12

AS/400e 400 models

Model	General availability	Withdrawn from marketing
400	01 September 1995	30 June 1998

12.1 AS/400e 400 model overview

Processor feature	400			
	#2130	#2131	#2132	#2133
Relative system performance (CPW-CISC or V3R6 RISC)[1]	12.3	18.3	24.5	30.6
Relative system performance (CPW - V3R7 RISC)[1]	13.8	20.6	27.0	33.3
Relative system performance (CPW - V4R1 RISC)[1]	13.8	20.6	27.0	35.0
Relative system performance (RAMP-C)[2]	4.1	6.1	8.7	10.9
Main storage (MB)	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			
Communication lines	1-20			
LAN adapters[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			

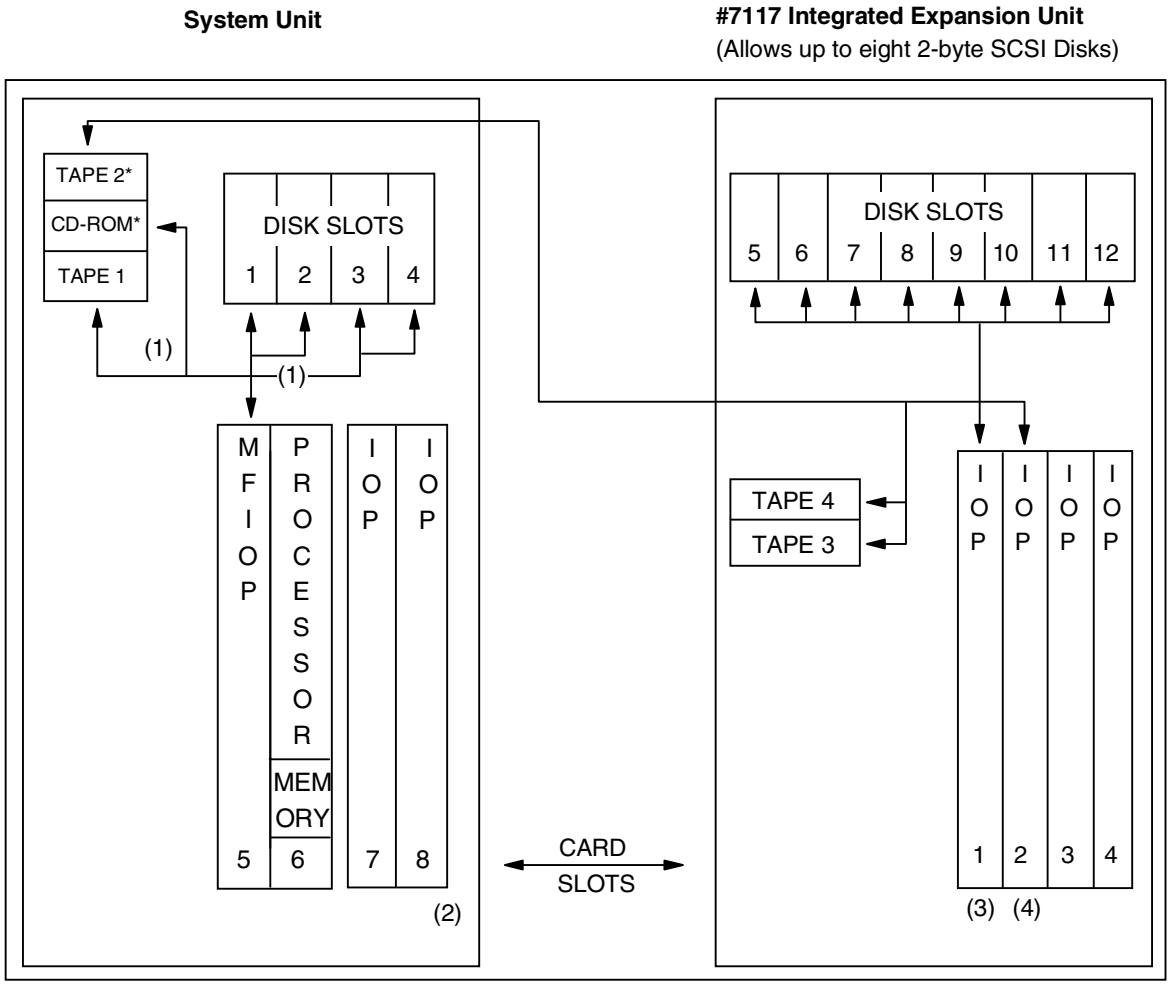
Note 1	Commercial Processing Workload (CPW) is used to measure the performance of all iSeries and AS/400e processors from September 1996 onward. The CPW value is measured on maximum configurations. The type and number of disk devices, the number of workstation controllers, the amount of memory, the system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

12.1.1 Model 400 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:
- 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.

12.2 9402 Model 400 system unit with #7117 Integrated 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. The #5135 Feature Power Supply is required if the #7117 Integrated Expansion Unit is not installed and there are three or four two-byte disk units; if the #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 a prerequisite for the #9320 Migrated Disk Unit Package. It is also required for certain high-power combinations of feature cards (when more than one of these cards is in a #7108: #2617 with the #7174/#9174 on the MFIOP, the #2618, #2620, #2628, #2663, or #2666, or if an Integrated PC Server is in a #7108).
2. The #7108 Expansion Card Cage 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 #7117 Integrated Expansion Unit.
4. Feature I/O card slot 2 is occupied by #2624 if tape drives are installed in the #7117 Integrated Expansion Unit.
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.

12.3 AS/400e Advanced System Model 400 features

See 12.2, “9402 Model 400 system unit with #7117 Integrated Expansion Unit” on page 424, for a diagram of the Model 400.

PROCESSORS		System unit	#7117 Integrated 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 Integrated Expansion Unit**
#5135	**#5135 Feature Power Supply** The #5135 Feature Power Supply is required in these circumstances: If #7117 Integrated Expansion Unit is not selected and there are three or four disks installed. If #7117 Integrated Expansion Unit is selected and there are three or four disks installed but no #6502/#6522/#6523/#6530/#6534 disk controllers. If #7117 Integrated Expansion Unit is selected and there are 11 or 12 disk units. If there is more than one #2618 Fiber Distributed Data Interface Adapter: #2620 Full Cryptographic Processor #2628 Limited Cryptographic Processor #2666 High-Speed Communications Adapter #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/IEEE 802.3 Adapter/HP in the #7108 Expansion Card Cage or #7174/#9174 Ethernet IOA in the MFIOP. The #5135 Feature Power Supply replaces #9242 Base 175-watt power supply. Card slots used: None Maximum: One	1	-
#7000	**Panel Keylock Feature** The #7000 provides a keylock to secure the door covering the system panel. Card slots used: None Maximum: One	1	-
#7108	**Expansion Card Cage** The #7108 provides two feature I/O card slots in the system unit. The #5135 Feature Power Supply may be required in high power feature combinations. Card Slots used: None Maximum: One	1	-

#7117	**#7117 Integrated Expansion Unitt** The #7117 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** The #9116 provides a special backplane and cabling that is required for these high performance cards when installed in a #7108: #2620 Full Cryptographic Processor #2628 Limited Cryptographic Processor #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 #5135 Feature Power Supply.	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. Prerequisite: #5135 Feature Power Supply 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 Integrated 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. The #2130 Processor supports two additional memory features. The other Model 400 processors support three. Supported for upgrades to Model 400 only.	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 Integrated Expansion Unit
#2629	**#2629 LAN/WAN/Workstation IOP** The #2629 supports up to three #2699, #6149, #6180, or #6181 LAN/WAN/ Workstation IOAs. The #6149 and #6181 cannot occupy all three positions of the #2629. Minimum OS/400 level: V4R1 Card slots used: One	2	4
#6050	**#6050 Enhanced Twinaxial Workstation ControllerEnhanced 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	**#6054 Workstation Adapter for Apple Macintosh (LocalTalk)** See the Communications section	2	4
#6140	**#6140 Twinaxial Workstation Controller** The #6140 provides eight ports to support a maximum of 40 Twinaxial devices. Requires one I/O card slot.	2	4
#6141	**#6141 ASCII Workstation Controller** The #6141 is a six-port workstation controller and workstation adapter supports up to six ASCII devices. Requires one I/O card slot.	2	4
#6142	**#6142 ASCII 12-Port Workstation Attachment** The attachment plugs into the #6141 ASCII Workstation Controller 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** The #6148 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	**#6180 Twinaxial Workstation IOA** One eight-port attachment is provided to support up to 40 twinaxial devices. Prerequisite: #2629 LAN/WAN/Workstation IOP. IOA slots required for #6180: One on #2629 Minimum OS/400 level: V4R1	-	-
#8054	**Workstation Adapter for Apple Macintosh (LocalTalk)** See the Communications and LAN sections.	1	-
#9171	**MFIOP/ASCII Workstation Controller** The #9171 provides the MFIOP 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	**MFIOP/Twinaxial Workstation Controller** The #9172 provides the MFIOP 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	**MFIOP/LocalTalk** The #9173 provides the MFIOP that includes a LocalTalk workstation adapter for attaching to a LocalTalk network. 31 devices and 56 sessions are supported.	1	-
#9176	**#9176 Base MFIOP** The #9176 specifies the MFIOP that does not include a workstation controller. Requires the #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	**MFIOP/LAN Controller** The #9177 specifies MFIOP that includes a #9174 Ethernet Adapter or #9175 Token Ring Adapter. The #9174 Ethernet IOA supports attachment to an Ethernet network. Order the #7174 to replace base #9175 Token Ring IOA. The #9025 Ethernet cable or customer supplied RJ45 cable is required. The #9175 Token Ring IOA supports attachment to a 4 Mbps Token Ring Network. Order #7175 to replace base #9174 Ethernet IOA. The #7175/#9175 now optionally supports a 16 Mbps 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. The #6146 Diskette Adapter is not supported on #9177.	1	-
COMMUNICATIONS		**System unit**	**#7117 Integrated Expansion Unit**
#2605	**#2605 ISDN Basic Rate Interface Adapter** Connects to MFIOP 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	**#2609 EIA 232/V.24 Two-Line Adapter** Connects to MFIOP 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 20-ft. (6m) #9835 EIA 232/V.24 enhanced cable 50-ft. (15m) #9022 EIA 232/V.24 cable 20-ft. (6m) #9836 EIA 232/V.24 cable 50-ft. (15m)	10	10
#2610	**#2610 EIA 232/V.24 Two-Line Adapter (SPD)** Connects to MFIOP 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 20-ft. (6m) #9839 X.21 cable 50-ft. (15m)	10	10
#2612	**#2612 EIA 232/V.24 One-Line Adapter** The #2612 connects to the 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).	8	12
#2613	**#2613 V.35 One-Line Adapter** The #2613 connects to MFIOP 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 20-ft. (6m) #9838 V.35 cable 50-ft. (15m)	4	4
#2614	**#2614 X.21 One-Line Interface Adapter (SPD)** The #2614 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).	8	12
#2620	**#2620 Full Cryptographic Processor** The #2620 provides full cryptographic support for encrypting and decrypting data. The #2620 consists of an I/O processor card and cable to attach an optional 4754-001. Distribution of the #2620 is restricted by U.S. Government export regulations. In countries outside the U.S.A. and Canada, it may be marketed only to financial institutions and subsidiaries of U.S. companies. Requires one I/O card slot. May require #5135 Feature Power Supply.	1	1

#2623	**#2623 Six-Line Communications Controller** The #2623 provides basic control and common circuits for up to six lines. Requires one I/O card slot	2	4
#2628	**#2628 Limited Cryptographic Processor (SPD)** The #2628 provides the 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 U.S. Customs clearance. Requires one I/O card slot. May require #5135 Feature Power Supply.	1	1
#2629	**#2629 LAN/WAN/Workstation IOP** The #2629 supports up to three #2699, #6149, #6180, or #6181 LAN/WAN/ Workstation IOAs. The #6149 and #6181 cannot occupy all three positions of the #2629. Minimum OS/400 level: V4R1 Card slots used: One	2	4
#2664	**#2664 Integrated Fax Adapter** The #2664 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. Not supported with V5R1 and later.	2	4
#2666	**#2666 High-Speed Communications Adapter (SPD)** The #2666 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 these 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 #5135 Feature Power Supply.	2	2
#6054 #8054	**#6054 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 one #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 *must not* 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

LANS/ATM		System unit	#7117 Integrated Expansion Unit
#2617	**#2617 Ethernet/IEEE 802.3 Adapter/HP (SPD)** The #2617 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 Attachment Unit Interface (AUI) Ethernet cable, which connects between the adapter and the Ethernet/IEEE 802.3 transceiver, must be ordered separately. Supports 10 Mbps half-duplex only. Requires one I/O card slot. May require #5135 Feature Power Supply.	2	2
#2618	**#2618 Fiber Distributed Data Interface Adapter (SPD)** The #2618 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 Feature Power Supply.	1	1
#2619	**#2619 LAN/WAN/Workstation IOA** The #2619 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	**#2626 16/4 Mbps Token Ring Adapter** The #2626 provides a single attachment to either a 16 or 4 Mbps Token Ring Network. Requires one I/O card slot.	2	2
#2629	**#2629 LAN/WAN/Workstation IOP** The #2629 supports up to three #2699, #6149, #6180, or #6181 LAN/WAN/ Workstation IOAs. The #6149 and #6181 cannot occupy all three positions of the #2629. Minimum OS/400 level: V4R1 Card slots used: One	2	4
#2663	**#2663 I/O Attachment Processor (SPD)** The #2663 provides the communication hardware base for the #2668 Wireless LAN Adapter. The #2663 is required when attaching the #2668. The #2663 and #2668 are integrated in a single hardware package to operate as a unit. Shares one I/O card slot with #2668 May require #5135 Feature Power Supply.	2	2
#2665	**Shielded Twisted-Pair Distributed Data Interface Adapter** The #2665 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	**#2668 Wireless LAN Adapter (SPD)** The #2668 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 these antenna cables must be specified: #9814 20-ft. antenna cable #9815 50-ft. antenna cable One of these antenna must be specified: #9890 Omni-directional antenna #9891 Hemispherical antenna #9892 Directional antenna Prerequisite: #2663 I/O Attachment Processor	2	2
#2699	**#2699 Two-Line WAN IOA** The #2699 supports up to two multiple protocol communications ports when any one or two of these cables are attached: #0329 V.24/EIA 232 80-ft. (24m) cable #0330 V.24/EIA 232 20-ft. (6m) cable #0331 V.24/EIA 232 50-ft. (15m) cable #0332 V.24/EIA 232 20-ft. (6m) enhanced cable #0333 V.24/EIA 232 50-ft. (15m) enhanced cable #0334 V.24/EIA 232 80-ft. (24m) enhanced cable #0335 V.36/EIA 449 20-ft. (6m) cable #0336 V.36/EIA 449 50-ft. (15m) cable #0337 V.36/EIA 449 150-ft. (45m) cable #0338 V.35 20-ft. (6m) cable #0339 V.35 50-ft. (15m) cable #0340 V.35 80-ft. (24m) cable #0341 X.21 20-ft. (6m) cable #0342 X.21 50-ft. (15m) cable There are some restrictions in communications using #2699. For full details, see the #2699 description in 10.13, “AS/400e Model 640 and 650 features” on page 317. Prerequisite: #2629 LAN/WAN/Workstation IOP IOA slots required for #2699: One on #2629 Minimum OS/400 level: V4R1	-	-
#2723	**#2723 PCI Ethernet IOA** The #2723 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. Prerequisite: #6617 Integrated PC Server or #6618 Integrated Netfinity Server. Minimum OS/400 level: V4R1	-	-
#2724	**#2724 PCI 16/4 Mbps Token Ring IOA** The #2724 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-ft. (2.4m) cable. Alternatively, a twisted pair cable for attachment to the RJ45 connector on the IOA can be ordered separately. Prerequisite: #6617 Integrated PC Server or #6618 Integrated Netfinity Server. Minimum OS/400 level: V4R2	-	-
#2810	**#2810 LAN/WAN IOP** The #2810 is required to attach one #2838 PCI 100/10 Mbps Ethernet IOA or #2811/#2812/#2815/#2816/#2818/#2819 PCI ATM IOA. Card slots required: One with any of the preceding features.		

#2811	**#2811 PCI 25 Mbps UTP ATM IOA** The #2811 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 Minimum OS/400 level: V4R2 Card slots required: One (with #2810) Prerequisite: #2810 LAN/WAN IOP	1	1
#2812	**#2812 PCI 45 Mbps Coax T3/DS3 ATM IOA** The #2812 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 Minimum OS/400 level: V4R2 Card slots required: One (with #2810) Prerequisite: #2810 LAN/WAN IOP	1	1
#2815	**#2815 PCI 155 Mbps UTP OC3 ATM IOA** The #2815 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 Minimum OS/400 level: V4R2 Card slots required: One (with #2810) Prerequisite: #2810 LAN/WAN IOP	1	1
#2816	**#2816 PCI 155 Mbps MMF ATM IOA** The #2816 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. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Minimum OS/400 level: V4R2 Card slots required: One (with #2810) Prerequisite: #2810 LAN/WAN IOP	1	1
#2818	**#2818 PCI 155 Mbps SMF OC3 ATM IOA** The #2818 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. Technical specifications and industry standards supported are available at the ATM Forum Web site: http://www.atmforum.com Minimum OS/400 level: V4R2 Card slots required: One (with #2810) Prerequisite: #2810 LAN/WAN IOP	1	1
#2819	**#2819 PCI 34 Mbps Coax E3 ATM IOA** The #2819 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 Minimum OS/400 level: V4R2 Card slots required: One (with #2810) Prerequisite: #2810 LAN/WAN IOP	1	1

#2838	**#2838 PCI 100/10 Mbps Ethernet IOA** The #2838 provides attachment to a standard 100 Mbps high-speed Ethernet LAN and allows attachment to existing 10 Mbps Ethernet LAN. The adapter comes with an RJ45 connector for attachment to UTP-5 media. Minimum OS/400 level: V4R1 with the #2810 or V4R2 with the #6617. Maximum: One per system. Card slots required: One (with #2810) or three (with #6617 or #6618). Prerequisite: #2810 LAN/WAN IOP or #6617 Integrated PC Server or #6618 Integrated Netfinity Server	1	1
#6149	**#6149 16/4 Mbps Token Ring IOA** The #6149 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-ft. (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. Minimum OS/400 level: V3R7 in the #6616 or V4R1 in the #2629. Card slots required: None Prerequisite: One #2629 LAN/WAN/Workstation IOP or #6616 Integrated PC Server slot Maximum: Two	-	-
#6181	**#6181 ASCII Workstation Controller** The #6181 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. The #6181 can operate in full or half-duplex mode. Minimum OS/400 level: V3R7 in #6616 or V4R1 in #2629. Card slots required: None Prerequisite: One #2629 LAN/WAN/Workstation IOP or #6616 Integrated PC Server slot Maximum: Two	-	-
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 server to provide high performance file serving to PCs attached through token-ring or Ethernet networks. The I/O processor consists of an INTEL 80486 66 MHZ processor and onboard main storage (16 to 64 MB). These 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 These cables need to be specified depending on the network attaching into an 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 Feature 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	**#6616 Integrated PC Server** The #6616 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 these 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 these LAN IOAs are supported: #6149 16/4 Mbps Token Ring IOA #6181 ASCII Workstation Controller Minimum OS/400 level: V3R7 with cumulative PTF package C7029370. Card slots required: Two contiguous slots	1	2
#6617	**#6617 Integrated PC Server (SPD)** The #6617 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 these 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 two of these 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 16/4 Mbps Token Ring IOA #2838 PCI 100/10 Mbps Ethernet IOA The #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: The #0325 Integrated PC Server Extension cable for Windows NT is required. The #1700 Integrated PC Server Keyboard or Mouse for Windows NT is the default in the U.S.A. A display is required to support Windows NT on IPCS. For country-specific keyboard or mouse and display support, see the Web site at: http://www.ibm.com/eserver/iseries/ Minimum OS/400 level: V4R2 Card slots required: Three contiguous slots.	-	1
#6618	**#6618 Integrated Netfinity Server (SPD)** The #6618 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 these 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 Up to three of these 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 16/4 Mbps Token Ring IOA Specify #is not required #2838 PCI 100/10 Mbps Ethernet IOA Specify #0222 is required 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 Netfinity Server. If running Windows NT on the #6618, then: A minimum of 64 MB IOP memory is required. The #0325 Integrated PC Server Extension Cable for Windows NT is required.		

#6618 (cont.)	The #1700 Integrated PC Server Keyboard or Mouse for Windows NT is the default in the U.S.A. A display is required to support Windows NT on the IPCS. For country-specific keyboard/mouse and display support, see the Web site at: http://www.ibm.com/eserver/iseries/ 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. 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. SPD slots required: Three contiguous slots. Cannot be placed in #5044 System Unit Expansion Rack. Minimum OS/400 level: V4R2 and CUM C8342420 or V4R3 and CUM C8349430.		
DISK UNITS		**System unit**	**#7117 Integrated Expansion Unit**
#1105	**320 MB Single Disk Unit Conversion Kit** The #1105 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 *two* of these kits. Each kit occupies one disk unit position in the #9320. Cannot be installed in #7117 Integrated Expansion Unit.	4	-
#1107	**400 MB Single Disk Unit Conversion Kit** The #1107 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 *two* of these kits. Each kit occupies one disk unit position in the #9320. Cannot be installed in #7117 Integrated Expansion Unit.	4	-
#1109	**988 MB Single Disk Unit Conversion Kit** The #1109 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 *two* of these kits. Each kit occupies one disk unit position in the #9320. Cannot be installed in #7117 Integrated Expansion Unit.	4	-
#1602	**1.03 GB Single Disk Unit Conversion Kit** The #1602 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 *two* of these kits. Each kit occupies one disk unit position in the #9320. Cannot be installed in #7117 Integrated Expansion Unit.	4	-
#1603	**#1603 1.96 GB Single Disk Unit Conversion Kit** The #1603 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 *two* of these kits. Each kit occupies one disk unit position in the #9320. Cannot be installed in #7117 Integrated Expansion Unit.	4	-
#6109	**988 MB Additional One-Byte SCSI Disk Unit** The #6109 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 Integrated Expansion Unit.	4	-
#6602	**1.03 GB Additional One-Byte SCSI Disk Unit** The #6602 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 Integrated Expansion Unit.	4	-

#6603	**1.96 GB Additional One-Byte SCSI Disk Unit** The #6603 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 Integrated Expansion Unit.	4	-
#6605 #4605	**1.03 GB Additional Two-Byte Disk Unit** The #6605 provides a 3 ½-inch disk unit with 1.03 GB capacity for additional disk storage in the system unit or #7117 Integrated 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 Integrated 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** The #6906 provides a 3 ½-inch single disk unit with 1.96 GB capacity for additional disk storage in the system unit or the #7117 Integrated 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 Integrated 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** The #6607 provides a 3 ½-inch single disk unit with 4.1 9GB capacity for additional disk storage in the system unit or the #7117 Integrated 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 Integrated Expansion Unit. The #7607 is replacement base disk. Minimum OS/400 level: V3R7.	4	8
#6652 #4652	**1.03 GB Additional Two-Byte SCSI Disk Unit** The #5541 provides a 3 ½-inch single disk unit with 1.03 GB capacity for additional disk storage in system unit or the #7117 Integrated 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 Integrated Expansion Unit. The #4652 is the plant install version of #6652.	3	8
#9606	**1.9 6 GB Standard Two-Byte SCSI Disk Unit** The #9606 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 Integrated Expansion Unit**
#1378	**525 MB ¼-inch Cartridge Tape Unit Conversion Kit** The #1378 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** The #1379 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** The #1380 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 Integrated Expansion Unit**
#2621	**#2621 Storage Device Controller (SPD)** The #2621 is 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	**#2624 Storage Device Controller** The #2624 is required to support an internal tape unit in the #7117 Integrated Expansion Unit or a second internal tape unit in a system with no #7117 Integrated Expansion Unit. The #2624 can concurrently support a #6146 Diskette Adapter to attach a second external diskette unit. Card Slots used: One Maximum: One	1	1
#2644	**#2644 Magnetic Tape Attachment Card/HP** The #2644 provides attachment for all 34xx Tape subsystem models, except SCSI attach 3490 models. May also require a #9980 serpentine cable. Card Slots used: One Maximum: One	1	1
#6146	**#6146 Diskette Adapter** The #6146 provides support for one of these 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** The #6501 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 Integrated 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. Prerequisite: #7117 Integrated Expansion Unit The #6522 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 Integrated Expansion Unit. Mutually exclusive with #6502/#6522. Prerequisite: #7117 Integrated Expansion Unit. The #6523 replaces the #6530. Card Slots used: One Maximum: One	-	1

#6534	**#6534 Magnetic Media Controller (SPD) (Ultra SCSI)** 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. Minimum OS/400 level: 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