.
Models 5xx	These are stand-alone towers. The #2405 specifies black covers and #2410 specifies white covers.
	These can be converted to attach to other supported open systems (RS/6000, HP, SUN, and NCR) by specifying Feature #5001. This includes a controller card, operator panel, and installation support disk drive.

Note 3 N=No Y=Yes S=Switchable

Note 4 There is no direct upgrade path to the 9337-4xx models. However, the 4xx Controller card with a 4 MB Write Cache (#1400) can be installed on any 9337-2xx model to boost performance by up to 20%.

Note 5 Not Model 600 or S10.

15.3 Enterprise Storage Server

<p>2105 F10, F20 E10 or E20</p>	<p>Enterprise Storage Server</p> <p>Enclosure of the Enterprise Storage Server. Incorporates dual RISC 4-way SMP processors. Sixteen standard configurations offered range from 400 GB to over 11 TB. Each standard configuration provides a support infrastructure base of up to 16 GB cache, 384 MB nonvolatile storage (NVS) (write cache), four device adapter pairs, and serial 9 GB, 18 GB, or 36 GB disks in the optimum serial loop configuration. Provides RAID-5 protection.</p> <p>Enterprise Storage Server supports all platforms supported by the Versatile Storage Server, including RS/6000 running AIX and many leading UNIX variants, Netfinity, and other PC servers running Windows NT or Novell Netware, and Compaq AlphaServers running OpenVMS. In addition, the ESS supports System/390 servers running OS/490, VM, VSE, and TPF. Storage capacity is partitioned among the attached servers using the Web-based StorWatch ESS Specialist management tool.</p> <p>Field upgrades are only allowed for configurations within the same drive size (9.1 GB, 18.2 GB, and 36.4 GB).</p> <p>Attaches to the AS/400 system using a #6501 (SPD). The #6501 requires OS/400 V3R1. When attached to the #6501, the Enterprise Storage Server emulates the 9337-5xx drive based on the size of the disk unit installed. V3R1 supports 4GB and 8GB arms, V4R2 supports 4GB, 8GB, 17GB and 36GB arms. Sixteen disk drives (LUNs) are supported per #6501, with up to a maximum of 16 #6501s for 32 ports on the ESS.</p> <p>#1001 Remote Power Control #2100 Expansion Enclosure (E20 only) #2121 9.1 GB Disk Eight-Pack #2122 18.2 GB Disk Eight-Pack #2123 36.4 GB Disk Eight-Pack #2715 Remote Support Facility #2716 Remote Support Facility Attachment #3002 SCSI Host Adapter #93xx 93xx - Modem Specify Features for Remote Support, country specific #96xx Capacity increment consisting of 9.1 GB drives for the E10, E20, F10 or F20 #9701 10 Meter Cable - Ultra SCSI #9702 20 Meter Cable - Ultra SCSI #9705 10 Meter AS/400 SCSI-2 Host Attachment Cable #9706 20 Meter AS/400 SCSI-2 Host Attachment Cable #9801 Single Phase 50/60 Hz 50 Am Power Cord #9986 Single Phase 50/60 Hz 50 Am (Chicago) #9870 Nominal AC Voltage 200V-240V 50/60 Hz #9904 Reserve Two Loops</p> <p>Note: Resources can be reserved to later incorporate capacity of existing IBM 7133 Serial Storage Disk Architecture (SSA) IBM 2105 Model B09 and Model 100 frames.</p>	<p>D, E, F, 3x0, 5x0, 6x0, Sx0, 7x0, 8xx (excluding 600 or S10)</p>
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15.4 Versatile Storage Server

<p>2105 B09</p>	<p>Versatile Storage Server</p> <p>Primary Enclosure of the Versatile Storage Server. Includes the storage server, two 7133 drawers, and the power control system. There is space for two additional 7133 disk drawers. The primary enclosure can be combined with up to two 2105-100 expansion enclosures.</p> <p>Attaches to the AS/400 system using a #6501 (SPD). The #6501 requires OS/400 V3R1. When attached to the #6501, the Versatile Storage Server emulates the 9337-580 or 9337-590 based on the size of the disk unit installed.</p> <p>Note: Each connection to an AS/400 using a #6501 supports a maximum of sixteen disk units. There can be a maximum of eight #3001 Host Interface Adapters per 2105 VSS. If eight #6501s are attached to eight #3001s, this would dedicate the 2105 VSS to the AS/400 system and gives a maximum capacity of 536.3 GB when emulating 9337-580s and 1099.5 when emulating 9337-580s and 1099.5 when emulating 9337-590s.</p> <p>Note: In most cases, the minimum cache memory of 512 MB is best for use with the AS/400 system. The expert cache function OS/400 normally provides better performance.</p>	<p>D, E, F, 3x0, 5x0, 6x0, Sx0, 7x0 8xx (excluding 600 and S10)</p>
<p>2105 100</p> <p>#1000</p> <p>#2111</p> <p>#2713</p> <p>#2714</p> <p>#3001</p> <p>#3201</p> <p>#4001</p> <p>#9701</p> <p>#9702</p> <p>#9703</p> <p>#9704</p> <p>#9705</p> <p>#9706</p> <p>#9801</p> <p>#9851</p> <p>#9854</p> <p>#9901</p> <p>#9986</p> <p>#9987</p> <p>#9988</p>	<p>Versatile Storage Server Expansion Enclosure</p> <p>Expansion Enclosure that includes space for seven 7133-010 or 7133-020 or 7133-D40 drawers and a power control system.</p> <p>Prerequisite: 2105-B09</p> <p>2105-B09 and 2105-100 Features</p> <p>Battery Backup System</p> <p>Additional Storage Capacity Upgrade Base to 456 GB</p> <p>Remote Support Switch. 2105-B09 only.</p> <p>Remote Support Attachment. 2105-B09 only.</p> <p>Host Interface Adapter</p> <p>SSA Disk Adapter</p> <p>ReadWrite Cache (per 512M)</p> <p>Cables-10 meter (Ultra SCSI)</p> <p>Cables-20 meter (Ultra SCSI)</p> <p>Cables-20 meter (SCSI-2 FW)</p> <p>Cables-20 meter (SCSI-2 FW)</p> <p>Cables-10 meter (AS/400-SCSI-2)</p> <p>Cables-20 meter (A/S400 SCSI-2)</p> <p>Single phase 50/60 hz 50 amp</p> <p>Three phase 50/60 hz 50 amp</p> <p>Three phase 50/60 hz 60 amp</p> <p>Designate 7133-020 Drawers</p> <p>Single phase 50/60 hz 50 amp</p> <p>Three phase 50/60 hz 50 amp</p> <p>Three phase 50/60 hz 60 amp</p>	
<p>7133 010 and 020 and D40</p> <p>#0987</p> <p>#2105</p> <p>#2106</p> <p>#3401</p> <p>#3901</p> <p>#9850</p>	<p>Serial Storage Architecture Disk Subsystem</p> <p>The IBM 7133 SSA Disk Subsystem is a leading-edge, second-generation serial storage subsystem that uses the industry-standard Serial Storage Architecture (SSA). The 7133 can be attached to the AS/400 system only through a 2105 Versatile Storage Server.</p> <p>When installed in a 2105, disk drives must be added in multiples of eight.</p> <p>IBM 7133 Model 10 and Model 20 are for migration only.</p> <p>Prerequisite: 2105-B09 or 2105-100.</p> <p>RDS Rochester Manufacturing Integration</p> <p>Plant install in Versatile Storage Server</p> <p>Field install in Versatile Storage Server</p> <p>One 4.5 GB Disk Drive Module (valid quantity of 6 or 14 per 7133)</p> <p>One 9.1 GB Disk Drive Module (valid quantity of 6 or 14 per 7133)</p> <p>100/200V 50/60hz 300V DC Power</p>	<p>D, E, F, 3x0, 5x0, 6x0, Sx0, 7x0, 8xx (excluding 600 and S10)</p>

15.5 High Workload IOP Placement Rules for Magnetic Media

Disk unit, tape, and some LAN IOPs are considered high workload IOPs, and therefore, require special consideration when configuring an AS/400 system. In addition, their workload capability IOPs can be streaming or non-streaming.

See the following table for a list of high workload IOPs and streaming or non-streaming IOPs.

Subsystem	High Workload IOP	Bus Capacity
DASD	#6112, #6500	Non-streaming
Tape	#2621, #2624, #2644, #6112	Non-streaming
DASD	#6501, #6530, #6502, #6512, #6532, #6533	Streaming
Tape	#6501, #6513, #6534	Streaming
Tape IOP with 3590	#6501, #6534	Streaming
Optical	#6534	Streaming
LAN	#2810	Streaming
Limitations on Combinations:		
Maximum of five high workload IOPs per bus. This includes system bus 1.		
Maximum of three non-streaming high workload IOPs per bus.		
In feature code #5044, no DASD controllers are allowed on the same bus with a 3590 tape controller. More than one 3590 tape controller is allowed on the same bus.		
Note: These guidelines are for all system buses and include the first system bus (bus 1). Exceeding these guidelines will cause performance degradation.		

15.6 External Tape Rules

15.6.1 Alternate IPL or Alternate Installation Device

Throughout this book and the *iSeries Handbook*, GA19-5486, the term Alternate IPL or ALT-IPL is used to describe both Alternate IPL devices and alternate installation devices. It is important to understand the differences. An Alternate IPL device must be attached to the first system bus (bus one), and an Alternate Installation Device can be attached to any bus except bus one.

Alternate Installation Device support allows you to perform installation and recovery procedures using a combination of devices. Prior to V4R1, these types of activities can only be performed using devices attached to the first system bus. The first system bus connects to the service processor IOP. Typically, this is where the optical device or tape devices used for installations are attached. Now, you can use a combination of devices that are attached on the first system bus and on additional buses. The Alternate Installation Device is not attached to the first system bus.

If you use this function, the system uses existing support (a device on the first system bus) to install or recover enough of the Licensed Internal Code required to perform an IPL with IPL-type D. Then, using the new alternate installation device support, the system continues the operation using media in the alternate installation device. This new function supports installation and recovery from tape media, such as SAVSYS tapes or distribution tapes that you created, which contains Licensed Internal Code and may contain the operating system, licensed programs, and data.

See *Backup and Recovery*, SC41-5304, for more information.

15.6.2 3590 and Disk IOP Restriction on Model 530 and 53S

On Models 530 and 53S, an information only RPQ 843914 for V3R6 and V3R7 removes a prior restriction against controlling both internal disk and a 3590 on bus one. This RPQ may result in degraded 3590 performance. Starting with V4R1, the 3590 may be placed on any bus as an alternate installation device.

For maximum performance, controllers that drive high-speed tapes must not be installed in bus extension units (#5060, #5040).

15.7 External Diskette, Tapes, and Optical Devices

Machine	Model	Description	9406 Model
9331	001	8-Inch Diskette Drive Allows data and program transfer between other 9404, 9406, 5360, 5362, 5381 and 5382 systems.	B, D, E, F, 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0, (not 600/S10), 8xx
9331	002	5 ¼-Inch Diskette Drive Allows data and program transfer between other 9404, 9406, 5363, and 5364 systems. Both attach to 9406 using the Magnetic Storage Device Controller #6112 (#6110 for 9406 B Models) or #6146. The #6112 attachment not available for S10, S30,S40. Maximum: Two 9331 Diskette drives per system.	B, D, E, F, 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0, (not 600/S10), 8xx
9331	002	5 ¼-Inch Diskette Drive Attaches to 9406 using the Magnetic Storage Device Controller #6112 (#6110 for 9406 B Models) or #6146. The #6112 attachment not available for S10, S30,S40. Allows data and program transfer between other 9404, 9406, 5363, and 5364 systems. Maximum: Two 9331 Diskette drives per system.	B, D, E, F, 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0, (not 600/S10), 8xx
9331 9331	011 012	8-Inch Diskette Drive 5 ¼-Inch Diskette Drive Both allow interchange of data between the AS/400 and other systems. Attaches using #6146 or to the MFIOp using the #6147 Diskette Adapter (3x0 and 5x0 only).	2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0, (not 600/S10), 8xx
#6135		5 ¼-Inch Diskette Drive Allows interchange of data between the AS/400 and other systems. Attaches using #6146 or to the MFIOp using the #6147 Diskette Adapter (3x0 and 5x0 only).	3x0, 5x0, 6x0, Sx0, 7x0, (not 600/S10), 8xx
2440	A12 #3903 #3904 #3905 #3906 #3907 #3908	Tape I/O Subsystem ½-inch reel tape drive which records at 1600/6250bpi and can be used for save/restore, program distribution and Alternate IPL. Attaches to 9406 using the Removable Device Media Attachment #2621 (SPD)—#2602 for 9406 B models. The tape drive and controller are packaged in a stand-alone 1.6m high rack. 2440 High-speed feature (field installation) 2440 High-speed feature (factory installation) Allows up to four 9332 disks to be placed in the 2440 rack Allows one 9335-A01 and up to two 9335-B01 drives to be placed in the 2440 rack Allows up to three 9336 drawers to be placed in the 2440 rack Allows up to three 9337 drawers to be placed in the 2440 rack	B, D, E, F, 3x0, 5x0, 6x0. Sx0, 7x0 (not 600/S10), 8xx
9347	001	Tape Drive ½-inch cartridge tape drive which records at 1600/3200bpi. At 1600bpi can be used for data interchange, save/restore, program distribution and Alternate IPL. At 3200bpi, the capacity of a reel can approximately doubled for system backup/restore functions. Attaches to 9406 using the Magnetic Storage Device Controller #6112 (#6110 for 9406 B models). Maximum: Two per system. Refer to the overview section at the beginning of each processor chapter for maximum combination of tape devices per system.	B, D, E, F, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0 (not 600/S10), 8xx

9348	001 002	Tape Drive ½-inch reel tape drive which records at 1600/6250bpi and can be used for restore, program distribution and Alternate IPL. Attaches to 9406 using #2621 (SPD) or #6534 (SPD) or #2729 (PCI) or #2749 - #2607 or #2608 for 9406 B models. Each 2440 or 9347 attached reduces the number of 9348s, which can be attached by one. Refer to the overview section at the beginning of each processor chapter for maximum combination of tape devices per system.	B, D, E, F (except D02, and E02) and all 170, 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0 8xx
3480	A22 B22	Cartridge Tape Subsystem ½-inch cartridge tape which can be used for data interchange, save/restore, program distribution and Alternate IPL. Subsystem consists of stand-alone controller (Model A22) and up to eight tape drives (Model B22), which has two drives. Attaches to the #9406 using feature #2621 or #2644 (SPD)—#2604 on 9406 B models. Refer to the overview section at the beginning of each processor chapter for maximum combination of tape devices per system. Attachment of 3480 Models A11 and B11 is also supported.	B, D, E, F, 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0 (not 600/S10), 8xx
3490	D31 D32 A01 A02	Cartridge Tape Subsystem ½-inch cartridge tape which can be used for data interchange, save/restore, program distribution and Alternate IPL. Attaches to the #9406 with feature #2621 or #2644 (SPD)—#2604 for 9406 B models. Refer to the overview section at the beginning of each processor chapter for maximum combination of tape devices per system. Attachment of 3490 Models B02 and B04 is also supported. Note: Cannot use enhanced capacity cartridge.	B, D, E, F, 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0 (not 600/S10.), 8xx
3490E	A10 A20	Cartridge Tape Subsystem ½-inch cartridge tape which can be used for data interchange, save/restore, program distribution and Alternate IPL. Attaches to the #9406 with feature #2621 or #2644 (SPD), #2604 for 9406 B models. Refer to the overview section at the beginning of each processor chapter for maximum combination of tape devices per system. Attachment of 3490 Models B02 and B04 is also supported. Note: Cannot use enhanced capacity cartridge.	B, D, E, F, 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0 (not 600/S10), 8xx
3490E	D41 D42	Cartridge Tape Subsystem ½-inch cartridge drives which can be used for data interchange, save/restore, program distribution and Alternate IPL. IDRC is standard. Attach using the #2644 (SPD) - #2604 on 9406 B models.	B, D, E, F, 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0 (not 600/S10), 8xx

3490E	C10 C11 C22 C1A C2A #5037 #5040 #5045 #6045 #6120 #6180 #9927 #9931 #9932 #9985	Rack Mounted 3490 tape drives ½-inch cartridge tape which can be used for data interchange, save/restore, program distribution and Alternate IPL. C10 Control Unit and Tape Drive (1 x 2.4 GB), attach using #2644 only. C11 Control Unit, Tape Drive and Automatic Cartridge Loader for six tape cartridge (6 x 2.4 GB) C22 Control Unit, two Tape Drives and Automatic Cartridge Loader for twelve cartridges (12 x 2.4 GB) C1A Control Unit, tape drive for 3494 Tape Library C2A Control Unit, two tape drives for 3494 Tape Library Attaches to 9406 and 9404 using #2644 (SPD) - #2604 on 9406 B models, #6501/#6534 (SPD), #2729 PCI or #2749 PCI Requires 9309 rack if not C1A or C2A. Parallel Channel Attachment. Maximum two per 3490 SCSI attachment. Maximum two per 3490-C11/C22/C1A/C2A Performance enhancement feature. Maximum 2 per 3490E-C11/C22/C1A/C2A 4.5 M SCSI Cable (#6501 Attach) requires interposer 12 M SCSI Cable (#6501 Attach) requires interposer 18 M SCSI Cable (#6501 Attach) requires interposer Tailgate option (External #2644 (Channel) cables) 6 M internal channel cable (#2644 attach) 24 M internal channel cable (#2644 attach) 6 M External Cable Maximum combination of cables is two per 3490. The following upgrades are supported: C10 to C11/C22/C1A/C2A C11 to C22/C1A/C2A C1A to C2A Both a channel attach (#5037) and a SCSI attach (#5040) are supported together on the same 3490-Cxx unit.	9404 and 9406 - B, D, E, F, 170, 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0, 8xx
3490E	E01 E11	Cartridge Tape Subsystem ½-inch cartridge tape. The E01/E01 tapes have IDRC as standard, both include a seven Cartridge Stack Loader. Attachment is only available to a single AS/400 system. E01 Table Top Version (7x2.4 GB) E11 Rack Mounted Version (7x2.4 GB) Attaches to the AS/400 system using #6501 (SPD) or #6534 (SPD) or #2729 (PCI) or #2749 PCI). The #6501 requires OS/400 V3R1, #6534 and #2729 require OS/400 V4R1. The #2749 requires OS/400 V4R5.	9404/9406 - D, E, F, 170, 2x0, 3x0, 4x0 5x0, 6x0, Sx0, 7x0, 8xx
3490E	F00 F01 F11 F1A	Cartridge Tape Subsystem ½-inch cartridge tape. These tapes have IDRC as standard. There are four models, with the F01 and F11 having a 10 cartridge stack loader. Attachment is only available to a single AS/400 system. F00 Table Top (1x2.4GB) F01 Stand-alone (10x2.4GB) F11 Rack Mounted Version (10x2.4GB) F1A Tape Unit for 3494 Tape Library Attaches to the AS/400 system using #6501 (SPD) or #6534 (SPD) or #2729 (PCI) or #2749 PCI). The #6501 requires OS/400 V3R1, #6534 and #2729 require OS/400 V4R1. The #2749 requires OS/400 V4R5.	9406/9406 - D, E, F, 170, 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0, 8xx

3570		Cartridge Tape Subsystem Cartridge Tape Unit with table-top and library units based on 3590 technology. Up to 5 GB capacity per cassette (up to 15GB when compressed) or 7GB capacity per cassette (up to 21 GB when compressed). Both attach to the AS/400 system using #6501 (SPD) or #6534 (SPD) or #2729 (PCI) or #2749. The #6501 requires OS/400 V3R1. The #6534 and #2729 require OS/400 V4R1. The #2749 requires OS/400 V4R5. One drive can attach to one AS/400 system only. With models B02/C02 and B12/C12, each one of the two drives may be connected to a different system.	D, E, F, 170, 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0 (except D02, E02, F02), 8xx
	B00 B01 B11 B12 C00 C01 C02 C11 C12	Bxx models Data transfer rate of 2.2 M/sec (uncompressed) up to 6.6 M/sec (average compressed) data transfer rate. Cxx models Data transfer rate of 7 MB/sec (uncompressed) up to 15 MB/sec (average compressed) data transfer rate using C-format cartridges. Data Transfer rate of 3.5 MB/sec (uncompressed) up to 10.5 MB/sec (average compressed) data transfer rate using B-format cartridges. B00/C00 Table Top Unit (1 x 15GB) B01/B02/C01/C2 Stand Alone Library with 20 cassette slots (20 x 15GB0 and one drive. B11/B12/C11/C12 Rack Mounted Library with 20 cassette slots (20 x 15GB) and one drive. Requires 9309 Rack. Cable Features: #5205 0.5 M SCSI cable #5212 12 M SCSI cable #5218 18 M SCSI cable #5225 25M SCSI cable (Models C00,C01, C02, C11, C12) #5245 4.5 M SCSI cable #2895 AS/400 Interposer Other Features: #8701 10-Pack Data Cartridges + one cleaning cassette. #8702 20-Pack Data Cartridges + one cleaning cassette. #8703 20-Pack Data Cartridges + one cleaning cassette. #8705 20-Pack Data Cartridges + one cleaning cassette. All Cxx models. #8750 10-Pack C-format Data Cartridges + one cleaning cassette. #8751 One Cleaning Cassette. #8752 One Data Cassette. #8753 10-pack Data Cassette. All Bxx models. #8758 Two 10-cassette Magazine. #9066 10-Pack Data Cassettes + one cleaning cassette. All Cxx models. #9068 White Covers (B01, B02). #9076 Black Covers (B01, B02). #9080 Attached to SP2. #9200 Watertight Power Plug. #9210 Open System Device Driver. Not Bxx models. #9211 Attached to HP-UNIX. Not Bxx models. #9212 Attached to SUN. Not Bxx models. #9400 Attached to Windows NT. Not Bxx models. #9570 Attached to AS/400. Not Bxx models. #9600 One Data Cassette, one cleaning cassette. #9603 Attached to AS/400. Not Bxx models. #9710 AIX Device Driver. Not Cxx models. SUN Device Driver. Not Cxx models.	

3995	Optical Library Dataserver The following OS/400 software is required to support 3995-Cx0 with up to four internal 2.6GB drives: OS/400 V3R6 with Group PTF SF99087 or OS/400 V3R7. OS/400 V3R2 with 5755-AS3 #1979 and PRPQ 5799-XBW specify code #3520 Models C4x with up to four internal 5.2GB drives: OS/400 V4R2 with Group PTF SF99088 or OS/400 V4R3 OS/400 V3R2 with 5755-AS3 #1979 and PRPQ 5799-XBW specify code #3520 and Group PTF SF99079 Models C46 and C48 with six drives installed require: OS/400 V4R2 with Group PTF SF99088 or later and #2729 or #6534 AS/400 attachment (not supported on #2621) 8X support on direct attach 3995 require: For #2621 attach: Only OS/400 V3R2 with PRPQ 5799-XBW #3520 and Group PTF SF99079 For #2729/#6534 attach: OS/400 V4R2 with Group PTF SF99088 or V4R3 with Group PTF SF99089 or OS/400 V4R4. Note: Media must be formatted as WORM in LAN-attached 3995 libraries to be used in AS/400 direct-attached 3995 libraries.								D, E, F 2xx, 3xx, 4xx, 5xx, 6xx, Sxx, 7x0 (except D02, E02) 170 8xx, 270	
	Media Supported				Capacity (per Library)					
	Direct Attach	WORM	Rewritable	CCW	Cartridge Capacity (GB)	Optical Nerves	Storage Slots	Total Unformatted (GB)		Model Upgrades from
	A43	Yes	Yes	No	.65/1.3	1	16	20		-
	043	Yes	Yes	No	.65/1.3	2	32	40		042
	143	Yes	Yes	No	.65/1.3	4	144	188		142
	C40	Yes	Yes	Yes	.65/1.3/2.6/5.2	1-2	20	104		-
	C42	Yes	Yes	Yes	.65/1.3/2.6/5.2	2	52	270		-
	C44	Yes	Yes	Yes	.65/1.3/2.6/5.2	2-4	104-156	540		-
	C46	Yes	Yes	Yes	.65/1.3/2.6/5.2	4-6	156	811		C44
C48	Yes	Yes	Yes	.65/1.3/2.6/5.2	4-6	258	1341	-		
#1403	Additional 2.6 GB Optical Drive for 3995-C40 model									
#1413	Two additional 2.6 GB Optical Drives for 3995-C44, C46, or C48 model									
#1440	Additional 2.6 GB Optical Drive for 3995-C40									
#1442	Two additional 5.2 GB Optical Drives for 3995-C44, C46, C48									
#1443	Two 5.2 GB Extended Multifunction Optical Drives Upgrade									
#1444	Four 5.2 GB Extended Multifunction Optical Drives Upgrade									
#9400/										
#7400	12M SCSI Cable for #2621 (SPD)									
#7402	20M SCSI Cable for AS/400 #2621									
#9401/										
#7401	12M SCSI Cable for #2749 (PCI) or #2729 (PCI) and #6534 (SPD)									
#7403	20M SCSI Cable for AS/400 #2729 (PCI) or #2729 or #6534									
	Media Supported				Capacity (per Library)					
LAN Attach	WORM	Rewritable	CCW	Cartridge Capacity (GB)	Optical Nerves	Storage Slots	Total Unformatted (GB)	Model Upgrades from		
023	Yes	Yes	No	.65/1.3	2	144	188	022		
123	Yes	Yes	No	.65/1.3	4	32	40	122		
C20	Yes	Yes	Yes	.65/1.3/2.6/5.2	1-2	20	104	-		
C22	Yes	Yes	Yes	.65/1.3/2.6/5.2	2	52	270	-		
C24	Yes	Yes	Yes	.65/1.3/2.6/5.2	2-4	104	540	-		
C26	Yes	Yes	Yes	.65/1.3/2.6/5.2	4-6	156	811	C24		
C28	Yes	Yes	Yes	.65/1.3/2.6/5.2	4-6	258	1341	-		
#1403	Additional 2.6 GB Optical Drive for 3995-C20 model									
#1413	Two additional Optical Drives for 3995-C24/C26/C28 models									
#1440	Additional 5.2 GB Optical Drive for 3995-C20 model									
#1442	Additional two 5.2 GB Optical Drives for 3995-C22/C24/C28									

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7208 342	<p>8 mm Tape Drive (20 GB)</p> <p>Stand-alone 8 mm cartridge tape drive providing capacity of up to 20 GB per cartridge or 40 GB with compression and has an effective data transfer rate of 6 MB/sec when compressed (3 MB/sec in native mode).</p> <p>It is intended for Save and Restore and archiving purposes. It uses the 8mm advanced metal-evaporated (AME) data cartridges and can only read previous IBM 8mm tape formats. Attaches using #6534 (SPD) or #2729 / #2749 (PCI). The 7208 requires V4R1 or higher. The #2749 requires OS/400 V4R5. Available in black only.</p> <p>Attachment cable length and media option must be specified.</p> <p>#7019 Five data cartridges, cleaning cartridge, and test cartridge (plant) #2019 Five data cartridges (MES) #9019 One data cartridges, cleaning cartridge, and test cartridge (plant) #2016 Five cleaning cartridges (MES) #9245 4.5m cable #9212 12m cable #9218 18m cable</p>	4x0, 5x0, 6x0, Sx0, 7x0, 170, 8xx, 270, 250
7210 020	<p>The 7210-020 CD-ROM bridge box is an external 32x CD-ROM bridge box that attaches to the magnetic media PCI adapter #2718 that may reside in the 170, 6xx, Sxx, and 7xx PCI adapter slots or to the magnetic media PCI adapter #2768 that fits into the 8xx hardware. The device reports as a 6321 (same as internal CD-ROM). SLIC determines which IOA the device is attached to and when it sees a PCI IOA #2718 or #2768, it reports this device as an external CD-ROM.</p> <p>There can be only one 7210-020 CD Bridge Box device per IOA.</p> <p>The 7210-020 CD-ROM bridge box is primarily intended for use with LPAR but it is not limited to LPAR. Since the PCI IOAs #2718 and #2768 serve as adapters for the tape bridge box 7207-122, there can be such a device attached to the same IOA as the 7210-010 CD-ROM bridge box. The restrictions for this type of configuration are:</p> <p>The 7210-020 CD-ROM bridge box must be daisy chained to the tape bridge box 7207-122.</p> <p>The tape bridge box 7207-122 must be the first physical device.</p> <p>Requires OS/400 V4R5.</p>	
358x Hxx	<p>The 3580 Ultrium Tape Drive is a stand-alone, SCSI attached IBM Linear Tape Option (LTO) Ultrium tape drive. It provides a media capacity of up to 100GB (200GB with 2:1 compression) per cartridge and a sustained data rate of up to 15MB per second (uncompressed).</p> <p>The 3581 Ultrium Tape Autoloader is an external, stand-alone or rack mounted autoloader that incorporates IBM Ultrium tape drives. It is SCSI attached. The 3581 Ultrium Tape Autoloader capacity is up to seven tape cartridges, providing a media capacity of up to 700GB (1.4 TB with 2:1 compression) and a sustained data rate of up to 15 MB per second (uncompressed). The 3581 appears as two drives on the SCSI bus and can be operated in sequential or random-access modes.</p> <p>The Hxx models have a High Voltage Differential (HVD) Ultra SCSI interface.</p> <p>Supported by OS/400 V4R4 or later and attaches with the #2729, #2749, #6534 and #6501 HVD IOAs. The #2749 requires V4R5. The #6501 attach requires an interposer #2895.</p> <p>Cable Features: SCSI cables and appropriate interposers, as required, should be ordered.</p> <p>#9705 5.0m SCSI cable (HD68 connectors on both ends). #5302 2.5m SCSI cable (HD68 connectors on both ends). #5305 5.0m SCSI cable (HD68 connectors on both ends). #5310 10.0m SCSI cable (HD68 connectors on both ends). #5318 18.0m SCSI cable (HD68 connectors on both ends). #5325 25.0m SCSI cable (HD68 connectors on both ends).</p> <p>Cartridges: IBM Ultrium data and cleaning cartridges available only with the initial order. #8001 Data cartridge - 100 GB #8002 Cleaning cartridge</p> <p>Additional media can be ordered by using machine type 3589 IBM LTO Ultrium Data Cartridge - IBM p/n 08L9120 IBM LTO Ultrium Cleaning Cartridge - IBM p/n 08L9124 Leader Pin attachment Kit - IBM p/n 08L9129 Manual Rewind Tool - IBM p/n 08L9130 Magazine with cover - IBM p/n 35L1088</p>	4x0, 5x0, 6x0, Sx0, 7x0, 170, 8xx, 270, 250

3590 B11 B1A	High Performance Tape Subsystem ½-inch cartridge rack mountable tape unit which provides: Up to 17 MB/second sustained data rate Up to 10 GB capacity per cartridge (up to 30 GB when compressed) A ten cartridge random access Automatic Cartridge Facility (ACF) giving data capacity of up to 300 GB unattended (not on the B1A model). The 3590-B11 or B1A can simultaneously attach to a combination of two iSeries, AS/400e and RS/6000 systems. It attaches to the iSeries using #2749 (PCI), and AS/400e models using #6501 (SPD), #6534 (SPD), #2729 (PCI) or #2749(PCI). The #6501 requires OS/400 V3R1. The #6534 or #2729 require V4R1, #2749 requires V4R5. The B1A is supported in the 3494 Tape Library. The B11 can upgrade to the B1A. 3590 Ultra SCSI feature is available as standard with #9790 or as an MES with #5790. Minimum software requirement is V4R1. PTFs are required to attach the 3590 with the Ultra SCSI interface to iSeries and AS/400e models with a magnetic media controller (#6534 SPD, #2729 PCI, or #2749 PCI). Refer to AS/400 Informational APAR II11472 for required PTFs. No PTFs required for attachment to the #6501 Magnetic Media Controller.	B,D,E,F 170 2x0, 3x0, 4x0, 5x0, 6x0, Sx0, 7x0 (except D02, E02), 8xx
	Cable Features: #5106 0.6m SCSI cable used to connect 3590-B11s when they are side-by-side in a rack and connected to the same SCSI port. Maximum: Two #5128 2.8m SCSI cable used to connect a 3590-B11 when it is in the same rack as the iSeries, AS/400e, or RS/6000 processor. Maximum: Two #5145 4.5m SCSI cable #5112 12m SCSI cable #5118 18m SCSI cable #5125 25m SCSI cable #9240 Interposer for AS/400 Note: If SCSI Feature #2420 on RS/6000 or POWER parallel SP2 is used, the total length of all device connections cannot exceed the 19m cable length maximum. Other Features: #5780 Extended Media Support - Bxx #5781 Extended Media Support - Exx #5790 Field installation of Ultra SCSI feature for 3590 #9221 First B11 in rack #9222 Second or Fourth B11 in rack #9223 Third B11 in rack #9400 Attached to AS/400 #9790 Plant installation of Ultra SCSI attachment feature for 3590. #9600 Attached to RS/6000	
Note 1:	The ¼-inch Cartridge Tape Units are specified as features on the 9406 models. These may be found in the 9406 feature sections.	
Note 2:	Data compression and data transfer rate values are data and application dependent, so end-user results vary.	

3590 E11 E1A	<p>High Performance Tape Subsystem $\frac{1}{2}$-inch cartridge rack mountable tape unit which provides: Up to 33 MB/second sustained data rate Up to 20 GB capacity per cartridge (up to 60 GB when compressed) A ten cartridge random access Automatic Cartridge Facility (ACF) provides data capacity up to 600 GB unattended (not on the E1A model). The 3590-E11 or E1A can simultaneously attach to any combination of two iSeries, AS/400e, and RS/6000 systems. The Magstar 3590 E11 and E1A can be attached to all AS/400e servers capable of running OS/400 V4R1 and later (iSeries models running OS/400 V4R5). PTFs are required. Refer to Informational APAR II11472 for details. The E1A is supported in the 3494 Tape Library and the E11 can upgrade to the E1A.</p> <p>For the cables to connect correctly, each #6501 AS/400 Magnetic Media Subsystem Controller requires one #9410 Interposer for AS/400 feature on the 3590.</p> <p>Cable Features: #5145 4.5m SCSI cable Maximum: Two. This is the minimum length SCSI cable required to connect a 3590 Model E11 or an E1A to a SCSI port on a host system. #5112 12m SCSI cable Maximum: Two #5118 18m SCSI cable Maximum: Two #5125 25m SCSI cable Maximum: Two #9410 Interposer for AS/400 Note: #9410 not required for attachment to #2729 iSeries adapter, or #6534 or #2749 AS/400e adapters.</p> <p>Other Features: #5780 Extended Media Support - Bxx #5781 Extended Media Support - Exx #9221 First E11 in rack #9222 Second or Fourth B11 in rack #9223 Third E11 in rack #9400 Attached to AS/400</p>	170 4x0, 5x0, 6x0, Sx0, 7x0, 8xx
Note	Data compression and data transfer rate values are data and application dependent, so end-user results vary.	

15.8 Automated Tape Library

3570 TAPE LIBRARY	
See the 3570 in the table in 15.7, "External Diskette, Tapes, and Optical Devices" on page 418.	
9427 8MM TAPE CARTRIDGE LIBRARY	
Model 210	Is the standalone unit
Model 211	Is the rack mounted unit. Two model 211's can be put in a rack side by side
Model 210 cannot be upgraded to the Model 211	
<p>The Tape Library consists of:</p> <ol style="list-style-type: none"> 1. Either a single 7 GB 8mm tape drive (#0701) or two 7GB 8mm tape drives (#0702). The effective data transfer rate is 1 MB per second when compressed (500KB per second in native mode) for each drive, and is read/write compatible with all IBM 8mm Cartridge Tape Units. 2. Two ten-cartridge magazines (one per drive ordered) providing storage for up to 20 8mm cartridges, giving storage capacity of up to 280 GB. 3. A power cord (#9800 for 125V or #9833 for 250V) 4. a: One SCSI System-to-Device Cable for #2621 attach: <ul style="list-style-type: none"> #9870 - 2m SCSI cable #9871 - 4m SCSI cable #9872 - 12m SCSI cable #9873 - 20 SCSI cable b: One SCSI System-to-Device Cable for #2749, #2729, #6534, #6501 attach - #6501 requires interposer <ul style="list-style-type: none"> #9245 - 4.5m SCSI cable #9212 - 12m SCSI cable #9218 - 18m SCSI cable #9174 - interposer 5. Either black (#9100) or white (#9200) exterior covers 6. A cleaning cartridge and two 8mm cartridges are included 	
Options	
#2007	Additional ten cartridge magazine
#2008	Direct attach feature allows option to configure drive 1 to attach to port 1 and drive 2 to attach to port 2 of the #2621 (SPD) adapter card to allow two concurrent data streams.
#2656/#2857/#2858/#2859	System-to-Device cables for additional host attachment or for dual port attachment with #2008.
Attaches to all AS/400 models, except B and C and 9401 models using #2621 (SPD), #6534 (SPD), or #2729 (PCI) or #2749) or #9427 (PCI). Maximum of one 9427 per controller.	
Requires OS/400 V3R1.	
Note: Data Compression values are data and application dependent so end-user results may vary.	

3494 ½-INCH CARTRIDGE LIBRARY

The 3494 is a stand-alone automated tape storage subsystem which provides the solution for automated tape operations such as save/restore, migration of data between DASD and tape and other mass data applications;

The Tape Library consists of:

1. A Library Control Unit (3494-L10 or 3494-L12), which includes the Media Library Manager (a PC that controls the library) and the Media Library Device Driver.
2. Base storage for up to 240 ½-inch cartridges (210 if the convenience I/O station, #5210, is installed, or 160 of #5230 installed).
3. A tape subsystem (either 3490-CxA or 3590-B1A).
4. The Accessor (robotic arm that accesses the tape cartridges).
5. AS/400 attachment to the Media Library Manager using a RS232 or LAN for the library commands.

The storage capacity and the number of tape subsystems in the Library can be increased by adding Drive Units and Storage Units (see the following table). The Drive Units provide additional cartridge slots and space for additional tape subsystems and the Storage Unit provides an additional 400 Cartridge slots but no space for tape subsystems.

3494 Model Matrix Summary

Model	Cartridge Capacity (Max)	Flexible Growth	Tape Drive Supported
Library Control Units			
3494 - L10	210 (if #5210 installed) 160 (if #5320 installed)	1-8 CxA tape units(16 drives) ¹ 1-8 Frames Supports D10, D12, S10#5300 ² , #5400 ² , #5302 ³	3490E-CxA 3490E-F1A
3492 - L12	210 (if #5210 installed) 160 (if #5230 installed)	1-16 B1A tape units ¹ 1-8 Frames Supports D10, D12, S10#5300 ² , #5400 ² , #5302 ³	3590-B1A
Drive Units			
3494 - D10	400	0 Tape Drives	3490E-CxA 3490E-F1A
	300	1-2 Tape Drives	
3494 - D12	400	0 Tape Drives	3590-B1A
	335	1-2 Tape Drives	
	290	3-4 Tape Drives	
	250	5-6 Tape Drives	
Storage Units			
3494 - S10	400	0 Tape Drives	None

Notes:

1. Both 3490E and 3590 tape drives are supported by the L10 and L12 Library Control Units provided that the appropriate Drive Units are installed (3494-D10 for 3490E and 3494-D12 for 3590).
2. #5300 was the specify feature for a Drive Unit and #5400 was the specify feature for a Storage Unit. These were both withdrawn from marketing on 10 April 1995, and replaced by the 3494 Models D10 and S10 respectively. Both the #5300 and #5400 are supported by the Library Control Units 3494 Models L10 and L12.
3. #5302 is the specify feature for upgrading a #5300 to support 3590-B1A tape transports in place of 3490-CxA tape transports.
4. The maximum combined total of D10, D12, S10 #5300, #5302, and #5400 is seven.

OPTIONS FOR 3494 MODELS L10 AND L12				
#5210	Convenience I/O Station (10 cartridges) Allows either input or output of up to 10 ½-inch cartridges into the 3494 Library without interruption of normal operations. See #5230 if a 30 cartridge I/O station required. Maximum: One			
#5211 #5213	RS232 Host Attachment Supports attachment of AS/400 Host processors and provides communications between the AS/400 system and the tape library using the Media Library Device Driver. The RS232 attached distance for #5211 is 50 feet and for #5213 is 400 feet. One #2511 or #5213 is required per AS/400 attached. Maximum: Four without #5229, eight with #5229			
#5214	2nd Disk Drive for Library Manager Allows mirroring of the 3494 Library Manager database and provides the capability to recover the Library Manager data base in case of the failure of the primary disk drive. Maximum: One			
#5212	Dual Gripper Provides a second cartridge picker on the Accessor for enhanced tape library performance. Maximum: One			
#5216	Remote Power Sequence Allows power on and off sequencing by attached AS/400 host processors. Maximum: One			
#5219	Token Ring Adapter Allows the 3494 Library Manager to attach to a Token Ring LAN, and provides communications between the host and the tape library. Maximum: One			
#5220	Ethernet Adapter Allows the 3494 Library Manager to attach to an Ethernet LAN, and provides communications between the host and the tape library. Maximum: One			
#5226	Remote Console Provides the capability of controlling and monitoring the status of up to eight 3494 Tape Library Dataservers from a remote location using a LAN connection. One #5226 is required per 3494 connected in the LAN. Maximum: One			
#5228	Tape Control Unit Expansion This expands the number of tape drive controllers that can be attached to the Library Manager. One feature converts four RS-232 host processor connections into four tape control unit connections in either the base library manager of the Expansion Attachment (#5229). Up to 16 tape control units can be supported on the Library Manager (see the following table).			
	Number of #5228 (for direct attach	Available RS-232 Ports Connections	Available Tape Control Unit Required	Additional Features to host)
	0	4	4	None
	0	8	8	#5229
	1	0	8	#5219 or #5220
	1	4	12	#5229
	2	0	16	#5229 and #5219 or #5220
Maximum: Two				
#5229	Expansion Attachment Card This applies to the Library Manager of the 3494 and is required to support the fifth to eighth tape control units or the fifth to eighth RS232 connection. Maximum: One			

#5230	Convenience I/O Station (30 Cartridges) Allows either input or output of up to 30 ½-inch cartridges into the 3494 library without interruption of normal operations. See #5210 if ten cartridge I/O stations required. Maximum: One
#5300	Drive Unit Withdrawn from marketing on 10 April 1995 and replaced by 3494 Model D10. This provided an expansion unit for an additional CxA tape subsystem and additional 300 cartridge storage capacity. Attachment to 3494-L10 is supported but attachment to 3494-L12 requires an RPQ.
#5302	Upgrade #5300 for 3590-B1A This feature upgrades #5300 Drive Unit to accept two 3590-B1A tape systems. RPQ 8B3166 allows #5300 to accept a third and fourth 3590-B1A. RPQ 8B3167 allows #5300 to accept a 5th and 6th 3590-B1A tape subsystem. For cartridge storage capacities, refer to "3494 ½-INCH CARTRIDGE LIBRARY" on page 428. Maximum: One per #5300
#5400	Storage Unit Withdrawn from marketing 10 April 1995 and replaced by 3494 Model S10. This provided an expansion unit for 400 additional cartridges. Attachment to the 3494-L10 is supported but attachment to the 3494-L12 requires a RPQ.

TAPE ATTACHMENT TO THE iSERIES AND AS/400e MODELS

The 3490-C1A and C2A attach:

(i) Channel Attach

#2644 (SPD) on AS/400 (or optionally #2622 on D/E models).
#2644 requires OS/400 V3R1.

The following features on the 3490-CxA:

#5037 Channel Attach

#9931 or #9932 Internal cable 6m or 24m

A second #5037 can be added to the 3490-CxA to allow attachment of a second AS/400 system.

(ii) SCSI Attach

#6501 (SPD), #6534 (SPD) or #2729 (PCI) or #2749 (PCI) on the iSeries or AS/400e server. The #6501 requires OS/400 V3R1. The #6534 or #2729 require OS/400 V4R1. The #2749, requires OS/400 V4R5.

3490-CxA features:

#5040 Magnetic Tape Subsystem SCSI Attachment

#5045 Performance Enhancement Feature

A second #5040 and #5045 can be added to the 3490-CxA to allow attachment to a second iSeries or AS/400e server.
Plus one of the following features per #5040:

#6045 4.5 M SCSI cable

#6120 12 M SCSI cable

#6140 14 M SCSI cable

#6180 18 M SCSI cable

#9410 Interposer for the AS/400

Both Channel Attach and SCSI Attach are supported together on the same 3490-CxA unit.

3590-B1A attaches as follows:

For all iSeries or AS/400e models that support #6501

#6501, #6534 or #2729 on AS/400e models, or #2749 on iSeries or AS/400e. The #6501 requires OS/400 V3R1. The #6534 or #2729 requires OS/400 V4R1. The #2749 requires OS/400 V4R5.

The following features are required for each AS/400 attached:

#5112 12m SCSI Cable

#5118 18m SCSI Cable

#5125 25m SCSI Cable

#5145 45m SCSI Cable

#9400 AS/400 Attach Specify

#9410 Interposer for the AS/400

#2424 US English Specify

UPGRADES		
The following field upgrades are possible	From	To
	3490-C10	3490-C1A
	3490-C11	3490-C1A
	3490-C1A	3490-C2A
	3490-C22	3490-C2A
	3590-B11	3490-B1A
	3494-D10	3490-D12
	3490-L10	3490-L12
Existing ½-inch cartridges can be used after applying 3M barcode labels on CxA drives. 3590-B1A requires high capacity ½-inch cartridges. The ACL on the 3490-C11 and 3490-C22 and ACF on the 3590-B11 are not used in the Library.		

3575 MAGSTAR MP TAPE LIBRARY DATASERVER				
<p>The 3575 is a stand-alone automated tape storage subsystem that provides the solution for automated tape operations such as save/restore, migration of data between DASD and tape, and other mass data applications. All models of the 3575, except the L06, may be partitioned into two or three logical libraries with separate and distinct drives and storage slots. This allows multiple heterogeneous hosts to share the library easily.</p>				
<p>The 3575 Tape Library Dataserver consists of:</p> <ul style="list-style-type: none"> • A Media Mover robotic assembly • Two to six 3570 B1A or C model tape devices • Attachment for up to six host systems using SCSI. When attached to AS/400 #2749, #2729, #6534, #6501 is required. These adapters only support an HVD interface. <p>There are multiple models of the 3575 that feature varied amounts of attachable tape drives and capacities (see the following table).</p>				
3575 MODEL MATRIX SUMMARY				
Model	Capacity (native)	Capacity (compressed)	Cartridges	Drives
L06	300GB	900GB	60	2
L12	600GB	1.8TB	120	2-4
L18	900GB	2.7TB	180	2-6
L24	1.2TB	3.6TB	240	2-6
L32	1.6TB	4.8TB	324	2-6
<p>Notes:</p> <ol style="list-style-type: none"> 1. Fourteen cartridge slots may be configured for bulk I/O within the library. This reduces the maximum cartridges per library by fourteen and reduces the maximum capacity of the library. 2. Model L12 can be upgraded to Model L18 to increase the capacity of the library. 3. Model L24 can be upgraded to Model L32 to increase the capacity of the library. 4. All drives installed at the plant are 3570 Model C tape drives. 5. AS/400 configurators allow only one drive per IOP port to enable maximum performance. Installing more than one 3570 Magstar MP Model C tape drive on an IOP port may impact system performance. When using #6501 to attach the 3575, one port on the #6501 must remain unused. 				
FEATURES FOR 3575				
1400	<p>Multi-Path Feature with Two Magstar MP Model C Tape Drives Provides plant installation of the multi-path feature and two Magstar MP Model C tape drives. Required Feature: Yes Maximum: One</p>			

1450	Multi-Path Feature Provides field installation of the multi-path feature for 3575s manufactured, shipped, and installed prior to the availability of #1400. Required Feature: No Maximum: One
1451	Field Installation of Magstar MP 3570 Tape Drive Model B1A Adds Magstar MP 3570 Model B1A tape drives into a currently installed 3575. Not available on Model L06.

3575 MAGSTAR MP TAPE LIBRARY	
1453	Magstar MP Model C Tape Drive Add a Magstar MP Model C tape drive into a currently installed 3575 Tape Library. Not available on Model L06. Prerequisite: #1400 or #1450 Multi-Path Feature
2895	Interposer for AS/400 Feature #6501 Allows attachments of tape drives installed in the 3575 Tape Library to AS/400 feature #6501. One is required for each tape drive that will attach to a #6501. AS/400 configurators allow only one drive per IOP port for maximum performance. Installing more than one Magstar MP Model C tape drive on an IOP part can impact system performance. When using a #6501 to attach the 3575 tape drives, one port on the #6501 must remain unused. Prerequisite: #1400 or #1450 Multi-Path Feature
5212	12 Meter SCSI Cable 12 meter (39-foot) cable with an industry-standard high-density 68-pin (HD68) cable connector on each end.
5218	18 Meter SCSI Cable 18 meter (59-foot) cable with an industry-standard high-density 68-pin (HD68) cable connector on each end.
5225	25 Meter SCSI Cable 25 meter (81-foot) cable with an industry-standard high-density 68-pin (HD68) cable connector on each end.
5245	4.5 Meter SCSI Cable 4.5 meter (15-foot) cable with an industry-standard high-density 68-pin (HD68) cable connector on each end.
8750	One Cleaner Cartridge One cleaner cartridge used to clean the Magstar MP Model C tape drives or 3570 Model B1A tape drives. Maximum: 3
8754	30-Pack of Magstar MP B-format Data Cartridges
8755	30-Pack of Magstar MP C-format Data Cartridges
8756	120-Pack of Magstar MP B-format Data Cartridges
8757	120-Pack of Magstar MP C-format Data Cartridges
9400	Attached to the AS/400 system
9907	4.3 Meter (14-foot) Power Cord, 125V
9908	4.3 Meter (14-foot) Power Cord, 250V
9909	4.3 Meter (14-foot) Power Cord, 250V, Watertight
9985	1.8 Meter (6-foot) Power Cord, 125V
9986	1.8 Meter (6-foot) Power Cord, 250V
9987	1.8 Meter (6-foot) Power Cord, 250V, Watertight

3583 Ultrium Scalable Tape Library	
3583 Lxx	<p>Ultrium Scalable Tape Library</p> <p>The IBM 3583 Ultrium Scalable Tape Library is designed for desktop operation, but an optional rack mounting kit allows installation into an ANSI/EIA standard 19-inch rack.</p> <p>The 3583 tape library contains from one to six IBM LTO Ultrium tape drives that have a native data transfer rate of 15 MB/sec and cartridge capacity of 100MB. Data compression (IDRC) provides an effective data rate of 30 MB/sec and up to 200 MB cartridge capacity.</p> <p>The 3583 models L18, L36 and L72 have cartridge capacities of 18, 36, and 72 respectively providing total data capacities of 1.8 TB, 3.6 TB, and 7.2 TB (3.6 TB, 7.2 TB, and 14.4 TB with compression).</p> <p>The L18 and L36 models can be field upgraded to increase their capacities to 72 cartridges.</p> <p>The 3583 is supported by OS/400 V4R3 and attaches with the #2729, #2749, #6534 and #6501 adapters. The #6501 attach requires interposer #2895. The #2749 requires V4R5.</p>
#8004	<p>Tape Drive Features: The 3583 library requires one IBM LTO Ultrium Tape Drive Sled and can have up to six installed, each with an Ultra SCSI High Voltage Differential (HVD) interface. Specify the following feature.</p> <p>LTO Ultrium HVD Drive Sled - includes one tape drive with the HVD interface, terminator and 0.5m SCSI cable</p>
#8006	<p>Library Features:</p> <p>Rack mount option - allows mounting in standard EIA 19-inch rack</p> <p>18 Slot Tape Storage Column</p> <p>12 Cartridge I/O Station</p> <p>Redundant Power Module</p> <p>Cable Features: A SCSI cable is available as a no-charge specify feature for each IBM Ultrium Tape Drive included on the initial order. At least one SCSI cable must be specified with each tape drive ordered, either the no-charge feature #9705 or one of the following. A short 0.5 meter drive-to-drive cable is included with the shipment of each Ultrium tape drive. Each of the following cables has a HD68 connector on each end.</p> <p>#5300 0.5m additional drive-to-drive SCSI cable</p> <p>#9705 5.0m SCSI cable</p> <p>#5302 2.5m SCSI cable</p> <p>#5305 5.0m SCSI cable</p> <p>#5310 10.0m SCSI cable</p> <p>#5318 18.0m SCSI cable</p> <p>#5325 25.0m SCSI cable</p> <p>#9400 Attached to AS/400</p> <p>Cartridge Features: (only available with initial order)</p> <p>#8001 1 data cartridge</p> <p>#8002 1 cleaning cartridge</p> <p>#8010 20 data cartridges</p> <p>#8013 6 cartridge magazine</p> <p>Additional media can be ordered by using machine type 3589</p> <p>IBM LTO Ultrium Data Cartridge - IBM p/n 08L9120</p> <p>IBM LTO Ultrium Cleaning Cartridge - IBM p/n 08L9124</p> <p>Leader Pin attachment Kit - IBM p/n 08L9129</p> <p>Manual Rewind Tool - IBM p/n 08L9130</p> <p>Magazine with cover - IBM p/n 35L1088</p>
#8007	
#8012	
#8008	

3584 Ultra Scalable Tape Library	
3584 Lxx/Dxx	<p>The IBM Ultra Scalable Tape Library Models L32 and D32 are an excellent choice for tape automation for the AS/400, RS/6000 and other popular Open Systems. The IBM 3584 L32 and D32 utilize the Multi-path architecture allowing homogeneous and heterogeneous Open Systems servers to share the library robotics.</p> <p>The 3584 Ultra Scalable Tape Library Model L32 offers 141 to 281 slots and up to twelve IBM LTO Ultrium Tape Drives. It provides excellent price/performance in Open System environments where the tape automation requirements are satisfied by one to twelve drives or a library capacity of 56TB (with 2:1 compression) or 28TB native data.</p> <p>The 3584 Ultra Scalable Tape Library Model D32 Expansion Frame offers 440 slots and up to twelve drives. Five model D32 frames can be attached to a Model L32 frame providing a total library capacity of up to 72 IBM LTO Ultrium drives or up to 2481 slots holding up to 496.2 TB (with 2:1 compression) or 248.1 TB native data.</p> <p>Hardware Requirements: The IBM 3584 Ultra Scalable Tape Library can be attached to the AS/400, RS/6000, RS/6000 SP, Netfinity systems and non-IBM servers, workstations, and personal computers that support Ultra/Wide SCSI HVD and Ultra2/Wide SCSI LVD interface specifications.</p>
#9003	One #9003 Drive Frame Attachment must be added to the Model L32 for each Model D32 frame that is attached. This is to ensure that the proper cables are shipped and the configuration records are correct.
#1603	The capacity of the base Model L32 can be expanded by enabling an additional four columns in that frame with the addition of the Capacity Expansion feature #1603. This feature is also required to enable the use of IBM LTO Ultrium drives and storage elements in the optional Model D32 Expansion Frame.
#1455	<p>The 3584 Ultra Scalable Tape Library contains a maximum of 12 LTO Ultrium Tape Drives per frame (total of 72 tape drives), each with an Ultra/Wide SCSI High Voltage Differential (HVD) interface. Select the following feature: LTO Ultrium HVD Drive Sled - which includes one IBM LTO Ultrium Tape Drive with the Ultra/Wide SCSI High Voltage Differential (HVD) interface.</p> <p>A minimum of one #1455 feature must be specified on the Model L32. If one of these features is not ordered on a Model D32 then the following feature must be specified on that Model D32: #9001 - Driveless Frame</p> <p>A terminator is included with each tape drive. SCSI cables and appropriate interposers, as required, should be ordered for attachment to a server. Refer to the Cables section for detailed descriptions of these SCSI cable features. A power cord feature number, if applicable, should also be specified.</p> <p>The 3584 is supported by OS/400 V4R3 and attaches via #2729, #2749, #6534 and #6501 adapters. The #6501 attach requires interposer #2895. The #2749 requires V4R5.</p> <p>Cable Features: A SCSI cable is available as a no-charge specify feature for each IBM Ultrium Tape Drive included on the initial order. At least one SCSI cable must be specified with each tape drive ordered. A short 0.5 meter drive-to-drive cable is included with the shipment of each Ultrium tape drive. Each of the following cables has a HD68 connector on each end.</p>
#5300	0.5m additional drive-to-drive SCSI cable
#5302	2.5m SCSI cable
#5305	5.0m SCSI cable
#5310	10.0m SCSI cable
#5318	18.0m SCSI cable
#5325	25.0m SCSI cable
#9400	Attached to AS/400
#8750	Cartridge Features: (only available with initial order) 1 cleaning cartridge
#8757	20 data cartridges
	<p>Additional media can be ordered by using machine type 3589 IBM LTO Ultrium Data Cartridge - IBM p/n 08L9120 IBM LTO Ultrium Cleaning Cartridge - IBM p/n 08L9124 Leader Pin attachment Kit - IBM p/n 08L9129 Manual Rewind Tool - IBM p/n 08L9130 Magazine with cover - IBM p/n 35L1088</p>

15.9 SCSI Cable Part Numbers for External Tape

The following part numbers may not be available in all countries or on all models of the AS/400 system and can change.

SCSI Cables for #2729, #2749, #6534, and #6501 (#6501 attach requires interposer p/n 05H3834)

Tape Drive	Length	Part Number	Feature Code
3490 E01, E11 3590	2.8m	05H4647	5128
	4.5m	05H4648	5145
	12.0m	05H4649	5112
	18.0m	05H4650	5118
	25.0m	05H4651	5125
3490 F00, F01, F11 3570 B / C 7208 - 342 9427 - 210 / 211	0.5m	49G6456	5205
	4.5m	49G6457	5245
	12.0m	49G6458	5212
	18.0m	49G6459	5218
	25.0m	08L6201	5225 (3570 Cxx)
3490 C10, C11, C22 with #5040 - SCSI attach #6501 attach only	4.5m	61G8328	6045
	12.0m	61G8329	6120
	18.0m	61G8330	6180
358x Hxx/Dxx	0.5m	09L9701	5300
	2.5m	35L1307	5302
	5.0m	08L9702	5305
	10.0m	08L9703	5310
	18.0m	35L1308	5318
	25.0m	08L9714	5325

SCSI Cables for #2729, #2749, and #6534

Tape Drive	Length	Part Number	Feature Code
7208 - 232 / 234 / 222 9348 - 001 / 002	1.0m	06H6037	2875
	4.0m	59H3460	2901
	12.0m	59H3461	2902
7208 - 012	1.5m	52G0174	2871
	4.0m	59H3462	2903
	12.0	59H3463	2904
3995 - C4x	12.0m	05H5543	7401/9401
	12.0m (for #2621 attach only)	05H5439	7400/9400

15.10 QIC Format Compatibility

Cartridge Capacity (Native)	Media Type	Format (Density)	2.5GB: 6380 6480	2.5GB: 6381 6481 Note 8	4GB: 4482 4582 6382 6482	16GB: 4483 4583 6383 6483	13GB: 6385 6485 Note 5	25GB: 4486 4586 6386 6486												
25 GB (4, 6)	MLR3-25 GB	*MLR3						R/W												
16 GB (3, 6)	MLR1-16 GB (1)	*QIC5010				R/W	R/W	R/W												
13 GB (3, 6)	DC5010 (1)	*QIC5010				R/W	R/W	R/W												
8 GB	SLR5-4 GB	*QIC4DC (2)			R/W	R		R												
4 GB	SLR5-4 GB	*QIC4GB			R/W	R		R												
5 GB	DC9250	*QIC2DC (2)		R/W	R/W	R		R												
2.5 GB	DC9250	*QIC2GB	R/W	R/W	R/W	R	R/W	R												
1.2 GB	DC9120	*QIC1000	R/W	R/W	R/W		R/W													
525 MB	DC6525	*QIC525	R/W	R/W	R/W		R/W													
320 MB	DC6320	*QIC525	R/W	R/W	R/W		R/W													
120 MB	DC6150	*QIC120	R/W	R/W	R/W		R/W													
60 MB	DC6150	*QIC24 (7)	R	R																
Note 1	13 GB and 16 GB cartridges have auto-retention (retention done as required).																			
Note 2	QIC2DC and QIC4DC formats are compression formats. Cartridge capacity is data dependant. Native capacities shown assume a two to one compression ratio.																			
Note 3	The internal 13 GB tape drives with feature code #6385 or #6485 also supports the 16 MB IBM MLR1 tape media. For the correct operation of the #6385 and #6485 tape drives with the MLR1 tape media, the following PTFs are required: <ul style="list-style-type: none">• MF19447 for V3R7• MF19448 for V4R1• MF19449 for V4R2• MF19450 for V4R3• With V4R4 support is built in.																			
Note 4	The 25 GB capacity cartridge drive is supported for V4R1 and later releases.																			
Note 5	The #6385 and #6485 13 GB were withdrawn from marketing 31 May 2000.																			
Note 6	The capacity shown can typically be doubled when the compression option is selected.																			
Note 7	QIC24 format is written by System/36.																			
Note 8	The #6381/#6481 2.5GB QIC internal tape speed is: <table><tr><td>Format</td><td>Speed</td></tr><tr><td>QIC2DC</td><td>600 K/second</td></tr><tr><td>QIC2GB</td><td>300 K/second</td></tr><tr><td>QIC1000</td><td>300 K/second</td></tr><tr><td>QIC525</td><td>200 K/second</td></tr><tr><td>QIC120</td><td>120 K/second</td></tr></table>								Format	Speed	QIC2DC	600 K/second	QIC2GB	300 K/second	QIC1000	300 K/second	QIC525	200 K/second	QIC120	120 K/second
Format	Speed																			
QIC2DC	600 K/second																			
QIC2GB	300 K/second																			
QIC1000	300 K/second																			
QIC525	200 K/second																			
QIC120	120 K/second																			

15.11 Cable Part Numbers

The following part numbers can be used for ordering cables for the iSeries and AS/400e models. These part numbers may not be available in all countries or on all models and can change.

Description	Length	Part Number	Feature Code
SPD Communication Cables Non-Enhanced			
RS232 Cable	15.2 m (50 ft)	22F9348	#9836
RS232 Cable Germany	15.2 m (50 ft)	21F9953	#9836
RS232 Cable Japan	15.2 m (50 ft)	21F9349	#9836
RS232 Cable	6.1 m (20 ft)	22F0149	#9022
RS232 Cable Germany	6.1 m (20 ft)	22F0150	#9022
RS232 Cable Japan	6.1 m (20 ft)	22F0151	#9022
RS366 Cable	6.1 m (20 ft)	72X5643	
RS366 Cable Japan	6.1 m (20 ft)	21F4415	
SPD Communication Cables Enhanced			
V.24 Cable	6.1 m (20 ft)	22F0152	#9023
V.24 Cable Germany	6.1 m (20 ft)	22F0153	#9023
V.24 Cable Japan	6.1 m (20 ft)	22F0154	#9023
V.24 Cable	15.2 m (50 ft)	21F9350	#9835
V.24 Cable Germany	15.2 m (50 ft)	21F9352	#9835
V.24 Cable Japan	15.2 m (50 ft)	21F9351	#9835
V.24 Cable	24.2 m (80 ft)	74F1837	
Other SPD Communications Cables			
X.21 Cable	6.1 m (20 ft)	72X5640	#9021
X.21 Cable	15.2 m (50 ft)	21F9356	#9839
V.35 Cable	6.1 m (20 ft)	72X5641	#9020
V.35 Cable	15.2 m (50 ft)	21F9357	#9838
V.35 Cable	24.4 m (80 ft)	74F1839	
2 Port Communication Cable	3 m (9.8 ft)	21F9345	#9843
SPD High Speed Communications Adapter (#2666)			
X.21 Cable	6.1 m (20 ft)	17G3987	#9885
V.35 Cable	6.1 m (20 ft)	17G3991	#9879
V.35 Cable	24.4 m (80 ft)	17G3992	#9880
RS449 Cable	6.1 m (20 ft)	17G4000	#9882
RS449 Cable	24.4 m (80 ft)	17G4001	#9883
RS449 Cable	45.7 m (150 ft)	17G4002	#9884
PCI/SPD Miscellaneous system cables			
Diskette Cable	2.4 m (7.9 ft)	46G3658	
Diskette/Twinaxial Cable	2.4 m (7.9 ft)	46G3585	
BBU Cable	2.4 m (7.9 ft)	86G7712	
Ethernet Cable	3.0 m (9.8 ft)	86G7691	#9025
Token Ring Cable	2.44 m (8 ft)	6339098	#9024

PCI Communications Cables for Models 150, 600 S10, 620, S20, 720, 250, 270, 820, 830, SB2, 840, and SB3

RS232 Cable	6.1 m (20 ft)	44H7480	#0348
RS232 Cable Germany	6.1 m (20 ft)	44H7482	#0348
RS232 Cable Japan	6.1 m (20 ft)	44H7484	#0348
V.24 Cable	6.1 m (20 ft)	44H7486	#0350
V.24 Cable	6.1 m (20 ft)	44H7489	#0350
V.24 Cable	6.1 m (20 ft)	44H7492	#0350
V.35 Cable	6.1 m (20 ft)	44H7495	#0353
V.36 Cable	6.1 m (20 ft)	44H7498	#0356
X.21 Cable	6.1 m (20 ft)	44H7501	#0359
Client Access Console Cable	6.1 m (20 ft)	44H7504	#0362
Operations Console Cable	6.1 m (20 ft)	97H7557	#0367
Remote Control Panel Cable	6.1 m (20 ft)	97H7591	#0381

PCI Communications Cables for Models 170, 600, S10, 620, S20, 720, 250, 270, 820, 830, SB2, 840, and SB3

RS232 Cable	15.2 m (50 ft)	44H7481	#0349
RS232 Cable Germany	15.2 m (50 ft)	44H7483	#0349
RS232 Cable Japan	15.2 m (50 ft)	44H7485	#0349
V.24 Cable	15.2 m (50 ft)	44H7487	#0351
V.24 Cable Germany	15.2 m (50 ft)	44H7490	#0351
V.24 Cable Japan	15.2 m (50 ft)	44H7493	#0351
V.24 Cable	24.4 m (80 ft)	44H7488	#0352
V.24 Cable Germany	24.4 m (80 ft)	44H7491	#0352
V.24 Cable Japan	24.4 m (80 ft)	44H7494	#0352
V.35 Cable	15.2 m (50 ft)	44H7496	#0354
V.35 Cable	24.4 m (80 ft)	44H7497	#0355
V.36 Cable	15.2 m (50 ft)	44H7499	#0357
V.36 Cable	45.7 m (150 ft)	44H7500	#0358
X.21 Cable	15.2 m (50 ft)	44H7502	#0360
V.24 Cable	24.4 m (80 ft)	97H7386	#0365
V.24 Cable Germany	24.4 m (80 ft)	97H7387	#0365
V.24 Cable Japan	24.4 m (80 ft)	97H7388	#0365

SPD Communications Cables for Models 6x0, Sx0, and SB1

RS232 Cable	6.1 m (20 ft)	21H3764	#0330
RS232 Cable Germany	6.1 m (20 ft)	21H3765	#0330
RS232 Cable Japan	6.1 m (20 ft)	21H3766	#0330
RS232 Cable	15.2 m (50 ft)	21H3767	#0331
RS232 Cable Germany	15.2 m (50 ft)	21H3768	#0331
RS232 Cable Japan	15.2 m (50 ft)	21H3769	#0331
V.24 Cable	6.1 m (20 ft)	21H3770	#0332
V.24 Cable Germany	6.1 m (20 ft)	21H3771	#0332
V.24 Cable Japan	6.1 m (20 ft)	21H3772	#0332
V.24 Cable	15.2 m (50 ft)	21H3773	#0333
V.24 Cable Germany	15.2 m (50 ft)	21H3774	#0333
V.24 Cable Japan	15.2 m (50 ft)	21H3775	#0333
V.24 Cable	24.4 m (80 ft)	21H3776	#0334
V.24 Cable Germany	24.4 m (80 ft)	21H3777	#0334
V.24 Cable Japan	24.4 m (80 ft)	21H3778	#0334
V.36 Cable	6.1 m (20 ft)	21H3787	#0335
V.36 Cable	15.2 m (50 ft)	21H3788	#0336
V.36 Cable	45.7 m (150 ft)	21H3789	#0337
V.35 Cable	6.1 m (20 ft)	21H3792	#0338
V.35 Cable	15.2 m (50 ft)	21H3785	#0339
V.35 Cable	24.4 m (80 ft)	21H3786	#0340
X.21 Cable	6.1 m (20 ft)	21H3782	#0341
X.21 Cable	15.2 m (50 ft)	21H3783	#0342
Client Access, Console Cable	6.1 m (20 ft)	21H3779	#0344
Operations Console Cable	6.1 m (20 ft)	97H7556	#0328
Remote Control Panel Cable	6.1 m (20 ft)	97H7584	#0380
Models P0x, 10S, 2xx, 4xx, 5xx			
Client Access Console Cable	6 m (20 ft)	46G0450	#9026
Client Access Console Cable	2.5 m (8 ft)	46G0479	#9027

Modem (telephone) Cables for #9771 and #2761/#4761 IOAs

Modem Cable - Austria	9.1m (30 ft)	21H4902	#1010
Modem Cable - Belgium	9.1m (30 ft)	21H4903	#1011
Modem Cable - Africa	9.1m (30 ft)	21H4904	#1012
Modem Cable - Israel	9.1m (30 ft)	21H4905	#1013
Modem Cable - Italy	9.1m (30 ft)	75G3802	#1014
Modem Cable - France	9.1m (30 ft)	75G3803	#1015
Modem Cable - Germany	9.1m (30 ft)	75G3804	#1016
Modem Cable - U.K.	9.1m (30 ft)	75G3805	#1017
Modem Cable - Iceland/Sweden	9.1m (30 ft)	75G3806	#1018
Modem Cable - Australia	9.1m (30 ft)	75G3807	#1019
Modem Cable - HK/New Zealand	9.1m (30 ft)	75G3808	#1020
Modem Cable - Finland/Norway	9.1m (30 ft)	75G3809	#1021
Modem Cable - Netherlands	9.1m (30 ft)	75G3810	#1022
Modem Cable - Switzerland	9.1m (30 ft)	75G3811	#1023
Modem Cable - Denmark	9.1m (30 ft)	75G3812	#1024
Modem Cable - U.S./Canada	9.1m (30 ft)	87G6236	#1025

Chapter 16. CCIN Numbers

The following list contains the CCIN, feature code, and description for many AS/400 features. It assists customers and IBM personnel in configuring MESs and upgrades. It provides a cross reference for the CCIN number reported by the Hardware Resources Listing with a feature code used for ordering.

The listing in this chapter is sorted by CCIN number. The CCIN number is used when working from a Hardware Resource Listing. The Hardware Resource listing is also known as the Rack Configuration Listing. The entries selected are those which are most useful when interpreting Hardware Resource Listings.

See Chapter 17, "Feature Codes" on page 453, which sorts the features by feature code. The feature code is used by Marketing to report configurations and work with upgrades.

CCIN	Feat. Code	Description
0032	0381	Remote Control Panel Cable
0121	0121	270 Lower Unit in Rack Specify
0122	0122	270 Upper Unit in Rack Specify
0329	0329	ITU V.24/EIA-232 80-ft. Cable
032A	0327	Operations Console Cable
032B	0328	Operations Console Cable
032C	0367	Operations Console Cable
032D	0380	Remote Control Panel Cable
0330	0330	ITU V.24/EIA232 20-ft. Cable
0331	0331	ITU V.24/EIA232 50-ft. Cable
0332	0332	ITU V.24/EIA232 20-ft. Enh Cable
0333	0333	ITU V.24/EIA232 50-ft. Enh Cable
0334	0334	ITU V.24/EIA232 80-ft. Enh Cable
0335	0335	ITU V.36/EIA449 20-ft. Cable
0336	0336	ITU V.36/EIA449 50-ft. Cable
0337	0337	ITU V.36/EIA449 150-ft. Cable
0338	0338	ITU V.35 20-ft. Cable
0339	0339	ITU V.35 50-ft. Cable
0340	0340	ITU V.35 80-ft. Cable
0341	0341	ITU X.21 20-ft. Cable
0342	0342	ITU X.21 50-ft. Cable
0343	1460	3m HSL Cable
0344	0344	20-ft. Comm Console Cable
0348	0348	ITU V.24/EIA232 20-ft. PCI Cable
0349	0349	ITU V.24/EIA232 50-ft. PCI Cable
0350	0350	ITU V.24/EIA232 20-ft. End PCI Ca
0351	0351	ITU V.24/EIA232 50-ft Enh PCI Ca
0352	0352	ITU V.24/EIA232 80-ft Enh PCI Ca
0353	0353	ITU V.35 20-ft PCI Cable
0354	0354	ITU V.35 50-ft PCI Cable
0355	0355	ITU V.35 80-ft PCI Cable
0356	0356	ITU V.36 20-ft PCI Cable
0357	0357	ITU V.36 50-ft PCI Cable
0358	0358	ITU V.36 150-ft PCI Cable
0359	0359	ITU X.21 20-ft PCI Cable
0360	0360	ITU X.21 50-ft PCI Cable
0361	1461	6m HSL Cable
0362	0362	Comm Console PCI Cable
0364	0364	Parallel Cable

CCIN	Feat. Code	Description
0365	0365	ITU V.24/EIA232 80-ft PCI Cable
0368	1462	15m HSL Cable
0550	0550	830 Rack
0551	0551	270 Rack
2010	2010	1.6 SPPR CPU for Mdl 20S
2030	2030	0.7 SPPR CPU for Mdl 200
2031	2031	1.1 SPPR CPU for Mdl 200
2032	2032	1.6 SPPR CPU for Mdl 200
2040	2040	1.1 SPPR Processor
2041	2041	1.6 SPPR Processor
2042	2042	2.0 SPPR Processor
2043	2043	3.0 SPPR Processor
2044	2044	5.0 SPPR Processor
2050	2050	6.4 SPPR Processor
2051	2051	11.4 SPPR Processor
2052	2052	16.8 SPPR Processor
206A	2061	720 (240 CPW) with #1500 Interactive
206B	2061	720 (240 CPW) with #1501 Interactive
206C	2061	720 (240 CPW) with #1502 Interactive
206D	2062	720 (480 CPW) with #1500 Interactive
206E	2062	720 (480 CPW) with #1501 Interactive
206F	2062	720 (480 CPW) with #1502 Interactive
207A	2062	720 (480 CPW) with #1503 Interactive
207B	2063	720 (810 CPW) with #1500 Interactive
207C	2063	720 (810 CPW) with #1502 Interactive
207D	2063	720 (810 CPW) with #1503 Interactive
207E	2063	720 (810 CPW) with #1504 Interactive
207F	2064	720 (1600 CPW) with #1500 Interactive
208A	2064	720 (1600 CPW) with #1502 Interactive
208B	2064	720 (1600 CPW) with #1503 Interactive
208C	2064	720 (1600 CPW) with #1504 Interactive
208D	2064	720 (1600 CPW) with #1505 Interactive
2100	2100	2.3 SPPR CPU for Mod 236
2102	2102	2.2 SPPR CPU for 436
2104	2104	2.8 SPPR CPU for 436
2106	2106	5.2 SPPR CPU for 436
2109	2109	2.2 SPPR CPU for Mod 40S
2110	2110	2.8 SPPR CPU for Mod 40S
2111	2111	Model 40S Processor
2112	2112	Model 40S Processor

CCIN	Feat. Code	Description
2118	2118	Model S10 Processor
2119	2119	Model S10 Processor
2120	2120	5.2 SPPR CPU for Mod 50S
2121	2121	7.0 SPPR CPU for Mod 50S
2122	2122	Model 50S Processor
2129	2129	Model 600 Processor
2130	2130	1.0 SPPR CPU for Mod 400
2131	2131	1.5 SPPR CPU for Mod 400
2132	2132	2.2 SPPR CPU for Mod 400
2133	2133	2.8 SPPR CPU for Mod 400
2134	2134	Model 600 Processor
2135	2135	Model 600 Processor
2136	2136	Model 600 Processor
2140	2140	1.5 SPPR CPU for Mod 500
2141	2141	2.2 SPPR CPU for Mod 500
2142	2142	3.0 SPPR CPU for Mod 500
2143	2143	5.2 SPPR CPU for Mod 510
2144	2144	7.0 SPPR CPU for Mod 510
2150	2150	9.0 SPPR CPU for Mod 530
2151	2151	12 SPPR CPU for Mod 530
2151	2152	18.4 SPPR CPU for Mod 530
2153	2153	28 SPPR CPU for Mod 530
2154	2154	12 SPPR CPU for Mod 53S
2155	2155	18.4 SPPR CPU for Mod 53S
2156	2156	28 SPPR CPU for Mod 53S
2157	2157	Model 53S 4-Way Processor
2159	2159	Model 170 Processor
2160	2160	Model 170 Processor
2161	2161	Model S20 Processor
2162	2162	Model 530 4-Way Processor
2163	2163	Model S20 Processor
2164	2164	Model 170 Processor
2165	2165	Model S20 2-Way Processor
2166	2166	Model S20 4-Way Processor
2170	2170	S20 2 W ISV Processor
2175	2175	Model 620 Processor
2176	2176	Model 170 Processor
2177	2177	Model S20 4-W ISV Processor
2178	2178	Model S20 4-W ISV Processor
2179	2179	Model 620 Processor
2180	2180	Model 620 Processor
2181	2181	Model 620 Processor
2182	2182	Model 620 2-Way Processor
2183	2183	Model 170 Processor
2185	2185	Model 640 Processor
2186	2186	Model 640 2 Way Processor
2187	2187	Model 640 4 Way Processor
2188	2188	Model 650 8 Way Processor
2189	2189	Model 650 12 Way Processor
2200	2200	Model 600 Processor
2203	2203	Model S30 Processor
2204	2204	Model S30 2 Way Processor
2205	2205	Model S30 4 Way Processor
2206	2206	Model S30 8 Way Processor
2207	2207	Model S40 8 Way Processor
2208	2208	Model S40 12 Way Processor
2211	2211	Model 600 Processor

CCIN	Feat. Code	Description
2212	2212	Model 600 Processor
2213	2213	Model 600 Processor
2223	2223	Model S20 4 Way Processor
2228	2228	Model 620 Processor
2230	2230	Model 620 Processor
2231	2231	Model 620 Processor
2232	2232	Model 620 Processor
2233	2233	Model 620 2 Way Processor
2234	2234	Model 620 4 Way Processor
2237	2237	Model 640 Processor
2238	2238	Model 640 2-Way Processor
2239	2239	Model 640 4-Way Processor
2240	2240	Model 650 8-Way Processor
2243	2243	Model 650 12-Way Processor
2256	2256	Model S40 8-Way Processor
2257	2257	Model S30 Processor
2258	2258	Model S30 2-Way Processor
2259	2259	Model S30 4-Way Processor
2260	2260	Model S30 8-Way Processor
2261	2261	Model S40 12-Way Processor
2269	2269	Model 150 Processor
2270	2270	Model 150 Processor
2289	2289	Model 170 Processor
2290	2290	Model 170 Processor
2291	2291	Model 170 Processor
2292	2292	Model 170 Processor
22A2	2248	270 (150 CPW) with #1517 Interactive
22A4	2250	270 (370 CPW) with #1516 Interactive
22A5	2250	270 (370 CPW) with #1518 Interactive
22A7	2252	270 (950 CPW) with #1516 Interactive
22A8	2252	270 (950CPW) with #1519 Interactive
22AA	2253	270 (2000 CPW) with #1516 Interactive
22AB	2253	270 (2000 CPW) with #1520 Interactive
2310	2310	Model SB1 8-Way Processor
2311	2311	Model SB1 12-Way Processor
2312	2312	Model SB1 8 Way Processor
2313	2313	Model SB1 12 Way Processor
2315	2315	Model SB2 8 Way Processor
2316	2316	Model SB3 12 Way Processor
2318	2318	Model SB3 24 Way Processor
2320	2320	Model S30 4-W ISV Processor
2321	2321	Model S30 8-W ISV Processor
2322	2322	Model S30 8-W ISV Processor
2324	2324	Model S30 4 Way Processor
2325	2325	Model S30 8 Way Processor
2326	2326	Model S30 8 Way Processor
2328	2328	Model S20 ISV Processor
2329	2329	Model S20 Processor
2330	2330	Model S20 2 Way Processor
2331	2331	Model S20 4 Way Processor
2340	2340	Model S40 12 Way Processor
2341	2341	Model S40 ISV 12-W Processor
2383	2383	Model 170 Processor
2384	2384	Model 170 Processor
2385	2385	Model 170 Processor
2386	2386	Model 170 Processor
2387	2387	Model S20 Processor

CCIN	Feat. Code	Description
2388	2388	Model 170 2 Way Processor
2389	2389	Model S20 Processor
2390	2390	Model S20 Processor
2391	2391	Model S20 2 Way Processor
2392	2392	Model S20 4 Way Processor
23A1	2395	820 (370 CPW) with #1521 Interactive
23A2	2395	820 (370 CPW) with #1522 Interactive
23A3	2395	820 (370 CPW) with #1523 Interactive
23A4	2395	820 (370 CPW) with #1524 Interactive
23A9	2396	820 (950 CPW) with #1521 Interactive
23AA	2396	820 (950 CPW) with #1522 Interactive
23AB	2396	820 (950 CPW) with #1523 Interactive
23AC	2396	820 (950 CPW) with #1524 Interactive
23AD	2396	820 (950 CPW) with #1525 Interactive
23B1	2397	820 (2000 CPW) with #1521 Interactive
23B2	2397	820 (2000 CPW) with #1522 Interactive
23B3	2397	820 (2000 CPW) with #1523 Interactive
23B4	2397	820 (2000 CPW) with #1524 Interactive
23B5	2397	820 (2000 CPW) with #1525 Interactive
23B6	2397	820 (2000 CPW) with #1526 Interactive
23B8	2398	820 (3200 CPW) with #1521 Interactive
23B9	2398	820 (3200 CPW) with #1522 Interactive
23BA	2398	820 (3200 CPW) with #1523 Interactive
23BB	2398	820 (3200 CPW) with #1524 Interactive
23BC	2398	820 (3200 CPW) with #1525 Interactive
23BD	2398	820 (3200 CPW) with #1526 Interactive
23BE	2398	820 (3200 CPW) with #1527 Interactive
23C1	2400	830 (1850 CPW) with #1531 Interactive
23C2	2400	830 (1850 CPW) with #1532 Interactive
23C3	2400	830 (1850 CPW) with #1533 Interactive
23C4	2400	830 (1850 CPW) with #1534 Interactive
23C5	2400	830 (1850 CPW) with #1535 Interactive
23D1	2402	830 (4200 CPW) with #1531 Interactive
23D2	2402	830 (4200 CPW) with #1532 Interactive
23D3	2402	830 (4200 CPW) with #1533 Interactive
23D4	2402	830 (4200 CPW) with #1534 Interactive
23D5	2402	830 (4200 CPW) with #1535 Interactive
23D6	2402	830 (4200 CPW) with #1536 Interactive
23D8	2403	830 (7350 CPW) with #1531 Interactive
23D9	2403	830 (7350 CPW) with #1532 Interactive
23DA	2403	830 (7350 CPW) with #1533 Interactive
23DB	2403	830 (7350 CPW) with #1534 Interactive
23DC	2403	830 (7350 CPW) with #1535 Interactive
23DD	2403	830 (7350 CPW) with #1536 Interactive
23DE	2403	830 (7350 CPW) with #1537 Interactive
23E8	2418	840 (10000 CPW) with #1540 Interact.
23E9	2418	840 (10000 CPW) with #1541 Interact.
23EA	2418	840 (10000 CPW) with #1542 Interact.
23EB	2418	840 (10000 CPW) with #1543 Interact.
23EC	2418	840 (10000 CPW) with #1544 Interact.
23ED	2418	840 (10000 CPW) with #1545 Interact.
23EE	2418	840 (10000 CPW) with #1546 Interact.
23F8	2420	840 (16500 CPW) with #1540 Interact.
23F9	2420	840 (16500 CPW) with #1541 Interact.
23FA	2420	840 (16500 CPW) with #1542 Interact.
23FB	2420	840 (16500 CPW) with #1543 Interact.
23FC	2420	840 (16500 CPW) with #1544 Interact.

CCIN	Feat. Code	Description
23FD	2420	840 (16500 CPW) with #1545 Interact.
23FE	2420	840 (16500 CPW) with #1546 Interact.
23FF	2420	840 (16500 CPW) with #1547 Interact.
2422	2422	Dedicated Domino Processor
2423	2423	Dedicated Domino Processor
2424	2424	Dedicated Domino Proc 2-way
2425	2425	Dedicated Domino Processor
2426	2426	Dedicated Domino Proc 2-Way
2427	2427	Dedicated Domino Proc 4-way
2410	2410	100 Clnt Svr Processor
2411	2411	3.0 SPPR Processor
2412	2412	6.1 SPPR Processor
241B	2069	Model 740 8-Way Processor
241B	2070	Model 740 12-Way Processor
241C	2067	Model 730 4-Way Processor
241D	2068	Model 730 8-Way Processor
241F	2065	Model 730 Processor
242B	2064	Model 720 4-Way Processor
242C	2062	Model 720 Processor
242D	2063	Model 720 2-Way Processor
243A	2061	Model 720 Processor
24C0	2416	#1540 interactive 8/12 way 840 POD
24C1	2416	#1541 interactive 8/12 way 840 POD
24C2	2416	#1542 interactive 8/12 way 840 POD
24C3	2416	#1543 interactive 8/12 way 840 POD
24C4	2416	#1544 interactive 8/12 way 840 POD
24C5	2416	#1545 interactive 8/12 way 840 POD
24C6	2416	#1546 interactive 8/12 way 840 POD
24C8	2417	#1540 interactive 12/18 way 840 POD
24C9	2417	#1541 interactive 12/18 way 840 POD
24CA	2417	#1542 interactive 12/18 way 840 POD
24CB	2417	#1543 interactive 12/18 way 840 POD
24CC	2417	#1544 interactive 12/18 way 840 POD
24CD	2417	#1545 interactive 12/18 way 840 POD
24CE	2417	#1546 interactive 12/18 way 840 POD
24D0	2419	#1540 interactive 18/24 way 840 POD
24D1	2419	#1541 interactive 18/24 way 840 POD
24D2	2419	#1542 interactive 18/24 way 840 POD
24D3	2419	#1543 interactive 18/24 way 840 POD
24D4	2419	#1544 interactive 18/24 way 840 POD
24D5	2419	#1545 interactive 18/24 way 840 POD
24D6	2419	#1546 interactive 18/24 way 840 POD
24D7	2419	#1547 interactive 18/24 way 840 POD
2515	2515	C10 Floating Pt Processor
2516	2516	C20 Floating Pt Processor
2523	2523	D80 OPUS Processor
2528	2528	16.8 SPPR CPU for Mod F97
2530	2530	E04 BASS PISCES CR Proc
2531	2413	E06 Processor
2533	2533	E20 PISCES Processor
2534	2534	E25 PISCES Processor
2536	2536	E35 PISCES Processor
2537	2537	E45 PISCES Processor
2539	2539	E02 ZEUS TWINAX PISCES
2540	2540	0.7 SPPR CPU for Mod D35
2541	2541	D45 PISCES Processor
2542	2542	D50 PISCES Processor

CCIN	Feat. Code	Description
2543	2543	D60 PISCES Processor
2544	2544	D70 PISCES Processor
2552	2552	C06 CREST Processor
2553	2553	D06 CREST Processor
2554	2554	D04 PHANTOM Processor
2555	2555	D10 CREST Processor
2556	2556	D20 CREST Processor
2557	2557	D25 PISCES Processor
2558	2558	C04 Phantom Processor 8MB
2559	2559	E50 Opus Processor
2560	2560	E60 Opus Processor
2561	2561	E70 Opus Sort Processor
2562	2562	E80 Opus Sort Processor
2563	2563	E90 OSCAR (2way) Opus Sort
2568	2568	E95 OSCAR (2way) Opus Sort
2582	2582	F06 PIKE PISCES Processor
2583	2583	F25 PISCES Processor
2584	9584	ASCII Workstation Contrlr
2585	2414	F02 Processor
2585	9585	Twinaxial Workstn Contrlr
2586	2586	0.7 SPPR for F04
2587	2587	F10 PISCES CR Processor
2588	2588	F20 PISCES Processor
2592	2592	F35 PISCES Processor
2593	2593	F45 PISCES Sort Processor
2594	2594	F50 OPUS Processor
2595	2595	F60 OPUS Sort Processor
2596	2596	F70 CTECH Processor 1-way
2597	2597	F80 CTECH Processor 2-way
2598	2598	F90 CTECH Processor 2-way
259A	2599	F95 CTECH Processor 2-way
2600	2600	Magnetic Storage Controlr
2601	2601	9346 Mag Tape Unit Contr
2602	2602	Processor Expansion
2602	2607	9348 Mag Tape Unit Attach
2604	2604	3422 3430 Mag Tape Subsys
2605	2605	ISDN Basic Rate Adapter
2608	2608	2440/9348 HCD Mag Tape Att
2609	2609	EIA 232/V.24 Two Line Adpt
2609	2654	EIA 232/V.24 Two-Line 20E
2609	2655	EIA 232/V.24 Two-Line 20
2609	2657	EIA 232/V.24 Two-Line 50E
2609	2658	EIA 232/V.24 Two-Line 50
2609	8863	EIA 232/V.24 Two line 20E
2609	8866	EIA 232/V.24 Two line 50E
2610	2610	X.21 Two Line Adapter
2610	2656	X.21 Two-Line 20
2610	2659	X.21 Two-line 50
2611	2611	DASD Controller
2612	2612	EIA 232/V.24 One-Line Adpt
2612	9612	Std EIA 232/V.24 1-Line/Ad
2613	2613	V.35 One-Line Adapter
2614	2614	X.21 One-Line Adapter
2617	2617	Ethnet/IEEE 802.3 CSMA/CD
2617	9617	Std Ethrnt/IEEE 802.3 IOP
2618	2618	Fiber Distrib Data Inf Adpt
2618	8664	Opt Base Fiber DD Inf

CCIN	Feat. Code	Description
2618	9618	Std Fiber Distrib Data Inf
2619	2619	16/4 Mbps Tkn-Rng Adapt/HP
2619	9619	Std 16/4 Mbps Tkn Rng IOP
2620	2620	Cryptographic Processor
2621	2621	Removble Media Device Atch
2622	2622	3490 Magnetic Tape Attach
2623	2623	Six Line Comm Controller
2623	9623	Std Six Line Comm Cntrlr
2624	2624	Storage Device Controller
2624	9624	Store Device Control Spec
2625	2625	Ethnet/IEEE 802.3 CSMA/CD
2626	2626	16/4 Mbps Tkn-Rng Adapt/A
2628	2628	Limited Cryptographic Proc
2629	2629	LAN/WAN/Workstation IOP
2630	8505	I/O Card Unit Conversion
2634	2634	16/4 Mbps Token Ring Adpt
2636	2636	16/4 Mbps Token Ring Adpt
2637	9144	ASCII Workstation Contrlr
2637	9147	Std MFIOF/ASCII WSC
2637	9150	Std MFIOF/ASCII WSC
2638	9146	Std MFIOF/TWINAX WSC
2644	2644	34xx Magnetic Tape Atchmnt
2647	2647	9348 Model 2 Tape Atchmnt
2651	9651	Storage Device Controller
2654	8609	EIA 232/V.24 Two-Line
2654	9609	Std EIA 232/V.24 2-line
2661	9148	Std MFIOF/Twinaxial WSC
2661	9151	Std MFIOF/Twinaxial WSC
2661	9172	APEX TETON TWINAX MFIOF
2663	2663	I/O Attachment Processor
2664	2664	Integrated Fax
2665	2665	Shld Dist Data Inf Adapt
2665	8665	Opt Base Shielded DD Inf
2665	9665	Std Copper Dist Data Inf
2666	2666	High Speed Comm Adapter
2668	2668	ARLAN Wireless LAN Adapter
2669	2669	Shared Bus Interface Card
2670	2670	Sys Unit Exp Twr (optical)
2671	2671	PCI Bus IOP
2672	2672	PCI Bus IOP
2673	2673	Optical Bus Adapter
2673	9673	Std Optical Bus Adapter
2674	2674	Optical Bus Adapter
2680	2680	Optcl Bus Rcvr (266Mbps)
2682	2682	Optcl Bus Rcvr(1063Mbps)
2683	2683	266Mbps OptiConnect Rcvr
2685	2685	1063Mbps OptiConnect Rcvr
2686	2686	Optical Link Proc(266Mbps)
2688	2688	Optical Link Proc (1063Mbps)
2691	9691	Base Bus Adapter
2691	2691	Opt Bus Adapt w/Tkn Ring
2692	2692	Opt Bus Adapt w/Ethernet
2693	2693	Opt Bus Adapt w/Tkn Ring
2694	2694	Opt Bus Adapt w/Ethernet
2695	2695	Optical Bus Adapter
2696	9696	Base Optical Bus Adapter
2698	2698	Optical Bus Adapter

CCIN	Feat. Code	Description
2699	2699	Two-Line WAN IOA
2699	9699	Base Two-Line WAN IOA
2705	2705	M1 Filler Tray
2706	2706	M2 Terminator Tray
2713	2713	SPD I/O Regulator
2715	2715	Processor/Memory Regulator
2718	2718	PCI Magnetic Media Controller
2720	2720	Workstation/Comm Adpt
2720	9720	Base PCI WAN/Twinaxial IOA
2721	2721	Multiprotocol Adpt
2721	9721	Base PCI Two-Line WAN IOA
2722	2722	PCI Twinax Workstation IOA
2722	9722	Base PCI Twinaxial IOA
2723	2723	PCI Ethernet/IEEE 802.3 Adpt
2723	4723	PCI Ethernet/IEEE 802.3 Adpt
2723	9723	Ethernet/IEEE 802.3 Adpt
2724	2724	16/4Mbps Token Ring Adpt
2724	9724	16/4Mbps Token Ring Adpt
2728	9728	Base PCI Disk Unit Ctlr
2729	2729	PCI Magnetic Media Ctlr
2730	2730	Programmable Regulator
2731	2731	Regulator Memory Control
2732	9732	Base HSL Ports 8 ports
2732	9733	Base HSL Ports 8 ports
2737	9737	Base HSL Ports 16 Ports
2735	2735	Optical Bus Adapter
2736	2736	Optical Bus Adapter
2740	2740	PCI RAID Disk Unit CTRLR
2740	9740	Base PCI RAID Disk Unit CTRLR
2741	2741	PCI Raid Disk Unit CTRLR
2742	2742	PCI RAID Disk Cntrlr w/compr
2743	2743	PCI1 Gbps Ethernet card
2744	2744	PCI 100 Mbps Token Ring Adapter
2745	2745	PCI WAN IOA
2745	4745	PCI WAN IOA
2745	9745	Base PCI WAN IOA
2745	0398	Base PCI WAN IOA
2746	2746	PCI Twinax Workstation IOA
2746	4746	PCI Twinax Workstation IOA
2748	2748	PCI Raid Disk Controller
2748	4748	PCI Raid Disk Controller
2748	9748	PCI Raid Disk Controller
2749	2749	PCI Ultra Mag Media Controller
2750	2750	PCI ISDN IOA
2750	4750	PCI ISDN IOA
2751	2751	PCI ISDN IOA
2751	4751	PCI ISDN IOA
2761	2761	PCI Integrated Analog Modem
2763	2763	PCI Disk controller
2767	9767	Base PCI Disk Controller
2768	2768	PCI Magnetic Media Controller
2771	9771	PCI 2 Line Wan w/modem
2890	2790	PCI Int Netfinity server
2895	2795	128MB Netfinity IOP Memory
2896	2796	256MB Netfinity IOP Memory
2897	2797	1GB Netfinity IOP Memory
2800	9800	Internal Disk Unit (640MB)

CCIN	Feat. Code	Description
2801	2801	1.96GB Internal Dsk Unit
2801	9801	Internal Disk Unit (1GB)
2802	2802	2.0GB Internal Disk Unit
2802	9802	Std 2.0GB Int Disk Unit
2809	2809	PCI LAN/WAN/Workstation IOP
2810	2810	LAN/WAN IOP
2811	2811	PCI 25Mbps UTP ATM
2812	2812	PCI 45Mbps Coax T3/DS3 ATM
2813	2813	PCI 155Mbps MMF ATM
2813	2814	PCI 100Mbps MMF ATM
2815	2815	PCI 155Mbps UTP OC3 ATM
2816	2816	PCI 155Mbps MMF ATM
2816	4816	PCI 155Mbps MMF ATM
2818	2818	PCI 155Mbps SMF OC3 ATM
2818	4818	PCI 155Mbps SMF OC3 ATM
2819	2819	PCI 34Mbps Coax E3 ATM
2821	2821	Active Backplane
2822	2822	Clock card
2823	2823	Active Backplane
2824	2824	PCI LAN/WAN/Workstation IOP
2826	2826	Active Backplane
2828	2828	Active Backplane
2829	2829	Bridge Active Backplane
2830	2830	Main Storage Expansion
2831	2831	Main Storage Expansion
2833	2833	Clock card
2834	2834	Clock card
2835	2835	Active Backplane
2838	4838	PCI 100/10Mbps Ethernet IOA
2838	2838	PCI 100/10Mbps Ethernet IOA
2838	9738	Base PCI 100/10Mbps Ethernet
283F	7123	DASD Expansion Unit
283F	7127	DASD Expansion Unit
2840	2840	Integrated AIX Server
2842	2842	PCI IOP
2843	2843	PCI IOP
284A		PCI IOP Embedded
284B		PCI IOP Embedded
284C		PCI IOP Embedded
284D		PCI IOP Embedded
284E		PCI IOP Embedded
2850	2841	Integrated PC Server
2850	2850	Integrated PC Server 32MB
2850	2851	PCI Integrated PC Server
2850	2852	PCI Integrated PC Server
2850	2854	PCI Integrated PC Server
2850	2857	PCI Integrated PC Server
2850	2859	PCI Integrated PC Server
2850	2865	PCI Integ Netfinity Server
2850	2866	PCI Integ Netfinity Server
2850	2868	PCI Integ Netfinity Server
2850	PLC1	Intgrtd PC Srvr Ship Group
2853	2853	3450 .66m sys to dev cbl
2855	2855	3450 1.2m sys to dev cbl
2856	2856	3450 1.2m sys to dev cbl
2860	2860	Intg PC Ser Memory 16MB
2861	2861	32MB IOP Memory

CCIN	Feat. Code	Description
2862	2862	128MB IOP Memory
2863	2863	8MB Addtl Cache Memory
2864	2864	32MB Addtl Cache Memory
2867	2867	256MB IOP Memory
2881	2881	Main Storage Expansion
2884	2884	Main Storage Expansion
2890	2890	PCI Int Netfinity server
2895	2895	128MB Netfinity IOP Memory
2896	2896	256MB Netfinity IOP Memory
2897	2897	1GB Netfinity IOP Memory
2890	2790	PCI Int Netfinity server
2895	2795	128MB Netfinity IOP Memory
2896	2796	256MB Netfinity IOP Memory
2897	2797	1GB Netfinity IOP Memory
2A6A	2065	560 CPW Model 730 Processor with #1506 Interactive Feature
2A6B	2065	560 CPW Model 730 Processor with #1507 Interactive Feature
2A6C	2065	560 CPW Model 730 Processor with #1508 Interactive Feature
2A6D	2065	560 CPW Model 730 Processor with #1509 Interactive Feature
2A6E	2066	1050 CPW Model 730 Processor with #1506 Interactive Feature
2A6F	2066	1050 CPW Model 730 Processor with #1507 Interactive Feature
2B6A	2066	1050 CPW Model 730 Processor with #1508 Interactive Feature
2B6B	2066	1050 CPW Model 730 Processor with #1509 Interactive Feature
2B6C	2066	1050 CPW Model 730 Processor with #1510 Interactive Feature
2B6D	2067	2000 CPW Model 730 Processor with #1506 Interactive Feature
2B6E	2067	2000 CPW Model 730 Processor with #1508 Interactive Feature
2B6F	2067	2000 CPW Model 730 Processor with #1509 Interactive Feature
2C6A	2067	2000 CPW Model 730 Processor with #1510 Interactive Feature
2C6B	2067	2000 CPW Model 730 Processor with #1511 Interactive Processor
2C6C	2068	2890 CPW Model 730 Processor with #1506 Interactive Feature
2C6D	2068	2890 CPW Model 730 Processor with #1508 Interactive Feature
2C6E	2068	2890 CPW Model 730 Processor with #1509 Interactive Feature
2C6F	2068	2890 CPW Model 730 Processor with #1510 Interactive Feature
2D6A	2068	2890 CPW Model 730 Processor with #1511 Interactive Processor
2D6B	2069	3660 CPW Model 740 Processor with #1514 Interactive Feature
2D6C	2069	3660 CPW Model 740 Processor with #1510 Interactive Feature
2D6D	2069	3660 CPW Model 740 Processor with #1511 Interactive Feature

CCIN	Feat. Code	Description
2D6E	2069	3660 CPW Model 740 Processor with #1512 Interactive Feature
2E6A	2070	4550 CPW Model 740 Processor with #1514 Interactive Feature
2E6B	2070	4550 CPW Model 740 Processor with #1510 Interactive Feature
2E6C	2070	4550 CPW Model 740 Processor with #1511 Interactive Feature
2E6D	2070	4550 CPW Model 740 Processor with #1512 Interactive Feature
2E6E	2070	4550 CPW Model 740 Processor with #1513 Interactive Feature
3001	3001	32MB Main Storage
3001	4001	64MB Main Storage Package
3002	3002	128MB Main Storage
3002	4002	256MB Main Storage Package
3002	8002	Opt 128MB Main Storage
3003	3003	256MB Main Storage
3004	3004	256MB Main Storage
3004	3064	256MB Main Storage
3005	3005	512MB Main Storage
3005	3065	512MB Main Storage
3006	3066	512MB Main Storage
3022	3022	128MB Main Storage
3024	3024	256MB Main Storage
3025	3025	512MB Main Storage
3026	3026	512MB Main Storage
3054	3054	4MB Additional Main Store
3055	3055	8MB Additional Main Store
3060	3060	16MB Additional Main Store
3061	3061	16MB Additional Main Store
3062	3062	128MB Main Storage
3100	3100	16 MB Main Storage
3101	3101	32 MB Main Storage
3102	3102	16 MB Main Storage
3103	3103	32 MB Main Storage
3103	4103	32MB Main Storage
3104	3104	64 MB Main Storage
3104	4204	64MB Main Storage
3104	9304	Std 64MB Main Storage
3105	9105	Base 64MB Main Storage
3106	8106	Opt Base 128MB Main Store
3107	8107	Opt Base 256MB Main Store
3108	3108	8MB Main Storage
3109	3109	32 MB Main Storage
3110	3110	64 MB Main Storage
3110	8210	Optional 64MB Main Storage
3110	9110	Std 64MB Main Storage
3116	3116	MFIOP Storage Expansion
3117	3117	8MB Main Storage
3117	4117	8MB Main Storage SIMM
3118	3118	16MB Main Storage
3118	4118	16MB Main Storage SIMM
3119	3119	8 MB Main Storage
3120	3120	8MB Main Storage
3120	4120	8MB Main Storage
3121	3121	8MB Main Storage
3121	4121	8MB Main Storage

CCIN	Feat. Code	Description
3122	3122	32MB Main Storage
3122	4122	32MB Main Storage
3130	3130	32 MB Main Storage
3131	3131	64 MB Main Storage
3131	9231	Opt Base 64MB Main Store
3132	3132	128 MB Main Storage
3132	9232	Opt Base 128MB Main Store
3133	3133	64 MB Main Storage
3133	4133	64MB Main Storage
3134	3134	128 MB Main Storage
3134	4134	128MB Main Storage
3134	9234	Std 128MB Main Storage
3135	3135	256 MB Main Storage
3135	4135	256MB Main Storage
3135	7135	Opt 256MB Main Storage
3135	8135	Opt Base 256MB Main Store
3136	3136	256 MB Main Storage
3136	4136	256MB Main Storage
3138	3138	64MB Main Storage
3138	4138	64MB Main Storage
3140	3140	8 MB Main Storage
3141	3141	16 MB Main Storage
3142	3142	32 MB Main Storage
3144	3144	8 MB Main Storage
3144	4144	8MB Main Storage
3145	3145	16MB Main Storage
3145	4145	16MB Main Storage
3146	3146	32 MB Main Storage
3146	4146	32MB Main Storage
3147	3147	32MB Main Storage
3147	4147	32MB Main Storage
3149	3149	128 MB Main Storage
3149	4149	128MB Main Storage
3152	3152	32 MB Main Storage
3152	9252	Std 32MB Main Storage
3153	3153	64 MB Main Storage
3153	8253	Opt Base 64MB Main Store
3154	3154	128 MB Main Storage
3154	8254	Opt Base 128MB Main Store
3154	9254	Std 128MB Main Storage
3155	3155	256 MB Main Storage
3155	7255	Opt Base 256MB Main Store
3155	8255	Opt Base 256MB Main Store
3156	3156	64MB Main Storage
3156	4156	64MB Main Storage
3156	8156	Opt Base 64MB Main Storage
3156	9156	Std 64MB Main Storage
3157	3157	128MB Main Storage
3157	4157	128MB Main Storage
3157	7157	Opt Base 128MB Main Store
3157	8157	Opt Base 128MB Main Store
3157	9157	128MB Main Storage
3158	3158	256MB Main Storage
3158	4158	256MB Main Storage
3158	7158	Opt Base 256MB Main Store
3158	8158	Opt Base 256MB Main Store
3159	3159	8MB Main Store

CCIN	Feat. Code	Description
3159	9159	Std 8MB Main Storage
3160	3160	16MB Main Store
3160	8160	Opt Addtl 16MB Main Store
3160	9160	Std 16MB (2 SIMM)
3161	3161	32MB Main Storage
3161	4161	32MB Main Storage
3161	9161	Std 32MB Main Storage
3162	3162	128MB Main Storage
3162	9262	Std 128MB Main Storage
3163	3163	256MB Main Storage
3163	7263	Opt Base 256MB Main Store
3163	9263	Std 256MB Main Storage
3164	3164	512MB Main Storage
3164	7264	Opt Base 512MB Main Store
3164	8264	Opt Base 512MB Main Store
3165	3165	1024MB Main Storage
3165	7265	Opt Base 1024MB MS
3165	8265	Opt Base 512MB Main Store
3166	3166	256MB Main Storage
3166	7266	Opt Base 256MB MS
3166	9266	Std 256MB Main Storage
3167	3167	512MB Main Storage
3168	3168	1024MB Main Storage
3172	3172	32MB Main Store (2 simms)
3172	3182	32MB Main Store
3172	4172	32MB Main Storage
3172	8172	Delt Price 32MB
3172	8272	Opt Base 32MB Main Store
3172	9272	Std 32MB Main Storage
3172	9282	Std 32MB Main Storage
3179	3179	256MB Main Storage
3179	9179	Base 256MB Main Storage
3180	3180	512MB Main Storage
3180	8180	Opt Base 512MB Main Storage
3184	3184	32MB Main Store
3184	9184	Standard 32MB Main Storage
3185	3185	64MB Main Store
3185	8185	Opt Base 64MB Main Store
3185	9185	Standard 64MB Main Storage
3186	3186	128MB Main Store
3186	7186	Opt Base 128MB Main Store
3186	8186	Opt Base 128MB Main Store
3187	3187	256MB Main Store
3187	7187	Opt Base 256MB Main Store
3187	8187	Opt Base 256MB Main Store
3188	3188	64MB Main Storage
3189	3189	128MB Main Storage
3189	8389	Opt Base 128MB Main Store
3190	3190	256MB Main Storage
3190	8190	Opt Base 256MB Main Store
3190	8390	Opt Base 256MB Main Store
3190	9190	Base 256MB Main Storage
3191	3191	512MB Main Storage
3191	8191	Opt Base 512MB Main Storage
3191	8291	Opt Base 1024MB Main Store
3191	8391	Opt Base 1024MB Main Store
3192	3192	1024MB Main Storage

CCIN	Feat. Code	Description
3192	8192	Opt Base 1024MB Main Storage
3192	8292	Opt Base 1024MB Main Store
3192	8392	Opt Base 1024MB Main Store
3193	3193	2048MB Main Storage
3193	8193	Opt Base 2048MB Main Store
3195	3195	4096MB Main Storage
3196	3196	8192MB Main Storage
3197	3197	1024MB Main Storage
3198	3198	2048MB Main Storage
3612	3612	1024MB Main Storage
3613	3613	2048MB Main Storage
3614	3614	4096MB Main Storage
4010	4010	4MB Write Cache
4011	4011	8MB Data Store
4012	4012	32MB Data Store
4104	4104	4MB Main Storage
4104	9904	4MB Main Store - No Charge
4114	4114	4MB Main Storage Expansion
4758	4800	PCI Crypto Co-processor
4758	4801	PCI Crypto Co-processor
4758	4802	PCI Crypto Co-processor
5033	5033	Migration Tower I
5034	5034	Migration Tower I
5035	5035	Migration Tower I
5052	8052	Opt 16 Disk Unit Expansion
5065	5065	Storage/PCI Expansion Tower
5065	0565	Storage/PCI Expansion Tower
5074	5074	PCI Expansion Tower
5075	5075	PCI Expansion Tower
5079	5079	PCI Expansion Tower
5077	5077	Migration Tower II
5121	5121	Pwr Regulator Card
5130	5130	Tower Attach Power (RISC)
5133	5133	Feature Power Supply
5133	5134	Feature Power Supply
5135	5135	Feature Power Supply
5136	5136	Feature Power Supply
5140	5140	Regulator
5141	5141	3.6V I/O Regulator
5142	5142	Tower Attach Power
5143	5143	Bulk 400W Power Supply
5144	5144	BBU External (Opt)
5145	5145	BBU Internal (Opt)
5146	5146	Redundant Power(Bulk+Reg)
5147	5147	Feature Power -560W
5148	5148	Addtnl Bat Bckup Internal
5149	5149	Redundant Power(bulk+reg)
5150	5150	Battery Backup (External)
5151	5151	Power Supply (650 watts)
5152	5152	Feature Power Supply (500W)
5153	5153	Redundant Power Supplies
5155	5155	Redundant Power & Cooling
5156	5156	Redundant Power & Cooling
5157	5157	Redundant Power & Cooling
6040	6040	Twinaxial Workstn Contrlr
6041	6041	ASCII Workstation Contrlr
6050	6050	Twinaxial Workstn Contrlr

CCIN	Feat. Code	Description
6050	9050	Twinaxial Workstn Control
6053	9053	Std Twinaxial WSC Specify
6054	6054	LOCAL TALK Controller
6054	8054	LocalTalk Adapter
6054	9054	Std LocalTalk Controller
6100	6100	Disk Unit (315MB)
6100	9100	315MB Disk Unit Relocation
6102	9102	Std 320MB Disk Unit
6103	6103	Single Disk Unit (400MB)
6103	9103	Std 400MB Disk Unit
6104	6126	Base DASD Replace (988MB)
6104	9104	Std 988MB Disk Unit
6105	1105	Sngl Disk Unt (320MB) Kit
6105	1200	Sngl Disk Unt (320MB) Kit
6105	6105	Single Disk Unit (320 MB)
6105	6108	Addition Dual Disk (640MB)
6105	9106	Standard Dual Disk (640MB)
6107	1107	Sngl Disk Unt (400MB) Kit
6107	1201	Sngl Disk Unt (400MB) Kit
6107	6107	Single Disk Unit (400 MB)
6107	6120	Dual Disk Unit (800 MB)
6107	6121	Addition Dual Disk (800MB)
6107	9120	Standard Dual Disk (800MB)
6109	1109	Sngl Disk Unt (988MB) Kit
6109	1202	Sngl Disk Unt (988MB) Kit
6109	1210	Addt Dsk Unt(988MB)
6109	1319	1 Byte 988MB Disk Unit Kit
6109	6109	Single Disk Unit (988 MB)
6109	6123	Addition Dual Dsk (1976MB)
6109	6124	Base DASD Upgrade (1976MB)
6109	6125	Base DASD Replace (988MB)
6109	6127	Base DASD Replace (1976MB)
6109	8123	Dual Disk Unit (1976MB)
6109	9109	Std 988MB Disk Unit Spec
6110	6110	Mag Storage Dev Controller
6110	8110	Std Mag Storage Controller
6111	6111	Mag Storage Dev Controller
6111	8111	Std Mag Storage Controller
6112	6112	Mag Storage Dev Controller
6122	9122	Std 851MB Disk Unit (RPQ)
6140	6140	Twinaxial Workstn Contrlr
6140	9140	Twinaxial Workstn Control
6141	6141	ASCII Workstation Contrlr
6141	9141	ASCII Workstation Control
6146	6146	Diskette Adapter
6147	6147	Diskette Adapter
6149	6149	16/4 Mbps Token Ring IOA
6149	9249	Base 16/4Mbps Token Ring
6150	6150	Three-Line Comm Controller
6151	6151	X.21 One-Line 20
6151	6171	X.21 One-Line 50
6152	6152	EIA 232/V.24 Adapter
6152	6154	EIA 232/V.24 One-Line 20E
6152	6155	EIA 232/V.24 One-Line 20
6152	6174	EIA 232/V.24 One-Line 50E
6152	6175	EIA 232/V.24 One-Line 50
6152	9862	EIA 232/V.24 One line 20E

CCIN	Feat. Code	Description
6152	9865	EIA 232/V.24 One line 50E
6153	6153	V.35 One-Line 20
6153	6173	V.35 One-Line 50
6160	6160	Token Ring Network Adapter
6180	6180	Twinaxial Workstation IOA
6180	9280	Base Twinaxial WSC
6181	6181	ETHERNET/IEEE 802.3 IOA
6181	9381	Base Ethernet/IEEE 802.3 IOA
6183	6183	6 port ASCII IOA
6320	1263	650MB CD ROM (4x)
6320	9520	Std CD-ROM
6321	4425	CD-ROM
6321	4525	CD-ROM
6321	6325	CD-ROM
6321	6425	CD-ROM
6321	9521	Std CD ROM (6x)
6335	1262	840MB QIC-3040-MC
6335	1305	840MB QIC Mini Tape Unit Kit
6335	1335	6335 Extrnl Conversion Kit
6335	6335	840MB QIC-mini Tape Unit
6335	6365	840MB QIC-mini Tape Extrnl
6335	6435	840MB QIC Mini Tape Unit
6340	6340	13GB QIC mini Tape Unit
6341	6341	120MB ¼-in Cart Tape
6341	9341	Std 120MB ¼-in Tape
6342	6342	525MB ¼-in Cart Tape
6342	8342	525MB ¼-in Cart Tape
6342	9342	Std 525MB ¼-in Tape
6343	5343	Base Tape Replace (1.2 GB)
6343	6343	1.2GB ¼-in Cart Tape
6343	7343	1.2GB ¼-in Cart Tape
6343	8343	1.2GB ¼-in Cart Tape
6343	9343	Std 1.2GB ¼-in Tape
6344	6344	2.5GB ¼-in Cart Tape
6344	7344	2.5GB ¼-in Cart Tape
6344	8344	2.5GB ¼-in Cart Tape
6345	6345	13GB ¼-in Cart Tape
6345	8345	13GB ¼-in Cartridge Tape
6346	6346	120MB ¼-in Cart Tape
6347	6347	525MB ¼-in Cart Tape
6347	7347	Base Tape Upgrade (525MB)
6347	8347	525MB ¼-in Cart Tape
6347	9347	Std 525MB ¼-in Tape
6348	5348	Base Tape Replace (1.2 GB)
6348	6348	1.2GB ¼-in Cart Tape
6348	7348	1.2GB ¼-in Cart Tape
6348	8348	1.2GB ¼-in Cart Tape
6348	9348	Std 1.2GB ¼-in Tape
6349	5349	Base Tape Replace (2.5 GB)
6349	6349	2.5GB ¼-in Cart Tape
6349	7349	2.5GB ¼-in Cart Tape
6349	8349	2.5GB ¼-in Cart Tape
6350	6350	13GB ¼-in Cart Tape
6366	6366	120MB ¼-in Cart Tape
6366	6367	525MB ¼-in Cart Tape
6368	6368	1.2GB ¼-in Cart Tape
6369	6369	2.5GB ¼-in Cart Tape

CCIN	Feat. Code	Description
6370	6370	13GB ¼-in Cartridge Tape
6378	1250	525 MB ¼-in Tape Kit
6378	1378	525MB ¼-in Cart Tape Kit
6379	1251	1.2 GB ¼-in Tape Kit
6379	1349	1.2GB ¼-in Tape Kit
6379	1379	1.2GB ¼-in Cart Tape Kit
6380	1252	2.5 GB ¼-in Tape Kit
6380	1260	2.5 GB ¼-in Tape
6380	1350	2.5GB ¼-in Tape Kit
6380	1351	2.5GB ¼-in Tape Kit
6380	1380	2.5GB ¼-in Cart Tape Kit
6380	6380	2.5GB ¼-in Cart Tape
6380	6480	2.5GB ¼-in Cart Tape
6380	9380	2.5GB ¼-in Cart Tape
6385	1355	13.0GB ¼-in Tape Kit
6385	6385	13GB ¼-in Cartridge
6385	6485	13GB ¼-in Cart Tape
6390	1261	7.0 GB 8mm Cart Tape
6390	1360	7.0GB 8mm Cartridge Tape Kit
6390	6390	7.0GB 8mm Cart Tape Unit
6390	6490	7GB 8mm Cartridge Tape
6390	9390	Std 7.0GB 8mm Cart Tape
63A0	1356	25.0GB ¼-in Tape Kit
63A0	4482	4GB ¼-in Cartridge Tape
63A0	4483	16GB ¼-in Cartridge tape
63A0	4486	25GB ¼-in Cartridge tape
63A0	4582	4GB ¼-in Cartridge Tape
63A0	4583	16GB ¼-in Cartridge tape
63A0	4586	25GB ¼-in Cartridge tape
63A0	6381	2.5GB ¼-in Cart Tape
63A0	6382	4GB ¼-in Cart Tape
63A0	6386	25GB ¼-in Cart Tape
63A0	6481	2.5GB ¼-in Cart Tape
63A0	6482	4GB ¼-in Cart Tape
63A0	6486	25GB ¼-in Cart Tape
6500	6500	DASD Controller
6501	6501	Magnetic Storage Cntrlr
6502	6502	Dsk Unt Cntrlr for RAID
6502	6522	Dsk Unt Cntrlr for RAID
6502	9522	Std Dsk Unt Cntrlr w/RAID
6506	8716	Opt 16MB one Port FSIOP
6506	8717	Opt 32MB one Port FSIOP
6506	8718	Opt 48MB one Port FSIOP
6506	8719	Opt 64MB one Port FSIOP
6506	8726	Opt 16MB two port FSIOP
6506	8727	Opt 32MB two Port FSIOP
6506	8728	Opt 48MB two Port FSIOP
6506	8729	Opt 64MB two Port FSIOP
6509	6509	Optional 16MB SIMM
6512	6512	Disk Unit Cntrlr for RAID
6512	9512	Std Dsk Unt Cntrlr RAID
6513	6513	Internal Tape Device Ctlr
6517	9517	Std File Srvr 32MB 1 Port
6520	6520	2 Port LAN for FSIOP
6529	9529	Std File Srvr 64MB 2 Port
6530	6523	Dsk Unt Cntrlr
6530	6530	DASD Controller

CCIN	Feat. Code	Description
6532	6532	RAID Disk Unit Controller
6533	6533	Raid Disk Unit Controller
6534	6534	Magnetic Media Controller
6534	6538	Ulltra Mag Media Controller
6535	6536	SSA Disk Unit Cntrlr
6535	6537	SSA RAID Disk Unit Cntrlr
6601	6601	Single Disk Unit (1031 MB)
6601	6701	Base Disk Replace (1.0 GB)
6601	9601	Standard 1.0 GB Disk Unit
6602	1203	Sngl Disk Unt (1031 MB) Kit
6602	1211	Addt Dsk Unit (1.031 GB)
6602	1213	Std Dsk Unit (1.031GB, 2byte)
6602	1312	1-Byte 1.03 GB Disk Unit Kit
6602	1322	2-Byte 1.03 GB Disk Unit Kit
6602	1602	Sngl Disk Unit Kit (1031 MB)
6602	4211	Addt Dsk Unit (1.031GB)
6602	4652	Single Disk Unit (1031 MB)
6602	6602	Single Disk Unit (1031 MB)
6602	6612	Dual Disk Unit (2.0 GB)
6602	6652	Single Disk Unit (1031 MB)
6602	6802	Base Disk Replace (1.0 GB)
6602	6812	Base Disk Replace (2.0 GB)
6602	8612	Base 2.0 GB Dual Disk Unit
6602	9602	Standard 1.0 GB Disk Unit
6602	9652	Std Dsk Unt(1.031 GB, 2 Byte)
6603	1204	Sngl Disk Unt (1967 MB) Kit
6603	1212	Addt Dsk Unt(1967 MB)
6603	1214	Opt.Bs Dsk Unt(1.967 GB, 2 Bytes)
6603	1313	1-Byte 1.96 GB Disk Unit Kit
6603	1323	2-Byte 1.96 GB Disk Unit Kit
6603	1603	Sngl Disk Unt Kit (1967 MB)
6603	4212	Addt Dsk Unt (1967 MB)
6603	4650	Addt Dsk Unt (1.967 GB, reg)
6603	6603	Single Disk Unit (1967 MB)
6603	6613	Dual Disk Unit (4GB)
6603	6650	Addt Dsk Unt (1.967GB,2byt)
6603	7613	Base DASD Replace (3934 MB)
6603	8613	Base DASD Upgrade (3934 MB)
6603	8650	Opt Dsk Unt (1.967 GB, 2 Bytes)
6605	1205	Additional 1.031 GB Dsk Unt
6605	1325	2-Byte 1.03 GB Disk Unit Kit
6605	4205	Addt Dsk Unit (1.031 GB)
6605	4605	Addt Dsk Unit (1.031 GB, reg)
6605	6605	Disk Unit (1.031Gb, reg)
6605	9605	Std 1.031 Dsk Unit
6605	9705	Std 1.031 Dsk Unit regltd
6606	1206	Additional 1.967GB Dsk Unt
6606	1326	2-Byte 1.96GB Disk Unit Kit
6606	1336	2-Byte 1.96GB Disk Unit Kit
6606	4206	Addt Dsk Unit (1.967 GB)
6606	4606	Single Disk Unit (1967 MB)
6606	6606	Disk Unit (1.967 GB)
6606	6806	1.96 GB Disk Unit
6606	6906	1.96GB Disk Unit
6606	8606	Single Disk Unit (1967MB)
6606	8706	Opt Base Dsk Unt(1.967GB)
6606	9606	Std 1.967 Dsk Unt

CCIN	Feat. Code	Description
6607	1207	Additional 4.194 GB Dsk Unt
6607	1327	2-Byte 4.19 GB Disk Unit Kit
6607	1337	2-Byte 4.19 GB Disk Unit Kit
6607	4207	Addt Dsk Unit(4.194 GB)
6607	4607	Addt Dsk Unit (4.194 GB,reg)
6607	6607	Disk Unit (4.194 GB,reg)
6607	6807	4.19GB Disk Unit
6607	6907	4.19GB Disk Unit
6607	7607	Opt Base DASD (4.194 GB)reg
6607	8607	Opt Base DASD (4.194 GB)reg
6607	8707	Opt Base Dsk Unt(4.194 GB)
6607	9707	Base 4.19 GB Disk Unit
6607	9907	Base 4.19 GB Disk Unit
6616	6616	Integrated PC Server
6617	6617	Integrated PC Server
6617	6618	Integrated Netfinity Server
6711	9711	Std 1.967 Disk Unit
6713	1333	2-Byte 8.58GB Disk Unit Kit
6713	4313	8.58GB Disk Unit 10k
6713	4314	8.58GB Disk Unit
6713	6713	DISK UNIT 8.58GB
6713	6813	8.58GB Disk Unit
6713	7713	Opt Base DASD (8.58GB)
6713	8713	Opt Base Dsk Unt(8.xxxGB)
6713	8813	Opt Base 8.58GB Disk Unit
6713	8913	Opt Base 8.58 GB Disk Unit
6713	9313	Base 8.58GB Disk Unit
6714	1334	17.54GB Disk Unit Kit
6714	4324	17.54GB Disk Unit
6714	6714	17.54GB Disk UNit
6714	6824	17.54GB Disk Unit
6714	8824	Opt Base disk Unit (17.54GB)
6714	8924	Opt Base disk Unit (17.54GB)
6717	4317	8.58GB Disk Unit 10k
6717	6717	8.5 GB Disk Unit 10k
6717	6817	8.58GB Disk Unit
6717	8817	Opt Base Disk Unit (8.58GB) 10k
6717	8917	Opt Base Disk Unit (8.58GB) 10k
6717	8617	Opt Base Disk Unit (8.58GB) 10k
6718	8618	Opt Base Disk Unit (17.54GB) 10k
6718	8918	Opt Base Disk Unit (17.54GB) 10k
6718	8818	Opt Base Disk Unit (17.54GB) 10k
6731	4331	1.6GB Ext Adaptive Cache
6731	6831	1.6GB Ext adaptive cache
6750	6750	MFIOF
6751	9751	Base MFIOF with RAID
6752	6752	MFIOF
6753	6753	MFIOF
6753	9753	Base MFIOF
6754	9754	Base MFIOF with RAID
7002	7002	HSL Enabler
7104	7104	System Unit Expansion
9079	8079	Optional Base 1.8m I/O Rack for 840 or SB3
9079	9079	Base I/O Rack for 840 or SB3
9206	1463	2m SPCN Cable
9213	1465	15m SPCN Cable

CCIN	Feat. Code	Description
9214	1466	30m SPCN Cable
9215	1467	60m SPCN Cable
9219	1464	6m SPCN Cable

Chapter 17. Feature Codes

The following list contains the feature code, CCIN, and description for many AS/400 features. It assists customers and IBM personnel in configuring MESes and upgrades. It provides a cross reference for the feature code used for ordering with a CCIN number reported by the Hardware Resources Listing.

The listing in this chapter is sorted by feature code. The feature code is used by Marketing to report configurations and work with upgrades. The entries selected are those that are most useful when interpreting Hardware Resource Listings.

Refer to Chapter 16, "CCIN Numbers" on page 441, for a listing of the features sorted by CCIN number. The CCIN number is used when working from a Hardware Resource Listing. The Hardware Resource listing is also known as the Rack Configuration Listing.

Feat. Code	CCIN	Description
_PCI	284A	IOP Embedded
_PCI	284B	IOP Embedded
_PCI	284C	IOP Embedded
_PCI	284D	IOP Embedded
_PCI	284E	IOP Embedded
0121	0121	270 Lower Unit in Rack Specify
0122	0122	270 Upper Unit in Rack Specify
0327	032A	Operations Console Cable
0328	032B	Operations Console Cable
0329	0329	ITU V.24/EIA-232 80-ft Cable
0330	0330	ITU V.24/EIA232 20-ft Cable
0331	0331	ITU V.24/EIA232 50-ft Cable
0332	0332	ITU V.24/EIA232 20-ft Enh Cable
0333	0333	ITU V.24/EIA232 50-ft Enh Cable
0334	0334	ITU V.24/EIA232 80-ft Enh Cable
0335	0335	ITU V.36/EIA449 20-ft Cable
0336	0336	ITU V.36/EIA449 50-ft Cable
0337	0337	ITU V.36/EIA449 150-ft Cable
0338	0338	ITU V.35 20-ft Cable
0339	0339	ITU V.35 50-ft Cable
0340	0340	ITU V.35 80-ft Cable
0341	0341	ITU X.21 20-ft Cable
0342	0342	ITU X.21 50-ft Cable
0344	0344	20-ft Comm Console Cable
0348	0348	ITU V.24/EIA232 20-ft PCI Cable
0349	0349	ITU V.24/EIA232 50-ft PCI Cable
0350	0350	ITU V.24/EIA232 20-ft Enh PCI Cable
0351	0351	ITU V.24/EIA232 50-ft Enh PCI Cable
0352	0352	ITU V.24/EIA232 80-ft Enh PCI Cable
0353	0353	ITU V.35 20-ft PCI Cable
0354	0354	ITU V.35 50-ft PCI Cable
0355	0355	ITU V.35 80-ft PCI Cable
0356	0356	ITU V.36 20-ft PCI Cable
0357	0357	ITU V.36 50-ft PCI Cable
0358	0358	ITU V.36 150-ft PCI Cable
0359	0359	ITU X.21 20-ft PCI Cable
0360	0360	ITU X.21 50-ft PCI Cable
0362	0362	Comm Console PCI Cable
0364	0364	Parallel Cable
0365	0365	_ITU V.24/EIA232 80-ft PCI Cable

Feat. Code	CCIN	Description
0367	032C	Operations Console Cable
0380	032D	Remote Control Panel Cable
0381	0032	Remote Control Panel Cable
0398	2745	Base PCI WAN IOA
0550	0550	830 Rack
0551	0551	270 Rack
0565	5065	Storage/PCI Expansion Tower
1105	6105	Sngl Disk Unt (320 MB) Kit
1107	6107	Sngl Disk Unt (400 MB) Kit
1109	6109	Sngl Disk Unt (988 MB) Kit
1200	6105	Sngl Disk Unt (320 MB) Kit
1201	6107	Sngl Disk Unt (400 MB) Kit
1202	6109	Sngl Disk Unt (988 MB) Kit
1203	6602	Sngl Disk Unt (1031 MB) Kit
1204	6603	Sngl Disk Unt (1967 MB) Kit
1205	6605	Additional 1.031GB Disk Unit
1206	6606	Additional 1.967GB Disk Unit
1207	6607	Additional 4.194GB Disk Unit
1210	6109	Addt Dsk Unit (988 MB)
1211	6602	Addt Dsk Unit (1.031 GB)
1212	6603	Addt Dsk Unit (1967 MB)
1213	6602	Std Dsk Unit (1.031 GB, 2 bytes)
1214	6603	Opt.Bs Dsk Unit (1.967 GB, 2 bytes)
1250	6378	525 MB ¼-in Tape Kit
1251	6379	1.2 GB ¼-in Tape Kit
1252	6380	2.5 GB ¼-in Tape Kit
1260	6380	2.5 GB ¼-in Tape
1261	6390	7.0 GB 8mm Cart Tape
1262	6335	840 MB QIC-3040-MC
1263	6320	650 MB CD ROM (4x)
1305	6335	840 MB QIC Mini Tape Unit Kit
1312	6602	1-Byte 1.03 GB Disk Unit Kit
1313	6603	1-Byte 1.96 GB Disk Unit Kit
1319	6109	1 Byte 988 MB Disk Unit Kit
1322	6602	2-Byte 1.03 GB Disk Unit Kit
1323	6603	2-Byte 1.96 GB Disk Unit Kit
1325	6605	2-Byte 1.03 GB Disk Unit Kit
1326	6606	2-Byte 1.96 GB Disk Unit Kit
1327	6607	2-Byte 4.19 GB Disk Unit Kit
1333	6713	2-Byte 8.58 GB Disk Unit Kit
1334	6714	17.54 GB Disk Unit Kit

Feat. Code	CCIN	Description
1335	6335	6335 External Conversion Kit
1336	6606	2-Byte 1.96 GB Disk Unit Kit
1337	6607	2-Byte 4.19 GB Disk Unit Kit
1349	6379	1.2 GB ¼-in Tape Kit
1350	6380	2.5 GB ¼-in Tape Kit
1351	6380	2.5 GB ¼-in Tape Kit
1355	6385	13.0 GB ¼-in Tape Kit
1356	63A0	25.0 GB ¼-in Tape Kit
1360	6390	7.0 GB 8 mm Cartridge Tape Kit
1378	6378	525 MB ¼-in Cart Tape Kit
1379	6379	1.2 GB ¼-in Cart Tape Kit
1380	6380	2.5 GB ¼-in Cart Tape Kit
1460	0343	3m HSL Cable
1461	0361	6m HSL Cable
1462	0368	15m HSL Cable
1463	9206	2m SPCN Cable
1464	9219	6m SPCN Cable
1465	9213	15m SPCN Cable
1466	9214	30m SPCN Cable
1467	9215	60m SPCN Cable
1602	6602	Single Disk Unt Kit (1031 MB)
1603	6603	Single Disk Unt Kit (1967 MB)
2010	2010	1.6 SPPR CPU for Model 20S
2030	2030	0.7 SPPR CPU for Model 200
2031	2031	1.1 SPPR CPU for Model 200
2032	2032	1.6 SPPR CPU for Model 200
2040	2040	1.1 SPPR Processor
2041	2041	1.6 SPPR Processor
2042	2042	2.0 SPPR Processor
2043	2043	3.0 SPPR Processor
2044	2044	5.0 SPPR Processor
2050	2050	6.4 SPPR Processor
2051	2051	11.4 SPPR Processor
2052	2052	16.8 SPPR Processor
2061	206A	720 (240 CPW) with #1500 Interactive
2061	206B	720 (240 CPW) with #1501 Interactive
2061	206C	720 (240 CPW) with #1502 Interactive
2061	243A	Model 720 Processor
2062	206D	720 (480 CPW) with #1500 Interactive
2062	206E	720 (480 CPW) with #1501 Interactive
2062	206F	720 (480 CPW) with #1502 Interactive
2062	207A	720 (480 CPW) with #1503 Interactive
2062	242C	Model 720 Processor
2063	207B	720 (810 CPW) with #1500 Interactive
2063	207C	720 (810 CPW) with #1502 Interactive
2063	207D	720 (810 CPW) with #1503 Interactive
2063	207E	720 (810 CPW) with #1504 Interactive
2063	242D	Model 720 2-Way Processor
2064	207F	720 (1600 CPW) with #1500 Interactive
2064	208A	720 (1600 CPW) with #1502 Interactive
2064	208B	720 (1600 CPW) with #1503 Interactive
2064	208C	720 (1600 CPW) with #1504 Interactive
2064	208D	720 (1600 CPW) with #1505 Interactive
2064	242B	Model 720 4-Way Processor
2065	241F	Model 730 Processor
2065	2A6A	560 CPW Model 730 Processor with #1506 Interactive Feature

Feat. Code	CCIN	Description
2065	2A6B	560 CPW Model 730 Processor with #1507 Interactive Feature
2065	2A6C	560 CPW Model 730 Processor with #1508 Interactive Feature
2065	2A6D	560 CPW Model 730 Processor with #1509 Interactive Feature
2066	2A6E	1050 CPW Model 730 Processor with #1506 Interactive Feature
2066	2A6F	1050 CPW Model 730 Processor with #1507 Interactive Feature
2066	2B6A	1050 CPW Model 730 Processor with #1508 Interactive Feature
2066	2B6B	1050 CPW Model 730 Processor with #1509 Interactive Feature
2066	2B6C	1050 CPW Model 730 Processor with #1510 Interactive Feature
2067	241C	Model 730 4-Way Processor
2067	2B6D	2000 CPW Model 730 Processor with #1506 Interactive Feature
2067	2B6E	2000 CPW Model 730 Processor with #1508 Interactive Feature
2067	2B6F	2000 CPW Model 730 Processor with #1509 Interactive Feature
2067	2C6A	2000 CPW Model 730 Processor with #1510 Interactive Feature
2067	2C6B	2000 CPW Model 730 Processor with #1511 Interactive Processor
2068	241D	Model 730 8-Way Processor
2068	2C6C	2890 CPW Model 730 Processor with #1506 Interactive Feature
2068	2C6D	2890 CPW Model 730 Processor with #1508 Interactive Feature
2068	2C6E	2890 CPW Model 730 Processor with #1509 Interactive Feature
2068	2C6F	2890 CPW Model 730 Processor with #1510 Interactive Feature
2068	2D6A	2890 CPW Model 730 Processor with #1511 Interactive Processor
2069	241B	Model 740 8-Way Processor
2069	2D6B	3660 CPW Model 740 Processor with #1514 Interactive Feature
2069	2D6C	3660 CPW Model 740 Processor with #1510 Interactive Feature
2069	2D6D	3660 CPW Model 740 Processor with #1511 Interactive Feature
2069	2D6E	3660 CPW Model 740 Processor with #1512 Interactive Feature
2070	241B	Model 740 12-Way Processor
2070	2E6A	4550 CPW Model 740 Processor with #1514 Interactive Feature
2070	2E6B	4550 CPW Model 740 Processor with #1510 Interactive Feature
2070	2E6C	4550 CPW Model 740 Processor with #1511 Interactive Feature
2070	2E6D	4550 CPW Model 740 Processor with #1512 Interactive Feature
2070	2E6E	4550 CPW Model 740 Processor with #1513 Interactive Feature
2100	2100	2.3 SPPR CPU for Model 236
2102	2102	2.2 SPPR CPU for 436

Feat. Code	CCIN	Description
2104	2104	2.8 SPPR CPU for 436
2106	2106	5.2 SPPR CPU for 436
2109	2109	2.2 SPPR CPU for Model 40S
2110	2110	2.8 SPPR CPU for Model 40S
2111	2111	Model 40S Processor
2112	2112	Model 40S Processor
2118	2118	Model S10 Processor
2119	2119	Model S10 Processor
2120	2120	5.2 SPPR CPU for Model 50S
2121	2121	7.0 SPPR CPU for Model 50S
2122	2122	Model 50S Processor
2129	2129	Model 600 Processor
2130	2130	1.0 SPPR CPU for Model 400
2131	2131	1.5 SPPR CPU for Model 400
2132	2132	2.2 SPPR CPU for Model 400
2133	2133	2.8 SPPR CPU for Model 400
2134	2134	Model 600 Processor
2135	2135	Model 600 Processor
2136	2136	Model 600 Processor
2140	2140	1.5 SPPR CPU for Model 500
2141	2141	2.2 SPPR CPU for Model 500
2142	2142	3.0 SPPR CPU for Model 500
2143	2143	5.2 SPPR CPU for Model 510
2144	2144	7.0 SPPR CPU for Model 510
2150	2150	9.0 SPPR CPU for Model 530
2151	2151	12 SPPR CPU for Model 530
2152	2151	18.4 SPPR CPU for Model 530
2153	2153	28 SPPR CPU for Model 530
2154	2154	12 SPPR CPU for Model 53S
2155	2155	18.4 SPPR CPU for Model 53S
2156	2156	28 SPPR CPU for Model 53S
2157	2157	Model 53S 4-Way Processor
2159	2159	Model 170 Processor
2160	2160	Model 170 Processor
2161	2161	Model S20 Processor
2162	2162	Model 530 4-Way Processor
2163	2163	Model S20 Processor
2164	2164	Model 170 Processor
2165	2165	Model S20 2-Way Processor
2166	2166	Model S20 4-Way Processor
2170	2170	S20 2 W ISV Processor
2175	2175	Model 620 Processor
2176	2176	Model 170 Processor
2177	2177	Model S20 4-W ISV Processor
2178	2178	Model S20 4-W ISV Processor
2179	2179	Model 620 Processor
2180	2180	Model 620 Processor
2181	2181	Model 620 Processor
2182	2182	Model 620 2-Way Processor
2183	2183	Model 170 Processor
2185	2185	Model 640 Processor
2186	2186	Model 640 2 Way Processor
2187	2187	Model 640 4 Way Processor
2188	2188	Model 650 8 Way Processor
2189	2189	Model 650 12 Way Processor
2200	2200	Model 600 Processor
2203	2203	Model S30 Processor

Feat. Code	CCIN	Description
2204	2204	Model S30 2 Way Processor
2205	2205	Model S30 4 Way Processor
2206	2206	Model S30 8 Way Processor
2207	2207	Model S40 8 Way Processor
2208	2208	Model S40 12 Way Processor
2211	2211	Model 600 Processor
2212	2212	Model 600 Processor
2213	2213	Model 600 Processor
2223	2223	Model S20 4 Way Processor
2228	2228	Model 620 Processor
2230	2230	Model 620 Processor
2231	2231	Model 620 Processor
2232	2232	Model 620 Processor
2233	2233	Model 620 2 Way Processor
2234	2234	Model 620 4 Way Processor
2237	2237	Model 640 Processor
2238	2238	Model 640 2-Way Processor
2239	2239	Model 640 4-Way Processor
2240	2240	Model 650 8-Way Processor
2243	2243	Model 650 12-Way Processor
2248	22A2	270 (150 CPW) with #1517 Interactive
2250	22A4	270 (370 CPW) with #1516 Interactive
2250	22A5	270 (370 CPW) with #1518 Interactive
2252	22A7	270 (950 CPW) with #1516 Interactive
2252	22A8	270 (950CPW) with #1519 Interactive
2253	22AA	270 (2000 CPW) with #1516 Interactive
2253	22AB	270 (2000 CPW) with #1520 Interactive
2256	2256	Model S40 8-Way Processor
2257	2257	Model S30 Processor
2258	2258	Model S30 2-Way Processor
2259	2259	Model S30 4-Way Processor
2260	2260	Model S30 8-Way Processor
2261	2261	Model S40 12-Way Processor
2269	2269	Model 150 Processor
2270	2270	Model 150 Processor
2289	2289	Model 170 Processor
2290	2290	Model 170 Processor
2291	2291	Model 170 Processor
2292	2292	Model 170 Processor
2310	2310	Model SB1 8-Way Processor
2311	2311	Model SB1 12-Way Processor
2312	2312	Model SB1 8 Way Processor
2313	2313	Model SB1 12 Way Processor
2315	2315	Model SB2 8 Way Processor
2316	2316	Model SB3 12 Way Processor
2318	2318	Model SB3 24 Way Processor
2320	2320	Model S30 4-W ISV Processor
2321	2321	Model S30 8-W ISV Processor
2322	2322	Model S30 8-W ISV Processor
2324	2324	Model S30 4 Way Processor
2325	2325	Model S30 8 Way Processor
2326	2326	Model S30 8 Way Processor
2328	2328	Model S20 ISV Processor
2329	2329	Model S20 Processor
2330	2330	Model S20 2 Way Processor
2331	2331	Model S20 4 Way Processor
2340	2340	Model S40 12 Way Processor

Feat. Code	CCIN	Description
2341	2341	Model S40 ISV 12-W Processor
2383	2383	Model 170 Processor
2384	2384	Model 170 Processor
2385	2385	Model 170 Processor
2386	2386	Model 170 Processor
2387	2387	Model S20 Processor
2388	2388	Model 170 2 Way Processor
2389	2389	Model S20 Processor
2390	2390	Model S20 Processor
2391	2391	Model S20 2 Way Processor
2392	2392	Model S20 4 Way Processor
2395	23A1	820 (370 CPW) with #1521 Interactive
2395	23A2	820 (370 CPW) with #1522 Interactive
2395	23A3	820 (370 CPW) with #1523 Interactive
2395	23A4	820 (370 CPW) with #1524 Interactive
2396	23A9	820 (950 CPW) with #1521 Interactive
2396	23AA	820 (950 CPW) with #1522 Interactive
2396	23AB	820 (950 CPW) with #1523 Interactive
2396	23AC	820 (950 CPW) with #1524 Interactive
2396	23AD	820 (950 CPW) with #1525 Interactive
2397	23B1	820 (2000 CPW) with #1521 Interactive
2397	23B2	820 (2000 CPW) with #1522 Interactive
2397	23B3	820 (2000 CPW) with #1523 Interactive
2397	23B4	820 (2000 CPW) with #1524 Interactive
2397	23B5	820 (2000 CPW) with #1525 Interactive
2397	23B6	820 (2000 CPW) with #1526 Interactive
2398	23B8	820 (3200 CPW) with #1521 Interactive
2398	23B9	820 (3200 CPW) with #1522 Interactive
2398	23BA	820 (3200 CPW) with #1523 Interactive
2398	23BB	820 (3200 CPW) with #1524 Interactive
2398	23BC	820 (3200 CPW) with #1525 Interactive
2398	23BD	820 (3200 CPW) with #1526 Interactive
2398	23BE	820 (3200 CPW) with #1527 Interactive
2400	23C1	830 (1850 CPW) with #1531 Interactive
2400	23C2	830 (1850 CPW) with #1532 Interactive
2400	23C3	830 (1850 CPW) with #1533 Interactive
2400	23C4	830 (1850 CPW) with #1534 Interactive
2400	23C5	830 (1850 CPW) with #1535 Interactive
2402	23D1	830 (4200 CPW) with #1531 Interactive
2402	23D2	830 (4200 CPW) with #1532 Interactive
2402	23D3	830 (4200 CPW) with #1533 Interactive
2402	23D4	830 (4200 CPW) with #1534 Interactive
2402	23D5	830 (4200 CPW) with #1535 Interactive
2402	23D6	830 (4200 CPW) with #1536 Interactive
2403	23D8	830 (7350 CPW) with #1531 Interactive
2403	23D9	830 (7350 CPW) with #1532 Interactive
2403	23DA	830 (7350 CPW) with #1533 Interactive
2403	23DB	830 (7350 CPW) with #1534 Interactive
2403	23DC	830 (7350 CPW) with #1535 Interactive
2403	23DD	830 (7350 CPW) with #1536 Interactive
2403	23DE	830 (7350 CPW) with #1537 Interactive
2410	2410	100 Client Server Processor
2411	2411	3.0 SPPR Processor
2412	2412	6.1 SPPR Processor
2413	2531	E06 Processor
2414	2585	F02 Processor
2416	24C0	#1540 interactive 8/12 way 840 POD

Feat. Code	CCIN	Description
2416	24C1	#1541 interactive 8/12 way 840 POD
2416	24C2	#1542 interactive 8/12 way 840 POD
2416	24C3	#1543 interactive 8/12 way 840 POD
2416	24C4	#1544 interactive 8/12 way 840 POD
2416	24C5	#1545 interactive 8/12 way 840 POD
2416	24C6	#1546 interactive 8/12 way 840 POD
2417	24C8	#1540 interactive 12/18 way 840 POD
2417	24C9	#1541 interactive 12/18 way 840 POD
2417	24CA	#1542 interactive 12/18 way 840 POD
2417	24CB	#1543 interactive 12/18 way 840 POD
2417	24CC	#1544 interactive 12/18 way 840 POD
2417	24CD	#1545 interactive 12/18 way 840 POD
2417	24CE	#1546 interactive 12/18 way 840 POD
2418	23E8	840 (10000 CPW) with #1540 Interact.
2418	23E9	840 (10000 CPW) with #1541 Interact.
2418	23EA	840 (10000 CPW) with #1542 Interact.
2418	23EB	840 (10000 CPW) with #1543 Interact.
2418	23EC	840 (10000 CPW) with #1544 Interact.
2418	23ED	840 (10000 CPW) with #1545 Interact.
2418	23EE	840 (10000 CPW) with #1546 Interact.
2419	24D0	#1540 interactive 18/24 way 840 POD
2419	24D1	#1541 interactive 18/24 way 840 POD
2419	24D2	#1542 interactive 18/24 way 840 POD
2419	24D3	#1543 interactive 18/24 way 840 POD
2419	24D4	#1544 interactive 18/24 way 840 POD
2419	24D5	#1545 interactive 18/24 way 840 POD
2419	24D6	#1546 interactive 18/24 way 840 POD
2419	24D7	#1547 interactive 18/24 way 840 POD
2420	23F8	840 (16500 CPW) with #1540 Interact.
2420	23F9	840 (16500 CPW) with #1541 Interact.
2420	23FA	840 (16500 CPW) with #1542 Interact.
2420	23FB	840 (16500 CPW) with #1543 Interact.
2420	23FC	840 (16500 CPW) with #1544 Interact.
2420	23FD	840 (16500 CPW) with #1545 Interact.
2420	23FE	840 (16500 CPW) with #1546 Interact.
2420	23FF	840 (16500 CPW) with #1547 Interact.
2422	2422	Dedicated Domino Processor
2423	2423	Dedicated Domino Processor
2424	2424	Dedicated Domino Proc 2-way
2425	2425	Dedicated Domino Processor
2426	2426	Dedicated Domino Proc 2-Way
2427	2427	Dedicated Domino Proc 4-way
2515	2515	C10 Floating Pt Processor
2516	2516	C20 Floating Pt Processor
2523	2523	D80 OPUS Processor
2528	2528	16.8 SPPR CPU for Mod F97
2530	2530	E04 BASS PISCES CR Proc
2533	2533	E20 PISCES Processor
2534	2534	E25 PISCES Processor
2536	2536	E35 PISCES Processor
2537	2537	E45 PISCES Processor
2539	2539	E02 ZEUS TWINAX PISCES
2540	2540	0.7 SPPR CPU for Mod D35
2541	2541	D45 PISCES Processor
2542	2542	D50 PISCES Processor
2543	2543	D60 PISCES Processor
2544	2544	D70 PISCES Processor

Feat. Code	CCIN	Description
2552	2552	C06 CREST Processor
2553	2553	D06 CREST Processor
2554	2554	D04 PHANTOM Processor
2555	2555	D10 CREST Processor
2556	2556	D20 CREST Processor
2557	2557	D25 PISCES Processor
2558	2558	C04 Phantom Processor 8 MB
2559	2559	E50 Opus Processor
2560	2560	E60 Opus Processor
2561	2561	E70 Opus Sort Processor
2562	2562	E80 Opus Sort Processor
2563	2563	E90 OSCAR (2way) Opus Sort
2568	2568	E95 OSCAR (2way) Opus Sort
2582	2582	F06 PIKE PISCES Processor
2583	2583	F25 PISCES Processor
2586	2586	0.7 SPPR for F04
2587	2587	F10 PISCES CR Processor
2588	2588	F20 PISCES Processor
2592	2592	F35 PISCES Processor
2593	2593	F45 PISCES Sort Processor
2594	2594	F50 OPUS Processor
2595	2595	F60 OPUS Sort Processor
2596	2596	F70 CTECH Processor 1-way
2597	2597	F80 CTECH Processor 2-way
2598	2598	F90 CTECH Processor 2-way
2599	259A	F95 CTECH Processor 2-way
2600*	2600	Magnetic Storage Controlr
2601	2601	9346 Mag Tape Unit Contr
2602	2602	Processor Expansion
2604	2604	3422 3430 Mag Tape Subsys
2605*	2605	ISDN Basic Rate Adapter
2607	2602	9348 Mag Tape Unit Attachment
2608	2608	2440/9348 HCD Mag Tape Attachment
2609*	2609	EIA 232/V.24 Two Line Adapter
2610	2610	X.21 Two Line Adapter
2611*	2611	DASD Controller
2612*	2612	EIA 232/V.24 One-Line Adapter
2613*	2613	V.35 One-Line Adapter
2614*	2614	X.21 One-Line Adapter
2617*	2617	Ethnet/IEEE 802.3 CSMA/CD
2618*	2618	Fiber Distrib Data Inf Adapter
2619*	2619	16/4 Mbps Tkn-Rng Adapter/HP
2620*	2620	Cryptographic Processor
2621*	2621	Removable Media Device Attachment
2622	2622	3490 Magnetic Tape Attach
2623*	2623	Six Line Comm Controller
2624*	2624	Storage Device Controller
2625	2625	Ethnet/IEEE 802.3 CSMA/CD
2626	2626	16/4 Mbps Tkn-Rng Adapter/Attachment
2628	2628	Limited Cryptographic Processor
2629	2629	LAN/WAN/Workstation IOP
2634	2634	16/4 Mbps Token-Ring Adapter
2636	2636	16/4 Mbps Token-Ring Adapter
2644*	2644	34xx Magnetic Tape Attachment
2647	2647	9348 Model 2 Tape Attachment
2654*	2609	EIA 232/V.24 Two-Line 20E
2655*	2609	EIA 232/V.24 Two-Line 20

Feat. Code	CCIN	Description
2656*	2610	X.21 Two-Line 20
2657*	2609	EIA 232/V.24 Two-Line 50E
2658*	2609	EIA 232/V.24 Two-Line 50
2659*	2610	X.21 Two-line 50
2663*	2663	I/O Attachment Processor
2664*	2664	Integrated Fax
2665*	2665	Shld Dist Data Inf Adapter
2666*	2666	High Speed Comm Adapter
2668*	2668	ARLAN Wireless LAN Adapter
2669	2669	Shared Bus Interface Card
2670	2670	Sys Unit Exp Tower (optical)
2671	2671	PCI Bus IOP
2672	2672	PCI Bus IOP
2673	2673	Optical Bus Adapter
2674	2674	Optical Bus Adapter
2680	2680	Optcl Bus Rcvr (266 Mbps)
2682	2682	Optcl Bus Rcvr(1063 Mbps)
2683	2683	266Mbps OptiConnect Receiver
2685	2685	1063Mbps OptiConnect Receiver
2686	2686	Optical Link Proc (266 Mbps)
2688	2688	Optical Link Proc (1063 Mbps)
2691	2691	Opt Bus Adapt w/Token Ring
2692	2692	Opt Bus Adapt w/Ethernet
2693	2693	Opt Bus Adapt w/Token Ring
2694	2694	Opt Bus Adapt w/Ethernet
2695	2695	Optical Bus Adapter
2698	2698	Optical Bus Adapter
2699	2699	Two-Line WAN IOA
2705	2705	M1 Filler Tray
2706	2706	M2 Terminator Tray
2713	2713	SPD I/O Regulator
2715	2715	Processor/Memory Regulator
2718	2718	PCI Magnetic Media Controller
2720	2720	Workstation/Comm Adapter
2721	2721	Multiprotocol Adapter
2722	2722	PCI Twinax Workstation IOA
2723	2723	PCI Ethernet/IEEE 802.3 Adapter
2724	2724	16/4Mbps Token-Ring Adapter
2729	2729	PCI Magnetic Media Controller
2730	2730	Programmable Regulator
2731	2731	Regulator Memory Control
2735	2735	Optical Bus Adapter
2736	2736	Optical Bus Adapter
2740	2740	PCI RAID Disk Unit CTLR
2741	2741	PCI Raid Disk Unit CTLR
2742	2742	PCI RAID Disk Controller w/compr
2743	2743	PCI 1 Gbps Ethernet card
2744	2744	PCI 100 Mbps Token Ring Adapter
2745	2745	PCI WAN IOA
2746	2746	PCI Twinax Workstation IOA
2748	2748	PCI Raid Disk Controller
2749	2749	PCI Ultra Mag Media Controller
2750	2750	PCI ISDN IOA
2751	2751	PCI ISDN IOA
2761	2761	PCI Integrated Analog Modem
2763	2763	PCI Disk controller
2768	2768	PCI Magnetic Media Controller

Feat. Code	CCIN	Description
2790	2890	PCI Int Netfinity Server
2790	2890	PCI Int Netfinity Server
2795	2895	128 MB Netfinity IOP Memory
2795	2895	128 MB Netfinity IOP Memory
2796	2896	256 MB Netfinity IOP Memory
2796	2896	256 MB Netfinity IOP Memory
2797	2897	1 GB Netfinity IOP Memory
2797	2897	1 GB Netfinity IOP Memory
2801	2801	1.96 GB Internal Dsk Unit
2802	2802	2.0 GB Internal Disk Unit
2809	2809	PCI LAN/WAN/Workstation IOP
2810	2810	LAN/WAN IOP
2811	2811	PCI 25 Mbps UTP ATM
2812	2812	PCI 45 Mbps Coax T3/DS3 ATM
2813	2813	PCI 155 Mbps MMF ATM
2814	2813	PCI 100 Mbps MMF ATM
2815	2815	PCI 155 Mbps UTP OC3 ATM
2816	2816	PCI 155 Mbps MMF ATM
2818	2818	PCI 155 Mbps SMF OC3 ATM
2819	2819	PCI 34 Mbps Coax E3 ATM
2821	2821	Active Backplane
2822	2822	Clock card
2823	2823	Active Backplane
2824	2824	PCI LAN/WAN/Workstation IOP
2826	2826	Active Backplane
2828	2828	Active Backplane
2829	2829	Bridge Active Backplane
2830	2830	Main Storage Expansion
2831	2831	Main Storage Expansion
2833	2833	Clock card
2834	2834	Clock card
2835	2835	Active Backplane
2838	2838	PCI 100/10 Mbps Ethernet IOA
2840	2840	Integrated AIX Server
2841	2850	Integrated PC Server
2842	2842	PCI IOP
2843	2843	PCI IOP
2850	2850	Integrated PC Server 32 MB
2851	2850	PCI Integrated PC Server
2852	2850	PCI Integrated PC Server
2853	2853	3450 .66m system to device cable
2854	2850	PCI Integrated PC Server
2855	2855	3450 1.2m system to device cable
2856	2856	3450 1.2m system to device cable
2857	2850	PCI Integrated PC Server
2859	2850	PCI Integrated PC Server
2860	2860	Integrated PC Server Memory 16 MB
2861	2861	32 MB IOP Memory
2862	2862	128 MB IOP Memory
2863	2863	8 MB Addtnl Cache Memory
2864	2864	32 MB Addtnl Cache Memory
2865	2850	PCI Integ Netfinity Server
2866	2850	PCI Integ Netfinity Server
2867	2867	256 MB IOP Memory
2868	2850	PCI Integrated Netfinity Server
2881	2881	Main Storage Expansion
2884	2884	Main Storage Expansion

Feat. Code	CCIN	Description
2890	2890	PCI Int Netfinity Server
2895	2895	128 MB Netfinity IOP Memory
2896	2896	256 MB Netfinity IOP Memory
2897	2897	1 GB Netfinity IOP Memory
3001	3001	32 MB Main Storage
3002	3002	128 MB Main Storage
3003	3003	256 MB Main Storage
3004	3004	256 MB Main Storage
3005	3005	512 MB Main Storage
3022	3022	128 MB Main Storage
3024	3024	256 MB Main Storage
3025	3025	512 MB Main Storage
3026	3026	512 MB Main Storage
3054	3054	4 MB Additional Main Store
3055	3055	8 MB Additional Main Store
3060	3060	16 MB Additional Main Store
3061	3061	16 MB Additional Main Store
3062	3062	128 MB Main Storage
3064	3004	256 MB Main Storage
3065	3005	512 MB Main Storage
3066	3006	512 MB Main Storage
3100	3100	16 MB Main Storage
3101	3101	32 MB Main Storage
3102	3102	16 MB Main Storage
3103	3103	32 MB Main Storage
3104	3104	64 MB Main Storage
3108	3108	8 MB Main Storage
3109	3109	32 MB Main Storage
3110	3110	64 MB Main Storage
3116	3116	MFIOP Storage Expansion
3117	3117	8 MB Main Storage
3118	3118	16 MB Main Storage
3119	3119	8 MB Main Storage
3120	3120	8 MB Main Storage
3121	3121	8 MB Main Storage
3122	3122	32 MB Main Storage
3130	3130	32 MB Main Storage
3131	3131	64 MB Main Storage
3132	3132	128 MB Main Storage
3133	3133	64 MB Main Storage
3134	3134	128 MB Main Storage
3135	3135	256 MB Main Storage
3136	3136	256 MB Main Storage
3138	3138	64 MB Main Storage
3140	3140	8 MB Main Storage
3141	3141	16 MB Main Storage
3142	3142	32 MB Main Storage
3144	3144	8 MB Main Storage
3145	3145	16 MB Main Storage
3146	3146	32 MB Main Storage
3147	3147	32 MB Main Storage
3149	3149	128 MB Main Storage
3152	3152	32 MB Main Storage
3153	3153	64 MB Main Storage
3154	3154	128 MB Main Storage
3155	3155	256 MB Main Storage
3156	3156	64 MB Main Storage

Feat. Code	CCIN	Description
3157	3157	128 MB Main Storage
3158	3158	256 MB Main Storage
3159	3159	8 MB Main Store
3160	3160	16 MB Main Store
3161	3161	32 MB Main Storage
3162	3162	128 MB Main Storage
3163	3163	256 MB Main Storage
3164	3164	512 MB Main Storage
3165	3165	1024 MB Main Storage
3166	3166	256 MB Main Stroage
3167	3167	512 MB Main Storage
3168	3168	1024 MB Main Storage
3172	3172	32 MB Main Store (two SIMMs)
3179	3179	256 MB Main Storage
3180	3180	512 MB Main Storage
3182	3172	32 MB Main Store
3184	3184	32 MB Main Store
3185	3185	64 MB Main Store
3186	3186	128 MB Main Store
3187	3187	256 MB Main Store
3188	3188	64 MB Main Storage
3189	3189	128 MB Main Storage
3190	3190	256 MB Main Storage
3191	3191	512 MB Main Storage
3192	3192	1024 MB Main Storage
3193	3193	2048 MB Main Storage
3195	3195	4096 MB Main Storage
3196	3196	8192 MB Main Storage
3197	3197	1024 MB Main Storage
3198	3198	2048 MB Main Storage
3612	3612	1024 MB Main Storage
3613	3613	2048 MB Main Storage
3614	3614	4096 MB Main Storage
4001	3001	64 MB Main Storage Package
4002	3002	256 MB Main Storage Package
4010	4010	4 MB Write Cache
4011	4011	8 MB Data Store
4012	4012	32 MB Data Store
4103	3103	32 MB Main Storage
4104	4104	4 MB Main Storage
4114	4114	4 MB Main Storage Expansion
4117	3117	8 MB Main Storage SIMM
4118	3118	16 MB Main Storage SIMM
4120	3120	8 MB Main Storage
4121	3121	8 MB Main Storage
4122	3122	32MB Main Storage
4133	3133	64 MB Main Storage
4134	3134	128 MB Main Storage
4135	3135	256 MB Main Storage
4136	3136	256 MB Main Storage
4138	3138	64 MB Main Storage
4144	3144	8 MB Main Storage
4145	3145	16 MB Main Storage
4146	3146	32 MB Main Storage
4147	3147	32 MB Main Storage
4149	3149	128 MB Main Storage
4156	3156	64 MB Main Storage

Feat. Code	CCIN	Description
4157	3157	128 MB Main Storage
4158	3158	256 MB Main Storage
4161	3161	32 MB Main Storage
4172	3172	32 MB Main Storage
4204	3104	64 MB Main Storage
4205	6605	Additional Disk Unit (1.031 GB)
4206	6606	Additional Disk Unit (1.967 GB)
4207	6607	Additional Disk Unit (4.194 GB)
4211	6602	Additional Disk Unit (1.031GB)
4212	6603	Additional Disk Unit (1967 MB)
4313	6713	8.58 GB Disk Unit 10K
4314	6713	8.58 GB Disk Unit
4317	6717	8.58 GB Disk Unit 10K
4324	6714	17.54 GB Disk Unit
4331	6731	1.6 GB Extended Adaptive Cache
4425	6321	CD-ROM
4482	63A0	4 GB ¼-in Cartridge Tape
4483	63A0	16 GB ¼-in Cartridge tape
4486	63A0	25 GB ¼-in Cartridge tape
4525	6321	CD-ROM
4582	63A0	4 GB ¼-in Cartridge Tape
4583	63A0	16 GB ¼-in Cartridge tape
4586	63A0	25 GB ¼-in Cartridge tape
4605	6605	Addt Disk Unit (1.031 GB, reg)
4606	6606	Single Disk Unit (1967 MB)
4607	6607	Addt Dsk Unit (4.194 GB, reg)
4650	6603	Addt Dsk Unit (1.967 GB, reg)
4652	6602	Single Disk Unit (1031 MB)
4723	2723	PCI Ethernet/IEEE 802.3 Adapter
4745	2745	PCI WAN IOA
4746	2746	PCI Twinax Workstation IOA
4748	2748	PCI Raid Disk Controller
4750	2750	PCI ISDN IOA
4751	2751	PCI ISDN IOA
4800	4758	PCI Crypto Co-processor
4801	4758	PCI Crypto Co-processor
4802	4758	PCI Crypto Co-processor
4816	2816	PCI 155 Mbps MMF ATM
4818	2818	PCI 155 Mbps SMF OC3 ATM
4838	2838	PCI 100/10 Mbps Ethernet IOA
5033	5033	Migration Tower I
5034	5034	Migration Tower I
5035	5035	Migration Tower I
5065	5065	Storage/PCI Expansion Tower
5074	5074	PCI Expansion Tower
5075	5075	PCI Expansion Tower
5077	5077	Migration Tower II
5079	5079	PCI Expansion Tower
5121	5121	Pwr Regulator Card
5130	5130	Tower Attach Power (RISC)
5133	5133	Feature Power Supply
5134	5133	Feature Power Supply
5135	5135	Feature Power Supply
5136	5136	Feature Power Supply
5140	5140	Regulator
5141	5141	3.6V I/O Regulator
5142	5142	Tower Attach Power

Feat. Code	CCIN	Description
5143	5143	Bulk 400W Power Supply
5144	5144	BBU External (Opt)
5145	5145	BBU Internal (Opt)
5146	5146	Redundant Power (Bulk+Reg)
5147	5147	Feature Power -560W
5148	5148	Addtnl Bat Bckup Internal
5149	5149	Redundant Power (bulk+reg)
5150	5150	Battery Backup (External)
5151	5151	Power Supply (650 watts)
5152	5152	Feature Power Supply (500W)
5153	5153	Redundant Power Supplies
5155	5155	Redundant Power & Cooling
5156	5156	Redundant Power & Cooling
5157	5157	Redundant Power & Cooling
5343	6343	Base Tape Replace (1.2 GB)
5348	6348	Base Tape Replace (1.2 GB)
5349	6349	Base Tape Replace (2.5 GB)
6040	6040	Twinaxial Workstn Controller
6041	6041	ASCII Workstation Controller
6050*	6050	Twinaxial Workstn Controller
6054*	6054	LOCAL TALK Controller
6100	6100	Disk Unit (315MB)
6103	6103	Single Disk Unit (400 MB)
6105	6105	Single Disk Unit (320 MB)
6107	6107	Single Disk Unit (400 MB)
6108	6105	Addition Dual Disk (640 MB)
6109	6109	Single Disk Unit (988 MB)
6110*	6110	Mag Storage Dev Controller
6111*	6111	Mag Storage Dev Controller
6112*	6112	Mag Storage Dev Controller
6120	6107	Dual Disk Unit (800 MB)
6121	6107	Addition Dual Disk (800 MB)
6123	6109	Addition Dual Dsk (1976 MB)
6124	6109	Base DASD Upgrade (1976 MB)
6125	6109	Base DASD Replace (988 MB)
6126	6104	Base DASD Replace (988 MB)
6127	6109	Base DASD Replace (1976 MB)
6140*	6140	Twinaxial Workstn Controller
6141*	6141	ASCII Workstation Controller
6142*		ASCII 12-Port WS Expansion
6146*	6146	Diskette Adapter
6147*	6147	Diskette Adapter
6148*		8-Port Twinaxial Expansion
6149	6149	16/4 Mbps Token-Ring IOA
6150*	6150	Three-Line Comm Controller
6151*	6151	X.21 One-Line 20
6152*	6152	EIA 232/V.24 Adapter
6153*	6153	V.35 One-Line 20
6154	6152	EIA 232/V.24 One-Line 20E
6155	6152	EIA 232/V.24 One-Line 20
6160	6160	Token-Ring Network Adapter
6171	6151	X.21 One-Line 50
6173	6153	V.35 One-Line 50
6174	6152	EIA 232/V.24 One-Line 50E
6175	6152	EIA 232/V.24 One-Line 50
6180	6180	Twinaxial Workstation IOA
6181	6181	ETHERNET/IEEE 802.3 IOA

Feat. Code	CCIN	Description
6183	6183	6 port ASCII IOA
6325	6321	CD-ROM
6335	6335	840 MB QIC-mini Tape Unit
6340	6340	13 GB QIC mini Tape Unit
6341	6341	120 MB ¼-in Cart Tape
6342	6342	525 MB ¼-in Cart Tape
6343	6343	1.2 GB ¼-in Cart Tape
6344	6344	2.5 GB ¼-in Cart Tape
6345	6345	13 GB ¼-in Cart Tape
6346	6346	120 MB ¼-in Cart Tape
6347	6347	525 MB ¼-in Cart Tape
6348	6348	1.2 GB ¼-in Cart Tape
6349	6349	2.5 GB ¼-in Cart Tape
6350	6350	13 GB ¼-in Cart Tape
6365	6335	840 MB QIC-mini Tape Extnl
6366	6366	120 MB ¼-in Cart Tape
6367	6366	525 MB ¼-in Cart Tape
6368	6368	1.2 GB ¼-in Cart Tape
6369	6369	2.5 GB ¼-in Cart Tape
6370	6370	13 GB ¼-in Cartridge Tape
6380	6380	2.5 GB ¼-in Cart Tape
6381	63A0	2.5 GB ¼-in Cart Tape
6382	63A0	4 GB ¼-in Cart Tape
6383		16 GB ¼-in Cart Tape
6385	6385	13 GB ¼-in Cartridge
6386	63A0	25 GB ¼-in Cart Tape
6390	6390	7.0 GB 8mm Cart Tape Unit
6425	6321	CD-ROM
6435	6335	840 MB QIC Mini Tape Unit
6480	6380	2.5 GB ¼-in Cart Tape
6481	63A0	2.5 GB ¼-in Cart Tape
6482	63A0	4 GB ¼-in Cart Tape
6483		16 GB ¼-in Cart Tape
6485	6385	13 GB ¼-in Cart Tape
6486	63A0	25 GB ¼-in Cart Tape
6490	6390	7 GB 8mm Cartridge Tape
6500*	6500	DASD Controller
6501*	6501	Magnetic Storage Cntrlr
6502*	6502	Dsk Unit Controller for RAID
6509	6509	Optional 16 MB SIMM
6512*	6512	Disk Unit Controller for RAID
6513*	6513	Internal Tape Device Ctr
6520	6520	2 Port LAN for FSIOP
6522*	6502	Dsk Unit Controller for RAID
6523	6530	Dsk Unit Controller
6530*	6530	DASD Controller
6532	6532	RAID Disk Unit Controller
6533	6533	Raid Disk Unit Controller
6534	6534	Magnetic Media Controller
6536	6535	SSA Disk Unit Cntrlr
6537	6535	SSA RAID Disk Unit Cntrlr
6538	6534	Ultra Mag Media Controller
6601	6601	Single Disk Unit (1031 MB)
6602	6602	Single Disk Unit (1031 MB)
6603	6603	Single Disk Unit (1967 MB)
6605	6605	Disk Unit (1.031 Gb, reg)
6606	6606	Disk Unit (1.967 GB)

Feat. Code	CCIN	Description
6607	6607	Disk Unit (4.194 GB, reg)
6612	6602	Dual Disk Unit (2.0 GB)
6613	6603	Dual Disk Unit (4 GB)
6616	6616	Intergrated PC Server
6617	6617	Integrated PC Server
6618	6617	Integrated Netfinity Server
6650	6603	Addt Dsk Unit (1.967 GB, 2 bytes)
6652	6602	Single Disk Unit (1031 MB)
6701	6601	Base Disk Replace (1.0 GB)
6713	6713	DISK UNIT 8.58 GB
6714	6714	17.54GB Disk Unit
6717	6717	8.5 GB Disk Unit 10K
6750	6750	MFIOF
6752	6752	MFIOF
6753	6753	MFIOF
6802	6602	Base Disk Replace (1.0 GB)
6806	6606	1.96GB Disk Unit
6807	6607	4.19GB Disk Unit
6812	6602	Base Disk Replace (2.0 GB)
6813	6713	8.58GB Disk Unit
6817	6717	8.58GB Disk Unit
6818		17.54GB Disk Unit 10k
6824	6714	17.54GB Disk Unit
6831	6731	1.6GB Ext Adaptive Cache
6906	6606	1.96GB Disk Unit
6907	6607	4.19GB Disk Unit
7002	7002	HSL Enabler
7104	7104	System Unit Expansion
7123	283F	DASD Expansion Unit
7127	283F	DASD Expansion Unit
7128		DASD Expansion Unit
7130		Expansion Unit Tape/Cage
7133		DASD Concurrent Maintenance Cage
7135	3135	Opt 256 MB Main Storage
7157	3157	Opt Base 128 MB Main Store
7158	3158	Opt Base 256 MB Main Store
7174*	9174	Ethernet IOA
7175*	9175	Token Ring IOA
7186	3186	Opt Base 128 MB Main Store
7187	3187	Opt Base 256 MB Main Store
7255	3155	Opt Base 256 MB Main Store
7263	3163	Opt Base 256 MB Main Store
7264	3164	Opt Base 512 MB Main Store
7265	3165	Opt Base 1024 MB MS
7266	3166	Opt Base 256 MB MS
7343	6343	1.2 GB ¼-in Cart Tape
7344	6344	2.5 GB ¼-in Cart Tape
7347	6347	Base Tape Upgrade (525 MB)
7348	6348	1.2 GB ¼-in Cart Tape
7349	6349	2.5 GB ¼-in Cart Tape
7607	6607	Opt Base DASD (4.194 GB) reg
7613	6603	Base DASD Replace (3934 MB)
7713	6713	Opt Base DASD (8.58 GB)
8002	3002	Opt 128 MB Main Storage
8052	5052	Opt 16 Disk Unit Expansion
8054*	6054	LocalTalk Adapter

Feat. Code	CCIN	Description
8079	9079	Optional Base 1.8m I/O Rack for 840 or SB3
8106	3106	Opt Base 128 MB Main Store
8107	3107	Opt Base 256 MB Main Store
8110	6110	Std Mag Storage Controller
8111	6111	Std Mag Storage Controller
8123	6109	Dual Disk Unit (1976 MB)
8135	3135	Opt Base 256 MB Main Store
8156	3156	Opt Base 64 MB Main Storage
8157	3157	Opt Base 128 MB Main Store
8158	3158	Opt Base 256 MB Main Store
8160	3160	Opt Addtl 16 MB Main Store
8172	3172	Delt Price 32 MB
8180	3180	Opt Base 512 MB Main Storage
8185	3185	Opt Base 64 MB Main Store
8186	3186	Opt Base 128 MB Main Store
8187	3187	Opt Base 256 MB Main Store
8190	3190	Opt Base 256 MB Main Store
8191	3191	Opt Base 512 MB Main Storage
8192	3192	Opt Base 1024 MB Main Storage
8193	3193	Opt Base 2048 MB Main Store
8210	3110	Optional 64 MB Main Storage
8253	3153	Opt Base 64 MB Main Store
8254	3154	Opt Base 128 MB Main Store
8255	3155	Opt Base 256 MB Main Store
8264	3164	Opt Base 512 MB Main Store
8265	3165	Opt Base 512 MB Main Store
8272	3172	Opt Base 32 MB Main Store
8291	3191	Opt Base 1024 MB Main Store
8292	3192	Opt Base 1024 MB Main Store
8342	6342	525 MB ¼-in Cart Tape
8343	6343	1.2 GB ¼-in Cart Tape
8344	6344	2.5 GB ¼-in Cart Tape
8345	6345	13 GB ¼-in Cartridge Tape
8347	6347	525 MB ¼-in Cart Tape
8348	6348	1.2 GB ¼-in Cart Tape
8349	6349	2.5 GB ¼-in Cart Tape
8389	3189	Opt Base 128 MB Main Store
8390	3190	Opt Base 256 MB Main Store
8391	3191	Opt Base 1024 MB Main Store
8392	3192	Opt Base 1024 MB Main Store
8505	2630	I/O Card Unit Conversion
8606	6606	Single Disk Unit (1967 MB)
8607	6607	Opt Base DASD (4.194 GB) reg
8609*	2654	EIA 232/V.24 Two-Line
8612	6602	Base 2.0GB Dual Disk Unit
8613	6603	Base DASD Upgrade (3934 MB)
8617	6717	Opt Base Disk Unit (8.58 GB) 10K
8618	6718	Opt Base Disk Unit (17.54 GB) 10K
8650	6603	Opt Disk Unit (1.967 GB, 2bytes)
8664	2618	Opt Base Fiber DD Inf
8665	2665	Opt Base Shielded DD Inf
8706	6606	Opt Base Disk Unit (1.967 GB)
8707	6607	Opt Base Disk Unit (4.194 GB)
8713	6713	Opt Base Disk Unit (8.xxx GB)
8716	6506	Opt 16 MB one Port FSIOP
8717	6506	Opt 32 MB one Port FSIOP

Feat. Code	CCIN	Description
8718	6506	Opt 48 MB one Port FSIOP
8719	6506	Opt 64 MB one Port FSIOP
8726	6506	Opt 16 MB two port FSIOP
8727	6506	Opt 32 MB two Port FSIOP
8728	6506	Opt 48 MB two Port FSIOP
8729	6506	Opt 64 MB two Port FSIOP
8813	6713	Opt Base 8.58 GB Disk Unit
8817	6717	Opt Base Disk Unit (8.58 GB) 10K
8818	6718	Opt Base Disk Unit (17.54 GB) 10K
8824	6714	Opt Base disk Unit (17.54 GB)
8863*	2609	EIA 232/V.24 Two line 20E
8866*	2609	EIA 232/V.24 Two line 50E
8913	6713	Opt Base 8.58 GB Disk Unit
8917	6717	Opt Base Disk Unit (8.58 GB) 10K
8918	6718	Opt Base Disk Unit (17.54 GB) 10K
8924	6714	Opt Base disk Unit (17.54 GB)
9050	6050	Twinaxial Workstation Controller
9053	6053	Std Twinaxial WSC Specify
9054	6054	Std LocalTalk Controller
9079	9079	Base I/O Rack for 840 or SB3
9100	6100	315 MB Disk Unit Relocation
9102	6102	Std 320 MB Disk Unit
9103	6103	Std 400 MB Disk Unit
9104	6104	Std 988 MB Disk Unit
9105	3105	Base 64 MB Main Storage
9106	6105	Standard Dual Disk (640 MB)
9109	6109	Std 988 MB Disk Unit Spec
9110	3110	Std 64 MB Main Storage
9120	6107	Standard Dual Disk (800 MB)
9122	6122	Std 851 MB Disk Unit (RPQ)
9140	6140	Twinaxial Workstation Controller
9141	6141	ASCII Workstation Controller
9143*	9143	Twinaxial Workstation Controller
9144*	2637	ASCII Workstation Controller
9145*	9145	Std MFIOP/ASCII WSC
9146	2638	Std MFIOP/TWINAX WSC
9147	2637	Std MFIOP/ASCII WSC
9148	2661	Std MFIOP/Twinaxial WSC
9149*	9149	Twinaxial passthru adapter
9150	2637	Std MFIOP/ASCII WSC
9151	2661	Std MFIOP/Twinaxial WSC
9152	9152	Std MFIOP/Twinaxial WSC
9153*	9153	Std MFIOP without Twinax WSC
9156	3156	Std 64 MB Main Storage
9157	3157	128 MB Main Storage
9159	3159	Std 8 MB Main Storage
9160	3160	Std 16 MB (2 SIMM)
9161	3161	Std 32 MB Main Storage
9162*	9162	Std MFIOP w/Twinax WSC
9163*	9163	Std MFIOP
9164	9164	Std MFIOP
9171*	917A	Std MFIOP/ASCII WSC
9172	2661	APEX TETON TWINAX MFIOP
9173*	917C	Std MFIOP/LocalTalk WSC
9174*	9174	Base ETHERNET IOA
9175*	9175	Base Token Ring IOA
9176*	918E	Base MFIOP

Feat. Code	CCIN	Description
9177*	918D	APEX MCKINLEY Ethernet MFIOP
9179	3179	Base 256 MB Main Storage
9184	3184	Standard 32 MB Main Storage
9185	3185	Standard 64 MB Main Storage
9190	3190	Base 256 MB Main Storage
9211	9211	60 meter SPCN Optical Cable
9212	9212	100 meter SPCN Optical Cable
9215	9215	60 meter SPCN Copper Cable
9231	3131	Opt Base 64 MB Main Store
9232	3132	Opt Base 128 MB Main Store
9234	3134	Std 128 MB Main Storage
9249	6149	Base 16/4 Mbps Token-Ring
9252	3152	Std 32 MB Main Storage
9254	3154	Std 128 MB Main Storage
9262	3162	Std 128 MB Main Storage
9263	3163	Std 256 MB Main Storage
9266	3166	Std 256 MB Main Storage
9272	3172	Std 32 MB Main Storage
9280	6180	Base Twinaxial WSC
9282	3172	Std 32 MB Main Storage
9304	3104	Std 64 MB Main Storage
9313	6713	Base 8.58 GB Disk Unit
9341	6341	Std 120 MB ¼-in Tape
9342	6342	Std 525 MB ¼-in Tape
9343	6343	Std 1.2 GB ¼-in Tape
9347	6347	Std 525 MB ¼-in Tape
9348	6348	Std 1.2 GB ¼-in Tape
9380	6380	2.5 GB ¼-in Cart Tape
9381	6181	Base Ethernet/IEEE 802.3 IOA
9390	6390	Std 7.0GB 8mm Cart Tape
9512	6512	Std Disk Unit Cntrlr RAID
9517	6517	Std File Srvr 32MB 1 Port
9520	6320	Std CD-ROM
9521	6321	Std CD ROM (6x)
9522	6502	Std Dsk Unt Cntrlr w/RAID
9529	6529	Std File Srvr 64MB 2 Port
9584	2584	ASCII Workstation Controller
9585	2585	Twinaxial Workstation Controller
9601	6601	Standard 1.0GB Disk Unit
9602	6602	Standard 1.0GB Disk Unit
9605	6605	Std 1.031 Disk Unit
9606	6606	Std 1.967 Disk Unt
9609	2654	Std EIA 232/V.24 2-line
9612	2612	Std EIA 232/V.24 1-Line/Ad
9617	2617	Std Ethrnt/IEEE 802.3 IOP
9618	2618	Std Fiber Distrib Data Inf
9619	2619	Std 16/4 Mbps Token Ring IOP
9623	2623	Std Six Line Comm Controller
9624	2624	Store Device Control Spec
9651	2651	Storage Device Controller
9652	6602	Std Dsk Unt(1.031 GB, 2 Bytes)
9665	2665	Std Copper Dist Data Inf
9673	2673	Std Optical Bus Adapter
9691	2691	Base Bus Adapter
9696	2696	Base Optical Bus Adapter
9699	2699	Base Two-Line WAN IOA
9705	6605	Std 1.031 Disk Unit regltd

Feat. Code	CCIN	Description
9707	6607	Base 4.19 GB Disk Unit
9711	6711	Std 1.967 Disk Unit
9720	2720	Base PCI WAN/Twinaxial IOA
9721	2721	Base PCI Two-Line WAN IOA
9722	2722	Base PCI Twinaxial IOA
9723	2723	Ethernet/IEEE 802.3 Adpt
9724	2724	16/4Mbps Token-Ring Adpt
9728	2728	Base PCI Disk Unit Controller
9732	2732	Base HSL Ports 8 ports
9733	2732	Base HSL Ports 8 ports
9737	2737	Base HSL Ports 16 Ports
9738	2838	Base PCI 100/10 Mbps Ethernet
9740	2740	Base PCI RAID Disk Unit CTLR
9745	2745	Base PCI WAN IOA
9748	2748	PCI Raid Disk Controller
9751	6751	Base MFIOP with RAID
9753	6753	Base MFIOP
9754	6754	Base MFIOP with RAID
9767	2767	Base PCI Disk Controller
9771	2771	PCI 2 Line WAN w/modem
9800	2800	Internal Disk Unit (640 MB)
9801	2801	Internal Disk Unit (1 GB)
9802	2802	Std 2.0 GB Int Disk Unit
9803	9803	2.5 meter DFCI cable
9814	9814	Antenna Cable - 20 ft
9815	9815	Antenna Cable - 50 ft
9820	9820	2nd Bus cable for Mdl 300
9835	9835	V.24 Enhanced cable 50 ft
9836	9836	RS-232 cable 50 ft
9838	9838	V.35 cable 50 ft
9839	9839	X.21 cable 50 ft
9853	9853	20.0 meter optical bus cable
9854	9854	60 meter optical bus cable
9855	9865	100.0 M optical bus cable
9862	6152	EIA 232/V.24 One line 20E
9865	6152	EIA 232/V.24 One line 50E
9880	9880	V.35 Interface Cable (80 ft/24.4M)
9882	9882	RS449/V.36 Cable (20 ft/6M)
9883	9883	RS449/V.36 Cable (80 ft/24.4M)
9884	9884	RS449/V.36 Cable (150 ft/45.7M)
9885	9885	X.21 Interface Cable (20 ft/6M)
9893	9893	FCS Fiber Optic Cable (6M)
9894	9894	FCS Fiber Optic Cable (10M)
9895	9895	FCS Fiber Optic Cable (20M)
9904	4104	4 MB Main Store - No Charge
9907	6607	Base 4.19GB Disk Unit
9927	9927	Channel Box and cable
9928	9928	1.7 meter attach cable
9929	9929	6.6 meter attach cable
9930	9930	24.0 meter attach cable
9980	9980	3490 Serpentine Cable Conn
PLC1	2850	Integrated PC Server Ship Group

Note: As of January 2000, level 3 microcode fixes for these adapters are no longer provided. There will be no further microcode changes for these components. IBM service and maintenance agreements on systems containing these I/O adapters can be offered within guidelines. Contact your IBM Service Representative for further information.

Chapter 18. Software

OS/400 V4R5, V4R4, V4R3, V4R2, V4R1, V3R7, and V3R6 run on RISC models of the iSeries or AS/400e servers only: 8x0, 270, SBx, 250, 7x0, 170, 150, 6x0, 5x0, and Sx0 models. This chapter covers OS/400 and related software information for all releases supporting these RISC processors.

Note: All OS/400 software releases up to and including Version 3 Release 2 run on CISC models of the AS/400 system only: Bx0, Cx0, Dx0, Exx, Fx0, P0x, 100, 135, 140, 2x0, and 3x0 models. For software supporting these CISC systems, refer to the *AS/400 CISC System Builder*, REDP0042, redpaper at:

<http://www.redbooks.ibm.com>

18.1 Minimum OS/400 Software Level Requirements for RISC Hardware

Note: See the following table for the minimum OS/400 software release required for RISC models. The Model 170, for example, has a minimum release of V4R2, but V4R5 is required for the newest processors.

V3R6 RISC	V3R7 RISC	V4R1 RISC
All 9402 400 and 40S models (except #2111 and #2112 Processors) All 9406 500, 510, 530, 50S and 53S models (except #2122, #2157 and #2162 Processors) All 9402 4xx Hardware and Hardware/Software Packages (#2111 and #2112 Processors require stack feature #1988) 3995 Direct Attach to 4xx and 5xx models (with stack feature #1980 and #1986) 9402 40S #2111, #2112; 9406 50S #2122; 9406 530 #2162; 9406 53S #2157 (all with stack feature #1988)	9401-150 #018x Packages #6385 13 GB ¼-inch Cartridge Tape for 5xx models #6513 Internal Tape Device Controller #6607 4.19 GB Disk in 4xx models #6713 8.58 GB Disk in 5xx models #6616 Integrated PC Server (with PTF package C7029370 or later) #2861 32 MB IPCS Memory #2862 128 MB IPCS Memory #6149 Token Ring IOA #6181 Ethernet IOA	All 9406 600, 620, 640, 650, S10, S20, S30, S40 and SB1 models 9401-150 #019x Packages 7208-342 8mm Tape Drive #03xx Communications Cables #2629 LAN/WAN/Workstation IOP #2699 Two-Line WAN IOA #2810 LAN/WAN IOP #2838 PCI 100/10 Mbps Ethernet IOA #6180 Twinaxial IOA #6532 RAID Disk Unit Controller #6534 Magnetic Media Controller

V4R2 RISC	V4R3 RISC	V4R4 RISC
9401-150 #029x Packages 9406-170 model 9406-S20 #2170 Processor 9406-S40 #2256 Processor 7207-122 4 GB External ¼-inch Cartridge Tape Drive #0222 100/10Mbps Ethernet on IPCS #0295 Performance Enhancement/28 Workstations (on 9401 Model 150) #0325 IPCS Extension Cables for NT #1334 2-byte 17.54 GB Disk Unit Kit #1700 IPCS Keyboard/Mouse for NT #2718 PCI Magnetic Media Controller #2740 PCI RAID Disk Unit Controller #2741 PCI RAID Disk Unit Controller #2811 PCI 25 Mbps UTP ATM #2812 PCI 45 Mbps Coax T3/DS3 ATM #2815 PCI 155 Mbps UTP OC3 ATM #2816 PCI 155 Mbps MMF ATM #2818 PCI 155 Mbps SMF OC3 ATM #2819 PCI 34 Mbps Coax E3 ATM #2852 PCI Integrated PC Server #2854 PCI Integrated PC Server #2865 PCI Integrated Netfinity Server #2866 PCI Integrated Netfinity Server #3179 256 MB Main Storage #3180 512 MB Main Storage #6381 2.5 GB ¼-inch Cartridge Tape (on 9401 Model 150) #6533 RAID Disk Unit Controller #6617 Integrated PC Server #6618 Integrated Netfinity Server #6713 8.58 GB Disk Unit (on 9401 Model 150) #6714 17.54 GB Disk Unit #6824 17.54 GB Disk Unit #8180 Optional Base 512 MB Main Stg #8714 Optional Base 17.54 GB Disk Unit #8824 Optional Base 17.54 GB Disk Unit #9179 Base 256 MB Main Storage #9754 Base MFIOF	9401-150 #039x Packages 9406-170 #229x Processors 9406-170 #238x Processors 9406-650 #2188 Processor 9406-650 #2189 Processor 9406-S40 #2207 Processor 9406-S40 #2208 Processor 9406-S40 #2340 Processor 9406-S40 #2341 Processor 9406-SB1 #2312 Processor 9406-SB1 #2313 Processor #0328 Ops Console Cable #0367 Ops Console PCI Cable #0380 Remote Control Panel Cable #0381 Remote Control Panel PCI Cable #2741 PCI RAID Disk Controller (on 9406 Model 170) #3003 256 MB Main Storage #3193 2048 MB Main Storage #5544 System Console on Operations Console #6824 17.54 GB Disk Unit (on 9406 Model 170) #8193 Optional Base 2048 MB Main Storage #8824 Optional Base 17.54 GB Disk Unit (on 9406 Model 170) V4R3 features 2/99 announce date #20xx 7x0 Processors #149x Interactive Specify codes #15xx Interactive cards #0034 Red Covers #003A Internet Leased Line #0220 Token Ring on IPCS #0221 Ethernet on IPCS #0422 JDE Pkg 1 Ready to go NTIPCS #0423 JDE Pkg 2 Ready to go Netfinity #0445 Preload Acacia #0465 Preload Lilly #2745 PCI Two Line WAN IOA #2867 256 Mb Memory #5536 Alt IPL Specify for 25 GB #6717 8.58 GB 10k RPM Disk Unit #6817 8.58 GB 10k RPM Disk Unit #8617 8.58 GB Optional Base 10k RPM Disk Unit #8817 8.58 GB Optional Base 10k RPM Disk Unit #6386 25 GB ¼-inch cartridge tape	#2746 PCI Twinaxial Workstation IOP #2748 PCI RAID Disk Unit Controller #2750 PCI ISDN BRI U IOA #2751 PCI ISDN BRI S/T IOA #2761 Integrated Analog Modem #2824 PCI LAN/WAN Workstation IOP #4308 4.19 GB Disk Unit #4314 8.58 GB Disk Unit #4317 8.58 GB 10k RPM Disk Unit #4318 17.54 GB 10k RPM Disk Unit #4324 17.54 GB Disk Unit #4331 1.6 GB Read Cache Device #4425 CD-ROM #4482 4 GB ¼-inch Cartridge Tape #4483 16 GB ¼-inch Cartridge Tape Unit #4486 25.0 GB ¼-inch Cartridge Tape #4800 PCI Crypto Co-processor #5065 Storage/PCI Expansion Tower #5066 1.8 M I/O Tower #6325 CD-ROM #6383 16 GB ¼-inch Cartridge Tape #6425 CD-ROM #6483 16 GB ¼-inch Cartridge Tape #6718 17.54 GB 10k RPM Disk Unit #6818 17.54 GB 10k RPM Disk Unit #6831 1.6 GB Read Cache Device #7102 System Expansion Unit #8618 17.54 GB Optional Base 10k RPM Disk Unit #8818 17.54 GB Optional Base 10k RPM Disk Unit #9330 PCI Integrated Exp Unit

V4R5 RISC	
#9406	All 250, 270, 820, 830, 840, SB2, and SB1 Processors
#146x	HSL Cables
#146x	SPCN Cables
#15xx	Interactive Features for 270 and 8xx
#2743	PCI 1 Gbps Ethernet IOA
#2744	PCI 100 Mbps Token Ring IOA
#2749	Ultra Magnetic Media Controller IOA
#2763	RAID Disk Unit Controller IOA
#2768	Magnetic Media Controller IOA
#2790	Integrated Netfinity Server IOP (Model 8xx)
#2795	128 MB IOP Memory
#2796	256 MB IOP Memory
#2797	1 GB IOP Memory
#2842	IOP (Model 270)
#2843	IOP (Model 8xx)
#2881	Main Storage Expansion
#2884	Main Storage Expansion
#2890	Integrated Netfinity Server IOP
#2895	128 MB IOP Memory
#2896	256 MB IOP Memory
#2897	1 GB IOP Memory
#3xxx	Memory for 270 and 8xx Models
#4525	CD-ROM
#4582	4 GB ¼-Inch Cartridge Tape
#4583	16 GB ¼-Inch Cartridge Tape
#4586	25 GB ¼-Inch Cartridge Tape
#4723	Ethernet IOA
#4745	WAN IOA
#4746	Twinaxial Workstation IOA
#4748	RAID Disk Unit Controller IOA
#475x	ISDN IOAs
#4761	Integrated Analog Modem IOA
#4801	Cryptographic Coprocessor IOA
#481x	155 Mbps ATM IOAs
#4838	100/10 Mbps Ethernet IOA
#503x	Migration Tower I
#5074	PCI Expansion Tower
#5075	PC Expansion Tower
#5077	Migration Tower II
#5079	1.8 m I/O Tower
#7002	HSL Adapter
#7104	System Unit Expansion
#7123	Disk Expansion Unit
#7127	Disk Expansion Unit
#7133	Disk Concurrent Maintenance Cage
#9074	Base I/O Enclosure
#9079	Base I/O Tower
#9691	Base Bus Adapter
#973x	Base HSL Ports
#9748	Base Disk Unit Controller IOA
#9767	Base Disk Unit Controller IOA
#9771	Base 2-Line WAN w/Modem IOA
#9943	Base IOP (Model 8xx)

Note: This information was correct at the time this edition was printed. However, verify it using Offering Information (OITool) at <http://crmweb.boulder.ibm.com/oitool>, IBMLink, or other online tools.

18.2 Supported Upgrade Paths

Single step RISC-to-RISC upgrades are supported as normal upgrade procedures. Refer to the appropriate software installation manual for instructions on software upgrades.

From:	To:	V4R1	V4R2	V4R3	V4R4	V4R5
V2R3	-	-	X*	X*	X*	-
V3R05	-	-	-	X*	X*	-
V3R1	X*	-	-	X*	X*	-
V3R2	X*	X*	X*	X*	X*	X*
V3R6	X	-	-	-	-	-
V3R7	X	X	X	X	-	-
V4R1			X	X	X	X
V4R2				X	X	X
V4R3					X	X
V4R4						X
* For single step CISC-to-RISC upgrades (previously known as e-Jump) from V2R3, V3R0M5, V3R1, and V3R2, use the Enhanced Upgrade Assistant (5798-TBU). OS/400 V4R4 is the last release to offer single step CISC-to-RISC upgrade capabilities from V2R3, V3R0.5, and V3R1 systems. OS/400 V4R5 is the last release to offer single step CISC-to-RISC upgrade capabilities from V3R2.						

The Software Inventory Tool is available to assist in planning and ordering software upgrades for iSeries and AS/400e servers with Version 4 installed. The Software Inventory Tool produces a printed report identifying the software installed on the customer system in the following categories:

- Products ordered at no-charge with a valid Software Subscription contract
- Products not covered by Software Subscription
- Keyed products that have an invalid key for the System's Processor Group
- User licensed products that have exceeded the usage limit
- Keyed products where no license key was found
- No charge software or software included at no charge with billed products
- Other non-categorized software products

The Software Inventory Tool provides information on the software installed on the system. It does not provide a valid Proof of Entitlement (PoE). It is the responsibility of the IBM Representative or Business Partner to verify entitlement of any software the customer has installed before an upgrade is ordered.

The Software Inventory Tool is available for download from the Web at:

<http://www.ibm.com/eserver/series/configure/>

18.3 Current Release to Previous Release Support

Values for TGTRLS Parameter			
Current OS/400 Release	*CURRENT	*PRV	Other Valid Values
V4R5	V4R5	V4R4	V4R3 V4R2 V3R2
V4R4	V4R4	V4R3	V4R2 V3R2
V4R3	V4R3	V4R2	V4R1 V3R7 V3R2
V4R2	V4R2	V4R1	V3R7 V3R2
V4R1	V4R1	V3R7	V3R6 V3R2 V3R1
V3R7	V3R7	V3R6	V3R2 V3R1 V3R0M5

18.4 Software Terminology

This section explains the standard software terminology. Rather than repeating this information, the following are terms used for all software versions.

- **Stack:** Each version of OS/400 has a product identifier. The format is 57xx-yyy. For example, V4R1 is 5769-SS1. Associated with each version is a stack product identifier whose format is 575x-Ayy. For example, at V4R1, the stack product identifier is 5755-AS5.
- **Stack features:** When ordering iSeries or AS/400e software, each product is ordered and a corresponding “stack feature” or Licensed Program Component Supply Feature is inserted into the “stack”.
- **Additional feature:** These additional features are stack features that relate to the optional feature of the licensed programs. This feature also provides the delivery mechanism for the licensed programs.
- **Skip ship:** For V4, there are some products that “skip ship” from a prior release, so they retain their original product identifiers, but can still be ordered as part of a 5755-AS5 stack.

18.5 OS/400 General Availability

Release	GA Date	Announce End of Marketing Date	Effective End of Marketing Date	End of Program Support	Fee-based Support Extension
R7.5 SSP	03/08/1996	02/09/1999	02/25/2000	05/31/2000	N/A
V3R0.5	06/03/1994	02/11/1997	05/16/1997	05/31/1997	N/A
V3R1.0	11/25/1994	02/11/1997	05/16/1997	10/31/1998	N/A
V3R2.0	06/21/1996	02/10/1998	02/25/2000	05/31/2000	N/A
V3R6.0	12/22/1995	08/19/1997	11/21/1997	10/31/1998	N/A
V3R7.0	11/08/1996	09/01/1998	12/01/1998	06/30/1999	N/A
V4R1.0	08/29/1997	02/09/1999	02/25/2000	05/31/2000	N/A
V4R2.0	02/27/1998	02/09/1999	02/25/2000	05/31/2000	01/31/2001
V4R3.0	09/11/1998	02/15/2000	12/29/2000	01/31/2001	N/A
V4R4.0	05/21/1999			05/31/2001	11/30/2001
V4R5.0	07/28/2000			07/31/2002	N/A

18.6 V4R5 OS/400 Software (RISC Systems)

The following table shows those V4R5 OS/400 based software products most commonly ordered. It is not intended to be a definitive list of all iSeries or AS/400e software products now available.

See 18.11, “Table Notes for V4R5, V4R4, V4R3, V4R2, and V4R1” on page 490, for information about different releases of V4 software.

Database Products	WDFM ¹¹	Skip Ship ²	Product Identifier	Stack Feature ²	Addn'l Feature ²	Keyed Stamped Media ⁹	Software Subscription ⁸
System Program Order			5755-AS5	-	-		
Operating System/400 ^{6,7}			5769-SS1	#2501		5050	✓
TCP/IP Connectivity Utilities/400 ¹⁰			5769-TC1*		#2529		
Integration for Windows Server			5769-WSV*		#2547		
HTTP Server for AS/400 ¹⁰			5769-DG1*		#2553		
Performance Manager ¹⁰			5769-PM1*		#2556		
AS/400 Toolbox for Java Refresh ¹⁰			5769-JC1*		#2584		
AS/400 Toolbox for Java ¹⁰			5769-JC1*		#2585		
AS/400 Developer Kit for Java ¹⁰			5769-JV1*		#2586		
Websphere Applications Server ¹⁰			5769-AS1*		#2591		
Client Access Express for Windows ¹⁰			5769-XE1*		#2603		
Media and Storage Extensions					#2619	5103	
OptiConnect for OS/400					#2642		
Integration Services for FSIOP					#2644		
Novel Enhanced Integration					#2646		
Private Address Space Environment					#2648		
PSF/400 1-28 IPM					#2681	5112	
PSF/400 1-45 IPM					#2682	5113	
PSF/400 Any Speed					#2683	5114	
PSF/400 Fax Feature					#2684	5102	
CPA Toolkit					#2690		
DB2 Symmetric Multiprocessing					#2698		
DB2 MultiSystem					#2699		
Cryptographic Support for AS/400 ⁶		✓	5769-CR1	#2518	-		✓
S/38 Utilities for AS/400 ⁶		✓	5769-DB1	#2519	-		✓
DataPropagator Relational 7.1 for AS/400 ⁶			5769-DP3	#2546		5050	✓
Query for AS/400 ^{6,7}			5769-QU1	#2508	-	5050	✓
DB2 Query Manager and SQL Development Kit for AS/400 ^{6,7}			5769-ST1	#2511	-	5050	✓

Networking Products	WDFM ¹¹	Skip Ship ²	Product Identifier	Stack Feature ²	Addn'l Feature ²	Keyed Stamped Media ⁹	Software Subscription ⁸
Cryptographic Access Provider 40-bit ^{6†††}			5769-AC1	#2560	-		✓
Cryptographics Access Provider 56-bit ^{6††††}			5769-AC2	#2561	-		✓
Cryptographics Access Provider 128-bit ^{6,12}			5769-AC3	#2562	-		✓
AS/400 Client Encryption (40-bit) ^{6†††}			5769-CE1	#2580	-		✓
AS/400 Client Encryption (56-bit) ^{6††††}			5769-CE2	#2581	-		✓
AS/400 Client Encryption (128-bit) ^{6,12}			5769-CE3	#2582	-		✓
Point-of-Sale Communications Utility for OS/400 ⁶		✓	5769-CF1	#2528	-		✓
Communications Utilities for AS/400 ⁶		✓	5769-CM1	#2503	-	5050	✓
DCE Base Services for AS/400 ⁶		✓	5769-DC1	#2563	-		✓
DCE DES Library Routines for AS/400 ⁶		✓	5769-DC3	#2564	-		✓
Firewall for AS/400 ⁶	12/2000	✓	5769-FW1	#2514	-		✓
MQSeries for AS/400 (V4R2M1) ⁶		✓	5769-MQ2	#2524	-		✓
MQSeries for AS/400 (V5.1) ⁶			5733-A38			-	✓
MQSeries for AS/400 (V5.1) ¹³			5801-AAR				✓
MQSeries Integrator for AS/400 ¹⁴			5801-AAR				
Client Access Family ^{6,7} Enhanced Windows 3.1 Client Windows 95 Client			5769-XW1	#2516			✓
Wireless Connection for AS/400			5798-TBW	-	-		✓
56-bit WebSphere Standard Edition ^{6††††}			5733-AS2	-	-		✓
128-bit WebSphere Standard Edition ^{6, 12}			5733-AS3	-	-		✓
56-bit WebSphere Advanced Edition ^{6††††}		✓	5733-WA2	-	-		✓
128-bit WebSphere Advanced Edition ^{6,12}		✓	5733-WA3	-	-		✓
Network Station Manager V1R3		✓	5648-C05	-	-		
Network Station Manager V2R1 (40-bit)		✓	5648-C07	-	-		
Network Station Manager V2R1 (128-bit) ††		✓	5648-C08	-	-		
Network Station Manager for AS/400 (V3R7)			5648-B07	-	-		-
Network Station Browser (40-bit encryption)			5648-B08	-	-		-
Navio NC Navigator for IBM Network Station (40-bit encryption)			5648-B10	-	-		-
Network Station Browser (128-bit encryption) ††			5648-B18	-	-		-
Navio NC Navigator for IBM Network Station (128-bit encryption) ††			5648-B20	-	-		-

Systems Management Products	WDFM¹¹	Skip Ship²	Product Identifier	Stack Feature²	Addn'l Feature²	Keyed Stamped Media⁹	Software Subscription⁸
Backup Recovery and Media Services for OS/400 ⁶		✓	5769-BR1	#2521		5050	✓
Advanced Feature		✓			#2616	5102	
Network		✓			#2617	5101	
Advanced Job Scheduler for AS/400 ⁶		✓	5769-JS1	#2594	-	5050	✓
Managed System Services for AS/400 ⁶		✓	5769-MG1	#2558	-		✓
Performance Tools for AS/400 ^{6,7}			5769-PT1	#2525	-	5050	✓
Manager Feature					#2610	5101	
Agent Feature					#2611	5102	
Content Manager OnDemand for AS/400 ⁶			5769-RD1	#2593		5050	✓
Server Feature					#2693		
Spool File Archive					#2694	5101	
Record Level Archive					#2695	5103	
Object Level Archive					#2696	5102	
Anystore					#2697	5104	
System Manager for OS/400 ⁶			5769-SM1	#2533	-		✓

Application Development Products	WDFM¹¹	Skip Ship²	Product Identifier	Stack Feature²	Addn'l Feature²	Keyed Stamped Media⁹	Software Subscription⁸
ILE COBOL for AS/400 ⁶		✓	5769-CB1	#2513	-	5050	✓
Application Development ToolSet Client Server ⁶		✓	5769-CL3	#2568	-		✓
ILE C for AS/400 ⁶		✓	5769-CX2	#2527	-	5050	✓
VisualAge C++ for AS/400 ⁶		✓	5769-CX5	#2532			✓
VisualAge C++ for Windows Client		✓			#2620		
CICS for AS/400 ⁶		✓	5769-DFH	#2545	-		✓
Application Program Driver for AS/400		✓	5769-PD1	#2557	-		✓
Application Development ToolSet for AS/400 ^{6,7}		✓	5769-PW1	#2526		5050	✓
Application Dictionary Services Feature ⁷		✓			#2612	5102	
Application Development Manager Feature ⁷		✓			#2613	5101	
ILE RPG for AS/400 ⁶		✓	5769-RG1	#2512	-	5050	✓
Visualage Generator Server for AS/400			5769-VG1	#2577	-		✓
Net.Commerce for AS/400 (V3.2)		✓	5798-NC3	-	-		✓
WebSphere Payment Manager for AS/400		✓	5733-PY2	-	-		✓

Office Products	WDFM ¹¹	Skip Ship ²	Product Identifier	Stack Feature ²	Addn'l Feature ²	Keyed Stamped Media ⁹	Software Subscription ⁸
Advanced Function Printing Utilities for AS/400 ⁶		✓	5769-AF1	#2541	-	5050	✓
Advanced DBCS Printer Support ⁶ IPDS Printer Support			5769-AP1	#2510	#2607	5050 5101	✓
Language Dictionaries for AS/400		✓	5716-DCT	#2105	-		-
Dictionaries and Linguistic Tools for AS/400 ⁶			5769-DL1	#2522	-		✓
Business Graphics Utility for AS/400 ⁶		✓	5769-DS1	#2507	-		✓
Advanced Function Printing Fonts for AS/400 ⁶ Various Fonts		✓	5769-FNT	#2550	- #2625 to #2639		✓
Advanced Function Printing DBCS Fonts for AS/400 ^{6†} Various Fonts		✓	5769-FN1	#2535	- #2650 to #2654		✓
OfficeVision for AS/400 ⁶		✓	5769-WP1	#2504	-		✓
Content Manager for AS/400 Object Server Advanced Workflow			5769-VI1	#2551	- #2687 #2689		✓
AFP PrintSuite for AS/400 ⁶			5798-AF3	-	-		-
Facsimile Support for AS/400		✓	5798-TBY	-	-		✓

Additional Products	WDFM ¹¹	Skip Ship ²	Product Identifier	Stack Feature	Addn'l Feature	Keyed Stamped Media ⁹	Software Subscription ⁸
Connect for iSeries			5733-B2B				✓
Lotus Domino Enterprise Server for AS/400 ⁶			5769-LNT				✓
Lotus Enterprise Integrator ⁶			5769-LNP				✓
System/38 Migration Aid			5714-MG1	-	-		-
System/36 Migration Aid			5727-MG1	-	-		-

18.7 V4R4 OS/400 Software (RISC Systems)

The following table shows those V4R4 OS/400 based software products most commonly ordered. It is not intended to be a definitive list of all AS/400e software products now available.

The end of service support for V4R4 OS/400 is 31 May 2001.

See 18.11, "Table Notes for V4R5, V4R4, V4R3, V4R2, and V4R1" on page 490, for information about different releases of V4 software.

Database Products	WDFM ¹¹	Skip Ship ²	Product Identifier	Stack Feature ²	Addn'l Feature ²	Keyed Stamped Media ⁹	Software Subscription ⁸
System Program Order			5755-AS5	-	-		
Operating System/400 ^{6,7}			5769-SS1	#2501		5050	✓
TCP/IP Connectivity Utilities/400 ¹⁰			5769-TC1*		#2529		
HTTP Server for AS/400 ¹⁰			5769-DG1*		#2553		
NetQuestion for AS/400 ¹⁰					#2554		
Performance Manager ¹⁰			5769-PM1*		#2556		
AS/400 Toolbox for Java Refresh ¹⁰			5769-JC1*		#2584		
AS/400 Toolbox for Java ¹⁰			5769-JC1*		#2585		
AS/400 Developer Kit for Java ¹⁰			5769-JV1*		#2586		
Websphere Applications Server ¹⁰			5769-AS1*		#2591		
Client Access Express for Windows ¹⁰			5769-XE1*		#2603		
Media and Storage Extensions					#2619	5103	
Client Access Express for Windows Refresh					#2641		
PSF/400 1-20 IPM					#2681	5112	
PSF/400 1-45 IPM					#2682	5113	
PSF/400 Any Speed					#2683	5114	
PSF/400 Fax Feature					#2684	5102	
CPA Toolkit					#2690		
OptiConnect for OS/400					#2642		
Integration Services for Integrated PC Server					#2644		
Integration for Novell Network	1/2001				#2645		
Enhanced Integration for Novel Network					#2646		
Private Address Space Environment					#2648		
Integration for Windows NT Server					#2692		
DB2 Symmetric Multiprocessing					#2698		
DB2 MultiSystem					#2699		
Cryptographic Support for AS/400 ⁶			5769-CR1	#2518	-		✓
S/38 Utilities for AS/400 ⁶			5769-DB1	#2519	-		✓
DataPropagator Relational 5.1 for AS/400 ⁶		✓	5769-DP2	#2552			✓
Query for AS/400 ^{6,7}			5769-QU1	#2508	-	5050	✓
DB2 Query Manager and SQL Development Kit ^{6,7}			5769-ST1	#2511	-	5050	✓

Networking Products	WDFM ¹¹	Skip Ship ²	Product Identifier	Stack Feature ²	Addn'l Feature ²	Keyed Stamped Media ⁹	Software Subscription ⁸
Cryptographic Access Provider 40-bit ^{6†††}			5769-AC1	#2560	-		✓
Cryptographics Access Provider 56-bit ^{6††††}			5769-AC2	#2561	-		✓
Cryptographics Access Provider 128-bit ^{6,12}			5769-AC3	#2562	-		✓
AS/400 Client Encryption (40-bit) ^{6†††}			5769-CE1	#2580	-		✓
AS/400 Client Encryption (56-bit) ^{6††††}			5769-CE2	#2581	-		✓
AS/400 Client Encryption (128-bit) ^{6,12}			5769-CE3	#2582	-		✓
Point-of-Sale Communication Utility for OS/400 ⁶			5769-CF1	#2528	-		✓
Communications Utilities for AS/400 ⁶			5769-CM1	#2503	-	5050	✓
CallPath for AS/400 ⁶ Switch Connection	✓	✓	5769-CP4	#2534	#2608		✓
DCE Base Services for AS/400 ⁶		✓	5769-DC1	#2563	-		✓
DCE DES Library Routines ⁶		✓	5769-DC3	#2564	-		✓
Firewall for AS/400 ⁶	12/2000		5769-FW1	#2514	-		✓
MQSeries for AS/400 (V4R2M1) ⁶		✓	5769-MQ2	#2524	-		✓
MQSeries for AS/400 (V5.1) ⁶			5733-A38			-	✓
MQSeries Integrator for AS/400 ¹⁴			5801-AAR				
Client Access Family for Windows ^{6,7} Enhanced Windows 3.1 Client Windows 95 Client			5769-XW1	#2516			✓
Client Access Family ⁶ DOS Client	✓	✓	5769-XY1	#2517			✓
DOS Extended Client OS/2 Client Optimized OS/2 Client Windows 3.1 Client							
OS/2 Warp Server for AS/400 ⁶	✓	✓	5769-XZ1	#2566	-		✓
Wireless Connection for AS/400			5798-TBW	-	-		✓
56-bit WebSphere Standard Edition ^{6††††}			5733-AS2	-	-		✓
128-bit WebSphere Standard Edition ^{6,12}			5733-AS3	-	-		✓
56-bit WebSphere Advanced Edition ^{6††††}			5733-WA2	-	-		✓
128-bit WebSphere Advanced Edition ^{6,12}			5733-WA3	-	-		✓
Network Station Manager V1R3		✓	5648-C05	-	-		
Network Station Manager V2R1 (40-bit)		✓	5648-C07	-	-		
Network Station Manager V2R1 (128-bit) ^{††}		✓	5648-C08	-	-		
Network Station Manager for AS/400 (V3R7)			5648-B07	-	-		-
Network Station Browser (40-bit encryption)			5648-B08	-	-		-

Navio NC Navigator for IBM Network Station (40-bit encryption)			5648-B10	-	-		-
Network Station Browser (128-bit encryption)††			5648-B18	-	-		-
Navio NC Navigator for IBM Network Station (128-bit encryption)††			5648-B20	-	-		-

Systems Management Products	WDFM¹¹	Skip Ship²	Product Identifier	Stack Feature²	Addn'l Feature²	Keyed Stamped Media⁹	Software Subscription⁸
Backup Recovery and Media Services for OS/400 ⁶			5769-BR1	#2521		5050	✓
Advanced Network					#2616 #2617	5102 5101	
Job Scheduler for AS/400 ⁶			5769-JS1	#2594	-	5050	✓
Managed System Services for AS/400 ⁶		✓	5769-MG1	#2558	-		✓
Performance Tools for AS/400 ^{6,7}			5769-PT1	#2525	-	5050	✓
Performance Tools Manager					#2610	5101	
Performance Tools Agent					#2611	5102	
OnDemand for AS/400 ⁶			5769-RD1	#2593		5050	✓
Server Feature					#2693		
Spool File Archive					#2694	5101	
Record Level Archive					#2695	5103	
Object Level Archive					#2696	5102	
Anystore					#2697	5104	
SystemView System Manager for OS/400 ⁶			5769-SM1	#2533	-		✓
Netfinity Server for AS/400 ⁶	✓		5769-SVA	#2536	-		✓
Netfinity AS/400 Manager for OS/2 V3R7 ⁶	✓		5769-SVD	#2537	-		✓
Netfinity AS/400 Manager for Windows95 V3R7 ⁶	✓		5769-SVE	#2538	-		✓
ADSTAR Distributed Storage Manager ⁶	✓	✓	5769-SV3	#2598			✓
Multiple Client Workstations Supported		✓			#1442 #1446		

Packaged Software	WDFM¹¹	Skip Ship²	Product Identifier	Stack Feature²	Addn'l Feature²	Keyed Stamped Media⁹	Software Subscription⁸
ValuPak for OS/400			5769-VP1	#1463	-		-
ValuPak for AS/400 Printing			5769-PPK	#1452	-		-
Application Development ToolSet Plus ⁶	✓		5769-PWK	#1453	-		-

Additional Products	WDFM¹¹	Skip Ship²	Product Identifier	Stack Feature	Addn'l Feature	Keyed Stamped Media⁹	Software Subscription⁸
Lotus Domino Enterprise Server for AS/400			5769-LNT				✓
Lotus Enterprise Integrator			5769-LNP				✓

System/38 Migration Aid			5714-MG1	-	-		-
System/36 Migration Aid			5727-MG1	-	-		-

Application Development Products	WDFM ¹¹	Skip Ship ²	Product Identifier	Stack Feature ²	Addn'l Feature ²	Keyed Stamped Media ⁹	Software Subscription ⁸
ILE COBOL for AS/400 ⁶			5769-CB1	#2513	-	5050	✓
Application Development ToolSet Client Server ⁶		✓	5769-CL3	#2568	-		✓
ILE C for AS/400 ⁶			5769-CX2	#2527	-	5050	✓
VisualAge C++ for AS/400 VisualAge C++ for OS/2 Client	✓	✓ ✓	5716-CX4	#2190	#2214		-
VisualAge C++ for AS/400 (Windows) ⁶ VisualAge C++ for Windows Client			5769-CX5	#2532	#2620		✓
CICS Transaction Server for AS/400 ⁶			5769-DFH	#2545	-		✓
Application Program Driver for AS/400		✓	5769-PD1	#2557	-		✓
Application Development ToolSet for AS/400 ^{6,7} Application Dictionary Services/400 ⁷ Application Development Manager/400 ⁷			5769-PW1	#2526	#2612 #2613	5050 5102 5101	✓
ILE RPG for AS/400 ⁶			5769-RG1	#2512	-	5050	✓
VisualGen Host Services for AS/400			5716-VG1	#2177	-		-
Net.Commerce for AS/400 (V2)			5798-NC2	-	-		-
Net.Commerce for AS/400 (V3.2)			5798-NC3	-	-		✓
Payment Server for AS/400	✓		5733-PY1	-	-		✓
WebSphere Payment Manager for AS/400			5733-PY2	-	-		✓
Office Products	WDFM ¹¹	Skip Ship ²	Product Identifier	Stack Feature ²	Addn'l Feature ²	Keyed Stamped Media ⁹	Software Subscription ⁸
Advanced Function Printing Utilities for AS/400 ⁶			5769-AF1	#2541	-	5050	✓
Advanced DBCS Printer Support ^{6†} IPDS Printer Support			5769-AP1	#2510	#2607		✓
Language Dictionaries for AS/400		✓	5716-DCT	#2105	-		-
Business Graphics Utility for AS/400 ⁶			5769-DS1	#2507	-		✓
Advanced Function Printing Fonts for AS/400 ⁶ Various Fonts		✓	5769-FNT	#2550	- #2625 to #2639		✓
Advanced Function Printing DBCS Fonts for AS/400 ^{6†} Various Fonts		✓	5769-FN1	#2535	- #2650 to #2654		✓
OfficeVision for AS/400 ⁶		✓	5769-WP1	#2504	-		✓

Office Products	WDFM ¹¹	Skip Ship ²	Product Identifier	Stack Feature ²	Addn'l Feature ²	Keyed Stamped Media ⁹	Software Subscription ⁸
ImagePlus VisualInfo for AS/400 Secondary Object Server Advanced Workflow			5769-VI1	#2551	- #2687 #2689		✓
AFP PrintSuite for AS/400			5798-AF3	-	-		-
OfficeVision JustMail for AS/400			5798-TBT	-	-		✓
Facsimile Support for AS/400			5798-TBY	-	-		✓

18.8 V4R3 OS/400 Software (RISC Systems)

The following table shows those V4R3 OS/400 based software products most commonly ordered. It is not intended to be a definitive list of all AS/400e software products now available.

V4R3 OS/400 will be withdrawn from marketing effective 31 December 2000. The end of service support is 31 January 2001.

See 18.11, "Table Notes for V4R5, V4R4, V4R3, V4R2, and V4R1" on page 490, for information about different releases of V4 software.

Database Products	WDFM ¹¹	Skip Ship ²		V4R3	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Subscription ⁸
		V3R6	V3R7					
System Program Order (also known as Software Stack)	12/2000			✓	5755-AS5	-	-	
Operating System/400 ^{6,7}	12/2000			✓	5769-SS1	#2501	-	✓
(including TCP/IP Connectivity Utilities/400)					-	-	#2529	✓
HTTP Server for AS/400				✓			#2553	✓
NetQuestion for AS/400				✓			#2554	✓
(including Performance Manager)				✓	-	-	#2556	✓
AS/400 Toolbox for Java				✓	-	-	#2585	✓
AS/400 Toolbox for Java Refresh				✓			#2584	✓
AS/400 Developer Kit for Java				✓	-	-	#2586	✓
SystemView Base for OS/400	✓			✓	-	-	#2195	✓
Operations Navigator				✓	-	-	#2601	✓
Print Services Facility/400 ⁶				✓	-	-	#2691	✓
CPA Toolkit				✓	-	-	#2690	✓
Media and Storage Extensions ⁶				✓	-	-	#2619	✓
Client Access Express for Windows Refresh ⁶							#2641	✓
OptiConnect for OS/400 ⁶				✓	-	-	#2642	✓
Integration Services for Integrated PC Server				✓	-	-	#2644	✓
Integration for Novell Netware	✓			✓	-	-	#2645	✓

Enhanced Integration for Novel Netware ⁶				✓	-	-	#2646	✓
Integration of Lotus Notes				✓	-	-	#2656	✓
DB2 Symmetric Multiprocessing ⁶				✓	-	-	#2698	✓
DB2 MultiSystem ⁶				✓	-	-	#2699	✓
Integration for Windows NT Server ⁶				✓	-	-	#2692	✓
Private Address Space Environment				✓	-	-	#2648	✓
Cryptographic Support for OS/400	12/2000			✓	5769-CR1	#2518	-	✓
S/38 Utilities for OS/400 ⁶	12/2000			✓	5769-DB1	#2519	-	✓
DataPropagator Relational Capture and Apply ⁷	✓			✓	5769-DP1	#2565	-	✓
DataPropagator Relational 5.1 for AS/400 ⁶	12/2000			✓	5769-DP2	#2552		✓
Query for OS/400 ⁷	12/2000			✓	5769-QU1	#2508	-	✓
DB2 Query Manager and SQL Development Kit ⁷	12/2000			✓	5769-ST1	#2511	-	✓
Networking Products	WDFM ¹¹	Skip Ship ²		V4R3	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Subscription ⁸
		V3R6	V3R7					
Cryptographic Access Provider 40-bit ⁶	12/2000			✓	5769-AC1	#2560		✓
Cryptographics Access Provider 56-bit ⁶	12/2000			✓	5769-AC2	#2561		✓
Cryptographics Access Provider 120-bit ⁶	12/2000			✓	5769-AC3	#2562		✓
Point-of-Sale Communication Utility for OS/400	12/2000			✓	5769-CF1	#2528	-	✓
Communications Utilities for OS/400 ⁶	12/2000			✓	5769-CM1	#2503	-	✓
CallPath for OS/400 ⁶	✓			✓	5769-CP4	#2534	-	✓
DCE Base Services for AS/400 ⁶	12/2000			✓	5769-DC1	#2563		✓
DCE DES Library Routines ⁶	12/2000			✓	5769-DC3	#2564		✓
Firewall for AS/400	12/2000			✓	5769-FW1	#2514	-	✓
MQSeries for OS/400 (V4R2) ⁶	✓			✓	5769-MQ1	#2523	-	✓
MQSeries for OS/400 (V4R2M1) ⁶	12/2000			✓	5769-MQ2	#2524		✓
Internet Connection Secure Server ⁶ ††	12/2000			✓	5769-NC1	#2506	-	✓
Internet Connection Secure Server for AS/400 ⁶	12/2000			✓	5769-NCE	#2509	-	✓
Client Access Family for Windows ⁷	12/2000			✓	5769-XW1	#2516	-	✓
Enhanced Windows 3.1 Client				✓	-	-	-	✓
Windows 95 Client				✓	-	-	-	✓
Windows 95/NT Client Refresh				✓	-	-	#2640	✓
Client Access Family	✓			✓	5769-XY1	#2517	-	✓
DOS Client				✓	-	-	-	✓

DOS Extended Client				✓	-	-	-	✓
OS/2 Client				✓	-	-	-	✓
Optimized OS/2 Client				✓	-	-	-	✓
Windows 3.1 Client				✓	-	-	-	✓
OS/2 Warp Server for OS/400	✓			✓	5769-XZ1	#2566	-	✓
Wireless Connection for AS/400	12/2000	✓	✓	✓	5798-TBW	-	-	✓
Network Station Manager V1R3			✓	✓	5648-C05	-	-	-
Network Station Manager V2R1 (40-bit)				✓	5648-C07	-	-	-
Network Station Manager V2R1 (128-bit)††				✓	5648-C08	-	-	-
Network Station Manager for AS/400 (V3R7)	12/2000		✓	✓	5648-B07	-	-	-
Network Station Browser (40-bit encryption)	12/2000		✓	✓	5648-B08	-	-	-
Navio NC Navigator for IBM Network Station (40-bit encryption)	12/2000		✓	✓	5648-B10	-	-	-
Network Station Browser (128-bit encryption)††	12/2000		✓	✓	5648-B18	-	-	-
Navio NC Navigator for IBM Network Station (128-bit encryption)††	12/2000		✓	✓	5648-B20	-	-	-
Systems Management Products	WDFM ¹¹	Skip Ship ²		V4R3	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Subscription ⁸
		V3R6	V3R7					
Backup Recovery and Media Services for OS/400	12/2000			✓	5769-BR1	#2521	-	✓
Job Scheduler for OS/400	12/2000			✓	5769-JS1	#2594	-	✓
Managed System Services for OS/400	12/2000			✓	5769-MG1	#2558	-	✓
Performance Tools for OS/400 ⁷	12/2000			✓	5769-PT1	#2525	-	✓
Performance Tools Manager			✓	✓	-	-	#2610	✓
Performance Tools Agent				✓	-	-	#2611	✓
OnDemand for AS/400	12/2000			✓	5769-RD1	#2593	-	✓
Server Feature				✓	-		#2693	✓
Spool File Archive				✓	-	-	#2694	✓
Record Level Archive				✓	-	-	#2695	✓
Object Level Archive				✓	-	-	#2696	✓
Anystore				✓	-	-	#2697	✓
SystemView System Manager for OS/400	12/2000			✓	5769-SM1	#2533	-	✓
Netfinity Server for AS/400 ⁶	✓			✓	5769-SVA	#2536	-	✓
Netfinity AS/400 Manager for OS/2 V3R7 ⁶	✓			✓	5769-SVD	#2537	-	✓
Netfinity AS/400 Manager for Windows95 V3R7 ⁶	✓			✓	5769-SVE	#2538	-	✓

ADSTAR Distributed Storage Manager ^{6,7}	✓			✓	5769-SV3	#2598	-	✓
Multiple Client Workstations Supported				✓	-	-	#1442- #1446	✓
Multimedia Products	WDFM ¹¹	Skip Ship ²		V4R3	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Subscription ⁸
		V3R6	V3R7					
Ultimedia Business Conferencing for OS/400	✓	✓	✓	✓	5716-UB1	#2170	-	-
Person-to-Person		✓	✓	✓	-	-	#2223	-
Client Access Ultimedia Tools for OS/400	✓	✓	✓	✓	5716-US1	#2172	-	-
Ultimedia Perfect Image/400		✓	✓	✓	-	-	#2221	-
Ultimedia Builder/400		✓	✓	✓	-	-	#2222	-
Application Development Products	WDFM ¹¹	Skip Ship ²		V4R3	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Subscription ⁸
		V3R6	V3R7					
ILE COBOL for OS/400 ⁶	12/2000			✓	5769-CB1	#2513	-	✓
Application Development ToolSet Client Server ⁶	12/2000			✓	5769-CL3	#2568	-	✓
ILE C for OS/400 ⁶	12/2000			✓	5769-CX2	#2527	-	✓
VisualAge C++ for OS/400	12/2000	✓	✓	✓	5716-CX4	#2190	-	-
VisualAge C++ for OS/2 Client					-	-	#2214	-
VisualAge C++ for AS/400 (Windows)	12/2000		✓	✓	5716-CX5	#2132		-
VisualAge C++ for Windows Client		✓	✓	✓	-	-	#2220	-
CICS for OS/400	12/2000			✓	5769-DFH	#2545	-	✓
Application Program Driver for OS/400	12/2000			✓	5769-PD1	#2557	-	✓
Application Development ToolSet for OS/400 ^{6,7}	12/2000			✓	5769-PW1	#2526	-	✓
Application Dictionary Services/400				✓	-	-	#2612	✓
Application Development Manager/400				✓	-	-	#2613	✓
ILE RPG for OS/400 ^{6,7}	12/2000			✓	5769-RG1	#2512	-	✓
VisualGen Host Services for OS/400	12/2000			✓	5716-VG1	#2177	-	-
Net.Commerce for AS/400	12/2000			✓	5798-NC2	-	-	-
Office Products	WDFM ¹¹	Skip Ship ²		V4R3	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Subscription ⁸
		V3R6	V3R7					
Advanced Function Printing Utilities for OS/400	12/2000			✓	5769-AF1	#2541	-	✓
Advanced DBCS Printer Support†	12/2000			✓	5769-AP1	#2510	-	✓
IPDS Printer Support				✓		#2607	-	****
Language Dictionaries for OS/400 ⁷	12/2000		✓	✓	5716-DCT	#2105	-	-

Business Graphics Utility for OS/400 ⁶	12/2000			✓	5769-DS1	#2507	-	✓
Advanced Function Printing Fonts for OS/400	12/2000			✓	5769-FNT	#2550	-	✓
Various Fonts				✓	-	-	#2625 to #2639	✓
Advanced Function Printing DBCS Fonts for OS/400	12/2000			✓	5769-FN1	#2535	-	✓
Various Fonts				✓	-	-	#2650 to #2654	✓
OfficeVision for OS/400 ⁷	12/2000			✓	5769-WP1	#2504	-	✓
ImagePlus VisualInfo for AS/400	12/2000			✓	5769-VI1	-	-	✓
AFP PrintSuite for OS/400 ⁷	12/2000		✓	✓	5798-AF3	-	-	-
OfficeVision JustMail for OS/400	12/2000			✓	5798-TBT	-	-	✓
Facsimile Support for OS/400	12/2000			✓	5798-TBY	-	-	✓
Packaged Software	WDFM ¹¹	Skip Ship ²		V4R3	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Subscription ⁸
		V3R6	V3R7					
ValuPak for OS/400	12/2000			✓	5769-VP1	#1463	-	-
GrowthPak for OS/400	✓			✓	5769-GP1	#1464	-	-
Application Development ToolSet Plus ⁶	✓			✓	5769-PWK	#1453	-	-
ValuPak for AS/400 Printing	12/2000			✓	5769-PPK	#1452	-	-
Operations Productivity Pak	✓			✓	5769-OPK	#1771	-	
Additional Products	WDFM ¹¹	Skip Ship ²		V4R3	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Subscription ⁸
		V3R6	V3R7					
System/38 Migration Aid	12/2000	✓	✓	✓	5714-MG1	-	-	-
System/36 Migration Aid	12/2000	✓	✓	✓	5727-MG1	-	-	-

18.9 V4R2 OS/400 Software (RISC Systems)

The following table shows those V4R2 OS/400 based software products most commonly ordered. It is not intended to be a definitive list of all AS/400e software products now available.

V4R2 OS/400 was withdrawn from marketing effective 25 February 2000. The end of service support was 31 May 2000. Support may be extended on an individual customer basis until 31 January 2001 for a fee.

See 18.11, "Table Notes for V4R5, V4R4, V4R3, V4R2, and V4R1" on page 490, for information about different releases of V4 software.

Database Products	WDFM ¹¹	Skip Ship ²		V4R2	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Subscription ⁸
		V3R6	V3R7					
System Program Order (also known as Software Stack)	✓			✓	5755-AS5	-	-	
Operating System/400 ^{6,7}	✓			✓	5769-SS1	#2501	-	✓
(including TCP/IP Connectivity Utilities/400)	✓			✓	-	-	#2529	✓

(including Performance Manager)	✓			✓	-	-	#2556	✓
AS/400 Toolbox for Java	✓			✓	-	-	#2585	✓
AS/400 Developer Kit for Java	✓			✓	-	-	#2586	✓
SystemView Base for OS/400	✓			✓	-	-	#2195	✓
Windows 95/NT Client (shipped with OS/400)	✓			✓	-	-	#2601	
Advanced Printer Function Feature	✓			✓	-	-	#2691	✓
CPA Toolkit	✓			✓	-	-	#2690	✓
Media and Storage Extensions	✓			✓	-	-	#2619	✓
OptiConnect for OS/400	✓			✓	-	-	#2642	✓
Integration Services for Integrated PC Server	✓			✓	-	-	#2644	✓
Netware Integration for OS/400	✓			✓	-	-	#2645	✓
Enhanced Netware Integration	✓			✓	-	-	#2646	✓
Integration of Lotus Notes	✓			✓	-	-	#2656	✓
DB2 Symmetric Multiprocessing	✓			✓	-	-	#2698	✓
DB2 MultiSystem	✓			✓	-	-	#2699	✓
Integration for Windows NT Server	✓			✓	-	-	#2692	✓
Cryptographic Support for OS/400	✓			✓	5769-CR1	#2518	-	✓
S/38 Utilities for OS/400 ⁶	✓			✓	5769-DB1	#2519	-	✓
DataPropagator Relational Capture and Apply ⁷	✓			✓	5769-DP1	#2565	-	✓
Query for OS/400 ⁷	✓			✓	5769-QU1	#2508	-	✓
DB2 Query Manager and SQL Development Kit ⁷	✓			✓	5769-ST1	#2511	-	✓
Networking Products	WDFM ¹¹	Skip Ship ²		V4R2	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
Point-of-Sale Communication Utility for OS/400	✓			✓	5769-CF1	#2528	-	✓
Communications Utilities for OS/400 ⁶	✓			✓	5769-CM1	#2503	-	✓
CallPath for OS/400	✓		✓	✓	5716-CP3	#2131	-	-
Firewall for AS/400	✓			✓	5769-FW1	#2514	-	✓
MQSeries for OS/400 (V4R2) ⁶	✓			✓	5769-MQ1	#2523	-	-
MQSeries for OS/400 (V4R2M1) ⁶	✓			✓	5769-MQ2	#2524		✓
Internet Connection Secure Server††	✓			✓	5769-NC1	#2506	-	✓
Internet Connection Secure Server for AS/400	✓			✓	5769-NCE	#2509	-	✓
Client Access Family for Windows ⁷	✓			✓	5769-XW1	#2516	-	✓
Enhanced Windows 3.1 Client	✓			✓	-	-		✓
Windows 95 Client	✓			✓	-	-		✓
Windows 95/NT Client Refresh	✓			✓	-	-	#2640	✓
Client Access Family	✓			✓	5769-XY1	#2517	-	✓
DOS Client	✓			✓	-	-	-	✓

DOS Extended Client	✓			✓	-	-	-	✓
OS/2 Client	✓			✓	-	-	-	✓
Optimized OS/2 Client	✓			✓	-	-	-	✓
Windows 3.1 Client	✓			✓	-	-	-	✓
OS/2 Warp Server for AS/400	✓			✓	5769-XZ1	#2566	-	✓
Wireless Connection for AS/400	✓	✓	✓	✓	5798-TBW	-	-	✓
Network Station Manager V1R3			✓	✓	5648-C05	-	-	-
Network Station Manager V2R1 (40-bit)				✓	5648-C07	-	-	-
Network Station Manager V2R1 (128-bit)††				✓	5648-C08	-	-	-
Network Station Manager for AS/400	✓		✓	✓	5648-B07	-	-	-
Network Station Browser (40-bit encryption)	✓		✓	✓	5648-B08	-	-	-
Navio NC Navigator for IBM Network Station (40-bit encryption)	✓		✓	✓	5648-B10	-	-	-
Network Station Browser (128-bit encryption)††	✓		✓	✓	5648-B18	-	-	-
Navio NC Navigator for IBM Network Station (128-bit encryption)††	✓		✓	✓	5648-B20	-	-	-
Systems Management Products	WDFM ¹¹	Skip Ship ²		V4R2	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
Backup Recovery and Media Services for AS/400	✓			✓	5769-BR1	#2521	-	✓
Job Scheduler for OS/400	✓			✓	5769-JS1	#2594	-	✓
Managed System Services for OS/400	✓			✓	5769-MG1	#2558	-	✓
Performance Tools for OS/400 ⁷	✓			✓	5769-PT1	#2525	-	✓
Performance Tools Manager	✓		✓	✓	-	-	#2610	✓
Performance Tools Agent	✓			✓	-	-	#2611	✓
OnDemand for AS/400	✓			✓	5769-RD1	#2593	-	✓
Spool File Archive	✓			✓	-	-	#2694	✓
Record Level Archive	✓			✓	-	-	#2695	✓
Object Level Archive	✓			✓	-	-	#2696	✓
Anystore	✓			✓	-	-	#2697	✓
SystemView System Manager for OS/400	✓			✓	5769-SM1	#2533	-	-
Netfinity Server for AS/400	✓		✓	✓	5716-SVA	#2136	-	-
Netfinity AS/400 Manager for OS/2	✓		✓	✓	5716-SVD	#2137	-	-
Netfinity AS/400 Manager for Windows95	✓		✓	✓	5716-SVE	#2138	-	-
ADSTAR Distributed Storage Manager ⁷	✓		✓	✓	5716-SV2	#2197	-	-
Multiple Client Workstations Supported	✓		✓	✓	-	-	#1419- #1440	-
Multimedia Products	WDFM ¹¹	Skip Ship ²		V4R2	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
Ultimedia Business Conferencing for OS/400	✓	✓	✓	✓	5716-UB1	#2170	-	-

Person-to-Person	✓	✓	✓	✓	-	-	#2223	-
Client Access Ultimea Tools for OS/400	✓	✓	✓	✓	5716-US1	#2172	-	-
Ultimea Perfect Image/400	✓	✓	✓	✓	-	-	#2221	-
Ultimea Builder/400	✓	✓	✓	✓	-	-	#2222	-
Application Development Products	WDFM ¹¹	Skip Ship ²		V4R2	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
ILE COBOL for OS/400 ⁶	✓			✓	5769-CB1	#2513	-	✓
Application Development ToolSet Client Server ⁶	✓			✓	5769-CL3	#2568	-	✓
ILE C for OS/400 ⁶	✓			✓	5769-CX2	#2527	-	✓
VisualAge C++ for OS/400	✓	✓	✓	✓	5716-CX4	#2190	-	-
VisualAge C++ for OS/2 Client	✓	✓	✓	✓	-	-	#2214	-
VisualAge C++ for AS/400 (Windows)	✓		✓	✓	5716-CX5	#2132	-	-
VisualAge C++ for Windows Client	✓	✓	✓	✓	-	-	#2220	-
CICS for OS/400	✓			✓	5769-DFH	#2545	-	✓
Application Program Driver for OS/400	✓			✓	5769-PD1	#2557	-	✓
Application Development ToolSet for OS/400 ^{6,7}	✓			✓	5769-PW1	#2526	-	✓
Application Dictionary Services/400 ⁷	✓			✓	-	-	#2612	✓
Application Development Manager/400 ⁷	✓			✓	-	-	#2613	✓
ILE RPG for OS/400 ^{6,7}	✓			✓	5769-RG1	#2512	-	✓
VisualGen Host Services for OS/400	✓			✓	5716-VG1	#2177	-	-
Net.Commerce for AS/400	✓			✓	5798-NC2	-	-	-
Office Products	WDFM ¹¹	Skip Ship ²		V4R2	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R					
Advanced Function Printing Utilities for OS/400	✓			✓	5769-AF1	#2541	-	✓
Advanced DBCS Printer Support†	✓			✓	5769-AP1	#2510	-	✓
PDS Printer Support	✓			✓			2607	✓
Language Dictionaries for OS/400 ⁷	✓		✓	✓	5716-DCT	#2105	-	-
Business Graphics Utility for OS/400 ⁶	✓			✓	5769-DS1	#2507	-	✓
Advanced Function Printing Fonts for OS/400	✓			✓	5769-FNT	#2550	-	✓
Various Fonts	✓			✓	-	-	#2625 to #2639	✓
Advanced Function Printing DBCS Fonts for OS/400	✓			✓	5769-FN1	#2535	-	✓
Various Fonts	✓			✓	-	-	#2650 to #2654	✓
OfficeVision for OS/400 ⁷	✓			✓	5769-WP1	#2504	-	✓
ImagePlus VisualInfo for AS/400	✓		✓	✓	5733-A18	-	-	✓
AFP PrintSuite for OS/400 ⁷	✓		✓	✓	5798-AF3	-	-	-
OfficeVision JustMail for OS/400	✓			✓	5798-TBT	-	-	✓
Facsimile Support for OS/400	✓			✓	5798-TBY	-	-	✓

Packaged Software	WDFM ¹¹	Skip Ship ²		V4R2	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
ValuPak for OS/400	✓			✓	5769-VP1	#1463	-	-
GrowthPak for OS/400	✓			✓	5769-GP1	#1464	-	-
Application Development ToolSet Plus	✓			✓	5769-PWK	#1453	-	-
ValuPak for AS/400 Printing	✓			✓	5769-PPK	#1452	-	-
Operations Productivity Pak	✓			✓	5769-OPK	#1771	-	
Additional Products	WDFM ¹¹	Skip Ship ²		V4R2	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
System/38 Migration Aid	✓	✓	✓	✓	5714-MG1	-	-	-
System/36 Migration Aid	✓	✓	✓	✓	5727-MG1	-	-	-

18.10 V4R1 OS/400 Software (RISC Systems)

The following table shows those V4R1 OS/400-based software products most commonly ordered. It is not intended to be a definitive list of all AS/400e software products now available.

V4R1 OS/400 was withdrawn from marketing effective 25 February 2000. The end of service support was 31 May 2000.

See 18.11, "Table Notes for V4R5, V4R4, V4R3, V4R2, and V4R1" on page 490, for information about different releases of V4 software.

Database Products	WDFM ¹¹	Skip Ship ²		V4R1	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
System Program Order (Software Stack)	✓			✓	5755-AS5	-	-	
Operating System/400 ^{6,7}	✓			✓	5769-SS1	#2501	-	✓
(including TCP/IP Connectivity Utilities/400)	✓			✓	-	-	#2529	✓
(including Performance Manager)	✓			✓	-	-	#2556	✓
SystemView Base for OS/400	✓			✓	-	-	#2195	✓
Windows 95/NT Client (shipped with OS/400)	✓			✓	-	-	#2601 #2691 #2690 #2619 #2642	✓ ✓ ✓ ✓ ✓
PSF/400 ⁷	✓			✓	-	-		
CPA Toolkit	✓				-	-		
Media and Storage Extensions	✓				-	-		
OptiConnect for OS/400	✓			✓	-	-		
Integration Services for Integrated PC Server	✓			✓	-	-	#2644	✓
Netware Integration for OS/400	✓			✓	-	-	#2645	✓
Enhanced Netware Integration	✓			✓	-	-	#2646	✓
Integration of Lotus Notes ⁷	✓			✓	-	-	#2656	✓

DB2 Symmetric Multiprocessing	✓			✓	-	-	#2698	✓
DB2 MultiSystem	✓			✓	-	-	#2699	✓
Cryptographic Support for OS/400	✓		✓	✓	5716-CR1	#2118	-	-
S/38 Utilities for OS/400	✓	✓	✓	✓	5716-DB1	#2119	-	-
DataPropagator Relational Capture and Apply ⁷	✓		✓	✓	5716-DP1	#2165	-	-
Query for OS/400 ⁷	✓			✓	5769-QU1	#2508	-	✓
DB2 Query Manager and SQL Development Kit ⁷	✓			✓	5769-ST1	#2511	-	✓
Networking Products	WDFM ¹¹	Skip Ship ²		V4R1	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
Point-of-Sale Communication Utility for OS/400	✓	✓	✓	✓	5716-CF1	#2128	-	-
Communications Utilities for OS/400	✓		✓	✓	5716-CM1	#2103	-	-
CallPath for OS/400	✓		✓	✓	5716-CP3	#2131	-	✓
Firewall for AS/400	✓		x	✓	5769-FW1	#2514	-	
MQSeries for OS/400	✓		✓	✓	5716-MQ1	#2123	-	-
Internet Connection Secure Server††	✓			✓	5769-NC1	#2506	-	✓
Internet Connection Secure Server for AS/400	✓			✓	5769-NCE	#2509	-	✓
Client Access Family for Windows ⁷	✓			✓	5769-XW1	#2516	-	✓
Enhanced Windows 3.1 Client	✓			✓	-	-		✓
Windows 95 Client	✓			✓	-	-		✓
Client Access Family	✓			✓	5769-XY1	#2517	-	✓
DOS Client	✓			✓	-	-	-	✓
DOS Extended Client	✓			✓	-	-	-	✓
OS/2 Client	✓			✓	-	-	-	✓
Optimized OS/2 Client	✓			✓	-	-	-	✓
Windows 3.1 Client	✓			✓	-	-	-	✓
Windows 95/NT Client Refresh V4R3	✓			✓	-	-	#2640	✓
OS/2 Warp Server for OS/400	✓			✓	5769-XZ1	#2566	-	✓
Wireless Connection for AS/400	✓			✓	5798-TBW	-	-	✓
Network Station Manager for AS/400 (V3R7)	✓		✓	✓	5648-B07	-	-	-
Network Station Manager V1R3			✓	✓	5648-C05	-	-	-
Network Station Browser (40-bit encryption)	✓		✓	✓	5648-B08	-	-	-
Navio NC Navigator for IBM Network Station (40-bit encryption)	✓		✓	✓	5648-B10	-	-	-
Network Station Browser (128-bit encryption)††	✓		✓	✓	5648-B18	-	-	-
Navio NC Navigator for IBM Network Station (128-bit encryption)††	✓		✓	✓	5648-B20	-	-	-

Systems Management Products	WDFM ¹¹	Skip Ship ²		V4R1	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
Backup Recovery and Media Services for OS/400	✓			✓	5769-BR1	#2521	-	✓
Job Scheduler for OS/400	✓		✓	✓	5716-JS1	#2194	-	-
SystemView Managed System Services for OS/400	✓		✓	✓	5716-MG1	#2158	-	-
Performance Tools for OS/400 ⁷	✓		✓	✓	5716-PT1	#2125	-	-
Performance Tools Manager	✓		✓	✓	-	-	#2210	-
Performance Tools Agent	✓	✓	✓	✓	-	-	#2211	-
Report/Data Archive and Retrieval System	✓		✓	✓	5716-RD1	#2193	-	-
Spool File Archive	✓		✓	✓	-	-	#2294	-
Record Level Archive	✓		✓	✓	-	-	#2295	-
Object Level Archive	✓		✓	✓	-	-	#2296	-
SystemView System Manager for OS/400	✓			✓	5769-SM1	#2533	-	✓
Netfinity Server for AS/400 V3R7	✓		✓	✓	5716-SVA	#2136	-	-
Netfinity AS/400 Manager for OS/2 V3R7	✓		✓	✓	5716-SVD	#2137	-	-
Netfinity AS/400 Manager for Windows95 V3R7	✓		✓	✓	5716-SVE	#2138	-	-
ADSTAR Distributed Storage Manager ⁷	✓		✓	✓	5716-SV2	#2197	-	-
Multiple Client Workstations Supported	✓		✓	✓	-	-	#1419- #1440	-
Multimedia Products	WDFM ¹¹	Skip Ship ²		V4R1	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
Ultimedia Business Conferencing for OS/400	✓	✓	✓	✓	5716-UB1	#2170	-	-
Person-to-Person	✓	✓	✓	✓	-	-	#2223	-
Client Access Ultimedia Tools for OS/400	✓	✓	✓	✓	5716-US1	#2172	-	-
Ultimedia Perfect Image/400	✓	✓	✓	✓	-	-	#2221	-
Ultimedia Builder/400	✓	✓	✓	✓	-	-	#2222	-
Application Development Products	WDFM ¹¹	Skip Ship ²		V4R1	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
ILE COBOL for OS/400	✓		✓	✓	5716-CB1	#2113	-	-
Application Development ToolSet Client Server	✓		✓	✓	5716-CL3	#2168	-	-
ILE C for AS/400	✓		✓	✓	5716-CX2	#2127	-	-
VisualAge C++ for OS/400	✓	✓	✓	✓	5716-CX4	#2190	-	-
VisualAge C++ for OS/2 Client	✓	✓	✓	✓	-	-	#2214	-
VisualAge C++ for AS/400 (Windows)	✓		✓	✓	5716-CX5	#2132		-
VisualAge C++ for Windows Client	✓	✓	✓	✓	-	-	#2220	-
CICS for OS/400	✓	✓	✓	✓	5716-DFH	#2145	-	-
Application Program Driver for OS/400	✓	✓	✓	✓	5716-PD1	#2157	-	-

Application Development ToolSet for AS/400 ⁷	✓		✓	✓	5716-PW1	#2126	-	-
Application Dictionary Services/400 ⁷	✓	✓	✓	✓	-	-	#2212	-
Application Development Manager/400 ⁷	✓	✓	✓	✓	-	-	#2213	-
ILE RPG for AS/400 ⁷	✓		✓	✓	5716-RG1	#2112	-	-
VisualGen Host Services for OS/400	✓	✓	✓	✓	5716-VG1	#2177	-	-
AS/400 Toolbox for Java	✓			✓	5798-JC1	-	-	-
Office Products	WDFM ¹¹	Skip Ship ²		V4R1	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
Advanced Function Printing Utilities for OS/400	✓		✓	✓	5716-AF1	#2141	-	-
Advanced DBCS Printer Support†	✓		✓	✓	5716-AP1	#2110	-	-
Language Dictionaries for AS/400 ⁷	✓		✓	✓	5716-DCT	#2105	-	-
Business Graphics Utility for AS/400	✓		✓	✓	5716-DS1	#2107	-	-
Advanced Function Printing Fonts for AS/400	✓	✓	✓	✓	5716-FNT	#2150	-	-
Various Fonts	✓	✓	✓	✓	-	-	#2225 to #2239	-
Advanced Function Printing DBCS Fonts for AS/400	✓		✓	✓	5716-FN1	#2135	-	-
Various Fonts	✓	✓	✓	✓	-	-	#2250 to #2254	-
OfficeVision for AS/400 ⁷	✓			✓	5769-WP1	#2504	-	✓
ImagePlus VisualInfo for AS/400 V4R1	✓		✓	✓	5733-A18	-	-	✓
AFP PrintSuite for OS/400 ⁷	✓		✓	✓	5798-AF3	-	-	-
OfficeVision JustMail for OS/400	✓		x	✓	5798-TBT	-	-	✓
Facsimile Support for OS/400	✓	✓	✓	✓	5798-TAY	-	-	-
Packaged Software	WDFM ¹¹	Skip Ship ²		V4R1	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
BasePak for Lotus Notes	✓			✓	5769-APK	#1454	-	-
EnhancedPak for Lotus Notes	✓			✓	5769-EPK	#1465	-	-
ValuPak for OS/400	✓			✓	5769-VP1	#1463	-	-
GrowthPak for OS/400	✓			✓	5769-GP1	#1464	-	-
Application Development ToolSet Plus	✓		✓	✓	5716-PWK	#1462	-	-
ValuPak for AS/400 for Print	✓		✓	✓	5716-PPK	#1459	-	-
Operations Productivity Pak	✓			✓	5769-OPK	#1771	-	-
Additional Products	WDFM ¹¹	Skip Ship ²		V4R1	Product Identifier	Stack Feature ²	Addn'l Feature ²	SW Sub- scription ⁸
		V3R6	V3R7					
System/38 Migration Aid	✓	✓	✓	✓	5714-MG1	-	-	-
System/36 Migration Aid	✓	✓	✓	✓	5727-MG1	-	-	-

18.11 Table Notes for V4R5, V4R4, V4R3, V4R2, and V4R1

Note 1:	<p>V4 supports the following AS/400e RISC models <i>only</i>:</p> <p>9401-150 9402/4-4xx 9404/6-5xx 9402/4/6-6xx/Sxx 9406-170 (V4R2) 9406-7xx (V4R3) 9406-250 (V4R5) 9406-270 (V4R5) 9406-8xx (V4R5) 9406-SB2/SB3 (V4R5)</p> <p>This version <i>does not</i> support any AS/400 CISC models.</p> <p>V4R1 is available beginning 29 August 1997. V4R2 is available beginning 27 February 1998. V4R3 is available beginning 14 September 1998. V4R4 is available beginning 29 May 1999. V4R5 is available beginning 28 July 2000</p>																																															
Note 2:	<p>The Stack Feature and Addn'l Feature columns provide the feature codes that are included in the System Program Order (5755-AS5) when a specific product or feature is ordered. Prior to V4R4 most AS/400 products are supplied together on a "stacked" media that is generated based on the features listed in the 5755-AS5 product. For Version 4, the only "stacked" media available is CD-ROM.</p> <p>With the introduction of Keyed Stamped Media in V4R4 all products the customer ordered are no longer "stacked" on a single set of CDs. For V4R4 and after, the SIPO provides a list of all products the customer receives. The customer receives the following groupings of CDs:</p> <ul style="list-style-type: none">• Microcode CDs• OS/400 Base Operating System CDs• Set of Keyed Stamped Media CDs• Individual CD for each product ordered that is not part of Keyed Stamped Media• Cumulative PTF CDs <p>Products marked with a "✓" in the Skip Ship column are unchanged from a prior version and/or release and are referred to as being "skip shipped". These products retain their original product identifiers but are still shipped as part of a 5755-AS5 stacked media when ordered.</p> <p>A typical order for licensed programs may be constructed as shown here:</p> <table><tr><td>5755-AS5</td><td>#2501</td><td>OS/400</td></tr><tr><td></td><td>#25xx</td><td>V4R1 and V4R2 Licensed Programs</td></tr><tr><td></td><td>#21xx</td><td>V3R6/V3R7 Skip Ship Licensed Programs</td></tr><tr><td></td><td>#26xx</td><td>Additional Features of V4R1 and V4R2 Licensed Programs</td></tr><tr><td></td><td>#22xx</td><td>Additional Features of V3R6/V3R7 Licensed Programs</td></tr><tr><td></td><td>#1991</td><td>New Releases and CumPacks supplied on demand only</td></tr><tr><td></td><td>#19xx</td><td>Update Feature (see below)</td></tr><tr><td></td><td>#29xx</td><td>Primary Language</td></tr><tr><td></td><td>#3410</td><td>CD-ROM Media</td></tr><tr><td></td><td>#35xx</td><td>Release Specifier (see below)</td></tr><tr><td></td><td>#5000</td><td>SW Preload</td></tr></table> <p>Release Specifiers:</p> <table><tr><td>#3510</td><td>Release specifier for V4R1</td></tr><tr><td>#3520</td><td>Release specifier for V4R2</td></tr><tr><td>#3530</td><td>Release specifier for V4R3</td></tr><tr><td>#3540</td><td>Release specifier for V4R4</td></tr><tr><td>#3550</td><td>Release specifier for V4R5</td></tr></table> <p>Update Features:</p> <table><tr><td>#1960</td><td>Version 3 to Version 4 Release 1 Upgrade PTFs</td></tr><tr><td>#1925</td><td>PTFs when upgrading to V4R2</td></tr></table>	5755-AS5	#2501	OS/400		#25xx	V4R1 and V4R2 Licensed Programs		#21xx	V3R6/V3R7 Skip Ship Licensed Programs		#26xx	Additional Features of V4R1 and V4R2 Licensed Programs		#22xx	Additional Features of V3R6/V3R7 Licensed Programs		#1991	New Releases and CumPacks supplied on demand only		#19xx	Update Feature (see below)		#29xx	Primary Language		#3410	CD-ROM Media		#35xx	Release Specifier (see below)		#5000	SW Preload	#3510	Release specifier for V4R1	#3520	Release specifier for V4R2	#3530	Release specifier for V4R3	#3540	Release specifier for V4R4	#3550	Release specifier for V4R5	#1960	Version 3 to Version 4 Release 1 Upgrade PTFs	#1925	PTFs when upgrading to V4R2
5755-AS5	#2501	OS/400																																														
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#1925	PTFs when upgrading to V4R2																																															

Note 3:	† This product is available in Asia Pacific (AP) countries only. †† This product is available in U.S.A. and Canada only. ††† This product is available in Europe, Middle East, and Africa (EMEA) countries only. †††† This product is available in EMEA, AP, and Latin America (LA) countries only.																																																																																																																								
Note 4:	Alternate IPL Device Feature Codes: #5502 840 MB Mini ¼-inch Cartridge Tape Unit (not 250, 270, 6xx, Sxx, 7xx, 8xx) #5503 9347 Tape Unit (not 250, 270, 8xx) #5504 3490 E01/E11 Tape Units #5505 2440 Tape Unit (not 250, 270, 8xx) #5506 4 GB ¼-inch Cartridge Tape Unit (not 150, 4xx, 5xx) #5507 9348 Tape Unit #5508 3422 Tape Subsystem (not 250, 270, 8xx) #5509 3430 Tape Subsystem (not 250, 270, 8xx) #5511 3480 Tape Subsystem #5512 3490 C10/C11/C22 Tape Unit #5513 3490 Tape Subsystem #5514 7208 8mm Tape Drive and Internal 8mm Tape Unit #5515 3570/358x Tape Subsystem #5516 1.2 GB ¼-inch Cartridge Tape Unit (not 270, 8xx) #5517 2.5 GB ¼-inch Cartridge Tape Unit #5518 13 GB ¼-inch Cartridge Tape Unit #5519 3590 Tape System #5531 16 GB ¼-inch Cartridge Tape Unit #5536 25 GB ¼-inch Cartridge Tape Unit #5599 No Save/Restore Device Refer to the Storage chapter and the Internal Tape Unit sections to see which tapes are supported on which models.																																																																																																																								
Note 5:	<table><tr><th colspan="2">Maximum number of chargeable users by product</th><th colspan="6">Maximum Number of Users</th></tr><tr><th></th><th></th><th>P05</th><th>P10</th><th>P20</th><th>P30</th><th>P40</th><th>P50</th></tr><tr><td>5769-BR1</td><td>BRMS for OS/400</td><td>50</td><td>50</td><td>50</td><td>50</td><td>50</td><td>50</td></tr><tr><td>5769-FW1</td><td>Firewall for AS/400</td><td>--</td><td>--</td><td>16 IPCS</td><td></td><td>--</td><td>--</td></tr><tr><td>5769-SM1</td><td>System Manager for AS/400</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td></tr><tr><td>5769-WP1</td><td>OfficeVision for AS/400</td><td>10</td><td>40</td><td>100</td><td>200</td><td>300</td><td>300</td></tr><tr><td>5769-XW1</td><td>Client Access Family For Windows</td><td>10</td><td>40</td><td>100</td><td>150</td><td>200</td><td>250</td></tr><tr><td>5769-XY1</td><td>Client Access Family</td><td>10</td><td>40</td><td>100</td><td>150</td><td>200</td><td>250</td></tr><tr><td>5769-XZ1</td><td>OS/2 Warp Server for AS/400</td><td>--</td><td>--</td><td>16 IPCS</td><td></td><td>--</td><td>--</td></tr><tr><td>5798-TBT</td><td>JustMail/400</td><td>--</td><td>--</td><td>No Maximum Limit</td><td></td><td>--</td><td>--</td></tr><tr><td>5769-DFH</td><td>CICS for AS/400</td><td>450</td><td>450</td><td>450</td><td>450</td><td>450</td><td>450</td></tr><tr><td>5769-RD1</td><td>OnDemand for AS/400 (Spl File Arch)</td><td>25</td><td>25</td><td>25</td><td>25</td><td>25</td><td>25</td></tr><tr><td>5769-SVD</td><td>Netfinity AS/400 Manager for OS/2</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td></tr><tr><td>5769-SVE</td><td>Netfinity AS/400 Manager for WIN95</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td></tr><tr><td>5769-SV3</td><td>ADSTAR Distributed Storage Mgr V3</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td></tr></table>	Maximum number of chargeable users by product		Maximum Number of Users								P05	P10	P20	P30	P40	P50	5769-BR1	BRMS for OS/400	50	50	50	50	50	50	5769-FW1	Firewall for AS/400	--	--	16 IPCS		--	--	5769-SM1	System Manager for AS/400	250	250	250	250	250	250	5769-WP1	OfficeVision for AS/400	10	40	100	200	300	300	5769-XW1	Client Access Family For Windows	10	40	100	150	200	250	5769-XY1	Client Access Family	10	40	100	150	200	250	5769-XZ1	OS/2 Warp Server for AS/400	--	--	16 IPCS		--	--	5798-TBT	JustMail/400	--	--	No Maximum Limit		--	--	5769-DFH	CICS for AS/400	450	450	450	450	450	450	5769-RD1	OnDemand for AS/400 (Spl File Arch)	25	25	25	25	25	25	5769-SVD	Netfinity AS/400 Manager for OS/2	250	250	250	250	250	250	5769-SVE	Netfinity AS/400 Manager for WIN95	250	250	250	250	250	250	5769-SV3	ADSTAR Distributed Storage Mgr V3	250	250	250	250	250	250
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5769-DFH	CICS for AS/400	450	450	450	450	450	450																																																																																																																		
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5769-SV3	ADSTAR Distributed Storage Mgr V3	250	250	250	250	250	250																																																																																																																		
Note 6:	<p>These products are licensed using the International Program License Agreement (IPLA). The remaining V4 licensed programs are licensed under the International Customer Agreement (ICA) or IBM Agreement for Programs (IAP) terms.</p> <p>Three documents, <i>Proof of Entitlement (POE)</i>, <i>License Information Document (LID)</i>, and <i>International Program License Agreement (IPLA)</i>, are provided with IPLA software as proof of a valid license. IPLA software may be sold to another party. You must notify the purchaser of the program's terms and provide the POE, LID, and IPLA documents to the purchaser. IBM licenses the purchaser when that party accepts the program's license terms by initial use of the program. The seller's license is terminated at this time.</p> <p>When ordering upgrades to software licensed under the IPLA, such as OS/400, a copy of the POE should be provided by the customer to validate the license to the software.</p>																																																																																																																								

Note 7:

These products are also available in software packages.

5769-VP1 ValuPak for OS/400 (not available on OS/400 V4R5) includes:

5769-SS1	Operating System/400	Note: Provides the following number of users:
5769-PSF	1-19 ipm feature of OS/400	XW1: P05/10 P10/20 P20/50 P30/70 P40/125 P50/150
5769-XW1	Client Access Family for Windows	
5769-QU1	Query/400	
5769-ST1	DB2/400 Query Manager and SQL Development Kit	
57xx-PT1	Performance Tools (Manager feature)	

5769-GP1 GrowthPak for OS/400 (OS/400 V4R1, V4R2, or V4R3 only, withdrawn 31 August 1999) includes:

5769-SS1	Operating System/400
5769-XW1	Client Access Family for Windows
5769-QU1	Query/400
5769-ST1	DB2/400 Query Manager and SQL Development Kit
5716-DCT	Language Dictionary/400
57xx-PT1	Performance Tools (Manager feature)
5769-WP1	OfficeVision/400

Note: Provides the following number of users:

XW1: P05/10 P10/20 P20/50 P30/70 P40/125 P50/150
WP1: P05/10 P10/20 P20/50 P30/140 P40/250 P50/250.

5769-PWK Application Development ToolSet Plus (5716-PWK in OS/400 V4R1, withdrawn 15 May 2000) includes:

57xx-PW1	Application ToolSet
	- Application Dictionary Services
	- Application Development Manager
57xx-CL3	Application Development Client Server ToolSet

Note: Provides the following number of users: CL3: P05/1 P10/1 P20/1 P30/1 P40/1 P50/1

5769-PPK ValuPak for AS/400 Printing (5716-PPK in OS/400 V4R1, not available on V4R5) includes:

57xx-AF1	Advanced Function Printing Utilities
5648-B45	AFP Font Collection
5798-AF3	AFP PrintSuite components:
	- Advanced Print Utility
	- Page Printer Formatting Aid

Note: User-based pricing does not apply to any of the products in this pack.

5769-APK OS/400 Integration Base Pack for Lotus Notes (OS/400 V4R1 only, withdrawn May 1998) includes:

Integration Services for Integrated PC Server feature of OS/400
IBM OS/400 Integration for Lotus Notes feature of OS/400
One Lotus Notes Server license
One Lotus Notes Client license

5769-EPK OS/400 Integration Enhanced Pack for Lotus Notes (OS/400 V4R1 only, withdrawn May 1998) includes:

IBM OS/400 Integration Base Pack for Lotus Notes (see above)	
5716-DP1	DataPropagator Relational for OS/400
5716-SV2	ADSTAR Distributed Storage Manager for AS/400, V2.1

5769-OPK Operations Productivity Pak (OS/400 V4R1, V4R2, or V4R3 only, withdrawn 31 August 1999) includes:

57xx-JS1	Job Scheduler
5769-BR1	Backup Recovery and Media Services (includes 5 user licenses, 50 media)
5716-SV2	ADSTAR Distributed Storage Manager (includes 20 user licenses)

Note 8:	<p>A number in the Software Subscription column indicates that the product is on the Eligible Products List for Software Subscription.</p> <p>Customers must purchase Software Subscription when they move to Version 4 to upgrade to new versions or releases. Software Subscription is available at a monthly charge (billed quarterly) or with prepayment options of between one and five years.</p> <p>The price of Software Subscription is the same no matter what software has been licensed to a system. Most AS/400 stacked software is covered by Software Subscription. Customers who do not take out Software Subscription when they install Version 4 must either re-license the software or pay the Currency Access Fee of Software Subscription to join if they want to upgrade to a new version or release.</p> <p>For more information on Software Subscription, refer to: http://www-1.ibm.com/servers/eserver/series/</p> <p>A current list of program products covered by Software Subscription can be found at: http://www-1.ibm.com/servers/eserver/series/</p> <p>Software subscription is ordered as a unique product/model combination depending upon the method of payment. The current products are:</p> <table> <tr> <td>5733-SMM</td><td>Software Subscription for AS/400 Periodic Change</td></tr> <tr> <td>5733-SM1</td><td>Software Subscription for AS/400 1-Year Prepay</td></tr> <tr> <td>5733-SM2</td><td>Software Subscription for AS/400 2-Year Prepay</td></tr> <tr> <td>5733-SM3</td><td>Software Subscription for AS/400 3-Year Prepay</td></tr> <tr> <td>5733-SM4</td><td>Software Subscription for AS/400 4-Year Prepay</td></tr> <tr> <td>5733-SM5</td><td>Software Subscription for AS/400 5-Year Prepay</td></tr> <tr> <td>5733-CAF</td><td>Software Subscription Currency Access Fee</td></tr> </table>	5733-SMM	Software Subscription for AS/400 Periodic Change	5733-SM1	Software Subscription for AS/400 1-Year Prepay	5733-SM2	Software Subscription for AS/400 2-Year Prepay	5733-SM3	Software Subscription for AS/400 3-Year Prepay	5733-SM4	Software Subscription for AS/400 4-Year Prepay	5733-SM5	Software Subscription for AS/400 5-Year Prepay	5733-CAF	Software Subscription Currency Access Fee
5733-SMM	Software Subscription for AS/400 Periodic Change														
5733-SM1	Software Subscription for AS/400 1-Year Prepay														
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5733-SM3	Software Subscription for AS/400 3-Year Prepay														
5733-SM4	Software Subscription for AS/400 4-Year Prepay														
5733-SM5	Software Subscription for AS/400 5-Year Prepay														
5733-CAF	Software Subscription Currency Access Fee														
Note 9:	<p>A number (representing the Install Code ID of the product) in the Keyed Stamped Media column indicates that the product is one of those provided in V4R4 on AS/400 Keyed Stamped Media and shipped with OS/400. This is to provide on-demand delivery of these products and features and allows a 70-day evaluation period for any of the provided products or features. To use the software distributed on the keyed stamped media after the 70-day evaluation period, order a Software License Key. New Software License Keys are also required when the Version, Release, or Modification Level of the software changes. If the software is transferred to a different system, a new software key is required as well. Some software is keyed based on the processor group and a new software key must be obtained when the processor group changes.</p> <p>When a Software License Key is ordered, retain the <i>Software License Key Sheet</i> that IBM provides.</p> <p>If a Keyed Stamped Media product or feature is to be upgraded, the current Software License Key Sheet for the product must be provided as proof of license.</p> <p>In the United States, Canada, and Asia Pacific a customer upgrading from V4R4 to V4R5 receives only new Software License Key sheets for program products that changed in V4R5. Program Products that changed in V4R5 may be identified by a blank in the Skip Ship column.</p>														
Note 10:	Included in SPO when OS/400 is ordered, no 5769-SS1 chargeable feature is required.														
Note 11:	<p>A "✓" in the WDFM (Withdrawn from Marketing) column indicates that the product has been withdrawn from marketing for a specific version and release.</p> <p>A date in the WDFM column indicates that the product will be withdrawn from marketing on the date specified.</p>														
Note 12:	<p>Available in USA and Canada only.</p> <p>Can be made available with a bulk license outside USA and Canada if the customer receiving the product meets standards set forth by the United States Government.</p>														
Note 13:	MQSeries for AS/400, V5.1, can be ordered as product 5801-AAR, feature 5610. It can also be ordered using part number 0704923.														
Note 14:	MQSeries Integrator can be ordered as product 5801-AAR, feature 6002. It can also be ordered using part number 0764248.														

18.12 V3R6 and V3R7 OS/400 Software (RISC Systems)

The following table shows those V3R7 and V3R6 OS/400 based software products most commonly ordered. It is not intended to be a definitive list of all AS/400e software products now available. See 18.14, "Software Pricing Groups: V3 and V4" on page 502, for information about different releases of V3 software.

V3R6 OS/400 was withdrawn from marketing effective 21 November 1997. The end of service support was 31 October 1998.

V3R7 OS/400 was withdrawn from marketing effective 01 December 1998. The end of service support was 30 June 1999.

Database Products	WDFM ²	V3R6 ¹	V3R7 ¹	Product Identifier	Stack Feature	Addn'l Feature
System Program Order (also known as Software Stack)	✓	✓	✓	5755-AS4	-	-
Operating System/400* (including TCP/IP Connectivity Utilities/400)	✓	✓	✓	5716-SS1	#2101	-
SystemView Base for OS/400	✓	x	✓	-	-	#2195
PSF/400*	✓	✓	✓	-	-	#2291
CPA Toolkit	✓	✓	✓	-	-	#2290
Media and Storage Extensions	✓	✓	✓	-	-	#2219
OptiConnect for OS/400	✓	✓	✓	-	-	#2242
Integration Services for Integrated PC Server	✓	x	✓	-	-	#2244
Netware Integration for OS/400	✓	x	✓	-	-	#2245
Enhanced Netware Integration	✓	x	✓	-	-	#2246
SOMObjects Runtime	✓	x	✓	-	-	#2247
Integration of Lotus Notes*	✓	x	✓	-	-	#2256
DB2 Symmetric Multiprocessing	✓	x	✓	-	-	#2298
DB2 MultiSystem	✓	x	✓	-	-	#2299
Cryptographic Support for OS/400	✓	✓	✓	5716-CR1	#2118	-
S/38 Utilities for OS/400	✓	✓	✓	5716-DB1	#2119	-
DataPropagator Relational Capture and Apply for OS/400*	✓	✓	✓	5716-DP1	#2165	-
Query for OS/400*	✓	✓	✓	5716-QU1	#2108	-
DB2 Query Manager and SQL Development Kit for OS/400*	✓	✓	✓	5716-ST1	#2111	-
Networking Products	WDFM V3R7 ²	V3R6 ¹	V3R7 ¹	Product Identifier	Stack Feature	Addn'l Feature
Point-of-Sale Communication Utility for OS/400	✓	✓	✓	5716-CF1	#2128	-
Communications Utilities for OS/400	✓	✓	✓	5716-CM1	#2103	-
CallPath for OS/400	✓	✓	x	5716-CP2	#2146	-
CallPath for OS/400	✓	x	✓	5716-CP3	#2131	-

OSI File Services for OS/400	✓	✓	✓	5716-FS1	#2142	-
MQSeries for OS/400	✓	✓	✓	5716-MQ1	#2123	-
OSI Message Services for OS/400	✓	✓	✓	5716-MS1	#2120	-
OSI Communications Subsystem for OS/400	✓	✓	✓	5716-OS1	#2102	-
Client Access for OS/400*	✓	✓	✓	5716-XA1	#2180	-
DOS Extended Client	✓	✓	✓	-	-	#2181
OS/2 Client	✓	✓	✓	-	-	#2182
DOS Client	✓	✓	✓	-	-	#2183
Windows 3.1 Client	✓	✓	✓	-	-	#2184
Optimized OS/2 Client	✓	✓	✓	-	-	#2186
Windows 95/NT Client	✓	✓	✓	-	-	#2196
Client Access Family for Windows*	✓	x	✓	5716-XW1	#2116	-
Enhanced for Windows 3.1 Client	✓	x	✓	-	-	-
Windows 95/NT Client	✓	x	✓	-	-	-
Client Access Family	✓	x	✓	5716-XY1	#2117	-
DOS Client	✓	x	✓	-	-	-
DOS Extended Client	✓	x	✓	-	-	-
OS/2 Client	✓	x	✓	-	-	-
Optimized OS/2 Client	✓	x	✓	-	-	-
Windows 3.1 Client	✓	x	✓	-	-	-
Client Access Migration Aid	✓	x	✓	-	#2106	-
LAN Server for OS/400	✓	✓	✓	5716-XZ1	#2166	-
TCP/ICP File Server Support for OS/400	✓	✓	✓	5798-TAZ	-	-
RadioPac for OS/400	✓	✓	x	5798-TBD	-	-
PagerPac for OS/400	✓	✓	x	5798-TBC	-	-
UNIX Connection Program for OS/400	✓	✓	x	5798-TBE	-	-
NetView File Transfer Program	✓	✓	✓	5798-TBG	-	-
Network Station Manager V1R3	x	x	✓	5648-C05	-	-
Network Station Manager for AS/400 (V3R7)	✓	x	✓	5648-B07	-	-
Network Station Browser (40-bit encryption)	✓	x	✓	5648-B08	-	-
Navio NC Navigator for IBM Network Station (40-bit encryption)	✓	x	✓	5648-B10	-	-
Network Station Browser (128-bit encryption)††	✓	x	✓	5648-B18	-	-
Navio NC Navigator for IBM Network Station (128-bit encryption)††	✓	x	✓	5648-B20	-	-
Systems Management Products	WDFM²	V3R6¹	V3R7¹	Product Identifier	Stack Feature	Addn'l Feature
Backup Recovery and Media Services for OS/400	✓	✓	✓	5716-BR1	#2121	-

SystemView OMEGAMON Services/400	✓	✓	✓	5716-ES1	#2122	-
Automated Facilities/400	✓	✓	✓	-	-	#2208
OMEGAVIEW/400	✓	✓	✓	-	-	#2209
Job Scheduler for OS/400	✓	✓	✓	5716-JS1	#2194	-
SystemView Managed System Services for OS/400	✓	✓	✓	5716-MG1	#2158	-
SystemView ManageWare for OS/400	✓	✓	✓	5716-MW1	#2124	-
Performance Tools for OS/400*	✓	✓	✓	5716-PT1	#2125	-
Performance Tools Manager	✓	✓	✓	-	-	#2210
Performance Tools Agent	✓	✓	✓	-	-	#2211
Report/Data Archive and Retrieval System	✓	x	✓	5716-RD1	#2193	-
Spool File Archive	✓	x	✓	-	-	#2294
Record Level Archive	✓	x	✓	-	-	#2295
Object Level Archive	✓	x	✓	-	-	#2296
SystemView System Manager for OS/400	✓	✓	✓	5716-SM1	#2133	-
ADSTAR Distributed Storage Manager for OS/400	✓	✓	x	5716-SV1	#2169	-
Multiple Client Workstations Supported	✓	✓	x	-	-	#2271- #2289
ADSTAR Distributed Storage Manager V2R1*	✓	x	✓	5716-SV2	#2197	-
Multiple Client Workstations Supported	✓	x	✓	-	-	#1419- #1440
NetFinity Server for AS/400 V3R7	✓	x	✓	5716-SVA	#2136	-
NetFinity AS/400 Manager for OS/2 V3R7	✓	x	✓	5716-SVD	#2137	-
NetFinity AS/400 Manager for Windows 95 V3R7	✓	x	✓	5716-SVE	#2138	-
Multimedia Products	WDFM²	V3R6¹	V3R7¹	Product Identifier	Stack Feature	Addn'l Feature
Ultimedia Business Conferencing for OS/400	✓	✓	✓	5716-UB1	#2170	-
Person-to-Person	✓	✓	✓	-	-	#2223
Client Access Ultimedia Tools for OS/400	✓	✓	✓	5716-US1	#2172	-
Ultimedia Perfect Image/400	✓	✓	✓	-	-	#2221
Ultimedia Builder/400	✓	✓	✓	-	-	#2222
Application Development Products	WDFM²	V3R6¹	V3R7¹	Product Identifier	Stack Feature	Addn'l Feature
ILE COBOL for OS/400	✓	✓	✓	5716-CB1	#2113	-
Application Development Toolset Client Server for OS/400*	✓	✓	x	5716-CL1	#2167	-
CODE for OS/400 and OS/2	✓	✓	x	-	-	#2240
VRPG for OS/400 and OS/2	✓	✓	x	-	-	#2241
Application Development ToolSet Client Server for OS/400	✓	x	✓	5716-CL3	#2168	-
ILE C for OS/400	✓	✓	✓	5716-CX2	#2127	-

VisualAge C++ for OS/400	✓	✓	✓	5716-CX4	#2190	-
VisualAge C++ for OS/2 Client	✓	✓	✓	-	-	#2214
VisualAge C++ for AS/400 (Windows)	✓	✓	✓	5716-CX5	#2132	
VisualAge C++ for Windows Client	✓	✓	✓	-	-	#2220
CICS for OS/400	✓	✓	✓	5716-DFH	#2145	-
Application Program Driver for OS/400	✓	✓	✓	5716-PD1	#2157	-
Application Development ToolSet for OS/400*	✓	✓	✓	5716-PW1	#2126	-
Application Dictionary Services/400	✓	✓	✓	-	-	#2212
Application Development Manager/400	✓	✓	✓	-	-	#2213
ILE RPG for OS/400*	✓	✓	✓	5716-RG1	#2112	-
VisualGen Host Services for OS/400	✓	✓	✓	5716-VG1	#2177	-
BYPASS2000 for AS/400	✓	x	✓	5679-C20	-	-
Intelligent Miner for AS/400	✓	x	✓	5733-IM1		-
KnowledgeTool Runtime for OS/400	✓	✓	✓	5798-TAT	-	-
KnowledgeTool Development Toolkit for OS/400	✓	✓	✓	5798-TAW	-	-
Neural Network Utility for OS/400	✓	✓	✓	5798-TBA	-	-
DCE Base Services for OS/400	✓	✓	✓	5798-TBF	-	-
SOMObjects Developer ToolKit	✓	x	✓	5798-TBL	-	-
AS/400 Toolbox for Java	✓	x	✓	5798-JC1	-	-
Office Products	WDFM²	V3R6¹	V3R7¹	Product Identifier	Stack Feature	Addn'l Feature
Advanced Function Printing Utilities for OS/400*	✓	✓	✓	5716-AF1	#2141	-
Advanced DBCS Printer Support	✓	x	✓	5716-AP1	#2110	-
Language Dictionaries for OS/400*	✓	✓	✓	5716-DCT	#2105	-
Business Graphics Utility for OS/400	✓	✓	✓	5716-DS1	#2107	-
Advanced Function Printing Fonts for OS/400	✓	✓	✓	5716-FNT	#2150	-
Various Fonts	✓	✓	✓	-	-	#2225 - #2239
Advanced Function Printing DBCS Fonts for OS/400†	✓	✓	✓	5716-FN1	#2135	-
Various Fonts	✓	✓	✓	-	-	#2250 - #2254
OfficeVision for OS/400*	✓	✓	✓	5716-WP1	#2104	-
ImagePlus VisualInfo for AS/400 V4R1	✓	x	✓	5733-A18	-	-
AFP PrintSuite for OS/400*	✓	x	✓	5798-AF3	-	-
OfficeVision JustMail for OS/400	✓	✓	✓	5798-TAQ	-	-
Facsimile Support for OS/400	✓	✓	✓	5798-TAY	-	-

Packaged Software	WDFM ²	V3R6 ¹	V3R7 ¹	Product Identifier	Stack Feature	Addn'l Feature
BasePak for Lotus Notes (withdrawn May 1998)	✓	x	✓	5716-APK	#1466	-
EnhancedPak for Lotus Notes (withdrawn May 1998)	✓	x	✓	5716-EPK	#1467	-
ValuPak for OS/400	✓	✓	✓	5716-VPK	#1587	-
ValuPak for V3R7	✓	x	✓	5716-VP1	#1457	
GrowthPak for OS/400	✓	✓	✓	5716-GPK	#1588	-
GrowthPak for V3R7	✓	x	✓	5716-GP1	#1458	
DeveloperPak for OS/400	✓	✓	✓	5716-DPK	#1589	-
Application Development ToolSet Plus	✓	x	✓	5716-PWK	#1462	-
ValuPak for AS/400 for Print	✓	x	✓	5716-PPK	#1459	-
Operations ProductivityPak for V3R7	✓	x	✓	5716-OPK	#1770	-
Additional Products	WDFM ²	V3R6 ¹	V3R7 ¹	Product Identifier	Stack Feature	Addn'l Feature
System/38 Migration Aid	✓	✓	✓	5714-MG1	-	-
System/36 Migration Aid	✓	✓	✓	5727-MG1	-	-

18.13 Table Notes for V3R7 and V3R6 Software

Note 1:	<p>OS/400 V3R6 and V3R7 support the following AS/400 RISC (PowerPC) models only:</p> <ul style="list-style-type: none"> 9401-150 (V3R7 only) 9402-400/40S 9404 CISC to 4xx and 5xx upgrades 9406-500/50S/510/530/53S <p>These releases do not support any AS/400 CISC models.</p> <p>V3R6 was withdrawn from marketing effective 21 November 1997 and is no longer supported effective 31 October 1998. V3R7 was withdrawn from marketing effective 01 December 1998 and is no longer supported effective 30 June 1999.</p>
Note 2:	<p>A "✓" in the WDFM column indicates that a product is about to be, or is already, withdrawn from marketing for all applicable releases.</p> <p>A date in the WDFM column indicates the date in the future when the product will be withdrawn from marketing.</p>
Note 3:	<p>A typical order for licensed programs may be constructed as follows:</p> <p>5755-AS4 #2101 OS/400 #21xx Licensed Programs #22xx Additional Features of Licensed Programs #198x Update Feature (not all stacks--see below) #1796 Custom QuickShip #1991 New Releases and CumPacks supplied on demand only #19xx Update Feature (see below) #29xx Primary Language #3410 CD-ROM Media #35xx Release Specifier (see below) #PRLI Preload required</p> <p>Release Specifiers: #3560 Release Specifier for V3R6 #3570 Release Specifier for V3R7</p>

Note 3: <i>continued</i>	Update Features: #1986 3995 Optical Library Support available on V3R6 #1988 V3R6 Processor Update (for Processors #2111, #2112, #2122, #2157, #2162) on V3R6 #1980 V3R7 3995-C4X Support																																																																																																																																																																																																																														
Note 4:	† This product is available in Asia Pacific countries only.																																																																																																																																																																																																																														
Note 5:	†† This product is available in USA and Canada only.																																																																																																																																																																																																																														
Note 6:	Alternate IPL Device Feature Codes: #5501 120 MB ¼-inch Cartridge Tape Unit #5502 840 MB ¼-inch Mini Tape Unit #5503 9347 Tape Unit #5504 3490 E01/E11 Tape Units #5505 2440 Tape Unit #5507 9348 Tape Unit #5508 3422 Tape Subsystem #5509 3430 Tape Subsystem #5510 525 MB ¼-inch Tape Unit #5511 3480 Tape Subsystem #5512 3490 C10/C11/C22 Tape Unit #5513 3490 Tape Subsystem #5514 7208 8 mm Tape Drive and Internal 8 mm Tape Unit #5515 3570 Tape Subsystem #5516 1.2 GB ¼-inch Cartridge Tape Unit #5517 2.5 GB ¼-inch Cartridge Tape Unit #5518 13 GB ¼-inch Cartridge Tape Unit #5519 3590 Tape System Refer to the Chapter 15, "External Storage Devices" on page 413, to see which tapes are supported on which models.																																																																																																																																																																																																																														
Note 7:	<table><tr><th colspan="2">Maximum number of chargeable users by product:</th><th>Users in</th><th colspan="5">Maximum Number of Users</th></tr><tr><th></th><th></th><th>Base</th><th>P05</th><th>P10</th><th>P20</th><th>P30</th><th>P40</th></tr><tr><td>5716-SS1</td><td>OS/400</td><td>N/A</td><td colspan="5">-----Not Applicable-----</td></tr><tr><td>5716-XA1</td><td>Client Access for OS/400</td><td>1</td><td>5</td><td>30</td><td>75</td><td>125</td><td>125</td></tr><tr><td>5716-XW1</td><td>Client Access Family For Windows</td><td>0</td><td>10</td><td>40</td><td>100</td><td>150</td><td>200</td></tr><tr><td>5716-XY1</td><td>Client Access Family</td><td>0</td><td>10</td><td>40</td><td>100</td><td>150</td><td>200</td></tr><tr><td>5716-DFH</td><td>CICS for OS/400</td><td>1</td><td>5</td><td>30</td><td>75</td><td>200</td><td>450</td></tr><tr><td>5716-WP1</td><td>OfficeVision for OS/400</td><td>1</td><td>10</td><td>40</td><td>100</td><td>200</td><td>300</td></tr><tr><td>5716-SM1</td><td>System Manager for OS/400</td><td>1</td><td>250</td><td>250</td><td>250</td><td>250</td><td>250</td></tr><tr><td>5716-BRI</td><td>BRMS for OS/400</td><td>0</td><td>50</td><td>50</td><td>50</td><td>50</td><td>50</td></tr><tr><td>5798-TBD</td><td>RadioPac for OS/400</td><td>N/A</td><td>750</td><td>750</td><td>750</td><td>750</td><td>750</td></tr><tr><td>5798-TBC</td><td>PagerPac for OS/400</td><td>N/A</td><td>750</td><td>750</td><td>750</td><td>750</td><td>750</td></tr><tr><td>5716-RDI</td><td>R/DARS for OS/400</td><td>1</td><td>25</td><td>25</td><td>25</td><td>25</td><td>25</td></tr><tr><td>5716-SV2</td><td>ADSM for AS/400, V2.1</td><td>N/A</td><td colspan="5">-----No Maximum Limit-----</td></tr><tr><td>5716-CL3</td><td>ADTS C/S for OS/400</td><td>N/A</td><td colspan="5">-----No Maximum Limit-----</td></tr><tr><td>5716-CP3</td><td>CallPath for OS/400</td><td>1</td><td colspan="5">-----No Maximum Limit-----</td></tr><tr><td>5716-US1</td><td>CA Ultimedia Tools for OS/400</td><td>0</td><td colspan="5">-----No Maximum Limit-----</td></tr><tr><td>5798-TAY</td><td>Facsimile Support for OS/400</td><td>N/A</td><td colspan="5">-----No Maximum Limit-----</td></tr><tr><td>5798-TAQ</td><td>JustMail</td><td>N/A</td><td colspan="5">-----No Maximum Limit-----</td></tr><tr><td>5716-XZ1</td><td>LAN Server for OS/400</td><td>1</td><td colspan="5">-----No Maximum Limit-----</td></tr><tr><td>5716-MQ1</td><td>MQSeries for OS/400</td><td>1</td><td colspan="5">-----No Maximum Limit-----</td></tr><tr><td>5798-TBL</td><td>SOMobjects Toolkit for OS/400</td><td>1</td><td colspan="5">-----No Maximum Limit-----</td></tr><tr><td>5716-ES1</td><td>OMEGAMON OMEGAVIEW</td><td>1</td><td colspan="5">-----No Maximum Limit-----</td></tr><tr><td>5716-UB1</td><td>Ultimedia Bus Conf for OS/400</td><td>1</td><td colspan="5">-----No Maximum Limit-----</td></tr><tr><td>5798-TBE</td><td>UNIX Connection for OS/400</td><td>N/A</td><td colspan="5">-----No Maximum Limit-----</td></tr><tr><td>5716-CX4</td><td>VisualAge C++ for OS/400 (OS/2)</td><td>N/A</td><td colspan="5">-----No Maximum Limit-----</td></tr><tr><td>5716-CX5</td><td>VisualAge C++ for OS/400 (Windows)</td><td>N/A</td><td colspan="5">-----No Maximum Limit-----</td></tr></table>							Maximum number of chargeable users by product:		Users in	Maximum Number of Users							Base	P05	P10	P20	P30	P40	5716-SS1	OS/400	N/A	-----Not Applicable-----					5716-XA1	Client Access for OS/400	1	5	30	75	125	125	5716-XW1	Client Access Family For Windows	0	10	40	100	150	200	5716-XY1	Client Access Family	0	10	40	100	150	200	5716-DFH	CICS for OS/400	1	5	30	75	200	450	5716-WP1	OfficeVision for OS/400	1	10	40	100	200	300	5716-SM1	System Manager for OS/400	1	250	250	250	250	250	5716-BRI	BRMS for OS/400	0	50	50	50	50	50	5798-TBD	RadioPac for OS/400	N/A	750	750	750	750	750	5798-TBC	PagerPac for OS/400	N/A	750	750	750	750	750	5716-RDI	R/DARS for OS/400	1	25	25	25	25	25	5716-SV2	ADSM for AS/400, V2.1	N/A	-----No Maximum Limit-----					5716-CL3	ADTS C/S for OS/400	N/A	-----No Maximum Limit-----					5716-CP3	CallPath for OS/400	1	-----No Maximum Limit-----					5716-US1	CA Ultimedia Tools for OS/400	0	-----No Maximum Limit-----					5798-TAY	Facsimile Support for OS/400	N/A	-----No Maximum Limit-----					5798-TAQ	JustMail	N/A	-----No Maximum Limit-----					5716-XZ1	LAN Server for OS/400	1	-----No Maximum Limit-----					5716-MQ1	MQSeries for OS/400	1	-----No Maximum Limit-----					5798-TBL	SOMobjects Toolkit for OS/400	1	-----No Maximum Limit-----					5716-ES1	OMEGAMON OMEGAVIEW	1	-----No Maximum Limit-----					5716-UB1	Ultimedia Bus Conf for OS/400	1	-----No Maximum Limit-----					5798-TBE	UNIX Connection for OS/400	N/A	-----No Maximum Limit-----					5716-CX4	VisualAge C++ for OS/400 (OS/2)	N/A	-----No Maximum Limit-----					5716-CX5	VisualAge C++ for OS/400 (Windows)	N/A	-----No Maximum Limit-----				
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5716-BRI	BRMS for OS/400	0	50	50	50	50	50																																																																																																																																																																																																																								
5798-TBD	RadioPac for OS/400	N/A	750	750	750	750	750																																																																																																																																																																																																																								
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5716-CX4	VisualAge C++ for OS/400 (OS/2)	N/A	-----No Maximum Limit-----																																																																																																																																																																																																																												
5716-CX5	VisualAge C++ for OS/400 (Windows)	N/A	-----No Maximum Limit-----																																																																																																																																																																																																																												

Note 8:

Products marked “**” are also available in software packages.

5716-VPK ValuPak for OS/400 (withdrawn 01 December 1998) includes:

Number of Users Provided:

P05 P10 P20 P30 P40

5716-SS1 Operating System/40051530100250

from 19th August 1997----- Unlimited Usage -----

5716-XA1 Client Access/400 Family 5 15 30 100 125

5716-QU1 Query/400 ----- Not Applicable -----

5716-ST1 DB2/400 Query Manager
and SQL Development Kit ----- Not Applicable -----

5716-VP1 ValuPak for V3R7 (withdrawn 01 December 1998) includes:

5716-SS1 Operating System/400 ----- Unlimited Usage -----

PSF 1-19 ipm feature of OS/400 ----- Not Applicable -----

5716-XW1 Client Access Family
for Windows 10 20 50 70 125

5716-QU1 Query/400 ----- Not Applicable -----

5716-ST1 DB2/400 Query Manager
and SQL Development Kit ----- Not Applicable -----

5716-PT1 Performance Tools/400
(Manager Feature) ----- Not Applicable -----

5716-GPK GrowthPak for OS/400 (withdrawn 01 December 1998) includes:

5716-SS1 Operating System/400 5 15 30 100 250
from 19th August 1997 ----- Unlimited Usage -----

5716-XA1 Client Access/400 Family 5 15 30 100 125

5716-QU1 Query/400 ----- Not Applicable -----

5716-ST1 DB2/400 Query Manager
and SQL Development Kit ----- Not Applicable -----

5716-DCT Language Dictionary/400 ----- Not Applicable -----

5716-WP1 OfficeVision/400 5 15 30 100 250
from 19th August 1997 10 20 50 140 250

5716-PT1 Performance Tools/400 ----- Not Applicable -----

5716-GP1 GrowthPak for V3R7 (withdrawn December 1998) includes:

5716-SS1 Operating System/400 ----- Unlimited Usage -----

PSF 19 ipm feature of OS/400 ----- Not Applicable -----

5716-XW1 Client Access Family for Windows 10 20 50 70 125

5716-QU1 Query/400 ----- Not Applicable -----

5716-ST1 DB2/400 Query Manager
and SQL Development Kit ----- Not Applicable -----

5716-QU1 Query/400 ----- Not Applicable -----

5716-PT1 Performance Tools/400
(Manager Feature) ----- Not Applicable -----

5716-WP1 OfficeVision/400 10 20 50 70 125

5716-DCT Language Dictionary/400 ----- Not Applicable -----

5716-DPK DeveloperPak for OS/400 (withdrawn December 1998) includes:

5716-PW1 Application Development
ToolSet/400 ----- Not Applicable -----

5716-RG1 Integrated Language Environment
RPG/400 ----- Not Applicable -----

5716-CL1 Application Development ToolSet
Client Server/400 5 15 30 100 250

Note 8:
continued

5716- PWK Application Development ToolSet Plus (withdrawn 31 August 1999) includes:

		Number of Users Provided:				
		P05	P10	P20	P30	P40
5716-PW1	Application Development Tool Set	----- Not Applicable -----				
	Application Dictionary Services	----- Not Applicable -----				
	Application Development Manager	----- Not Applicable -----				
5716-CL3	Application Development Tool Set Client Server	1	1	1	1	1

5716-PPK ValuPak for AS/400 for Print (withdrawn 31 August 1999) includes:

5716-AF1	Advanced Function Printing Utilities	Note: User-based pricing does not apply to any of the products in this pack.
5648-113	AFP Font Collection	
5798-AF3	AFP Print Suite components: Advanced Print Utility Page Printer Formatting Aid	

5716-APK OS/400 Integration Base Pack for Lotus Notes (withdrawn May 1998) includes:

Integration Services for Integrated PC Server (formerly FSIOF) feature of OS/400	Note: One Base Pack is required for each Integrated PC Server on which Lotus Notes is to be installed.
IBM OS/400 Integration for Lotus Notes feature of OS/400	
One Lotus Notes Server license One Lotus Notes Client license	

5716-EPK OS/400 Integration Enhanced Pack for Lotus Notes (withdrawn May 1998) includes:

IBM OS/400 Integration Base Pack for Lotus Notes (see above)	Note: One Enhanced Pack is required for the first integrated PC Server on which Lotus Notes is to be installed. Use Base Pack for the second and subsequent Integrated PC Servers with Lotus Notes. Three ADSM users are provided.
5716-DP1 DataPropagator Relational for OS/400	
5716-SV2 ADSTAR Distributed Storage Manager for AS/400,V2.1	

The Lotus Notes Packs are available for OS/400 V3R7 only.

5716-OPK Operations Productivity Pak for V3R7 (withdrawn 01 December 1998) includes:

5716-JS1 Job Scheduler	----- Not Applicable -----
5716-BR1 Backup Recovery and Media Services	All groups/5 (50 Media)
5716-SV2 ADSTAR Distributed Storage Manager	All groups/20

18.14 Software Pricing Groups: V3 and V4

Hardware Models	Processor Feature	Interactive Feature	Version 3 Groups	Version 4 Groups
10S	-	-	P05	-
150	#2269, #2270	-	EE3	-
170	#2159	-	-	P05
	#2160	-	-	P05
	#2164	-	-	P10
	#2176	-	-	P10
	#2183	-	-	P20
	#2286	-	-	P20
	#2289	-	-	P05
	#2290	-	-	P05
	#2291	-	-	P05
	#2292	-	-	P10
	#2385	-	-	P10
	#2386	-	-	P20
	#2388	-	-	P20
	#2407	-	-	P05
	#2408	-	-	P05
	#2409	-	-	P10
200	#2030	-	P05	-
	#2031	-	P10	-
	#2032	-	P10	-
20S	-	-	P05	-
250	#2295	-	-	PPS
	#2296	-	-	PPS
270	#2248	#1517	-	P05
	#2250	#1516	-	P10
		#1518	-	P10
	#2252	#1516	-	P10
		#1519	-	P10
	#2253	#1516	-	P20
		#1520	-	P20
	#2422	-	-	P05
300	#2423	-	-	P05
	#2424	-	-	P10
30S	-	-	P20	-
310	-	-	P10	-
320	-	-	P30	-
400	-	-	P40	-
	#2130	-	P05	P05
	#2131	-	P10	P10
	#2132	-	P10	P10
40E 40G 40L	#2133	-	P10	P10
	#2130	-	P05	-
	#2130	-	P05	-
	#2130	-	P05	-

Hardware Models	Processor Feature	Interactive Feature	Version 3 Groups	Version 4 Groups
40S	#2109	-	P05	
	#2110	-	P05	
	#2111	-	P05	
	#2112	-	P10	P10
40x	#2131	-	P10	-
	#2132	-	P10	-
	#2133	-	P10	-
41x	#2131	-	P10	-
	#2132	-	P10	-
	#2133	-	P10	-
42x	#2130	-	P05	P05
	#2131	-	P10	P10
	#2132	-	P10	P10
	#2133	-	P10	P10
4Hx	#2109	-	P05	P05
	#2110	-	P05	P05
	#2111	-	P05	P05
	#2112	-	P10	P10
4Sx	#2109	-	P05	
	#2110	-	P05	
	#2111	-	P05	
4Tx	#2112	-	P10	-
436	#2102	-	P05	-
	#2104	-	P10	P10
	#2106	-	P10	P10
500	-	-	P20	P20
50S	#2120, #2121, #2122	-	P10	P10
510	#2143, #2144	-	P30	P30
530	#2150, #2151, #2152, #2153, #2162	-	P40	P40
53S	#2154, #2155, #2156	-	P20	P20
600	#2129	-	-	P05
	#2134	-	-	P10
	#2135	-	-	P10
	#2136	-	-	P20
620	#2228, #2230	-	-	P20
	#2231, #2232			P30
	#2233			P40
	#2175			P20
	#2179	-	-	P20
	#2180	-	-	P30
	#2181	-	-	P30
	#2182	-	-	P40
640	#2185, #2186, #2187	-	-	P40
	#2237			P40
	#2238	-	-	P40
	#2239	-	-	P40

Hardware Models	Processor Feature	Interactive Feature	Version 3 Groups	Version 4 Groups
650	#2188	-	-	P50
	#2189	-	-	P50
	#2240	-	-	P40
	#2243	-	-	P40
720	#2061	#1500		P10
		#1501	-	P20
		#1502	-	P20
	#2062	#1500		P10
		#1501	-	P20
		#1502	-	P20
		#1503	-	P20
	#2063	#1500	-	P20
		#1502	-	P30
		#1503	-	P30
		#1504	-	P30
	#2064	#1500	-	P20
		#1502	-	P30
		#1503	-	P30
		#1504	-	P30
		#1505	-	P30
730	#2065	#1506	-	P20
		#1507	-	P30
		#1508	-	P30
		#1509	-	P30
	#2066	#1506	-	P20
		#1507	-	P30
		#1508	-	P30
		#1509	-	P30
		#1510	-	P30
	#2067	#1506	-	P30
		#1508	-	P40
		#1509	-	P40
		#1510	-	P40
		#1511	-	P40
	#2068	#1506	-	P30
		#1508	-	P40
		#1509	-	P40
		#1510	-	P40
		#1511	-	P40
740	#2069	#1510	-	P50
		#1511	-	P50
		#1512	-	P50
		#1514	-	P40
	#2070	#1510	-	P50
		#1511	-	P50
		#1512	-	P50
		#1513	-	P50
		#1514	-	P40

Hardware Models	Processor Feature	Interactive Feature	Version 3 Groups	Version 4 Groups
820	#2395	#1521	-	P10
		#1522	-	P20
		#1523	-	P20
		#1524	-	P20
	#2396	#1521	-	P20
		#1522	-	P30
		#1523	-	P30
		#1524	-	P30
		#1525	-	P30
	#2397	#1521	-	P20
		#1522	-	P30
		#1523	-	P30
		#1524	-	P30
		#1525	-	P30
		#1526	-	P30
	#2398	#1521	-	P30
		#1522	-	P40
		#1523	-	P40
		#1524	-	P40
		#1525	-	P40
		#1526	-	P40
		#1527	-	P40
	#2425	-	-	P05
	#2426	-	-	P10
	#2427	-	-	P10
830	#2400	#1531	-	P20
		#1532	-	P30
		#1533	-	P30
		#1534	-	P30
		#1535	-	P30
	#2402	#1531	-	P30
		#1532	-	P40
		#1533	-	P40
		#1534	-	P40
		#1535	-	P40
		#1536	-	P40
	#2403	#1531	-	P40
		#1532	-	P50
		#1533	-	P50
		#1534	-	P50
		#1535	-	P50
		#1536	-	P50
		#1537	-	P50

Hardware Models	Processor Feature	Interactive Feature	Version 3 Groups	Version 4 Groups
840	#2416	#1540	-	P40
		#1541	-	P50
		#1542	-	P50
		#1543	-	P50
		#1544	-	P50
		#1545	-	P50
		#1546	-	P50
	#2417	#1540	-	P40
		#1541	-	P50
		#1542	-	P50
		#1543	-	P50
		#1544	-	P50
		#1545	-	P50
		#1546	-	P50
	#2418	#1540	-	P40
		#1541	-	P50
		#1542	-	P50
		#1543	-	P50
		#1544	-	P50
		#1545	-	P50
		#1546	-	P50
	#2419	#1540	-	P40
		#1541	-	P50
		#1542	-	P50
		#1543	-	P50
		#1544	-	P50
		#1545	-	P50
		#1546	-	P50
		#1547	-	P50
	#2420	#1540	-	P40
		#1541	-	P50
		#1542	-	P50
		#1543	-	P50
		#1544	-	P50
		#1545	-	P50
		#1546	-	P50
		#1547	-	P50
S10	#2118	-	-	P05
	#2119	-	-	P05
S20	#2161	-	-	P05
	#2163	-	-	P10
	#2165	-	-	P10
	#2166	-	-	P20
	#2170	-	-	P20
	#2177	-	-	P20
	#2178	-	-	P20
S20	#2328, #2387, #2390, #2391			P10
	#2330, #2331, #2392			P20

Hardware Models	Processor Feature	Interactive Feature	Version 3 Groups	Version 4 Groups
S30	#2203, #2204, #2205	-	-	P20
	#2206, #2256			P30
	#2257			P20
	#2258	-	-	P20
	#2259	-	-	P20
	#2260	-	-	P30
	#2320	-	-	P20
	#2321	-	-	P30
	#2322			P30
	#2324			P20
	#2325, #2326	-	-	P30
S40	#2207	-	-	P40
	#2208	-	-	P40
	#2256	-	-	P30
	#2261	-	-	P40
	#2340	-	-	P50
	#2341	-	-	P50
SB1	#2310	-	-	P30
	#2311	-	-	P40
	#2312	-	-	P40
	#2313	-	-	P40
SB2	#2315	-	-	P30
SB3	#2316	-	-	P40
	#2318	-	-	P40

18.15 Release-to-Release Product Mapping

V2	V3R05 & V3R1	V3R2 ²	V3R6 ²	V3R7	V4R1	V4R2	V4R3	V4R4	V4R5
5738-SS1	5763-SS1	5763-SS1	5716-SS1	5716-SS1	5769-SS1	5769-SS1	5769-SS1	5769-SS1	5769-SS1
-	-	5798-JC1	-	5798-JC1	5798-JC1				
5738-AF1	5763-AF1	5763-AF1	5716-AF1	5716-AF1	*	5769-AF1	*	5769-AF1	*
5738-AP1	5763-AP1	5763-AP1	5716-AP1	5716-AP1	*	5769-AP1	*	5769-AP1	5769-AP1
5798-RYT	5763-BR1	5763-BR1	5716-BR1	5716-BR1	5769-BR1	*	5769-BR1	5769-BR1	*
5738-CB1	5763-CB1	5763-CB1	5716-CB1	5716-CB1	*	5769-CB1	*	5769-CB1	*
5738-CD1 WS Feature	5763-CD1 and 5763-VR1 Upgrade to	5763-CL3	5716-CL1	5716-CL3	*	5769-CL3	*	5769-CL3	*
5738-RP1	5763-CL1								
5733-073									
5738-CF1	5763-CF1	*	5716-CF1	*	*	5769-CF1	*	5769-CF1	*
5738-CM1	5763-CM1	5763-CM1	5716-CM1	5716-CM1	*	5769-CM1	*	5769-CM1	*
5738-CP1 5738-CP2	5763-CP2	5763-CP3	5716-CP2		*	*	5769-CP4	*	N/A
5738-CR1	5763-CR1	5763-CR1	5716-CR1	5716-CR1	*	5769-CR1	*	5769-CR1	*
5738-CX1 5738-CX2	5763-CX2	*	5716-CX2	5716-CX2	*	5769-CX2	5769-CX2	5769-CX2	*
-	-	5716-CX4	*	*	*	*	*	*	*
-	-	-	5716-CX5	*	*	*	*	5769-CX5	*
5738-DB1	5763-DB1	*	5716-DB1	*	*	5769-DB1	*	5769-DB1	*
-	-	-	-	-	-	-	5769-DC1	*	*
							5769-DCE	*	*
5738-DCT	5763-DCT	5763-DCT	5716-DCT	5716-DCT	*	*	*	*	<div>5769-DL1</div> *
5738-DFH	5763-DFH	*	5716-DFH	*	*	5769-DFH	5769-DFH	5769-DFH	*
-	5763-DP1	5763-DP1	5716-DP1	5716-DP1	*	5769-DP1	5769-DP2	*	5769-DP3
5738-DS1	5763-DS1	*	5716-DS1	*	*	5769-DS1	*	5769-DS1	*
5738-ES1	5763-ES1	5763-ES1	5716-ES1	*	NA				
5738-FNT	5763-FNT	*	5716-FNT	*	*	5769-FNT	*	*	*
5738-FN1	5763-FN1	5763-FN1	5716-FN1	*	5769-FN1	*	*	*	*
5738-FS1	5763-FS1	5763-FS1	5716-FS1	*	*	NA			
5738-FT1	5738-FT1	NA							

V2	V3R05 & V3R1	V3R2 ²	V3R6 ²	V3R7	V4R1	V4R2	V4R3	V4R4	V4R5
-	-	-	-	-	5769-FW1	*	5769-FW1	5769-FW1	*
5799-JS3	5798-JS2	5763-JS1	5716-JS1	5716-JS1	*	5769-JS1	*	5769-JS1	*
5738-MC1	5738-MC1	NA							
5738-MG1 5733-165	5763-MG1	5763-MG1	5716-MG1	5716-MG1	*	5769-MG1	*	*	*
5733-103	5763-MQ1	5763-MQ2	5716-MQ1	5716-MQ1	*	5769-MQ1	5769-MQ2	*	*
5738-MS1	5763-MS1	5763-MS1	5716-MS1	*	*	NA			
5733-119	5763-MW1	*	5716-MW1	*	NA				
-	-	-	-	-	5769-NC1	*	NA		
-	-	-	-	-	5769-NCE	*	NA		
5738-OS1	5763-OS1	5763-OS1	5716-OS1	*	*	NA			
5738-PD1 5798-RYX	5763-PD1	*	5716-PD1	*	5769-PD1	5769-PD1	5769-PD1	*	*
5738-PL1	5763-PL1	*	NA						
5738-PS1	5763-PS1	*	NA						
5738-PT1 5798-RYP	5763-PT1	5763-PT1	5716-PT1	5716-PT1	*	5769-PT1	*	5769-PT1	5769-PT1
5738-PW1 5738-RP1 5738-PW2 5738-AD1 5733-080 5738-LM1	5763-PW1	5763-PW1	5716-PW1	5716-PW1	*	5769-PW1	*	5769-PW1	*
5738-QU1	5763-QU1	5763-QU1	5716-QU1	5716-QU1	5769-QU1	*	5769-QU1	5769-QU1	5769-QU1
-	5733-218	5763-RD1	-	5716-RD1	*	5769-RD1	5769-RD1	5769-RD1	5769-RD1
5738-RP1 ¹ 5738-RG1	5763-RG1	5763-RG1	5716-RG1	5716-RG1	*	5769-RG1	*	5769-RG1	*
5738-SM1	5763-SM1	5763-SM1	5716-SM1	5716-SM1	5769-SM1	*	5769-SM1	5769-SM1	5769-SM1
5738-ST1	5763-ST1	5763-ST1	5716-ST1	5716-ST1	5769-ST1	*	5769-ST1	5769-ST1	5769-ST1
5733-197	5763-SV1	5763-SV2	5716-SV1	5716-SV2	*	*	5769-SV3	*	NA
-	5763-UB1	*	5716-UB1	*	*	*	NA		
-	5763-US1	*	5716-US1	*	*	*	NA		
-	5763-VG1	*	5716-VG1	*	*	*	*	5769-VG1	5769-VG1
5738-WP1	5763-WP1	5763-WP1	5716-WP1	5716-WP1	5769-WP1	5769-WP1	*	*	*

V2	V3R05 & V3R1	V3R2 ²	V3R6 ²	V3R7	V4R1	V4R2	V4R3	V4R4	V4R5
5738-PC1	5763-XA1	5763-XA1 5763-XW1 5763-XY1	5716-XA1	5716-XA1 5716-XW1 5716-XY	5769-XW1	5769-XW1	5769-XW1	5769-XW1	5769-XW1
					5769-XY1	*	*	*	NA
-	5763-XZ1	5763-XZ1	5716-XZ1	5716-XZ1	5769-XZ1	*	*	*	NA
5798-RYD	5798-RZW	*	5798-TAT	**	**	**	**	**	NA
5798-RYE	5798-RZX	**	5798-TAW	**	**	**	**	**	NA
5798-RYW	5798-TAA	**	5798-TAZ	**	NA				
5798-RYB	5798-RZK	**	5798-TBA	NA					
5798-RYZ	**	**	5798-TBC	NA					
5798-RYY	**	**	5798-TBD	NA					
-	5798-RZB	**	5798-TBE	**	NA				
5621-051	**	**							
5765-173	**	**							
-	5733-167	5733-167	5798-TBF	**	**	**	**	**	NA
5798-RZC	5798-RZC	5798-RZJ	5798-TAQ	5798-TAQ	5798-TBT	5798-TBT	**	**	NA
5798-RYC	5798-RZT	**	5798-TAY	5798-TAY	**	5798-TBY	**	**	**
<div>- Product announced after this version/release.</div> <div>* LP Product compatible with and unmodified for this release.</div> <div>** LPO supported on this version/release.</div> <div>NA Not Available</div> <div>1 Functions found in 5738-RP1 were moved to various products. Most functions were merged into 5763-RG1. Some functions require the addition of 5763-PW1 and 5763-CL1 to provide full compatibility. See the announcement letters for these products for assistance in determining if they are required.</div> <div>2 You cannot upgrade from OS/400 V3R2 to V3R6.</div>									

18.16 IBM AS/400 Performance Protection Plan for AS/400e servers

At no additional charge for hardware, you can safeguard your performance expectations for two years as you implement Enterprise Resource Planning (ERP) applications. The AS/400 Performance Protection Plan is offered to customers installing new AS/400e Custom Server Solutions with ERP software from:

- Intenia International AB
- J.D. Edwards Corporation
- SAP AG
- System Software Associates Incorporated

The AS/400 Performance Protection Plan offers a process for sizing and protecting performance of new AS/400 ERP placements for AS/400e Custom Server solutions.

The AS/400 Performance Protection Plan is based on a completed sizing questionnaire using customer provided workload input to IBM sizing center personnel. The sizing center recommends an AS/400e Custom Server Solution configuration for a production server to allow the upgrade paths covered by the AS/400 Performance Protection Plan. After selecting a Custom Server package that fits their needs, customers should complete the enrollment package and return it to IBM.

AS/400 Performance Protection Plan commences on the date of installation for the AS/400e server. It covers a period of up to 24 months after the date of installation. The AS/400 Performance Protection Plan does not cover any software upgrade or maintenance costs associated with the hardware upgrade.

For additional information, visit the iSeries Web site:

<http://www.ibm.com/eserver/series/developer/packaging/index.html>

The IBM AS/400 Performance Protection Plan is an ideal offering for customers. Its purpose is to reassure our customers that IBM is confident that the solution chosen works and performs well on the recommended server. The IBM AS/400 Performance Protection Plan provides limited hardware upgrade protection in the event that the workload specified by the customer performs at a rate significantly different from that estimated by the sizing center.

The AS/400 Performance Protection Plan has three base (billable) prerequisites:

- AS/400 SupportLine contract
- AS/400 Pre-production performance evaluation
- IBM Operational Support Services for PM/400e software

These services were selected as part of the AS/400 Performance Protection Plan for two key reasons:

- The SupportLine contract enables you to receive support from IBM to aid diagnosing and correcting problems.
- These products and services deliver our best tools and expertise to ensure that the AS/400e server the customer installs works in accordance to the customer's expectations.

To position the AS/400 Performance Protection Plan, the principle interest of IBM is to ensure your success. IBM qualified personnel:

- Evaluates your system performance capability before going into production (the Pre-Production Performance Evaluation)
- Evaluates potential performance problems using our best tools (IBM Operational Support Services for PM/400e)
- Links you into our support structure for fast and efficient service (SupportLine)

If, after review by our support structure, we determine that the your system requires a hardware upgrade to perform at the recommended levels, IBM provides our AS/400 Performance Protection Plan customers with a memory, DASD, or Processor (or combination of the three) upgrade.

18.16.1 Restrictions

The covered system, when diagnosed for a performance problem, must be used exclusively for the purchased ISV software solution. Third-party software must be de-activated or inactivated during the diagnosis process.

If the Business Partner or customer adds or removes memory, DASD, or a processor upgrade to the system, or alters the configuration in any way pertaining to the memory, DASD, or processor as recommended by the ERP Techline Sizing Center, the AS/400 Performance Protection Plan is considered null and void.

18.17 Preload Feature Codes

Preload of solution developer software for participating providers can be ordered with selected models of iSeries and AS/400e hardware. IBM does not sell solution developer software as part of the solution

package. The customer purchases the solution through the software developer using normal solution developer channels.

The preloaded feature code specified during the configuration process triggers a solution developer license validation check before the solution developer software is preloaded, and a total solution shipment is made. Only feature code #0400 may be preloaded on Models SB2 and SB3. All listed feature codes may be preloaded on Models 270 and 8xx.

Feature Code	Company Name	Solution Name	Availability
#0400	SAP	R/3 and Ready-to-run R/3	Preload SAP R/3
#0420	J.D. Edwards	One World	Preload J.D. Edwards (Withdrawn from Marketing 31 January 2001)
#0421	J.D. Edwards	One World	JDE Validate—No Preload (Withdrawn from Marketing)
#0422	J.D. Edwards	One World	Preload JDE Package 1 is withdrawn from marketing 31 January 2001
#0423	J.D. Edwards	One World	JDE Package 2 Preload (Withdrawn from Marketing)
#0425	Other Solution Developers		Other Solution Developers
#0429	Datatex	TIM - Textile Integrated Manufacturing	Preload Datatex (TIM) is withdrawn from marketing 31 January 2001
#0430	System Software Associates	BPCS Mixed Mode and Ready-To-Go packages	Preload SSA is withdrawn from marketing 31 January 2001
#0431	System Software Associates	BPCS Mixed Mode and Ready-To-Go packages	Validate SSA - No Preload (Withdrawn from Marketing)
#0432	System Software Associates	BPCS Mixed Mode and Ready-To-Go packages	SSA Package 1 Preload (Withdrawn from Marketing)
#0433	System Software Associates	BPCS Mixed Mode and Ready-To-Go packages	SSA Package 2 Preload (Withdrawn from Marketing)
#0435	Infinium Software, Inc.	Infinium Series	Preload Infinium is withdrawn from marketing 31 January 2001
#0436	Infinium Software, Inc.	Infinium Series	Validate Infinium—No Preload (Withdrawn from Marketing)
#0439	Lawson and Associates	Lawson Software	Preload Lawson (Withdrawn from Marketing 31 January 2001)
#0440	JBA International	System 21	Preload JBA is withdrawn from marketing 31 January 2001
#0441	JBA International	System 21	Validate JBA—No Preload (Withdrawn from Marketing)
#0445	Acacia Technologies	Warehouse BOSS	Preload Acacia is withdrawn from marketing 31 January 2001)
#0449	Vormittag Associates	System 2000 R3.5	Preload Vormittag is withdrawn from marketing 31 January 2001
#0452		RRR Preload (Prod Server).	Unique geography; See announcement letter.
#0460	Intentia International	Movex	Preload Intentia is withdrawn from marketing 31 January 2001
#0461	Intentia International	Movex	Validate Intentia—No Preload (Withdrawn from Marketing)

#0465	Lilly Software Associates	Visual Manufacturing	Preload Lilly is withdrawn from marketing 31 January 2001
#0470	International Business Systems	ASW	Preload IBS is withdrawn from marketing 31 January 2001
#0471	International Business Systems	ASW	Validate IBS—No Preload (Withdrawn from Marketing)
#0475			Preload E3 (Withdrawn from Marketing 31 January 2001)
#0480	MAPICS, Inc.	XA	Preload MAPICS is withdrawn from marketing 31 January 2001
#0481	MAPICS, Inc.	XA	Validate MAPICS—No Preload (Withdrawn from Marketing)
#0485	Manhattan Associates	PkMS Version 99R1	Preload Manhattan Associates is withdrawn from marketing 31 January 2001
#0490	Baan International	BaanERP - withdrawn from marketing February 2000	Preload BAAN (Model SB1 only) Preload BAAN is withdrawn from marketing 31 January 2001
#0491	Baan International	BaanERP - withdrawn from marketing February 2000	Validate BAAN—No Preload (Model SB1 only)
#0499	Other ISVs		Preload Other ISVs (Withdrawn from Marketing)

To determine the requirements for ordering these features and an up-to-date list of valid features, see the Web site: <http://www.ibm.com/eserver/series/developer/packaging>

Or, go to the Web site at: <http://www-4.ibm.com/software/>

Chapter 19. Summary of AS/400 CISC Models

Beginning with the V4R5 edition of the *iSeries and AS/400e System Builder*, detailed information on CISC features and models was removed. This chapter provides the capacity charts which indicate the minimum and maximum configurations of the CISC models. Refer to the *AS/400 CISC System Builder*, REDP0042, redpaper at <http://www.redbooks.ibm.com> for more detailed information on the CISC models.

OS/400 V1R2 through V3R2 support CISC systems.

19.1 9401 CISC Model Capacities

The 9401 P02, P03, and 10S systems minimum and maximum capacities tables follow.

19.1.1 9401 P02 Capacities

	Minimum	Maximum
Relative System Performance (RAMP-C) See Note	2.5	2.5
Main Storage (MB)	8	16
Disk Storage (GB)	1.03	2.06
Twinaxial Devices	1	7
Communications Lines	1	1
Optional External Tapes	1	1
Note: The Relative System Performance ratios are estimated based on AS/400 environment RAMP-C workload. A measurement of 1.0 is set as the base to represent the performance of a 9404 B10 with 16MB of main storage and 945MB of disk. The ratios shown are estimated at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments.		

19.1.2 9401 P03 and 10S Capacities

Model	P03								10S
Package	T01 (#0101)	T02 (#0102)	T03 (#0108)	T11 (#0124)	T12 (#0144)	L01 (#0103)	L02 (#0104)	L03 (#0109)	S01 (#0105)
Relative System Performance (CPW) (See Note 1)	7.3	9.6	16.8	9.6	7.3	7.3	9.6	16.8	5.5/17.1*
Relative System Performance (RAMP-C) (See Note 2)	2.5	3.3	3.9	3.3	2.5	2.5	3.3	3.9	1.9/5.9*
Main Storage (MB)	8-24	8-40	8-56	8-40	8-24	8-24	8-40	8-56	8-56
Disk Storage (MB)	1.03-299	1.96-3.93	1.96-3.93	1.03-2.99	1.96-3.93	1.03-2.99	1.96-3.93	1.96-3.93	1.96-3.93
Communication Lines	1	2	2	2	1	2†	2†	2†	2†
LAN Adapters	-	-	-	-	-	1	1	1	1
Maximum Workstations (One minimum)									
Twinaxial	7	14	14	14	7	-	-	-	-
LAN Attached	-	-	-	-	-	16	16	16	16
840MB ¼-inch Mini Cartridge Tape									
Internal	1	1	1	1	1	1	1	1	1
External	1	1	1	1	1	1	1	1	1
3450 ¼-inch Cartridge	1	1	1	1	1	1	1	1	1

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all AS/400 processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	Relative System Performance ratios are estimated based on AS/400 environment RAMP-C workload. A measurement of 1.0 is set as the base to represent the performance of a 9404 B10 with 16 MB of Main Storage and 945 MB of disk storage. The ratios shown are estimated at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments.
*	First figure = Interactive Environment; Second figure = Client/Server Environment
†	On LAN and Server Packages, one line must be used to provide system console support.

19.2 9402 CISC Models

The 9402 Y10, Models 236 and 436, Models C, D, E, F, 200, and 20S package model systems minimum and maximum capacities tables follow.

19.2.1 9402 Y10 Capacities

	9402 Y10
Main Storage (MB)	1-2
Disk Storage (MB)	160-760
Diskette Unit	1
Tape (¼-inch Cartridge)	0-1
Communications Lines	0-3
LAN Adapters	0-1

19.2.2 9402 Models 236 and 436 Capacities

Processor Feature	236	436 SSP Only			436 SSP and OS/400		
	#2100	#2102	#2104	#2106	#2102	#2104	#2106
Relative System Performance (RAMP-C) (See Note 1)	1.0	1.0	1.3	2.4	4.8	6.1	8.7
Relative System Performance (CPW V3R6) (See Note 2)	†	†	†	†	14.4	18.3	24.5
Relative System Performance (CPW V3R7/V4R1/V4R2/V4R3; See Note 2)	†	†	†	†	16.3	20.6	27.4
Main Storage (MB)	32-96	32-224	32-224	32-256	64-224	64-224	64-256
Disk Storage (GB)							
SSP (See Note 3)	1.03-4.1		1.03-4.12			-	
V3R6	2		-			1.96-236	
V3R7 or higher	-		-			1.96-50.3	
Maximum Feature Card Slots	6		6			6	
Communication Lines	1-8		1-8			1-20	
LAN Adapters (See Note 4)	0-2		0-2			0-2	
ATM Adapters	0		0			0-1	
Maximum Workstation Controllers	2		4			7	
Twinaxial	2		4			7	
ASCII	0		0			6	
LocalTalk	0		0			0	
Maximum Workstations (1 minimum)							
Twinaxial	80		160			280	
ASCII	0		0			108	
LocalTalk	0		0			0	
¼-inch/8mm Cartridge Tape (Internal)	1		1			1-4	
½-inch Tape							
9348	0-2		0-2			0-4	
34xx/35xx	0		0			0-2	
8mm Cartridge Tape (External)	0		0			0-4	
Tape Libraries	0		0			0-2	
Optical Libraries	0		0			0-4	
Diskette Drives (5 ¼-inch or 8-inch)	0-1		0-1			0-2	
Fax Adapters	0		0			0-6	
Cryptographic Processors	0		0			0-1	
System I/O Buses	1		1			1	

Note 1:	The relative system performance for SSP is estimated based on running the System/36 version of RAMP-C with a maximum configured Model 236 equaling 1.0. For OS/400, the relative system performance ratios are estimated based on AS/400 environment RAMP-C workload, with a 9404 Model B10 with 16 MB of Main Storage and 945 MB of disk equaling 1.0. The ratios shown were estimated at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments. The SSP relative performance ratings cannot be compared to the OS/400 relative performance ratings.
Note 2:	CPW is the Commercial Processing Workload that is used to measure the performance of AS/400 processors. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable. From the September 1996 announcement, all new AS/400 processors have CPW performance measurements only.
Note 3:	Additional DASD may be configured on the 436 with SSP only to support RAID and mirroring.
Note 4:	The Model 436 supports three LAN adapters if running Firewall for AS/400 (5769-FW1).
†	Commercial Processing Workload (CPW) figures are not available for systems running only SSP.

19.2.3 9402 Model 436 Packages Capacities

Package Name (See Note 1)	Entry #0114	Growth #0115	Large #0116
Relative System Performance (CPW V3R6) (See Note 2)	14.4-24.5	14.4-24.5	14.4-24.5
Relative System Performance (CPW V3R7, V4R1, V4R2, or V4R3) (See Note 2)	16.3-27.4	16.3-27.4	16.3-27.4
Relative System Performance (RAMP-C OS/400) (See Note 3)	4.8-8.7	4.8-8.7	4.8-8.7
Relative System Performance (RAMP-C SSP) (See Note 4)	1.0-2.4	1.0-2.4	1.0-2.4
Main Storage (MB)	32-256	32-256	64-256
Disk Storage (GB) (See Note 5)	1.03-23.6	1.96-23.6	3.93-23.6
Standard Tape	¼-inch Cartridge	¼-inch Cartridge	¼-inch Cartridge
Twinaxial Devices	40-280	40-280	80-280
LAN Adapters (See Note 6)	0-2	0-2	0-2
Communication Lines	1-20	2-20	2-20

Note 1:	Some of the hardware on the Model 436 is not supported by SSP and requires OS/400 to support it. See the 9402 Model 436 section for more details. Additional hardware can be configured if supported as required.
Note 2:	Commercial Processing Workload (CPW) is used to measure the performance of all AS/400 processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 3:	The Relative System Performance ratios are estimated based on AS/400 environment RAMP-C workload, with a 9494 B10 with 16 MB of Main Storage and 945 MB of disk equaling 1.0. The ratios shown were estimated at maximum configurations running at 70% utilization. Relative System Performance ratios may not be realized in all environments.
Note 4:	The Relative System Performance is estimated based on running the System/36 version of RAMP-C in SSP with maximum configured Model 236 equaling 1.0. The SSP relative performance ratings cannot be compared to the OS/400 relative performance ratings. Customer results may vary.
Note 5:	As of February 1997 with V3R7, the maximum disk capacity is 50.3 GB.
Note 6:	The Model 436 supports three LAN adapters if running Firewall for AS/400 (5769-FW1).

19.2.4 9402 C and D Model Capacities

	9402 C04	9402 C06	9402 D02	9402 D04	9402 D06
Relative System Performance (CPW) (See Note 1)	3.1	3.6	3.8	4.4	5.5
Relative System Performance (RAMP-C) (See Note 2)	1.1	1.3	1.3	1.5	1.9
Main Storage (MB)	8-12	8-16	8-16	8-16	8-20
Disk Storage (MB)	640-1280	640-1280	800-1200	800-1600	800-1600
Maximum Feature Card Slots	3	3	1	3	3
Communication Lines	1-5	1-5	0-3	1-8	1-8
LAN Adapters	0-1	0-1	0-1	0-1	0-1
Maximum Workstation Controllers	1	2	1	2	2
Twinaxial	1	2	1	2	2
ASCII	1	2	1	2	2
LocalTalk	0	0	1	1	1
Maximum Workstations (1 minimum)					
Twinaxial	14	54	14	28	54
ASCII	6	24	12	12	24
LocalTalk	0	0	31	31	31
¼-inch Cartridge Tape	1	1	1	1	1
½-inch Reel Tape	0-1	0-1	0	0-1	0-1
½-inch Cartridge Tape	0	0	0	0	0
8mm Cartridge Tape	0	0	0	0-2	0-2
Tape Libraries	0	0	0	0-1	0-1
Optical Libraries	0	0	0	0-1	0-1
Diskette Drives (5 ¼-inch or 8-inch)	0-1	0-1	0-1	0-1	0-1
Fax Adapters	0	0	0	0-2	0-3
Cryptographic Processors	0	0	0	0-1	0-1
System I/O Buses	1	1	1	1	1

Note 1: Commercial Processing Workload (CPW) is used to measure the performance of all AS/400 processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.

Note 2: The Relative System Performance ratios are estimated based on AS/400 environment RAMP-C workload, with a 9404 B10 with 16 MB of Main Storage and 945 MB of disk equalling 1.0. The ratios shown were estimated at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments.

19.2.5 9402 E and F Model Capacities

	E02	E04	E06	F02	F04	F06
Relative System Performance (CPW) (See Note 1)	4.5	5.5	7.3	5.5	7.3	9.6
Relative System Performance (RAMP-C) (See Note 2)	1.5	1.9	2.6	1.9	2.5	3.3
Main Storage (MB)	8-24	8-24	8-40	8-24	8-24	8-40
Disk Storage (MB)	988-2019	988-4081	988-4081	1031-2062	1031-4124	1031-8248
Maximum Feature Card Slots	1	3	7	1	3	7
Communication Lines	0-3	1-8	1-14	0-8	1-8	1-14
LAN Adapters	0-1	0-1	0-2	0-1	0-1	0-2
Maximum Workstation Controllers	1	3	4	2	4	6
Twinaxial	1	2	2	2	2	3
ASCII	1	3	4	2	4	6
Local Talk	1	1	2	2	2	3
Maximum Workstations (1 minimum)						
Twinaxial	14	42	68	28	68	108
ASCII	12	48	66	18	66	102
LocalTalk	31	31	62	31	62	93
¼-inch Cartridge Tape	1	1	1-2	1	1	1-2
½-inch Reel Tape	0	0-1	0-2	0-1	0-1	0-2
½-inch Cartridge Tape	0	0	0	0	0	0
8mm Cartridge Tape	0	0-2	0-4	0-2	0-2	0-4
Tape Libraries	0	0-1	0-2	0-1	0-1	0-2
Optical Libraries	0	0-1	0-2	0-1	0-1	0-2
Diskette Drives (5¼-inch or 8-inch)	0-1	0-1	0-1	0-1	0-1	0-1
Fax Adapters	0	0-2	0-3	0-1	0-2	0-3
Cryptographic Processors	0	0-1	0-1	0-1	0-1	0-1
System I/O Buses	1	1	2	1	1	2

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all AS/400 processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	The Relative System Performance ratios are estimated based on AS/400 environment RAMP-C workload, with a 9404 B10 with 16 MB of Main Storage and 945 MB of disk equalling 1.0. The ratios shown were estimated at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments.

19.2.6 9402 200 Model Capacities

Processor Feature	200		
	#2030	#2031	#2032
Relative System Performance (CPW-CISC) (See Note 1)	7.3	11.6	16.8
Relative System Performance (RAMP-C) (See Note 2)			
Main Storage (MB)	2.5 8-24	4.0 8-56	6.2 16-128
Disk Storage (GB)		1.03-23.6	
(V3R1/R6)		1.03-50.3	
(V3R2/R7, V4R1/R2/R3)		6	
Maximum Feature Card Slots		1-20	
Communications Lines		0-2	
LAN Adapters		0	
ATM Adapters		7	
Maximum Workstation Controllers		7	
Twinaxial		7	
ASCII		7	
LocalTalk		7	
Maximum Workstations			
Twinaxial		280	
ASCII		126	
LocalTalk		217	
¼-inch/8mm Cartridge Tape (Internal)		0-4	
½-inch Tape			
9348		0-4	
34xx/35xx		0-2	
8mm Cartridge Tape (External)		0-4	
Tape Libraries		0-2	
Optical Libraries		0-4	
Diskette Drives (5 ¼-inch or 8-inch)		0-2	
Fax Adapters		0-6	
Cryptographic Processors		0-1	
System I/O Buses		1	

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all AS/400 processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	The Relative System Performance (RAMP-C) ratios are estimated based on the AS/400 environment RAMP-C workload, with a 9404 B10 with 16 MB of Main Storage and 945 MB of disk equalling 1.0. The ratios shown were estimated at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments.

19.2.7 9402 Model 20S Based Packages Capacities

Package Name (See Note 1)	Twinax Server 2FS	LAN Server 2FS	Starter Server 2SS	Growth Server 2SG
Relative System Performance (CPW) (See Note 2)				
Client/Server Environment	17.1	17.1	17.1	17.1
Interactive Environment	5.5	5.5	5.5	5.5
Relative System Performance (RAMP-C) (See Note 3)				
Client/Server Environment	5.9	5.9	5.9	5.9
Interactive Environment	1.9	1.9	1.9	1.9
Main Disk Storage (MB)	16-128	16-128	16-128	16-128
Disk Storage (GB)	1.96-7.84	1.96-7.84	1.96-7.84	1.96-7.84
Standard Tape	¼-inch Cartridge	¼-inch Cartridge	¼-inch Cartridge	¼-inch Cartridge
Twinaxial Devices	7	0	0	0
LAN Adapters	1-2	1-2	1	1
Communication Lines (See Note 4)	1-3	1-2	1-2	1-2

Note 1:	The 2FS packages are announced only in EMEA. The 2SS and 2SG packages are announced only in AP. None of these packages can be upgraded to any other AS/400 model. There are limited additional features that can be configured in these packages. Use the configurator to validate any additional hardware configuration.
Note 2:	Commercial Processing Workload (CPW) is used to measure the performance of all AS/400 processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 3:	The Relative System Performance ratios are estimated based on AS/400 environment RAMP-C workload, with 9404 B10 with 16 MB of Main Storage and 945 MB of disk equaling 1.0. The ratios shown were estimated at maximum configurations running at 70% utilization. Relative System Performance ratios may not be realized in all environments.
Note 4:	When Client Access console is used, one communications line is reserved for this.

19.2.8 9402 1xx, 20S, and 3xS Capacities

Processor	9402 100	9404 135	9404 140	9402 20S	9406 30S	9406 30S
Feature				#2010	#2411	#2412
Relative System Performance (CPW) (See Note 1)						
Client/Server Environment	17.1	32.3	65.6	17.1	32.3	68.5
Interactive Environment	5.5	9.6	11.6	5.5	9.6	11.6
Relative System Performance (RAMP-C) (See Note 2)						
Client/Server Environment	5.9	10.9	22.5	5.9	10.9	23.5
Interactive Environment	1.9	3.3	4.0	1.9	3.3	4.0
Number of N-Way Multiprocessors	1	1	2	1	1	2
Main Storage (MB)	16-56	32-384	64-512	16-128	32-384	64-832
Disk Storage (GB)	1.03-8.2	1.03-27.5	1.03-86.5	1.03-23.6	1.03-86.5	1.03-86.5
Maximum Feature Card Slot	6	6	21	5	64	114
Communication Lines	1-8	1-14	1-20	1-20	1-33	1-33
LAN Adapters	1-2	1-4	1-6	1-2	1-8	1-8
Maximum Workstation Controllers						
Twinax	1	1	1	1	1	1
ASCII	1	1	1	1	1	1
LocalTalk	1	2	2	1	2	2
Maximum Workstations (1 minimum)						
Twinax	7	7	7	7	7	7
ASCII	6	6	6	6	6	6
LocalTalk Devices	31	62	62	31	62	62
¼-Inch Cartridge Tape/8mm Cartridge Tape (Internal)	1-2	1-2	1-3	0-4	0-5	0-5
½-Inch Tape						
9348/2440	0-2	0-4	0-4	0-4	0-4	0-4
(The 2440 is not supported by the Model 100 or 20S)						
34xx/35xx	0	0-2	0-2	0-2	0-2	0-2
8mm Cartridge Tape (External)	0-4	0-4	0-4	0-4	0-4	0-4
Tape Libraries	0	0	0	0-2	0-2	0-2
Optical Libraries	0-1	0-6	0-10	0-4	0-10	0-10
Diskette Drives (5 ¼-inch or 8-inch)	0-1	0-2	0-2	0-2	0-2	0-2
Fax Adapters	0-3	0-6	0-10	0-6	0-16	0-16
Cryptographic Processors	0-1	0-1	0-1	0-1	0-1	0-1
System I/O Buses	1-2	1-2	1-5	1	1-3	1-5

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all AS/400 processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine the performance that is achievable.
Note 2:	The Relative System Performance ratios are estimated based on AS/400 environment RAMP-C workload, with a 9404 B10 with 16 MB of Main Storage and 945 MB of disk equalling 1.0. The ratios shown are estimates at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments.

The 9404 B, C, D, E, and F models for the AS/400 minimum and maximum capacities table follows.

19.3 9404 CISC Model Capacities

The 9404 B, C, D, E, and F models system minimum and maximum capacities tables follow.

19.3.1 9404 B and C Model Capacities

Processor Feature	9404 B10	9404 B20	9404 C10	9404 C20	9404 C25
Relative System Performance (CPW) (See Note 1)	2.9	5.1	3.9	5.3	6.1
Relative System Performance (RAMP-C) (See Note 2)	1.0	1.7	1.3	1.8	2.2
Main Storage (MB)	4-16	4-28	8-20	8-32	8-40
Disk Storage (MB)	630-2400	630-4800	640-2400	640-4800	640-6400
Maximum Feature Card Slots	4	9	4	9	9
Communication Lines	1-8	1-14	1-8	1-14	1-14
LAN Adapters	0-1	0-2	0-1	0-2	0-2
Workstation Controllers					
Twinaxial	1	2	1	2	2
ASCII	2	4	2	4	4
Maximum Workstations (1 minimum)					
Twinaxial	40	80	40	80	80
ASCII	36	72	36	72	72
½-Inch Cartridge Tape	1	1-2	1	1-2	1-2
¼-Inch Reel Tape	0-1	0-1	0-1	0-1	0-1
¼-Inch Cartridge Tape	0-1	0-1	0-1	0-1	0-1
8mm Cartridge Tape	0-2	0-2	0-2	0-4	0-4
Tape Libraries	0-1	0-2	0-1	0-2	0-2
Optical Libraries	0	0	0	0	0
Diskette Drives (5 ¼-Inch or 8-Inch)	0-1	0-2	0-1	0-2	0-2
Fax Adapters	0	0	0	0	0
Cryptographic Processors	0	0	0	0	0
System I/O Buses	1	1-2	1	1-2	1-2

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all AS/400 processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	The Relative System Performance ratios are estimated based on AS/400 environment RAMP-C workload, with a 9404 B10 with 16 MB of Main Storage and 945 MB of disk equalling 1.0. The ratios shown are estimates at maximum configurations running at 70% utilization. Relative System Performance ratios may not be realized in all environments.

19.3.2 9404 D and E Model Capacities

	9404 D10	9404 D20	9404 D25	9404 E10	9404 E20	9404 E25
Relative System Performance (CPW) (See Note 1)	5.3	6.8	9.7	7.6	9.7	11.8
Relative System Performance (RAMP-C) (See Note 2)	1.9	2.4	3.4	2.6	3.5	4.2
Main Storage (MB)	8-32	8-40	16-64	8-40	8-72	16-80
Disk Storage (MB)	800-9504	800-9504	800-15808	988-19670	988-19670	988-19670
Maximum Feature Card Slots	9	9	9	9	9	9
Communication Lines	1-14	1-14	1-14	1-14	1-20	1-26
LAN Adapters	0-2	0-2	0-2	0-2	0-2	0-3
Maximum Workstation Controllers						
Twinaxial	2	2	4	4	4	6
ASCII	4	4	6	9	9	9
LocalTalk	2	2	4	4	4	6
Maximum Workstations (1 minimum)						
Twinaxial	80	80	160	160	160	240
ASCII	72	72	108	162	162	162
LocalTalk	62	62	124	124	124	186
½-Inch Cartridge Tape	1-2	1-2	1-2	1-2	1-2	1-2
¼-Inch Reel Tape	0-4	0-4	0-4	0-4	0-4	0-4
¼-Inch Cartridge Tape	0-1	0-1	0-1	0-1	0-1	0-1
8mm Cartridge Tape	0-4	0-4	0-4	0-4	0-4	0-4
Tape Libraries	0-2	0-2	0-2	0-2	0-2	0-2
Optical Libraries	0-2	0-2	0-2	0-2	0-2	0-2
Diskette Drives (5 ¼-Inch or 8-Inch)	0-2	0-2	0-2	0-2	0-2	0-2
Fax Adapters	0-8	0-8	0-8	0-8	0-8	0-8
Cryptographic Processors	0-1	0-1	0-1	0-1	0-1	0-1
System I/O Buses	1-2	1-2	1-2	1-2	1-2	1-2

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all AS/400 processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	The Relative System Performance ratios are estimated based on AS/400 environment RAMP-C workload, with a 9404 B10 with 16 MB of Main Storage and 945 MB of disk equalling 1.0. The ratios shown are estimates at maximum configurations running at 70% utilization. Relative System Performance ratios may not be realized in all environments.

19.3.3 9404 F Model Capacities

	9404 F10	9404 F20	9404 F25
Relative System Performance (CPW) (See Note 1)	9.6	11.6	13.7
Relative System Performance (RAMP-C) (See Note 2)	3.4	4.2	4.8
Main Storage (MB)	8-72	16-80	16-80
Disk Storage (GB)	1.03-20.62	1.03-20.62	1.03-20.62
Maximum Feature Card Slots	9	9	9
Communication Lines	1-14	1-20	1-26
LAN Adapters	0-2	0-4	0-4
Maximum Workstation Controllers			
Twinaxial	9	9	9
ASCII	9	9	9
LocalTalk	9	9	9
Maximum Workstations (1 minimum)			
Twinaxial	360	360	360
ASCII	162	162	162
LocalTalk	279	279	279
½-Inch Cartridge Tape	1-2	1-2	1-2
¼-Inch Reel Tape	0-4	0-4	0-4
¼-Inch Cartridge Tape	0-2	0-2	0-2
8mm Cartridge Tape	0-4	0-4	0-4
Tape Libraries	0-2	0-2	0-2
Optical Libraries	0-2	0-4	0-4
Diskette Drives (5 ¼-Inch or 8-Inch)	0-2	0-2	0-2
Fax Adapters	0-8	0-8	0-8
Cryptographic Processors	0-1	0-1	0-1
System I/O Buses	1-2	1-2	1-2

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all AS/400 processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	The Relative System Performance ratios are estimated based on AS/400 environment RAMP-C workload with a 9404 Model B10 with 16 MB of Main Storage and 945 MB of disk equalling 1.0. The ratios shown are estimates at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments.

19.4 9406 CISC Model Capacities

This section includes information on the 9406 B, D, E, and F models, and the 3xx family of CISC processors.

19.4.1 9406 B Model Capacities

Processor Feature	9406 B30	9406 B35	9406 B40	9406 B45	9406 B50	9406 B60	9406 B70
Relative System Performance (CPW) (See Note 1)	3.8	4.6	5.2	6.5	9.3	15.1	20.0
Relative System Performance (RAMP-C) (See Note 2)	1.4	1.6	2.0	2.3	3.2	5.2	7.0
Main Storage (MB)	4-36	8-40	8-40	8-40	16-48	32-96	32-192
Disk Storage (GB)	0.6-13.7	0.6-13.7	0.6-13.7	0.6-13.7	0.6-27.4	0.6-54.8	0.6-54.8
Minimum Feature Card Slots	5	5	5	5	10	13	13
Maximum Feature Card Slots	14	14	24	24	39	71	71
Main Storage Feature Card Slots (See Note 3)	2	2	2	2	2	4	4/5
Communication Lines	2-16	2-16	2-32	2-32	2-32	2-32	2-48
LAN Adapters	0-4	0-4	0-4	0-4	0-4	0-4	0-4
Maximum Workstation Controllers							
Twinaxial/ASCII	4	4	6	6	10	15	20
¼-Inch Cartridge Tape	0-1	0-1	0-1	0-1	0-1	0-1	0-1
½-Inch Reel Tape							
9347	0-2	0-2	0-2	0-2	0-2	0-2	0-2
9348/2440	0-2	0-2	0-2	0-2	0-4	0-4	0-4
3422/3430	0-1	0-1	0-1	0-1	0-2	0-2	0-2
½-Inch Cartridge Tape							
3480/3490	0-1	0-1	0-1	0-1	0-2	0-2	0-2
8mm Cartridge Tape	0-2	0-2	0-2	0-2	0-4	0-4	0-4
Tape Libraries (9427 not supported)	0-1	0-1	0-1	0-1	0-2	0-2	0-2
Optical Libraries	0	0	0	0	0	0	0
Diskette Drives (5 ¼-Inch or 8-Inch)	0-4	0-4	0-6	0-6	0-10	0-15	0-20
Fax Adapters	0	0	0	0	0	0	0
Cryptographic Processors	0	0	0	0	0	0	0
System I/O Buses	1	1	1	1	2	3	3

19.4.2 9406 D Model Capacities

	9406 D35	9406 D45	9406 D50	9406 D60	9406 D70	9406 D80
Relative System Performance (CPW) (See Note 1)	7.4	10.8	13.3	23.9	32.3	56.6
Relative System Performance (RAMP-C) (See Note 2)	2.6	3.7	4.8	8.3	11.2	19.8
Number of N-way Multiprocessors	1	1	1	1	1	2
Main Storage (MB)	8-72	16-80	32-128	64-192	64-256	64-384
Disk Storage Base (GB)	1.28	1.28	1.28	1.28	1.28	1.28
Maximum Internal (GB)	4.1	4.1	4.1	4.1	4.1	4.1
Maximum External (GB)	63.0	63.0	94.3	141.7	141.7	251.8
Minimum Feature Card Slots	11	11	18	18	18	18
Maximum Feature Card Slots	55	55	84	140	140	196
Main Storage Feature Card Slots	2	2	5	5	5	5
Communication Lines	1-17	1-33	1-33	1-33	1-49	1-64
LAN Adapters	0-4	0-4	0-4	0-4	0-4	0-4
Maximum Workstation Controllers						
Twinaxial/ASCII/LocalTalk	6	10	15	20	30	50
Maximum Workstations (one minimum)						
Twinaxial	240	400	600	800	1200	2000
ASCII	108	180	270	360	540	900
LocalTalk	186	310	465	620	930	1550
¼-Inch Cartridge Tape	0-5	0-5	0-9	0-9	0-9	0-9
½-Inch Reel Tape						
9347	0-2	0-2	0-2	0-2	0-2	0-2
2440/9348/3422/3430	0-2	0-2	0-4	0-4	0-4	0-4
½-Inch Cartridge Tape						
3480/3490/3490E/3590/3570	0-2	0-2	0-4	0-4	0-4	0-4
8mm Cartridge Tape	0-4	0-4	0-4	0-4	0-4	0-4
Tape Libraries	0-2	0-2	0-4	0-4	0-4	0-4
Optical Libraries	0-8	0-8	0-14	0-14	0-14	0-14
Diskette Drives (5 ¼-Inch or 8-Inch)	0-2	0-2	0-2	0-2	0-2	0-2
Fax Adapters	0-8	0-16	0-16	0-16	0-24	0-32
Cryptographic Processors	0-1	0-1	0-1	0-1	0-1	0-1
System I/O Buses	2	2	3	3-5	3-5	3-7

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all AS/400 processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	The Relative System Performance ratios are estimated based on AS/400 environment RAMP-C workload, with a 9409 B10 with 16 MB of Main Storage and 945 MB of disk equalling 1.0. The ratios shown were estimated at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments.
Note 3:	The number of available Main Storage features card slots for the Model B70 depends on whether 16 MB or 32 MB Main Storage cards are installed. When only 16 MB Main Storage cards are installed, the number of Main Storage feature card slots is four. When only 32 MB Main Storage cards are installed, the number of Main Storage feature card slots is five.

19.4.3 9406 E Model Capacities

	9406 E35	9406 E45	9406 E50	9406 E60	9406 E70	9406 E80	9406 E90	9406 E95
Relative System Performance (CPW) (See Note 1)	9.7	13.8	18.1	28.1	39.2	69.4	96.7	116.6
Relative System Performance (RAMP-C) (See Note 2)	3.4	4.8	6.4	10.2	14.2	25.2	34.4	42.1
Number of N-Way Multiprocessors	1	1	1	1	1	2	3	4
Main Storage (MB)	8-72	16-80	32-128	64-192	64-256	64-512	64-1024	64-1152
Disk Storage Base (GB)	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06
Maximum Internal (GB)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Maximum External (GB)	63.0	63.0	94.3	141.7	141.7	251.8	251.8	251.8
Minimum Feature Card Slots	11	11	18	18	18	18	18	18
Maximum Feature Card Slots	55	55	84	140	140	196	196	196
Main Storage Feature Card Slots	2	2	5	5	5	5	5	5
Communication Lines	1-20	1-33	1-33	1-33	1-49	1-64	1-64	1-64
LAN Adapters	0-4	0-4	0-4	0-4	0-4	0-6	0-6	0-6
Maximum Workstation Controllers								
Twinaxial/ASCII/LocalTalk	9	12	18	25	35	60	60	60
Maximum Workstations (One minimum)	360	480	720	1000	1400	2400	2400	2400
Twinaxial	162	216	324	450	630	1080	1080	1080
ASCII	279	372	558	775	1085	1860	1860	1860
LocalTalk	0-5	0-5	0-9	0-9	0-9	0-9	0-9	0-9
¼-Inch Cartridge Tape								
½-Inch Reel Tape								
9347	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2
2440/9348/3422/3430	0-2	0-2	0-4	0-4	0-4	0-4	0-4	0-4
½-Inch Cartridge Tape								
3480/3490/3490E/3590/3570	0-2	0-2	0-4	0-4	0-4	0-4	0-4	0-4
8mm Cartridge Tape	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4
Tape Libraries	0-2	0-2	0-4	0-4	0-4	0-4	0-4	0-4
Optical Libraries	0-8	0-8	0-14	0-14	0-14	0-14	0-14	0-14
Diskette Drives (5 ¼-Inch or 8-Inch)	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2
Fax Adapters	0-10	0-16	0-16	0-16	0-24	0-32	0-32	0-32
Cryptographic Processors	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
System I/O Buses	2	2	3	3-5	3-5	3-7	3-7	3-7

19.4.4 9406 F Model Capacities

	9406 F35	9406 F45	9406 F50	9406 F60	9406 F70	9406 F80	9406 F90	9406 F95	9406 F97
Relative System Performance (CPW) (See Note 1)	13.7	17.1	27.8	40.0	57.0	97.1	127.7	148.8	177.4
Relative System Performance (RAMP-C) (See Note 2)	4.8	6.0	10.2	14.7	21.0	36.5	50.5	59.0	71.5
Number of N-Way Multiprocessors	1	1	1	1	1	2	3	4	4
Main Storage (MB)	16-80	16-80	64-192	128-384	128-512	128-768	128-1024	128-1280	128-1536
Disk Storage Base (GB)	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06
Maximum Internal (GB)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Maximum External (GB)	63.0	63.0	110.2	141.7	251.8	251.8	251.8	251.8	251.8
Minimum Feature Card Slots	11	11	18	18	17	17	17	17	17
Maximum Feature Card Slots	55	55	140	140	195	195	195	195	195
Main Storage Feature Card Slots	2	2	5	5	5	5	5	5	5
Communication Lines	1-20	1-33	1-33	1-33	1-64	1-64	1-64	1-64	1-96
LAN Adapters	0-4	0-4	0-4	0-4	0-6	0-6	0-6	0-6	0-8
Maximum Workstation Controllers									
Twinaxial/ASCII/LocalTalk	12	18	25	35	60	60	60	60	120
Maximum Workstations (one minimum)									
Twinaxial	480	720	1000	1400	2400	2400	2400	2400	4800
ASCII	216	324	450	630	1080	1080	1080	1080	2160
LocalTalk	372	558	775	1085	1860	1860	1860	1860	3270
¼-Inch Cartridge Tape									
120 MB	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
1.2 GB/2.5 GB	0-5	0-5	0-9	0-9	0-9	0-9	0-9	0-9	0-9
½-Inch Reel Tape									
9347	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2
2440/9348/3422/3430	0-2	0-2	0-4	0-4	0-4	0-4	0-4	0-4	0-4
½-Inch Cartridge Tape									
3480/3490/3490E/3590/3570	0-2	0-2	0-4	0-4	0-4	0-4	0-4	0-4	0-4
8mm Cartridge Tape	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4
Tape Libraries	0-2	0-2	0-4	0-4	0-4	0-4	0-4	0-4	0-4
Optical Libraries	0-8	0-8	0-14	0-14	0-14	0-14	0-14	0-14	0-14
Diskette Drives (5 ¼-Inch or 8-Inch)	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2
Fax Adapters	0-10	0-16	0-16	0-24	0-32	0-32	0-32	0-32	0-32
Cryptographic Processors	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
System I/O Buses	2	2	3-5	3-5	3-7	3-7	3-7	3-7	3-7

Note 1:

Commercial Processing Workload (CPW) is used to measure the performance of all AS/400 processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.

Note 2:

The Relative System Performance ratios are estimated based on AS/400 environment RAMP-C workload, with a 9404 B10 with 16 MB of Main Storage and 945 MB of disk equalling 1.0. The ratios shown were estimated at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments.

19.4.5 9406 300, 310, and 320 Model Capacities

Model	300			310		320		
Processor Feature	#2040	#2041	#2042	#2043	#2044	#2050	#2051	#2052
Relative System Performance (CPW) (See Note 1)	11.6	16.8	21.1	33.8	56.5	67.5	120.3	177.4
Relative System Performance (RAMP-C) (See Note 2)	4.2	6.0	7.5	12.0	20.2	25.7	45.8	71.5
Number of N-Way Multiprocessors	1	1	1	1	2	1	2	4
Main Storage (MB)	8-72	16-80	32-160	64-832	64-832	128-1536	128-1536	128-1536
Disk Storage Base (GB)		1.03			1.03		1.03	
Maximum Internal (GB)		117.44			159.38		259.52	
Maximum External (GB)		94.42			141.63		251.79	
Maximum Combined (GB)		117.44			159.38		259.66	
External Disk Unit IOPS		0-6			0-16		0-28	
Minimum Feature Card Slots		8			3		1	
Maximum Feature Card Slots		45			115		151	
Feature Main Storage Slots		2			3		5	
Communication Lines		1-33			1-64		1-96	
LAN Adapters (See Note 3)		0-4			0-8		0-8	
Maximum Workstation Controllers								
Twinaxial/ASCII/LocalTalk		25			60		120	
Maximum Workstations (1 minimum)								
Twinaxial		1000			2400		4800	
ASCII		450			1080		2160	
LocalTalk		775			1860		3720	
¼-Inch/8mm Cartridge Tape (Internal)		0-5			0-9		0-9	
½-Inch Tape								
9348/2440		0-4			0-4		0-4	
34xx/35xx		0-2			0-4		0-4	
8mm Cartridge Tape (External)		0-4			0-4		0-4	
Tape Libraries		0-2			0-4		0-4	
Optical Libraries		0-8			0-14		0-2	
Diskette Drives (5 ¼-inch or 8-inch)		0-2			0-2		0-32	
Fax Adapters		0-16			0-32		0-1	
Cryptographic Processors		0-1			0-1		1-7	
System I/O Buses		1-2			1-5			
System Expansion								
#5063		0-1						
#5062					0-4		0-6	
#5061					0-4		0-6	
Bus Extension								
#5042					0-2		0-3	
#5040/#5060		0-2			0-5		0-6	
Storage Expansion								
#5051		0-1			0-1		0	
#5052		0-2			0-5		0-6	

Note 1:	Commercial Processing Workload (CPW) is used to measure the performance of all AS/400 processors announced from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system model, other factors, and the application being run determine what performance is achievable.
Note 2:	The relative system performance ratios are estimated based on AS/400 environment RAMP-C workload, with a 9404 Model B10 with 16 MB of Main Storage and 945 MB of disk equalling 1.0. The ratios shown were estimated at maximum configurations running at 70% utilization. Relative system performance ratios may not be realized in all environments.
Note 3:	On Models 300 and 320, a One-Port or Two-Port Integrated PC Server (formerly known as FSIOP) counts as a single LAN. On Model 310, a Two-Port Integrated PC Server counts as two LANs.

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Appendix B. Related publications

The publications listed in this section are considered particularly suitable for a more detailed discussion of the topics covered in this redbook.

B.1 IBM Redbooks

For information on ordering the following publications, see “How to Get IBM Redbooks” on page 537.

- *iSeries Handbook*, GA19-5486
- *AS/400e to iSeries Migration: A Guide to System Upgrades at V4R5*, SG24-6055
- *AS/400 CISC System Builder*, REDP0042

B.2 IBM Redbooks collections

Redbooks are also available on the following CD-ROMs. Click the CD-ROMs button at ibm.com/redbooks for information about all the CD-ROMs offered, updates and formats.

CD-ROM Title	Collection Kit Number
IBM System/390 Redbooks Collection	SK2T-2177
IBM Networking Redbooks Collection	SK2T-6022
IBM Transaction Processing and Data Management Redbooks Collection	SK2T-8038
IBM Lotus Redbooks Collection	SK2T-8039
Tivoli Redbooks Collection	SK2T-8044
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IBM RS/6000 Redbooks Collection	SK2T-8043
IBM Application Development Redbooks Collection	SK2T-8037
IBM Enterprise Storage and Systems Management Solutions	SK3T-3694

B.3 Other resources

These publications are also relevant as further information sources:

- *Physical Planning Reference Manual*, SA41-5109
- *AS/400 Roadmap for Changing to PowerPC Technology*, SA41-5150
- *System Upgrade Roadmap (RISC to RISC)*, SA41-5155
- *Software Installation Guide*, SC41-5120
- *Backup and Recovery*, SC41-5304
- *AS/400 Performance Capabilities V4R5*, SC41-0607

This publication is available online in softcopy format only at the iSeries 400 Online Library at:
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B.4 Referenced Web sites

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- Visit the IBM Redbooks home page at: <http://www.redbooks.ibm.com>
The redpaper, *AS/400 System Builder for CISC Systems*, can be accessed at this site.
- Visit the iSeries 400 Online Library at: <http://publib.boulder.ibm.com/pubs/html/as400/onlinelib.htm>
- Supported technical specifications and industry standards are available at the ATM Forum Web site at: <http://www.atmforum.com>
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