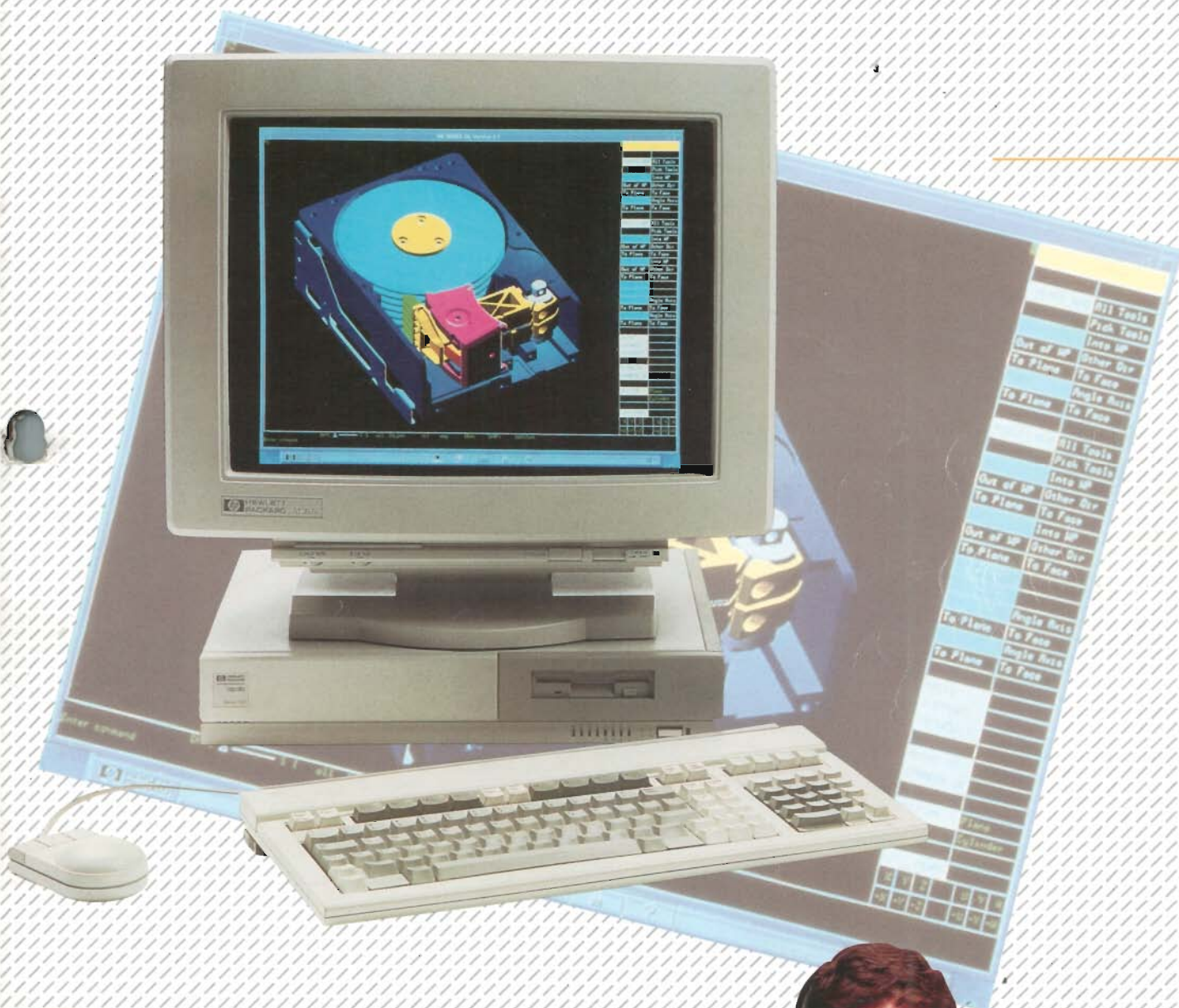*Spring/Summer 1992*

HP APOLLO DIRECT
WORKSTATION CATALOG

Introducing the Model 710, the industry's best price/performance desktop color workstation – see page 5.

For ordering and pre-sales technical assistance call 800-637-7740 ask for operator W221.

Dear HP Apollo Workstation User,

When you're ready to add capabilities to your workstations, I encourage you to call HP Apolllo DIRECT — the instantly accessible partner to your local HP field sales representative.

This service is another way of demonstrating our commitment to your continued satisfaction with HP Apollo Workstation products.

At HP Apollo DIRECT you can talk directly with technical support engineers to help clarify configuration or other pre-order questions about the HP-UX and Domain Workstation products in this catalog. At the same time, HP Apollo DIRECT customer representatives are on hand to quickly enter your order right over the phone — at the same contract discount terms offered by your local HP sales office. Be sure to tell your purchasing department!

Thank you for choosing Hewlett-Packard.

Sincerely,

Gary B. Eichhorn
General Manager
Workstation Business Unit
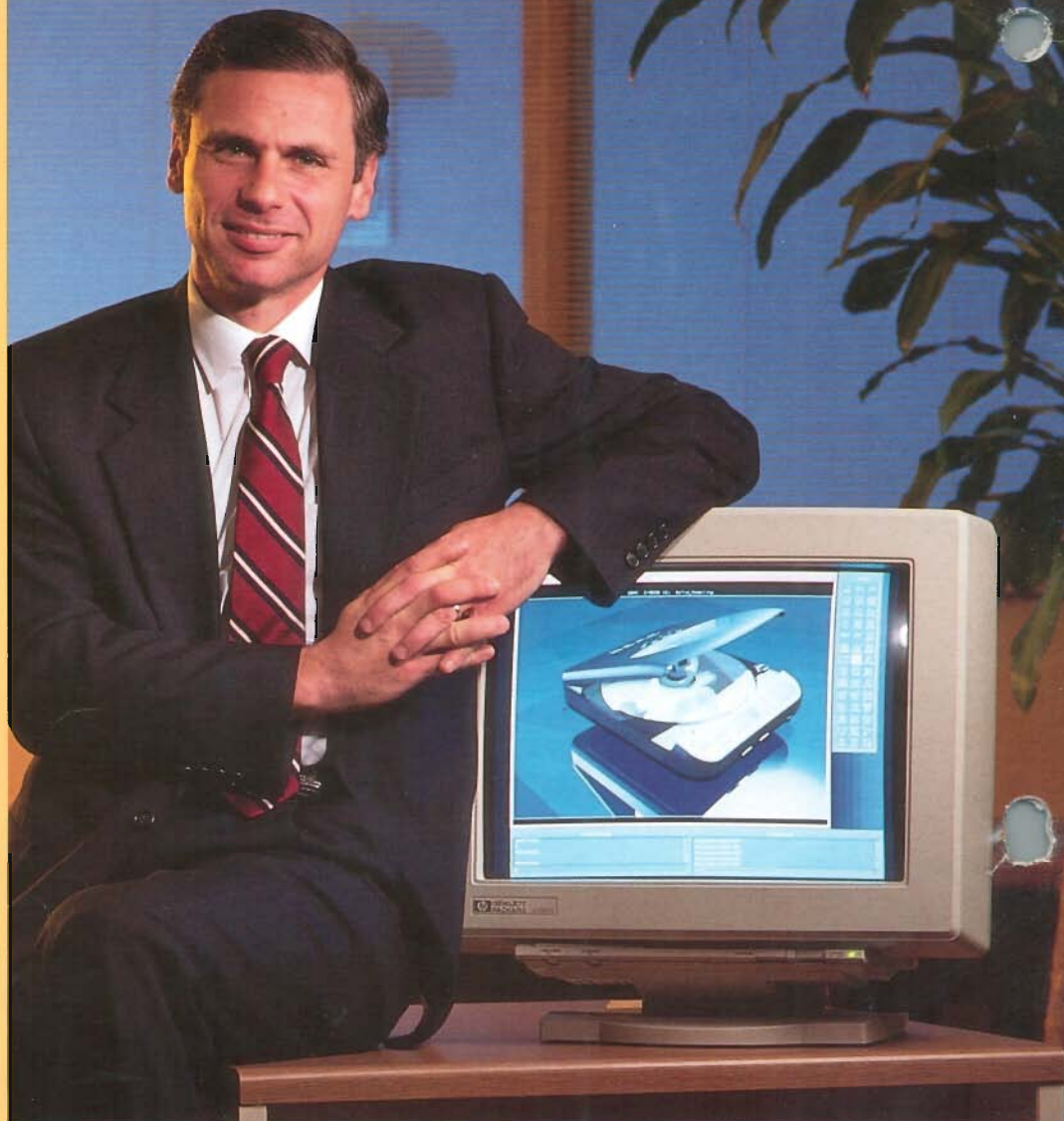
LOOK FOR THESE HELPFUL SYMBOLS THROUGHOUT THE CATALOG.

PRODUCT LITERATURE
Detailed literature is available for these products.

Just call 800-637-7740 and we'll send you the information right away.

OFF-THE-SHELF DELIVERY
These products are ready when you are. They're on the shelf, ready to ship. In most cases, your product will be shipped the next day.

NEW

NEW PRODUCTS
These HP products have been introduced since the last HP Apollo DIRECT catalog was published.
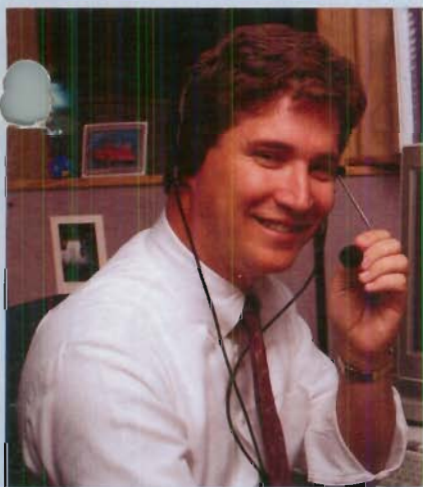
Table of Contents

Hewlett-Packard offers the largest range of compatible UNIX Systems in the world

HP offers the broadest family of compatible UNIX workstations, servers, and multiuser systems in the industry. So when you need to add applications and users, you have plenty of room to grow.

The HP 9000 family has a solid foundation in the standards that protect your investment in hardware, software, and training. Our tightly integrated HP-UX operating system optimizes performance and enhances reliability and ease-of-use within a base of industry standards.

This catalog features Hewlett-Packard's Series 300, 400 & 700 workstation products offering users an easy way to add or upgrade their current system or network.

HP also offers PA-RISC architecture Series 800 Business Servers designed to cost-effectively deliver premium performance for commercial applications. To receive HP's Business Computer Systems Catalog, please check the Business Systems and Servers catalog box on the business reply card attached to this catalog.

WORKSTATION FAMILY
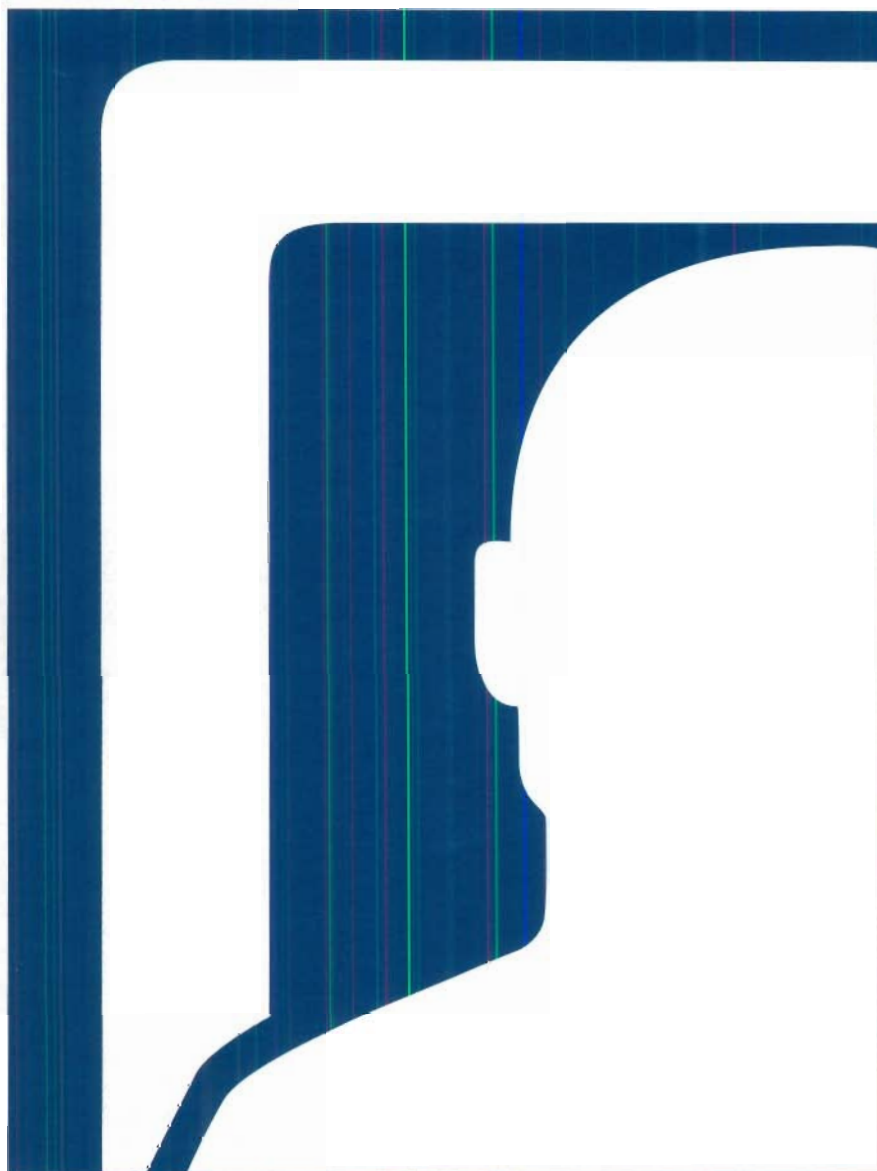
Performance Leadership, Investment Protection

Hewlett-Packard offers a full array of RISC- and Motorola-based workstations and servers that lead the industry in price and performance, along with RISC-based X stations for the lowest cost-per-seat and excellent X Windowing.

When you invest in HP systems, you're investing in the future. Whether you're comparing price/performance, standards, networking, graphics, or breadth of applications, you'll find that HP has the best workstation solutions in the industry and a clear vision of future computing.

HP graphics lead the industry with high performance

Outstanding graphics are the hallmark of the Series 400 and Series 700 workstation systems. From mono or grayscale to advanced 3D color graphics, HP's standards-based graphics options deliver outstanding speed and realism. HP's new CRX-24 and CRX-24Z options on the Series 700 with 24-color-plane capability provide true color, surface rendering, and the same X Window and high performance that are common to all of HP's graphics. The chart below highlights significant graphics features for the workstation configurations featured in the following pages of this catalog. If you would like additional information, please call our technical support engineers.

Graphics Options

Features	EVRX Grayscale 2D	EVRX Color 2D	Grayscale 2D (NEW)	Color 2D/3D (NEW)	GRX Grayscale 2D	CRX Color 2D	CRX-24 Color 2D/3D (NEW)	CRX-24Z Color 3D (NEW)	TVRX Color 3D	Dual CRX Color 2D/3D (NEW)
Available on:	425e	425e	705 710	710	720 730 425s 425t	720 730 750 425s 425t	720 730 750	720 730 750	425s 730 750	720 730 750
Graphics System	Integrated		Integrated		Graphics Board				Sub-System	Graphics Board
Resolution	19" 1280 x 1024 72 Hz	16" 1024 x 768 75 Hz / 19" 1280 x 1024 72 Hz	19" 1280 x 1024 72 Hz	16" 1024 x 768 75 Hz / 19" 1280 x 1024 72 Hz	19" 1280 x 1024 72 Hz					19" 2 x 1280 x 1024 72 Hz
Graphic Planes	8						24			8 per display
Double Buffer	–				8/8		12/12			8/8 per display
Overlay Planes	–						8		4	–
Power-Shade Support	Not Supported		Opt.		Not Supported	Optional S700 only Not Available S400			Bundled S700 Not Available S400	
Operating System	HP-UX Domain		HP-UX Domain (S400 only)		HP-UX		HP-UX			

Enhance your color graphics capabilities NEW

PowerShade, HP's 3D Surfaces Software, enhances the performance and functionality of your existing graphics hardware.

Gain the power of dynamic lighting and shading while leveraging the high-speed performance of your system. Every PowerShade software package comes with Wavefront's Personal

Visualizer, an easy-to-use rendering program that allows users to produce highly realistic renderings and animation without a large investment in training. Supported on the Series 700 only.

Ordering Information

Description	Product Number	Price
PowerShade	B2156A	$2,000
DDS/DAT tape	#UJ9	
CD-ROM certificate	#UJ8	

NOTE: *To meet your evolving graphics needs, HP offers a variety of graphics upgrade options. If you are interested in obtaining information on graphic upgrades, call HP Apollo DIRECT and ask to speak to one of our technical customer support engineers.*

HP Apollo Series 700 Workstations

The power that changed the workstation market

Compare price/performance, standards, networking, or graphics and you'll find that HP has the best RISC-based workstation in the industry — the HP Apollo Series 700.

Designed for power, the Series 700 products are the fastest PA-RISC desktop and deskside workstations and servers on the market today. Before the Series 700, performance like this could only be obtained with mainframe systems — a major powershift in the industry.

HP's commitment to open systems and standards is inherent with the Series 700 family. The UNIX-based HP-UX operating system provides a path to OSF/1™, the industry-standard operating system of the 1990s. In addition, HP's client/server and transparent networking technologies allow you to build a distributed cooperative computing environment.

HP's five Series 700 workstation models represent the broadest range of RISC-based systems today. You can count on HP's high standards of quality, reliability, and customer satisfaction to meet your needs at every level.

Model 705 NEW

Highest-performance entry-level desktop system

The best cost-per-seat performance solution available. The 35 MIPS, 34 SPECmarks, and 8 MFLOPS combine to set industry price/performance records. An ideal choice for a broad range of applications that require fast X Window performance and 2D/3D wireframe grayscale graphics.

Workstation Family

Introducing the Model 710 — grayscale and color graphics available

Model 710 NEW

Entry level ... color high-performance

HP's new member of the Series 700 family extends the benefits of the Series 700 to more workstation users. The Model 710 is the industry's fastest desktop workstation for less than $10,000. It offers 57 MIPS, 49.7 SPECmarks, 12 MFLOPS, and fast X Window system and 2D/3D wireframe color and grayscale graphics. The Model 710 offers the widest choice of internal removable options including CD-ROM and DDS tape drive. It is clearly the best entry-level color workstation in the industry!

Model 720

Midrange price/performance leadership

The Model 720 offers even higher performance and 3D solid graphics at a low price. With 59.5 SPECmarks, 17 MFLOPS, and 57 MIPS performance, the Model 720 is the first desktop workstation to achieve over one million 2D/3D vectors per second. This makes it the perfect hardware solution to improve productivity in 2D/3D design and wireframe applications. In addition, with the Model 720 you have the option to include one EISA slot.

Model 730

Fastest desktop workstation

The Model 730 is the highest-performance workstation sitting on a desk, boasting 76 MIPS, 76.8 SPECmarks, and 23 MFLOPS. Integrated graphics include the industry's fastest X11 and 2D/3D vector performance.

Both the Models 720 and 730 can be expanded to 128-MB RAM and 840 MB of internal disk. They can be configured as deskside or desktop systems.

Model 750

Expandability and pace-setting speed

The Model 750 deskside system provides the same leadership performance as the Model 730 and has added expandability and flexibility such as a larger instruction cache and RAM capacity. For more information, call your local HP sales or telesales representative.

HP Apollo Series 700 Performance Characteristics

Feature	Model 705	Model 710	Model 720	Model 730	Model 750
Packaging Type	Desktop	Desktop	Desktop	Desktop	Deskside
Integer Performance	35 MIPS	57 MIPS	57 MIPS	76 MIPS	76 MIPS
SPECmarks	34	49.7	59.5	76.8	77.5
Processor	PA-RISC	PA-RISC	PA-RISC	PA-RISC	PA-RISC
Clock Speed	35 MHz	50 MHz	50 MHz	66 MHz	66 MHz
Floating Point	8 MFLOPS	12 MFLOPS	17 MFLOPS	23 MFLOPS	23 MFLOPS
Main Memory	8-64 MB	16-64 MB	16-128 MB	32-128 MB	64-384 MB
Expansion	None	None	1 EISA (opt.)*	1 EISA (std.)	4 EISA (std.)
Graphics	2D Grayscale	2D Grayscale 2D & 3D Color	2D Grayscale 2D & 3D Color	2D Grayscale 2D & 3D Color	2D & 3D Color
Internal Disk Drives	840 MB	840 MB	840 MB	840 MB	2.6 GB
Internal Drive Capabilities	2 slots	2 slots	2 slots	2 slots	3 slots
Internal Flexible Drive	1.4 MB	1.4 MB	1.4 MB	1.4 MB	1.4 MB
Internal Hard Drive	210 MB 420 MB	210 MB 420 MB	420 MB	420 MB	1.3 GB
Internal Storage Options	600-MB CD-ROM 1.4-MB Flexible 2.0-GB 4mm DDS	600-MB CD-ROM 1.4-MB Flexible 2.0-GB 4mm DDS	1.4-MB Flexible	1.4-MB Flexible	600 MB CD-ROM 1.4-MB Flexible 2.0-GB 4mm DDS
Cache (instructions)	32 KB	32 KB	128 KB	128 KB	256 KB
Cache (data)	64 KB	64 KB	256 KB	256 KB	256 KB
Interfaces	SCSI II (2) RS-232-C (9 Pin) HP-HIL (1) Centronics, Parallel (1) Audio	SCSI II (2) RS-232-C (9 Pin) HP-HIL (1) Centronics, Parallel (1) Audio	SCSI II (2) RS-232-C (9 Pin) HP-HIL (1) Centronics, Parallel (1) Audio	SCSI II (2) RS-232-C (9 Pin) HP-HIL (1) Centronics, Parallel (1) Audio	SCSI II (2) RS-232-C (9 Pin) HP-HIL (1) Centronics, Parallel (1) Audio
Networks	IEEE-802.3	IEEE-802.3	IEEE-802.3, FDDI, X.25, 802.5 Token Ring	IEEE-802.3, FDDI, X.25, 802.5 Token Ring	IEEE-802.3, FDDI, X.25, 802.5 Token Ring
Operating System	HP-UX 8.05 or 8.07	HP-UX 8.05 or 8.07	HP-UX 8.05 or 8.07	HP-UX 8.05 or 8.07	HP-UX 8.05 or 8.07

*EISA optional for Model 720 Workstations only; EISA standard with all Servers


HP Apollo Series 700 family

Performance Leadership, Investment Protection

To simplify the selection and ordering of your Series 700 Workstation, we have pre-configured a variety of systems. If you prefer to configure a system yourself, order a diskless Workstation and choose from the factory options on page 8. To complete your system, select a keyboard by ordering one of the localization kits listed below. Should you have questions concerning configuration, compatibility, or performance, our technical customer support engineers are waiting to assist you.

Workstation Family

POWER SHIFT

HEWLETT-PACKARD APOLLO
WORKSTATIONS
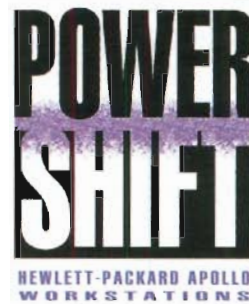
Ordering Information

Model	Operating System	Graphics	ECC RAM	Internal Disk Drive	Internal Media Option	Product Number	Price
705							
	HP-UX 8.07 Run-Time	19" Grayscale	16 MB	diskless	see pg 8 for integrated options	A2289A	$6,240
710							
	HP-UX 8.07 Run-Time [1]	19" Grayscale	16 MB	diskless	see pg 8 for integrated options	A2208A	$9,390
				420-MB SCSI-II	3.5" Flexible	A2209A	12,465
				420-MB SCSI-II	--	A2212A	11,965
		16" Color		diskless	see pg 8 for integrated options	A2210A	11,390
				420-MB SCSI-II	--	A2211A	13,965
		19" Color		diskless	see pg 8 for integrated options	A2213A	13,890
				420-MB SCSI-II	--	A2214A	16,465
			32 MB	(2) 420-MB SCSI-II	--	A2215A	22,965
				420-MB SCSI-II	2-GB 3.5" DDS tape drive	A2222A	22,965
720							
	HP-UX 8.07 Run-Time	19" Grayscale	16 MB	420-MB SCSI-II	see pg 8 for integrated options	A1929A	$14,890
		19" CRX Color				A1933A	21,390
		19" CRX-24 Color				A2263A	28,390
		19" CRX-24Z Color				A2264A	36,390
730							
	HP-UX 8.07 Run-Time	19" Grayscale	32 MB	420-MB SCSI-II	see pg 8 for integrated options	A1946A	$20,890
		19" CRX Color				A1950A	27,390
		19" CRX-24 Color				A2265A	34,390
		19" CRX-24Z Color				A2266A	42,390
		19" TVRX Color				A2276A	99,390
750							
	HP-UX 8.07 Run-Time	19" CRX Color	64 MB	1.3-GB SCSI-II	see pg 8 for integrated options	A2278A	$48,090
		19" CRX-24 Color				A2267A	55,090
		19" CRX-24Z Color				A2268A	63,090
		19" TVRX Color				A2281A	120,090

[1] *Additional options can not be ordered with the pre-configured 710 systems.*

Localization Kits

These HP-UX localization kits include a keyboard, 3-button mouse, four manuals (Owner's Guide, General Usage, HP VUE Users, and Using X Windows Systems) and a power cord. You can choose either the HP-HIL or PC AT keyboard model. Specify option #ABA for the U.S. English version.

Ordering Information

Description	Product Number	Price
HP-UX Localization kit. Includes HP-UX keyboard (HP-HIL).	A1099B opt. #ABA	$100
HP-UX Localization kit with PC-style keyboard. Includes PC-style keyboard. Supported with HP-UX 8.07	A2205A opt. #ABA	$100

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

Bring the power to those who need it

The Series 700 systems are now available in configurations designed to meet your needs for shared resource computing. These pre-configured systems will provide optional server support for diskless workstations, X Stations, printers/plotters as well as Wide Area and Local Area Networking and communications gateways. Access the environment of networked applications through the high performance of HP's most powerful Workstations. When ordering specify option #903 for the North America power cord and documentation.

Ordering Information

Model	Operating System	ECC RAM	Internal Disk Drive	Expansion	Product Number	Price
720	HP-UX 8.07 Run-Time Instant Ignition	32 MB	420-MB SCSI-II disk CD-ROM, 4mm DDS DAT tape drive	1 EISA bus interface	A2286A Opt. 903	$23,440
730	(also runs on HP-UX 8.05)	64 MB	(2) 420-MB SCSI-II disk CD-ROM, 4mm DDS DAT tape drive		A2284A Opt. 903	38,440
750		64 MB	1.3-GB SCSI-II disk CD-ROM, 4mm DDS DAT tape drive w/data compression	4 EISA bus interface	A2283A Opt. 903	57,190

Series 700 Factory Integrated Options

Customize an HP Apollo Series 700 Workstation to meet your performance needs. Use the compatibility chart below to choose from a full range of options.

For memory add-ons see page 42, for internal storage add-ons see pages 50 and 51.

Ordering Information

Description	Model 705	Model 710	Model 720	Model 730	Model 750	Option Number	Price
Memory							
Delete 8-MB RAM for a total of 8-MB RAM	X					#001	($1,350)
Add 8-MB RAM for a total of 24-MB RAM	X	X				#AN4	$2,000
Add 16-MB RAM for a total of 32-MB RAM	X	X	X	X		#AN8	4,000
Add 32-MB RAM for a total of 64-MB RAM					X	#ANN	8,000
Add 48-MB RAM for a total of 64-MB RAM	X	X	X	X		#AND	12,000
Add 96-MB RAM for a total of 128-MB RAM					X	#096	24,000
Add 112-MB RAM for a total of 128-MB RAM			X	X		#112	28,000
Add 224-MB RAM for a total of 256-MB RAM					X	#224	56,000
Add 352-MB RAM for a total of 384-MB RAM					X	#352	88,000
Internal Storage							
Add 210-MB SCSI-II Disk Drive (for diskless system)	X	X				#AM0	$2,000
Add second 1.3-GB SCSI-II Disk Drive					X	#AMG	6,000
Add second 420-MB Internal SCSI II Disk Drive (for 420-MB systems)			X	X		#AMH	2,500
Add second 420-MB Internal SCSI II Disk Drive (for diskless system)	X	X				#AMK	2,500
Add 1.4-MB 3.5-inch SCSI-II Floppy Disk Drive (may not be ordered concurrently with options AM8 or AMW)	X	X	X	X	X	#AMB	500
Add 2-GB 3.5-inch DDS SCSI-II tape drive (may not be ordered concurrently with options AMB or AM8)	X	X				#AMW	2,500
Add 4mm 3.5-inch DDS tape drive w/data compression					X	#AMX	3,500
Add 600-MB SCSI-II CD-ROM	X	X			X	#AM8	1,000
EISA Interface							
Add One EISA Interface Slot			X			#ALD	$1,500
Add EISA SCSI II Host Adapter (requires existing EISA slot)			X	X	X	#ALE	1,195
Add EISA HP-IB Host Adapter (requires existing EISA slot)			X	X	X	#ALF	1,195
Add EISA LAN/9000 (requires existing EISA slot)			X	X	X	#ALG	1,395
Add EISA FDDI/9000 (requires existing EISA slot)					X	#ALQ	4,495
Other Options							
Select LAN AUI Configuration (overrides default ThinNet Ethernet connection)	X	X	X	X	X	#AL9	N/C
HP-UX 8.07 Run-Time Instant Ignition, 2-User License (pre-loads OS to hard disk)	X	X	X	X	X	#ODJ	$75

The leader in Motorola-based workstations

Workstation Family

The HP Apollo Series 400 offers you a broad family of lowest-cost, highest-performing Motorola-based workstations. All Series 400 Model 425 systems redefine low-end computing by performing at 22 MIPS, 2.6 MFLOPS and 11 SPECmarks. This performance is gained by a superior architecture with the MC68040 chip at its heart.

The Series 400 represents what may well be the widest range of solutions on the market: a vast library of over 3500 leading applications and a suite of upgrade paths to future Motorola and RISC enhancements. What makes the Series 400 the industry leader in investment protection?

- Object-code compatibility with HP-UX and Domain applications
- HP's commitment to standards
- HP's promise of an ongoing upgrade path

Model 425e with 19" and 16" Display.

Model 425e

UNIX® power at a PC price

The 425e is one of the lowest-priced, fully functional workstations on the market. It combines a small, compact desktop package with powerful graphics and the performance of the MC68040 processor.

Whether it's used as an additional node or as a standalone, it is an outstanding choice for a low-cost workstation.

The 425e delivers 22 MIPS, powerful X Window performance, and a rich array of I/O capabilities, including parallel, serial, and SCSI ports. Expandable configurations give you flexibility to match specific application requirements.

For your CASE, DTP, low-end CAD, and commercial requirements, the Model 425e is the low-price, high-quality solution that typifies HP's workstation offerings.

For DOS functionality you can choose PC-style keyboard, floppy disk, DOS emulation software, and CD-ROM.

Model 425t

The flexible desktop solution for your applications

The 425t combines the performance of the Model 425e with more powerful graphics capabilities. In addition, Model 425t HP-UX systems include an HP-IB interface card for connecting a wide variety of peripherals. Domain/OS systems include an Apollo Token Ring network card.

This flexible desktop package is an ideal solution for applications in electrical and mechanical engineering.

To step beyond 2D graphics to the visual power of 3D, call your local HP sales office for information on graphics options.

Model 425s

Powerful deskside system

The 425s deskside model offers the processing power and graphics performance of the 425t with the option of even greater expansion capability. For more information on the 425s please call your local HP sales or telesales representative.
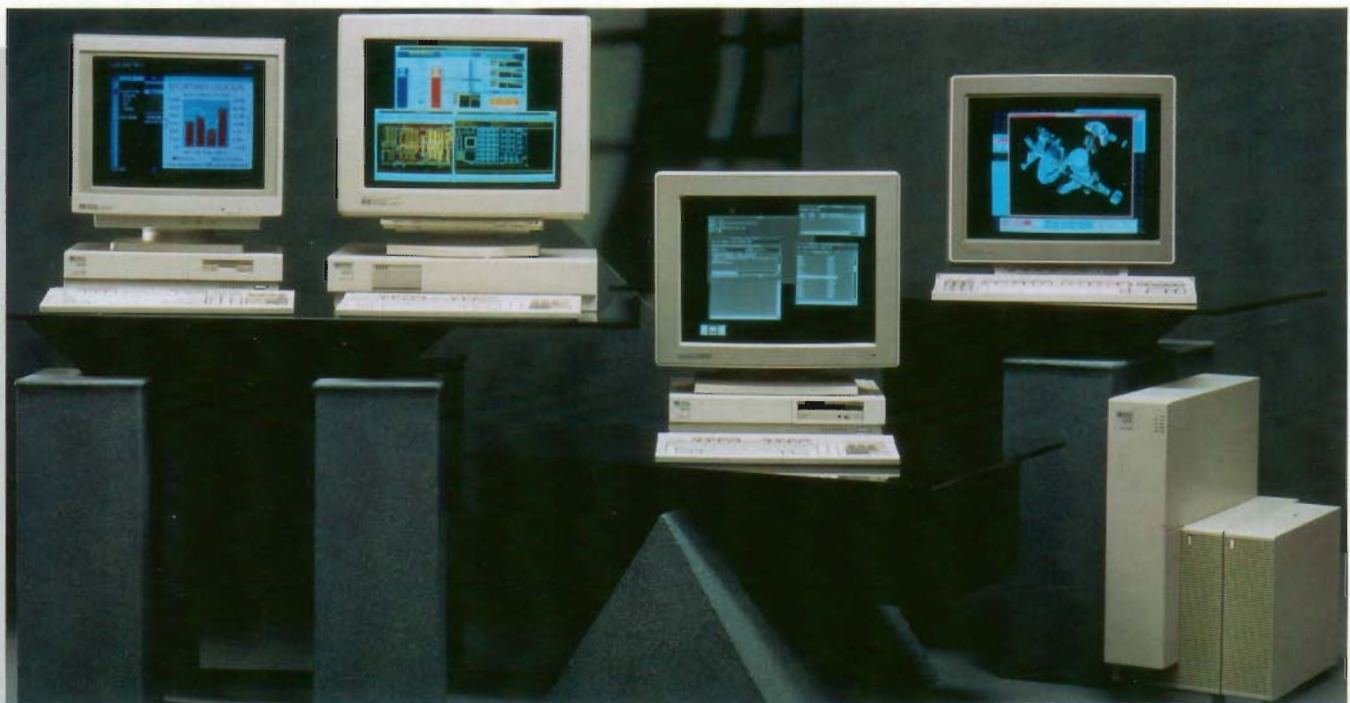
HP Apollo Series 400 family

HP Apollo Series 400
Performance Characteristics

Feature	Model 425e	Model 425t
Packaging Type	Desktop	Desktop
Integer Performance	22 MIPS	22 MIPS
SPECmarks	11	11
Processor	MC68040	MC68040
Clock Speed	25 MHz	25 MHz
Floating Point	2.6 MFLOPS	2.6 MFLOPS
Main Memory	8 48 MB	8 64 MB
Expansion	None	None
Graphics	Grayscale 2D Color	Grayscale 2D & 3D Color
Internal Disk Drives	Up to 840 MB	Up to 840 MB
Internal Drive Capabilities	2 slots	2 slots
Internal Flexible Drive	1.4 MB	N/A
Internal Hard Drive	210 MB-420 MB	420 MB
Internal Storage Options	1.4-MB Flexible 600-MB CD-ROM	N/A
Cache (instructions)	4 KB	4 KB
Cache (data)	4 KB	4 KB
Interfaces	SCSI (3) RS-232-C HP-HIL/Domain (1) Centronics, Parallel (1) Audio in/out	SCSI (1) RS-232-C* HP-HIL/Domain (1) Centronics, Parallel (1) Audio
Networks	IEEE-802.3	IEEE-802.3 Apollo Token Ring IBM Token Ring
Operating System	HP-UX 8.0, or Domain/OS SR 10.3 with PSK Q3 91	HP-UX 8.0, or Domain/OS SR 10.3 with PSK8 or PSK Q3 91
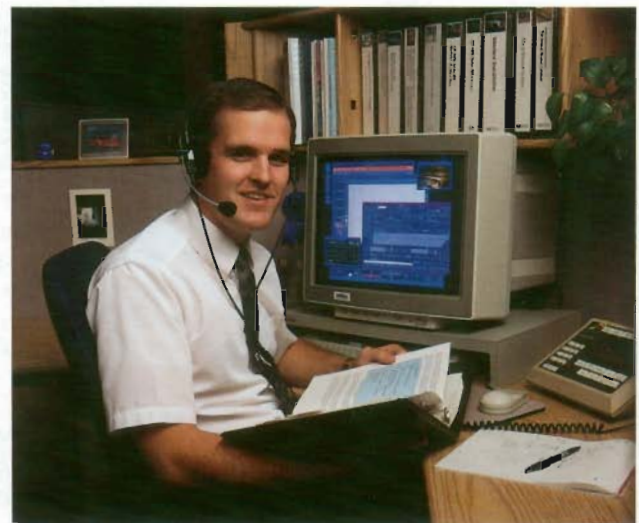
Call me... and I will help you select the right products to meet your needs.

*For RS-232-C expansion order product # K2292. See page 83.

HP Apollo Series 400 Workstations

Investment Protection, Compatibility

To simplify the selection and ordering of your Series 400 Workstation, we have pre-configured a variety of HP-UX and Domain systems. If you prefer to configure a system yourself, order a diskless workstation and choose from the factory options on page 12. To complete your system, select a keyboard by ordering one of the localization kits listed below. Should you have questions concerning configuration, compatibility, or performance, our technical support engineers are waiting to assist you.

Ordering Information

Model	Operating System	Instant Ignition HP VUE	Graphics	ECC RAM	Internal Disk Drive	Product Number	Price
425e	HP-UX 8.0	No	19"	8 MB	diskless	A2130A	$5,390
		Yes	EVRX		210-MB SCSI	A2131A	7,490
			Grayscale	16 MB	420-MB SCSI	A2132A	9,990
		No	16"	8 MB	diskless	A2134A	7,390
		Yes	EVRX		210-MB SCSI	A2135A	9,490
			Color	16 MB	420-MB SCSI	A2136A	11,990
		No	19"	8 MB	diskless	A2139A	9,890
		Yes	EVRX	16 MB	210-MB SCSI	A2140A	13,990
			Color		420-MB SCSI	A2141A	14,490
	Domain/OS	No	19"	8 MB	diskless	A2145A	5,390
	SR 10.3	Yes	EVRX		210-MB SCSI	A2146A	7,390
	with PSK Q3 91		Grayscale	16 MB	420-MB SCSI	A2147A	9,890
		No	16"	8 MB	diskless	A2149A	7,390
		Yes	EVRX		210-MB SCSI	A2150A	9,390
			Color	16 MB	420-MB SCSI	A2151A	11,890
		No	19"	8 MB	diskless	A2154A	9,890
		Yes	EVRX	16 MB	210-MB SCSI	A2155A	13,890
			Color		420-MB SCSI	A2156A	14,390
425t	HP-UX 8.0	No	19"	8 MB	diskless	A2162A	8,890
		Yes	GRX Grayscale	16 MB	420-MB SCSI	A2163A	13,490
		No	19"	8 MB	diskless	A2165A	12,890
		Yes	CRX Color	16 MB	420-MB SCSI	A2166A	17,490
	Domain/OS	No	19"	8 MB	diskless	A2172A	8,890
	SR 10.3	Yes	GRX Grayscale	16 MB	420-MB SCSI	A2173A	13,390
	with PSK8	No	19"	8 MB	diskless	A2175A	12,890
	or PSK Q3 91	Yes	CRX Color	16 MB	420-MB SCSI	A2176A	17,390

Localization Kits

These localization kits include a keyboard, 3-button mouse and power cord. The operating system of your Series 400 determines which kit to order. For HP-UX, you can choose either the HP-HIL or PC AT keyboard model.

Specify option #ABA for the U.S. English version.

Ordering Information

Description	Product Number	Price
HP-UX Localization kit. Includes HP-UX keyboard (HP-HIL).	A1099B opt. #ABA	$100
HP-UX Localization kit with PC-style keyboard. Includes PC-style keyboard. Supported with HP-UX 8.0.	A2205A opt. #ABA	100
Domain/OS Localization kit. Includes keyboard, mouse, and power cord.	A1098A opt #ABA	100

Series 400 Factory Integrated Options

Customize your Series 400 workstation to meet your operating needs. Use the compatibility chart below to choose from a full range of options. For memory add-ons see page 42, for internal storage add-ons see pages 50 and 51.

Ordering Information

Description	Product Number	Price
Replace standard 8-MB RAM with 16-MB RAM	ANB	$2,000
Add 8-MB RAM for a total of 24-MB RAM	ANF	2,000
Add 1.4-MB, 3.5-in Internal Floppy Disk Drive	AMB*	500
Add second 420-MB Internal SCSI Disk Drive	AMT	2,500
Add 600-MB SCSI CD-ROM Drive	AM8*	1,000
Select LAN AUI Configuration (option overrides default ThinNet Ethernet connection)	AL9	N/C

Options AMB and AM8 cannot be ordered concurrently for the same system.

Option Packages

Workstation			Factory Options					
			16-MB RAM	8-MB RAM	1.4-MB Flexible	600-MB CD-ROM	420-MB SCSI Drive	LAN AUI
Product Number	Description	Operating System	ANB	ANF	AMB*	AM8*	AMT	AL9
425e Option Packages								
19" EVRX Grayscale Systems								
A2130A	8-MB, Diskless	HP-UX	x				–	x
A2131A	8-MB, 210-MB Internal	HP-UX	x		x	x		x
A2132A	16-MB, 420-MB Internal	HP-UX			x	x	x	x
A2145A	8-MB, Diskless	Domain/OS	x					x
A2146A	8-MB, 210-MB Internal	Domain/OS	x		x	x		x
A2147A	16-MB, 420-MB Internal	Domain/OS			x	x	x	x
16" EVRX Color Systems								
A2134A	8-MB, Diskless	HP-UX	x					x
A2135A	8-MB, 210-MB Internal	HP-UX	x		x	x	x	x
A2136A	16-MB, 420-MB Internal	HP-UX			x	x	x	x
A2149A	8-MB, Diskless	Domain/OS	x					x
A2150A	8-MB, 210-MB Internal	Domain/OS	x		x	x		x
A2151A	16-MB, 420-MB Internal	Domain/OS			x	x	x	x
19" EVRX Color Systems								
A2139A	8-MB, Diskless	HP-UX	x					x
A2140A	16-MB, 210-MB Internal	HP-UX			x	x	x	x
A2141A	16-MB, 420-MB Internal	HP-UX			x	x	x	x
A2154A	8-MB, Diskless	Domain/OS	x					x
A2155A	16-MB, 210-MB Internal	Domain/OS			x	x	x	x
A2156A	16-MB, 420-MB Internal	Domain/OS			x	x	x	x
425t Option Packages								
19" GRX Grayscale Systems								
A2162A	8-MB, Diskless	HP-UX	x	–	–	–		x
A2163A	16-MB, 420-MB Internal	HP-UX					x	x
A2172A	8-MB, Diskless	Domain/OS	x					x
A2173A	16-MB, 420-MB Internal	Domain/OS					x	x
19" CRX Color Systems								
A2165A	8-MB, Diskless	HP-UX	x					x
A2166A	16-MB, 420-MB Internal	HP-UX					x	x
A2175A	8-MB, Diskless	Domain/OS	x					x
A2176A	16-MB, 420-MB Internal	Domain/OS					x	x

HP Series 300 Workstation Controllers

Excellent Workstation Controller performance at an affordable price

With the Series 300 workstation controller, you get the benefits of HP's long experience in and commitment to manufacturing computing products.

The Model 362 and 382 have been designed to meet your complex test engineering needs.

These systems offer unprecedented performance, flexibility, and features at an affordable price.

Object-code compatibility with the existing Motorola-based processors provides you with protection for your future upgrade path. HP's commitment to a wide range of industry standards gives you true open system connectivity. The Model 362 and 382 deliver the quality, reliability, and lasting value in controller and work-station technology you've come to expect from HP.

NOTE: *The HP 9000 workstation controllers feature the new Model 362 and 382. These systems provide enhanced 110 functionality, a standard form factor, and long product support life.*

Model 382 with HP VEE 16" Display

HP Series 300 Performance Characteristics

Feature	Model 362	Model 382
Packaging Type	19" Desktop/rackmount	19" Desktop/rackmount
Integer Performance	6 MIPS	22 MIPS
SPECmarks	N/A	11
Processor	MC68030	MC68040
Clock Speed	25 MHz	25 MHz
Floating Point	0.2 MFLOPS	2.4 MFLOPS
Main Memory	2-16 MB	4-32 MB
Expansion	none	none
Graphics	14" VGA color (640 x 480)	14" VGA color (640 x 480) 16" med. resolution color (1024 x 768) 19" high resolution color (1280 x 1024)
Maximum Internal Disk Capacity	800 MB	800 MB
Internal Drive Capabilities	2 slots	2 slots
Internal Hard Drive	52 MB 200 MB 400 MB	52 MB 200 MB 400 MB
Internal Storage Options/Flexible Drive	1.4 MB, 3.5" Flexible	1.4MB, 3.5" Flexible
Cache (instructions)	256 bytes	4-KB
Cache (data)	256 bytes	4-KB
Interfaces	HP-IB, HP Parallel, RS-232-C, audio, HP-HIL LAN (opt), SCSI (opt)	HP-IB, HP Parallel, RS-232-C, audio, HP-HIL LAN (opt), SCSI (opt)
I/O Slots	1 DIO slot	1 DIO slot
Networks	IEEE 802.3	IEEE 802.3
Operating System	HP-BASIC HP-Pascal	HP-BASIC Workstation HP-Pascal Workstation HP-UX 8.0

Model 362

The Model 362 controller is based on Motorola's MC68030 processor. With 6 MIPS, it is ideal for cost-sensitive Test & Measurement applications.

Built-in features include a wide range of network interfaces, a graphics subsystem, and DIO interface slot. To customize your system you can add a variety of options such as additional memory, mass storage, or secondary storage devices.

Designed as a low-cost, high-performance BASIC controller, the Model 362 supports HP BASIC/WS, HP Pascal and other third-party O/S environments. Excellent performance at an excellent price.

Model 382

The Model 382 controller offers higher performance at 22 MIPS based on Motorola's MC68040 processor. With the ECC RAM technology, extendable to 32 MB, the Model 382 boosts your productivity to levels never achieved before.

With this higher performance and larger RAM, the 382 supports the HP-UX operating system in addition to the operating environments supported by Model 362. With the HP-UX environment and the 16" and 19" resolution monitors, you can use a variety of applications to meet your engineering needs.

As a standalone dedicated controller or as part of a larger network, the Model 382 controller is an excellent solution for your growing performance requirements.

Model 382 with 19" Display

Ordering Information

Model	Operating System	Graphics	RAM	Internal Disk Drive	Internal Media Option	Product Number	Price
362	HP-BASIC	14" VGA color	2-MB Parity	3.5" Flexible Disk	see pg. 15 for options to order	A2240A	$5,490
382	HP-BASIC		4-MB ECC	3.5" Flexible Disk	see pg. 15 for options to order	A2241A	7,525
	HP-BASIC/UX		8-MB ECC	3.5" Flexible Disk or CD-ROM	see pg. 15 for options to order	A2242A	9,180

Series 300 Workstation Ordering

To simplify the selection and ordering of your Series 300 Workstation, we have pre-configured systems for you. To customize your system, there are a variety of factory options to choose from on page 15.

To complete your system, select your keyboard by ordering one of the localization kits listed below. Should you have questions concerning

configuration, compatibility, or performance, our technical customer support engineers are waiting to assist you.

Localization Kits

These HP localization kits include a keyboard, 3-button mouse, four manuals (Owner's Guide, General Usage, HP VUE Users, and Using X Windows Systems) and a power cord. Specify option #ABA for the U.S. English version.

Ordering Information

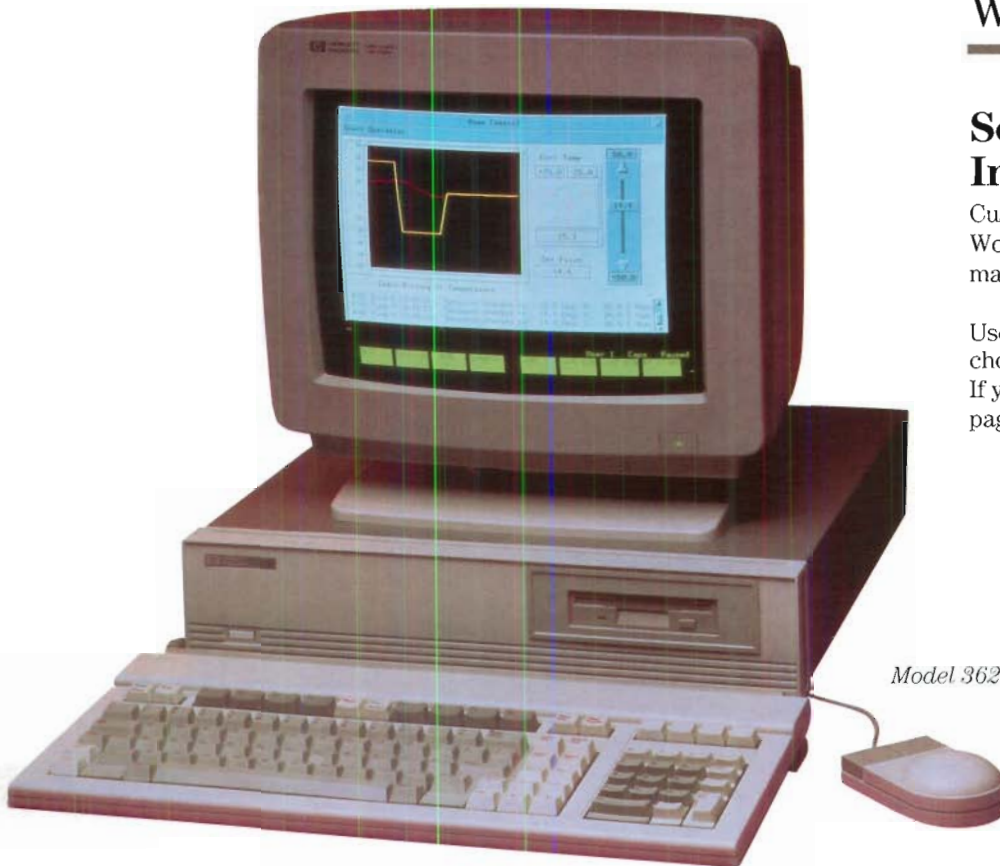| Description	Product Number	Price
HP-BASIC Localization kit. Includes U.S. keyboard.	A1099A opt. #ABA	$100
HP-UX Localization kit. Includes HP-UX keyboard (HP-HIL). Compatible with Model 382	A1099B opt. #ABA	100

HP Series 300 Workstation Controllers

Series 300 Factory Integrated Options

Customize a Model 362 or 382 Workstation to meet your performance needs.

Use the compatibility chart below to choose from a full range of options. If you need memory add-ons see page 43.

Model 362 with Basic Plus 14" Display

Ordering Information

Decription	362 HP BASIC	382 HP BASIC	382 HP BASIC/UX	Option Number	Price
Memory					
Configure for a total of 4-MB RAM	X			#ANM	$300
Configure for a total of 8-MB RAM	X			#ANJ	900
Configure for a total of 8-MB RAM		X		#ANJ	1,000
Configure for a total of 16-MB RAM		X		#AN8	3,000
Configure for a total of 16-MB RAM			X	#ANB	2,000
Internal Storage					
Add 52-MB Internal SCSI disk drive pre-loaded w/HP BASIC/WS	X	X		#AMR	$1,000
Add 200-MB Internal SCSI disk drive pre-loaded w/HP BASIC/WS		X		#AMS	2,000
Add 400-MB Internal SCSI disk drive pre-loaded w/HP BASIC/WS		X		#AMT	3,500
Add 200-MB Internal SCSI disk drive pre-loaded w/HP-UX and HP BASIC/UX			X	#AMO	2,000
Add 400-MB Internal SCSI disk drive pre-loaded w/HP-UX and HP BASIC/UX			X	#AMK	3,500
Add 3.5" Flexible disk drive			X	#AMB	500
Interfaces					
Add SCSI interface	X	X	X	#ALK	$200
Add LAN interface (AUI and ThinLAN w/BNC "T" connector)	X	X		#ALJ	700
Other Options					
Substitute Medium-resolution graphics 16" color monitor for 14" color VGA		X	X	#ADX	$2,500
Substitute High-resolution graphics 19" color monitor for 14" color VGA			X	#ADJ	4,500
Add HP BASIC/WS compiler	X	X		#ASO	595
Add HP BASIC Plus (Minimum 2-MB RAM required, 4-MB RAM recommended)	X	X		#AGU	400
Add HP BASIC/WS media and manuals	X	X		#AJO	400
Add HP BASIC/UX media and manuals			X	#AJO	400

Workstation X Window performance at X terminal prices

HP 700/RX RISC X stations are an affordable way to bring the power of network computing to the desktop of every user.

HP X stations are high-quality graphics display stations that use the industry-standard X Window System, Version 11, Release 4 protocol. They provide users with an easy-to-use, workstation-style environment. The HP family of X stations are available in a variety of color and monochrome models that range in price, performance, and functionality. They connect to an Ethernet network, operate in multivendor environments, and give the user interactive access to multiple applications simultaneously.

The low-cost family of HP 700/RX X stations complement the HP workstation family. An HP X station is a wise and secure investment even if your application needs change. Upgrade paths to an HP 9000 Workstation give you the freedom to grow as your business needs evolve. Contact your local HP sales representative for trade-in alternatives.

Benefits HP X Stations Offer

- Workstation X Window performance at X terminal prices
- Faster than competitive products at comparable or lower prices
- Industry-leading performance using RISC technology
- Interactive access to multiple applications simultaneously
- Access to multiple host systems
- Low cost per user seat
- Modular architecture
- Full support of X-based GUIs (graphical user interfaces)

Configuration Recommendations

X Station

Local Memory:	4-MB base user memory is standard with both color and monochrome models.
Expansion:	Up to 18 MB total.
Application Testing:	Most applications don't exceed 4 MB when backing store is not enabled. Test the application with the base 4 MB. As a general guideline, we recommend purchasing an additional 2-MB SIMM.
Host System Requirements:	The host processing power, the amount of memory, the size and number of disk drives, and the number and variety of applications all determine how many X stations can be connected to a network.
Recommendation:	Several representative applications were tested using various hosts to determine resource requirements. Use these test results with caution, since the test environment had only one application.

Host Processing Power: 1-2 MIPS per user
Host Memory: 2-4 MB per user
Host Disk Space: 4-16 MB
Local Terminal Memory: 2-3 MB per terminal

Multivendor System Configuration

System Requirements

Boot Hosts:	HP 9000 Series 300, 400, 600, 700, 800 Sun Microsystems Sun/4 SPARC-based systems
Operating System:	HP-UX 7.0/8.0 or greater and Sun/OS 4.1
Interface Type:	10 Mbit/s Ethernet LAN
Protocols:	X.11 R4, TCP/IP, Telnet
Supplied Utilities:	TFTP, BOOTP, XDM, Font Utilities

Standard Features on all Models

Architecture

RISC Processor	22.7 MHz Intel i960CA
Compact Design	Desktop, deskside, floor-mount
Memory Slots	2 single inline memory slots (SIMM)
Optional Memory Expansion	Up to 18 MB of DRAM

Graphics

Colors (for color models)	256 (palette of 16.7 million)
Graphic Planes for Color Models	8
Graphic Planes for Monochrome Model	1
Display Connector	15-pin VGA (adapts to RGB)

Software

Window System	X.11 Release 4
Name Server	Domain-name resolver
Font Server	NFS,TFTP
Software Media Options	Tape, ROM card
Supported Host Systems	HP 9000 family, Sun/4 SPARC family
Boot Options	TFTP, NFS
Login Options	XDMCP, Telnet

Communications

Network Connectors	BNC and AUI (AUI requires MAU)
Network Speed	10 Mbits/sec
Network Protocols	TCP/IP, 8-bit Telnet,SLIP, SNMP
Bidirectional Serial Port	RS-232-C for local printer or plotter
Parallel Port	Centronics for local printer
Keyboard Ports	PS/2 and HP-HIL
Mouse Ports	PS/2 and HP-HIL
Other HP-HIL Devices Supported	Tablet, knob box, button box

RISC X Stations

Characteristics

	Model	19Mi	14Ci	16Ci	16Ca	19Ca
Features:	Product #	C2702B	C2705A	C2706A	C2710A	C2711A
Performance		90000 Xstones	52000 Xstones		86000 Xstones	
Resolution		19" mono 1280 x 1024 72 Hz	14" color 1024 x 768 60 Hz *	16" color 1024 x 768 75 Hz		19" color 1280 x 1024 72 Hz
Video Memory		0.25 MB	1.0 MB			2.0 MB
User Memory		4.0 MB				
Keyboard		PS/2 PC-101				
Mouse		PS/2 3-button				

Also supports display resolutions of 800 x 600 at 72 Hz and 640 x 480 at 60 Hz.

Ordering Information

The HP 700/RX includes Base Unit and power cord, monitor, PC-101 PS/2 keyboard and cable, PS/2 3-button mouse, 3-conductor monitor cable, and installation manual. If you would prefer an HP-HIL keyboard model, order option #1A2 and this will delete the PC-keyboard model. With either keyboard model, specify option #ABA for the U.S. English version of the localization kit and 2-MB SIMM.

NOTE: *Two SIMM slots are available in each unit, the SIMMs installed in slots must be identical. With a 4-MB system, a 2-MB SIMM is included for customer installation in one slot therefore you can either add a 2-MB SIMM or use Option #AN7 and then order two 4-MB or 8-MB SIMMs for increased memory.*

X-Server Software and ROM

One copy of the downloadable X.11 Server Software is required per site. If ROM cards are used, one ROM per X Station is required.

Ordering Information

Description	Product Number	Price
HP 700/RX Models:		
19Mi	C2702B	$3,295
14Ci	C2705A	3,495
16Ci	C2706A	4,495
16Ca	C2710A	5,195
19Ca	C2711A	5,995
Localization Kit		
N. American keyboard, N. American power cord	#ABA	N/C
Other Options:		
Delete PC-101 keyboard	#1A2	($60)
Delete 2-MB SIMM (DRAM)	#AN7	($299)
Convert 1-year return-to-HP-warranty to 90 day onsite warranty	#W03	N/C
Additional User-installable Memory (DRAM)		
Add 2-MB SIMM	C2321A	$299
Add 4-MB SIMM	C2322A	499
Add 8-MB SIMM	C2323A	1,199

Ordering Information

	Product Number				
Description	Domain S400	HP-UX S300/S400	HP-UX S600/S700 S800	Sun O/S	Price
HP 700/RX Server Software	–	C2715A	C2716A	C2718A	$495
1/4-inch cartridge tape		#AAO	#AAO		N/C
DDS (4mm DAT) cartridge		#AAH	#AAH		N/C
ROM-based X.11 Server for color		C2725A			400
ROM-based X.11 Server for mono		C2727A			400

Localization Kits and Input Devices

Localization Kits

Whether you are ordering a localization kit for your new HP Apollo Workstation or you are replacing the one you have, HP has several options to choose from. Each localization kit includes a keyboard, 3-button mouse, operating manuals, power cord, and cables. The HP-UX localization kit includes HP-UX 8.0 "General Usage" documentation. Specify option #ABA for the U.S. English version.

Ordering Information

Description	Product Number HP-UX	Product Number Domain/OS	Price
HP-UX Localization kit. Includes HP-UX keyboard (HP-HIL).	A1099B opt. #ABA	–	$100
HP-UX Localization kit with PC-style keyboard. Includes PC-style keyboard. Supported with HP-UX 8.07	A2205A opt. #ABA	–	100
Domain/OS Localization kit. Includes Domain keyboard for Series 400.	–	A1098A opt. #ABA	100
Domain/OS Localization kit. Includes 32-button Lighted Programmable keyboard for Series DN.	–	A-LPFK-ABA	1,210

Input Devices

Make your workstation data input more convenient. With HP's variety of HP-HIL and Domain input devices, you can select the device that best meets your needs.

HP-HIL Input Devices for HP-UX Series 300, 400 and 700 Workstations

Ordering Information

Description	Product Number	Price
3-Button Mouse	46060B	$180
HP-HIL Foam-Backed Mouse Pad	K1411	9.95
HP-HIL ID Module	46084A	200
HP-HIL Control Dial Module	46085A	1,450
HP-HIL 32-Button Box	46086A	965
HP-HIL Digitizer Tablet (A4 size, includes tip switch stylus)	46087C	875
HP-HIL Digitizer Tablet (A3 size, includes tip switch stylus)	46088C	1,405
HP-HIL Digitizer Tablet (A4 size, includes 4-button cursor)	46090C	875
HP-HIL Digitizer Tablet (A3 size, includes 4-button cursor)	46091C	1,405
HP-HIL Quadrature Port (S300/S400 only) *Allows devices using Honeywell quadrature signals to be connected to HP-HIL interface.*	46094A	250
Spaceball	SPTL-2003NA	1,695
HP-HIL 3-Button Trackball input device	M1309A	302

PC-style keyboard, HP-HIL 32-button box, and HP-HIL Digitizer tablet

Localization Kits and Input Devices

HP-HIL Cables and Extensions

Ordering Information

Description	Product Number	Price
3-m (10 ft) coiled cable	46020-60001	$46
2.4-m (8 ft) flat male cable	46080-61601	25
0.5-m (1.6 ft) flat male cable	46083-61601	18
2.4-m (8 ft) extension	46080A	94
2.4-m (8 ft) extension with audio cable	46081A	225
15-m (49.5 ft) remote extension with audio and RGB video cables. Options available:	46082A	795
delete remote and RGB cables	Opt. #015	($335)
delete RGB cables	Opt. #343	($120)
30-m (99 ft) remote extension with audio and RGB video cables	46082B	1,115

Domain Input Devices for Series 400 and DN Series

Ordering Information

Description	Product Number	Price
Quadrature 3-Button Mouse	K1410	$99
Foam-Backed Mouse Pad	K1411	9.95
Summagraphics Digitizer Tablet (A4 size, includes 4-button cursor)	K2247	599
Summagraphics Digitizer Tablet (A3 size, includes 4-button cursor)	K1432	999
Marconi Trackball (supported by Marconi Coporation)	K1434	125
Itac Track ball (supported by Itac Systems)	K1435	199
Dial Set (provides manual control over image motion, orientation, and presentation on graphics workstations)	K1388	1,495
Dial Set Cable	K1536	69
Spaceball	SPTL-2003NA	1,695

HP-UX and Domain/OS Accessories

Working in Three Dimensions is easy with Spaceball– Now compatible with HP-UX and Domain/OS

Take full spatial control of your graphic images with the Spaceball input system. Spaceball is the ideal solution when using 3D software packages like HP-ME30, McDonnell Douglas–Unigraphics, and SDRC–Ideas. Just grasp the easy-to-use ball and push, pull, or twist; Spaceball lets you slide and rotate an image in X, Y, and Z axes. Spaceball also lets you "walk through" a design, building layout, or 3D scene. And with its dominant mode, Spaceball lets you

lock in motion along an axis based on the dominant force being applied to the ball. Attaches to 25-pin serial port. Supported by Spaceball Technologies. Includes Domain/OS and HP-UX software driver, RS-232-C interface cable, power supply, and HP adapter cable kit.

Model #SPTL-2003NA Spaceball

Workstation and Peripheral Maintenance Services
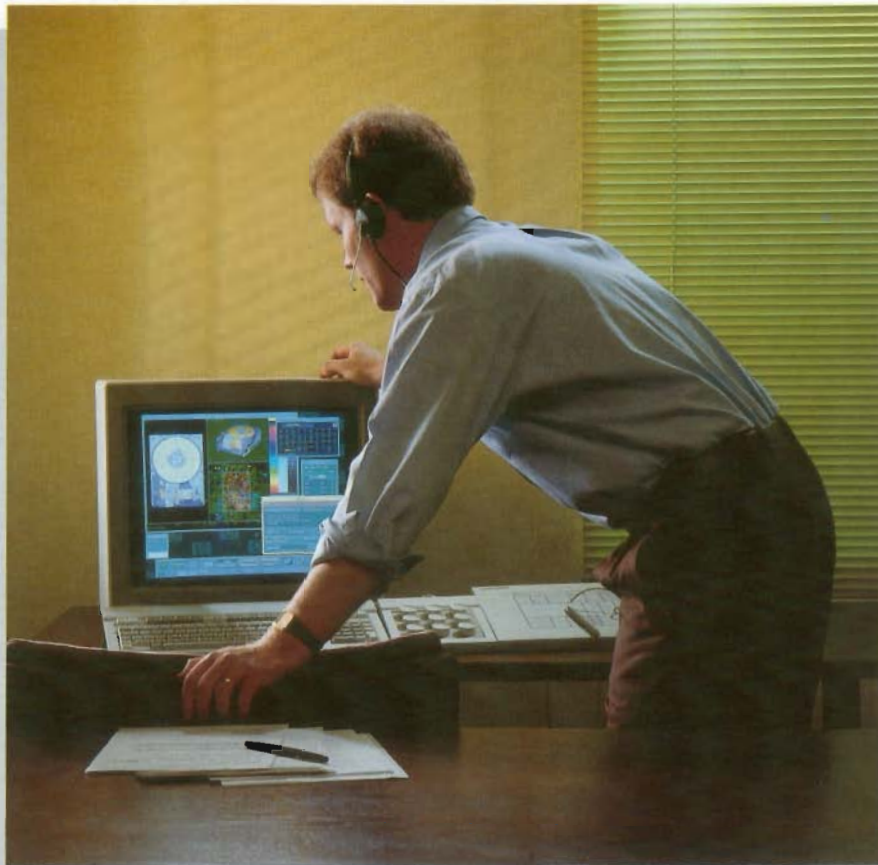
Personal support from HP Response Center professionals provides solutions to your workstation problems.

CALL...
HP Apollo DIRECT
for more
information

Workstation Services. HP Apollo Comprehensive Maintenance services for workstations provide you with high-quality support that enables you to maximize computer system uptime and productivity. Hewlett-Packard's professionalism and commitment to quality ensure that you receive maximum availability from your HP computer products.

With HP Apollo Comprehensive Maintenance services, you get the full features and benefits of HP's hardware, software, network, and peripheral services in a simplified package, priced lower than purchasing the individual support services. An HP Apollo Comprehensive Maintenance contract provides the following services for your workstations and network:

- **Onsite hardware support:** Maximize computer system uptime with assistance from local HP engineers.
- **Network support:** Whether your network environment is a single site of

HP Apollo Workstations or is a multivendor, multisite configuration, HP provides both local and remote capabilities to ensure maximum availability of your network.

- **Telephone and remote problem solving assistance:** Enhance system productivity by working with experts or information databases at the HP Response Center to quickly solve your computing problems.
- **Software updates:** Enhance your system performance and maintain compatibility with new hardware, software, and peripherals with the latest software fixes and enhancements.

The HP Apollo Maintenance program offers you three alternatives for purchasing support based on your specific business needs. You may choose from:

- HP Apollo Comprehensive Maintenance services which cover your total hardware, software, network, and peripheral support needs in a single product offering at the best price.

- HP Apollo separate services enable you to purchase separate hardware and software contracts when full coverage is not required.
- HP Apollo Custom Support Plan lets you mix contractual support with other support services such as education and consulting.

Peripheral Services. As the owner of an HP peripheral product, you are looking for maximum productivity and uptime at the lowest possible cost.

If you do not choose to include your peripherals in an HP Apollo Comprehensive Maintenance Service contract, you may select from several other alternative HP service agreements.

- Priority support provides service onsite within 4 working hours of your call.
- Next Day Support ensures service onsite within 1 working day of your call.
- HP Customer Return Services offers the most economical support and enables you, at your convenience, to bring your peripheral to an HP local service office.

HP Apollo Service and Support

Consulting Services

The HP consulting program provides technical expertise and worldwide resources to help you get the most from your HP workstation and related applications. From a thorough understanding of your individual needs, our skilled consultants develop a solution that enables you to increase your productivity without taking additional time from critical technical resources.
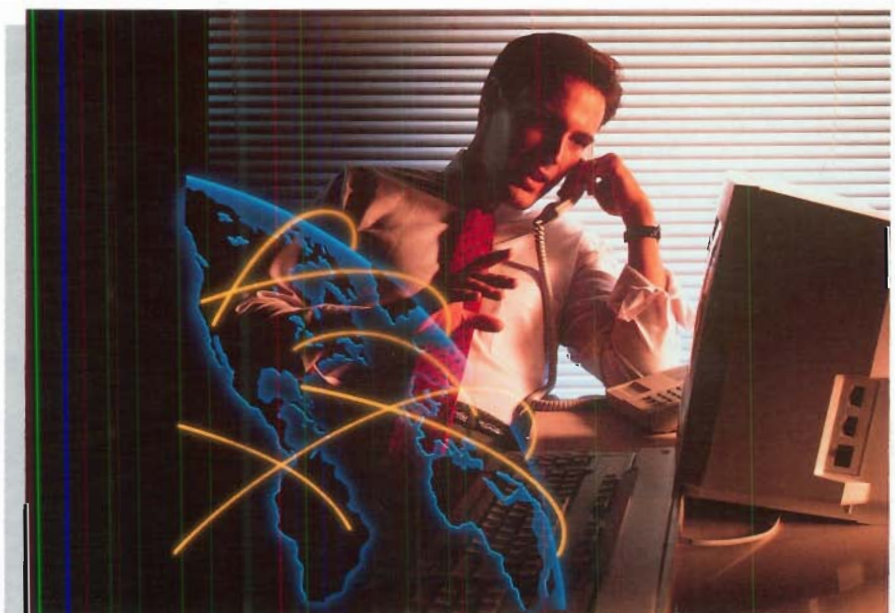
Multivendor Networking Services

To stay ahead of your competition, you rely on your multivendor network. Being assured that your network optimally supports your organization's needs can only be accomplished through effective planning, flexible design, reliable products, thorough training, consistent quality maintenance, and effective monitoring and operations.

Hewlett-Packard gives you a vast resource of networking professionals who have years of experience. Whether your network reaches around the corner or around the world, HP will, by acting as your single point of contact, ensure quality design, implementation, and operations. We offer services in the following areas:

- **Network Requirements Analysis and Planning**
  In-depth study of network requirements to meet business needs and objectives.

- **Logical and Physical Design**
  Evaluation of networking technologies, hardware, and software components, producing the solution that meets your needs.

- **Network Implementation**
  All aspects of the network are installed, labeled, documented, and tested to agreed acceptance criteria.

- **Network Operations**
  Maximize the uptime of your network through 24 x 7 monitoring and operations, change management, and service reporting.

Throughout the planning, implementation, and operation of your business cycle, our consulting professionals work with you to implement quality solutions so that you can focus more fully on your business goals and markets. Areas of focus include:

- Needs assessment
- Migration planning
- Network, database planning, and design
- Implementation assistance

CALL…
HP Apollo DIRECT
for more
information

Our Network Support Program has dependable experts throughout the world, so all your locations get personal, professional help.

HP Customer Education

Hewlett-Packard offers a wide range of customer training for HP-UX and Domain/OS operating systems.

Hands-on lecture/lab style courses are regularly scheduled at education centers throughout the world. All courses can also be taught to a dedicated group at your site, an HP sales office, or an HP education center.

A brief summary of training courses for workstation products featured in this catalog is provided below.

In addition to these courses, we also offer a wide range of courses on networking, UNIX software development, OSF technology, and open systems.

To order a copy of the **HP Education Catalog** *or to get complete scheduling information call 1-800 HP CLASS (1-800-472-5277 ext. 1160)*

UNIX System Basics I
2 days 51489S $595
Application users or system administrators in a run-time only environment learn basic UNIX system concepts required for day-to-day operation.

Fundamentals of the UNIX System
5 days 51434S $1,495
Programmers or full-time system administrators receive in-depth coverage of the UNIX operating system and basic shell programming.

HP-UX System Administration Basics
3 days 50722S.......................... $895
System administrators in a run-time only environment learn basic tasks required to maintain an HP-UX system.

HP-UX Workstation Administration for the HP 9000 Series 300/400/700
5 days 51436S $1,650
Full-time system administrators receive comprehensive coverage of system administration tasks and responsibilities.

HP OpenView NM Server Programming Fundamentals
5 days 22885S $1,750
Application developers learn how to use programmatic interfaces and diagnostic tools to develop an H P OpenView network management application.

HP LAN Manager/X for HP 9000 Systems Fundamentals
3 days B2781S $1,050
Learn how to plan, install, and manage a PC network using HP LAN Manager/X.

Programming with OSF/Motif
5 days 50767S $1,750
Software developers learn how to use OSF/Motif to create graphical user interfaces.

Introduction to PHIGS Programming
5 days B1682S $1,750
Programmers learn how to use the PHIGS graphics library to develop and run applications.

Introduction to SoftBench
3 days B1630S $1,050
Learn how to use SoftBench for the edit, compile, and debug phases of the development life cycle.

Introduction to Encapsulator
2 days B1631S $750
Learn how to use Encapsulator software with SoftBench.

C++/Object-Oriented Programming
5 days B1810S $1,495
Learn how to develop programs with the C++ programming language.

ANSI C Programming
5 days 35130S $1,495
Learn how to develop programs with the ANSI C programming language.

Introduction to the Ada/300 Development System
5 days 31124S $1,495
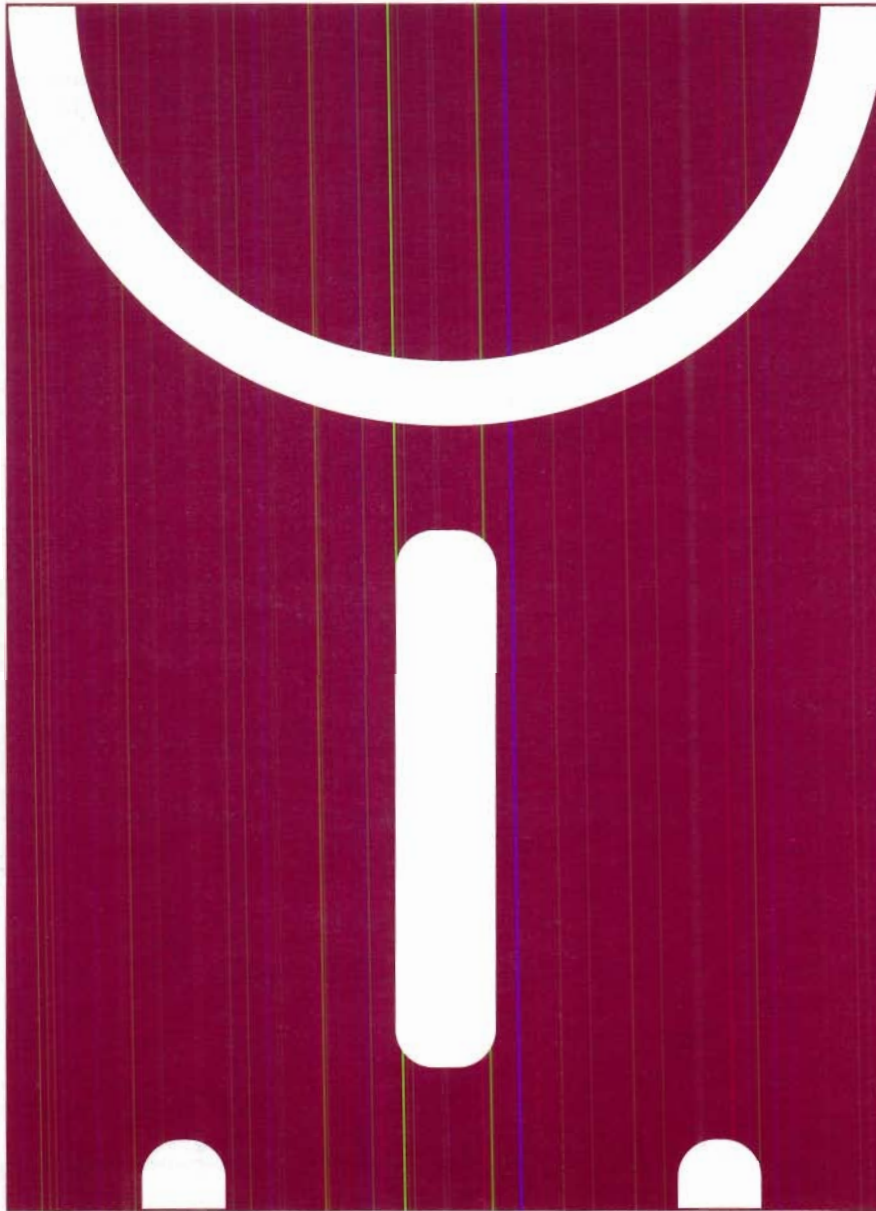Learn how to develop programs with the Ada programming language.

Pascal Programming
5 days 31112S...................... $1,495
Learn how to develop programs with the Pascal programming language.

Programming in FORTRAN 77
5 days 50698S...................... $1,495
Learn how to develop programs with the FORTRAN programming language.

SOFTWARE

HP Apollo Workstation Software

Computers and workstations are judged not only by their power and performance, but also by their operating system and available software. HP-UX and Domain/OS operating systems give customers a wealth of development tools, such as those shown in this catalog. In addition, there are over 3,500 application solutions available through our VARs and third-party software vendors.

HP has published a software solutions catalog for HP-UX and Domain/OS users. For details on how to order a copy, see page 38.

HP-UX Software

The HP-UX operating system is a multiuser, multiprogramming operating system. It provides the maximum operating system capabilities that are available for HP 9000 Series 300, 400, and 700 systems. HP-UX capabilities include support for an extensive array of programming languages, subsystems, and applications.

HP-UX Licensing, License Upgrades, Media, and Documentation

The base license for Series 300, 400, and 700 Workstations is a two-user license to use HP-UX. The bit-mapped console of a workstation or a terminal connected to a System Processor Unit counts as one user. LAN, if present (with any number of interfaces), counts as one user. Workstations that are limited to one bit-mapped console and one LAN interface use the two-user license. A workstation or network server that requires more than one direct-connected or modem-connected terminal, such as a network server supporting ME Series 10, exceeds the two-user license; its license must be upgraded to an 8- or 32-user license.

Licensed software can be made available for installation in licensed systems by:

1. Purchasing the corresponding media and documentation
2. Copying the licensed software to the licensed system
3. Installing the licensed software from a previously purchased media and documentation product.

NOTE: *The system license must match the software revision being installed. For example, an HP-UX Release 8.0 license is required for license installation and use of the HP-UX Release 8.0 software. Users upgrading software to current versions are required to purchase complete new license, media, and documentation.*

Domain/OS Software

Domain/OS allows customers to operate in any of three workstation environments: UNIX® system V.3, Berkeley UNIX 4.3, or the proprietary AEGIS operator system.

Usually, at the time of purchase, a node license for the current version of the operating system is included with the workstation. Media and documentation for the operating system is sold separately; see page 26 for ordering information.

Customers must purchase licenses to run optional Domain/OS software. All software is subject to standard HP terms and conditions. Brief descriptions of the types of licenses follow:

Domain/OS License Options

Node License: A license to run on a single, specific node. (Each node using the software is required to be licensed, including diskless nodes.) Discounts for Node Licenses are per customer's appropriate discount schedule. Node Licenses usually include media and documentation.

Development Node License: A type of Node License required for the development of applications software. Only the nodes developing applications using this software are required to purchase this type of license.

Run-Time Node License: A type of Node License required to run applications that were created using development licensed software. These licenses are priced less than development licenses. Some development license software does not require a run-time license. In these cases there is no license or fee for nodes running the resultant applications.

Corporate License: A type of quantity license agreement for the purchase of Node Licenses (development or run-time) at a reduced price. Quantities can be determined without any network or geographical restrictions. To qualify, the total quantity used to determine the discount must be ordered on one purchase order. Since quantity breaks are scheduled, customer discounts do not apply. Corporate Licenses do not include media or documentation.

Gateway License: A license for a communication product that runs on a single node but provides a service for users running on other systems. Although multiple users may benefit from the services provided, only the node running the software needs to be licensed.

"We're here as a resource to help you get maximum productivity from your HP Apolllo Workstations. If you don't see something you need ask us."

Operating System (HP-UX)

HP-UX 8.0

Unbeatable value based on standards

If you are searching for an operating system which will meet the needs of your organization, look no further. HP-UX is your best value in a standard-based operating system.

HP-UX protects your investment by adhering to current and emerging industry standards (POSIX IEEE 1003.1/XPG 3/SVID2/FIPS 151-1). This means your application can grow from one computing system to another. A growth path and a wealth of value-

added features help your organization save time and money.

What's more, this multiuser, multi-programming operating system gives you flexibility to add your hardware needs from a broad range of workstations up to powerful supermini-computers.

All HP-UX workstations include a 2-user license-to-use for the Run-Time environment. Instant Ignition delivers the Run-Time environment of HP-UX pre-installed and pre-configured on your workstation's internal disk. This is included with pre-configured

Software

workstations and/or can be ordered as an option.

All HP-UX 8.X Run-Time Environment products listed include installation documentation, HP VUE, NFS, ARPA, SAM and run time support for X.11, OSF/Motif™, Starbase, Starbase display list, NCS, and NetLS.

Documentation for HP-UX is available on long-lasting CD-ROM or as hardcopy. When ordering you must identify the corresponding product number for either the Series 300, 400, or 700 along with the option number, specifying media, content, or license you have choosen.

Ordering Information

| | Product Number | | | |
Description	HP-UX S300/S400	HP-UX S700	Domain O/S	Price
HP-UX Run-Time Environment, 2-User License	B1861A	B2352A	–	N/C
HP-UX 8.0 1/4-inch cartridge tape	#AA0			$395
HP-UX 8.05 DDS/DAT cartridge tape		#UJ7		395
HP-UX 8.07 DDS/DAT cartridge tape		#UJ9		395
HP-UX Run-Time Environment, 8-User License	–	B2353A	–	$1,195
CD-ROM certificate for HP-UX 8.05		#UJ6		N/C
HP-UX 8.05 DDS/DAT cartridge tape		#UJ7		395
CD-ROM certificate for HP-UX 8.07		#UJ8		N/C
HP-UX 8.07 DDS/DAT cartridge tape		#UJ9		395
HP-UX Run-Time Environment, 32-User License	B1862A	–	–	$1,895
CD-ROM certificate for HP-UX 8.0	#AAU			395
HP-UX 8.0 1/4-inch cartridge tape	#AA0			395
HP-UX CD-ROM Media				
HP-UX 8.0	B2378A	–	–	N/C
HP-UX 8.05 and related software	–	B2358A	–	N/C
HP-UX 8.07 and related software	–	B2826A	–	N/C
CD Media Kit—includes software on CD-ROM, codeword for software ordered concurrently and HP-HIL ID module.	#AAB	#AAB		$595
CD-ROM Disk set—includes software on CD-ROM.	#AAF	#AAF		495
HP-UX Documentation				
HP-UX 8.0	B1864A	–	–	N/C
HP-UX 8.05/8.07 (options include material for both versions)	–	B2355A	–	N/C
Documentation on CD-ROM; includes 1-user License.	#0BC	#0BC		$795
CD Complementary Documentation; provides hardcopy documentation currently not available on CD-ROM.	#0BJ	#0BJ		150
Adds up to 4 users for CD-ROM documentation.	#UA2	#UA2		395
General Usage hardcopy user's guides for HP-UX, HP VUE, and X Windows (set is shipped w/each Workstation).	#0BD	#0BD		130
HP-UX System Administration and Installation hardcopy manuals for HP-UX, networking, and HP VUE.	#0BE	#0BE		650
HP-UX User's Guides; includes manuals for UUCP, mail, text formatting and processing, shells, and editors.	#0BG	#0BG		175
General Programming hardcopy manuals for assembler, device I/O, native language support, and general HP-UX programming techniques.	#0BF	#0BF		325
User Environment hardcopy programming manuals for X Toolkit, Intrinsics, Xlib, HP VUE and OSF/Motif.	#0BL	#0BL		695
Starbase hardcopy programming manuals for Starbase, Starbase Display List, and Radiosity and Ray Tracing.	#0BM	#0BM		975
C/ANSI C, and symbolic debugger hardcopy manual.	#0BT	#0BT		195

NEW

Domain/OS Operating System Software

This is a single operating system that provides users with three operating environments—UNIX System V Release 3, BSD 4.3, and AEGIS. It also includes the X Window System environment, Apollo Display Manager, and Domain Distributed Debugging Environment (DDE)—a powerful, multilanguage debugging tool for large multiprocess, distributed applications. A migration path is under development to move Domain/OS customers to future applications through the OSF operating system.

Ordering Information

Description	Product Number			Price
	HP-UX S300/S400	HP-UX S700	Domain O/S	
Domain/OS 10.3; includes 1/4-inch cartridge tape. Order with Product Support (see below)	–	–	LF450BAD	$595
Product Support List PSK8; includes 1/4-inch cartridge tape (supporting 68040 processor)	–	–	LFZ70BAD	$98
PSK8; includes 1/4-inch cartridge tape (supporting SCSI CD-ROM and X.11-R4 environments)			LFZ00BAD	98
PSK Q3 for 680X0 workstations on 1/4-inch cartridge tape			LFC50BAD	98
Domain/OS for Series 10000, Media, Documentation, 1/4-inch cartridge tape	–	–	LF450BBD	$595
Product Support List PSK for SR 10.3; (supporting SCSI CD-ROM and X.11-R4 Enhancements.) Includes 1/4-inch cartridge tape (PRISM)	–	–	LFZ00BBD	$98
PSK Q3 for PRISM workstations on 1/4-inch cartridge tape			LFC50BBD	98

HP VUE makes the workstation easy to use.

HP VUE for Domain/OS

A suite of X-based, OSF/Motif-style applications that makes the workstation easy to use. Includes a graphical interface to UNIX, a text file viewer, the OSF/Motif window manager, and a set of personal productivity tools.

Ordering Information

Description	Product Number			Price
	HP-UX S300/S400	HP-UX S700	Domain O/S	
HP VUE 1.1, SR 10.2 License to use 1/4-inch cartridge tape and documentation for 680X0	–	–	LA980BLD	$550
OSF/Motif 1.0 License to use An industry-standard user interface offering applications with tools to develop a consistent behavior				
1/4-inch cartridge tape and documentation for 680X0	–	–	LA900BAD	$555
1/4-inch cartridge tape and documentation for 10000			LA900BBD	555

Domain Migration Software

DMX—Domain Display Manager on X Windows NEW

DMX is a tool that allows you to use an HP-UX workstation in very much the same way that you use a Domain workstation today. DMX is an X Window–based, Motif implementation of some of the key features of the Domain Display Manager. With DMX installed you get most of the DM editing features and some of the pad behavior from Domain on your standards-based HP-UX workstation.

The key features of DMX are:

* DM-like editor with DM commands, including cutting and pasting.

* Input/Output pads, including infinite scrolling of the output pad.
* Dynamic softkeys, allowing you to customize the keyboard to your needs.
* A common editor in editing and pad windows.

DMX works with any X Window manager you choose and is a good X client that supports the cutting and pasting features between DMX and non-DMX windows.

Software

By using DMX, you can quickly and easily move from a Domain workstation to an HP-UX workstation and maintain the same high level of productivity you've become accustomed to. With DMX, you *can* take it with you! **Product will be available for shipment after May 22, 1992.**

Ordering Information

Description	Product Number			Price
	HP-UX S300/S400	**HP-UX S700**	**Domain O/S**	
DMX License to use on one workstation (one needed for every seat)	B2896A [1]	B2895A	–	$99
DDS/DAT cartridge tape	#AAH	#AAH		195
CD-ROM certificate	#AAU	#AAU		N/C
Documentation	#OBJ	#OBJ		100
DMX on Domain - License, media, and documentation	–	–	LAC6ABAD	199
DMX on Domain - Additional License	–	–	LBC6ABA0	99

[1] Available on Series 400 only.

Other HP-UX Software

HP Terminal Session Manager for HP-UX

HP Terminal Session Manager provides users of character-based terminals the ability to easily "hot-key" between up to 10 HP-UX sessions, using either pull-down menus or softkeys.

Ordering Information

Description	Product Number			Price
	HP-UX S300/S400	**HP-UX S700**	**Domain O/S**	
HP Terminal Session Manager; includes manual and License to use for up to 32 users on one workstation; requires HP-UX 8.0	B2351A	B2810A	–	$595
CD-ROM certificate	#AAU	#AAU		N/C
1/4-inch cartridge tape	#AA0	–		195
DDS/DAT cartridge tape	–	#AAH		195

HP OpenView Network Node Manager for HP-UX and SunOS

Today, your success as a network manager depends on your ability to envision new ways to do more with less: better manage the diverse equipment and software installed in your environment, improve productivity, and reduce your operating costs.

To find insightful solutions to these master challenges, you need a rich set of tools. You need the solution chosen by users as the best overall standards-based fault, configuration, and performance management solutions for multivendor TCP/IP (Transmission Control Protocol/Internet Protocol) networks of interconnected LANs. You need the HP OpenView Network Node Manager.

Network administrators can understand the health of their network at a glance. With innovative capabilities including Discovery, Single View Management, and the Application Builder, HP OpenView Network Node Manager 2.0 greatly reduces the time and effort users must spend managing their networks.

HP OpenView Network Node Manager automatically discovers, maps, and continuously monitors all network and system resources across a TCP/IP network. As the network changes, the Discovery capability automatically shows the changes and updates the network map. Users can gather historical information for any numerical MIB element on any Simple Network Management Protocol (SNMP) device or group of devices

and trigger alarms based on user-defined thresholds. This information can be imported into popular spreadsheets or SQL databases.

In a matter of minutes, new or existing applications are integrated into the HP OpenView user interface and network map. This Single View Management capability protects your current investment and gives you control through a single, consistent view of the network.

The Application Builder creates a management application to graphically or textually display network device information and execute programs to handle network alarms without any programming. In as little as one minute, you can build applications to manage network devices and resources that use the industry-pervasive, multivendor SNMP. Customized user documentation is automatically integrated into the indexed, online user documentation. This powerful tool captures the expertise of the network administrator into the HP OpenView solution.

These automated features allow one person to manage all the LANs on an entire TCP/IP site or campus rather than just individual workgroups—saving time, effort, and money. Using HP OpenView Network Node Manager reduces network operating costs and improves service levels. Investing in HP OpenView Network Node Manager today provides the fastest path to OSF DME technology.

Best Overall

HP OpenView Network Node Manager

Data Comm MAGAZINE USERS' CHOICE November 1991

Top scores in far more categories than any other product gave Hewlett-Packard the top honors in this DATA COMM User Survey.

Data Comm is a networking technology magazine.

Ordering Information

Description	HP-UX S300/S400	HP-UX S700/S800	Sun SPARC	Price
Network Node Manager	B1009A	B1024A	B1034A	N/C
License to Use	#OAK	#OAK	#OAK	$15,000
Software on 1/4-inch tape and documentation	#AAO	#AAO	#AAO	100
Software on DAT tape and documentation	#AAH	#AAH	–	100
Extra copy of manual	#OB1	#OB1	#OB1	15

Network and System Management

HP OpenView TCP/IP Agent

HP OpenView TCP/IP Agent provides the capabilities necessary to manage HP 9000 Series 300, 400, 700, and 800 computer systems fully supporting the Simple Network Management Protocol MIB I and II. It provides network information such as traffic into and out of a node, as well as system information, such as CPU load and disk space, to SNMP management applications such as HP OpenView Network Node Manager.

The HP OpenView TCP/IP Agent is bundled with all Series 300, 400, and 700 workstations as well as HP 9000 Series 800 multiuser systems with bundled networking. It is available separately for Sun SPARC systems.

Ordering Information

	Product Number	
Description	Sun SPARC	Price
OpenView TCP/IP Agent	B1035A	N/C
License to use on a single system	#UAO	$400
License to use on 10 systems	#OA9	$3,000
License to use on 100 systems	#UAE	$20,000
License to use on 1000 systems	#UAG	$100,000
Software on 1/4-inch tape and documentation	#AAO	$100
Extra copy of manual	#OB1	$15

Network Node Manager maps and monitors all network and system resources.

Ordering Information

	Product Number			
Description	HP-UX S300/S400	HP-UX S700/S800	Sun SPARC	Price
Extensible SNMP Agent	B1036A	B1037A	B1038A	N/C
1/4-inch tape and manuals	#AAO	#AAO	#AAO	$100
DDS tape and manual	#AAH	#AAH	–	100
Additional copy of manual	#OB1	#OB1	#OB1	15
Single system license	#UAO	#UAO	#UAO	1,000
License for up to 10 systems	#OA9	#OA9	#OA9	8,000
License for up to 100 systems	#UAE	#UAE	#UAE	60,000
License for up to 1000 systems	#UAG	#UAG	#UAG	300,000
Upgrade from single system license	#UE4	#UE4	#UE4	(-$1,000)
Upgrade from 10 system license	#UE5	#UE5	#UE5	(-$8,000)
Upgrade from 100 user license	#UE6	#UE6	#UE6	(-$60,000)

HP OpenView Extensible SNMP Agent

HP OpenView Extensible SNMP Agent is a tool for managing systems and applications via the Simple Network Management Protocol (SNMP). It provides all of the capabilities of a standard SNMP agent, plus the capability for system administrators to extend the capabilities of SNMP applications like HP OpenView Network Node Manager to manage not just network devices such as routers, and hubs, but also to manage systems. Without any C language programming, the Extensible Agent can manage the complexities of distributed systems by customizing the agent to particular systems and applications to be managed.

The HP OpenView Extensible SNMP Agent supports standard Management Information Base (MIB) II objects, as well as all the objects in the basic HP OpenView TCP/IP agent. In addition to these standard objects, users and developers can specify their own objects, allowing them to custom-tailor their SNMP management to their own environments.

HP OpenView Extensible SNMP Agent is a key building block in developing complete, centralized system and network management solutions. Versions are available for HP 9000 Series 300, 400, 700, and 800 systems, as well as for Sun SPARC systems.

Increase your efficiency in the distributed computing environment

Task Broker

Task Broker provides efficient access to computers across a network. The software application selects the best computer on a network to run a batch-type task, transparently transfers its associated data to the selected computer, and sends the results back to the user upon completion of the task.

Note: *Licenses are restricted to a LAN—all systems connected to the same physical Ethernet or Token Ring*
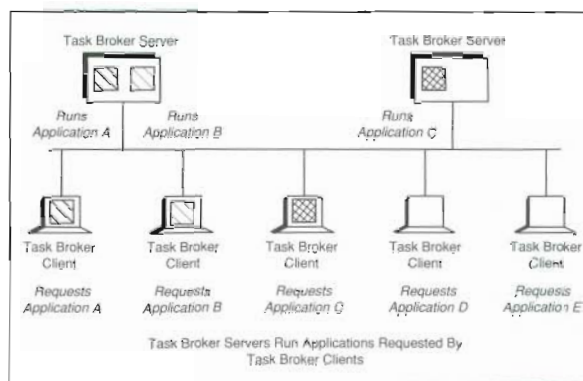
Domain/OS and HP-UX systems share a common account management system

Passwd Etc. NEW

Passwd Etc. controls the login and password information for distributed systems. Passwd Etc. is the client side of the Domain/OS Registry. It allows users to administer account data for both Domain/OS and HP-UX systems through the same tool. The software for the Domain/OS systems is bundled with the Domain/OS; for HP-UX the software must be ordered separately. The server must be a Domain/OS system.

HP OmniBack

HP OmniBack is a global network backup management solution that provides central file system backup and recovery. It automates the backup process for all machines in a distributed HP-UX and Apollo Domain environment. In addition HP OmniBack provides sophisticated scheduling and journaling facilities.

To receive the complete product, order the following:

- one base license
- one node license per workstation
- one platform software product

NOTE: HP OmniBack is required to back up 8mm 2.3-GB tape drive (HP Apollo only) see page 55 .

Ordering Information

Description	Product Number HP-UX S300/S400	HP-UX S700	Domain O/S	Price
Task Broker				
Media and documentation	B1732A	B1732A	B1743A	$300
1/4-inch cartridge tape	#AA0	#AA0	#AA0	N/C
License to use up to 10 workstations/systems	B1740L	B1740L	B1740L	5,000
License to use up to 50 workstations/systems	B1741L	B1741L	B1741L	15,000
Site License to use	B1742A	B1742A	B1742A	30,000
Passwd Etc.				
HP-UX 8.0 license to use	B2679A	B2681A	–	$225
1/4-inch cartridge tape	#AA0	–		195
DDS/DAT tape	–	#AAH		195
CD-ROM certificate	#AAU	#AAU		N/C
HP OmniBack				
Base license to use in one backup environment	B1942A	B1942A	B1942A	$5,050
Node license to use on one node (Quantity price break available)	B1943A	B1943A	B1943A	150
Platform Software (must be ordered with node license)	B1944A [1]	B1945A	B1947A	250
	B1944B [2]	–	–	250
1/4-inch cartridge tape	#AA0	–	#AA0	N/C
DDS/DAT tape	#AAH	#AAH	–	N/C
1/2-inch magnetic tape	#AA1	–	#AA1	N/C
CD-ROM	–	#AAU	–	N/C
Documentation	#ABA	#ABA	#ABA	N/C

[1] HP-UX 7.0 or later   [2] HP-UX 8.0 or later

Network and System Management

HP GlancePlus — A Window into your Systems

HP GlancePlus software is an easy-to-use online performance monitoring tool that helps you get the most from your workstation investment. This software tool shows at a glance how your workstation resources are being used and who is using them.

With HP GlancePlus, you can quickly pinpoint and resolve performance bottlenecks when they occur, thus maintaining high productivity for your users and systems staff. Using HP GlancePlus you can:

* identify and correct problems when work is running slowly
* monitor memory, CPU, and I/O usage by process and by user
* manage NFS and diskless workgroup
* balance disks and tune file systems for improved I/O performance

Software

HP GlancePlus is available for all HP-UX systems and is now available for Sun SPARCstations. A 60-day trial software is also available so you can look before you buy (you may apply the $50 trial fee toward your license purchase).

So say goodbye to guesswork, and get going with HP GlancePlus software!

Ordering Information

Description	Product Number HP-UX S300/S400	HP-UX S700	Sun SPARC	Price
HP GlancePlus/UX for S700				
Single node license to use	–	B1807A	–	$600
DDS/DAT cartridge tape for HP-UX 8.05 and 8.07		#AAH		195
CD-ROM certificate		#AAU		N/C
Documentation		#0BE		100
HP GlancePlus/UX for S300/S400				
For HP-UX 7.0	B1791A	–	–	N/C
For HP-UX 8.0	B2661A	–	–	N/C
Single node licence to use	#0AN			$600
License for up to 10 nodes	#0A9			3000
License for up to 25 nodes	#0AG			6000
License for up to 50 nodes	#0AA			10,000
1/4-inch cartridge tape (7.0 media includes documentation)	#AAO			195
CD-ROM certificate (8.0 only)	#AAU			N/C
Extra copy documentation	#0BE			100
60-day trial kit on DDS/DAT tape	5010-7681	5010-7681	–	$50
60-day trial kit on 1/4-inch cartridge tape	5010-7682	5010-7682	–	50
HP GlancePlus for Sun SPARCstations (Release 4.1 and later)				
Single node license to use	–	–	B2804A	$600
Media (QIC 24) and documentation			#AAO	195
Extra copy documentation			#0BE	100
60-day trial kit on 1/4-inch cartridge tape (QIC 24)	–	–	5010-7683	$50

HP GlancePlus enables you to pinpoint system problems so you can improve user productivity in your computing environment.

LAN Manager/X for HP-UX

HP LAN Manager/X is an advanced network operating environment that enables HP-UX computers to operate as file and resource servers to MS-DOS®, Windows 3.0, and OS/2 PCs.

HP LAN Manager/X also lets you use standard LAN Manager applications distributed across the network between HP-UX systems and PCs.

HP LAN Manager/X features include the following: Network file and

peripheral sharing, sophisticated network administration and management tools, comprehensive printer management and print spooling, advanced security system, Application Program Interfaces (APIs), and station-to-station messaging.

Ordering Information

Description	Product Number			Price
	HP-UX S300/S400	HP-UX S700	Domain O/S	
LAN Manager/X Media options include server software, client software for DOS and OS/2 on 5-1/4 inch and 3-1/2 inch flexible disks, and one complete set of server and client documentation.	B1003B [1]	B1011B [2]	–	N/C
License to use for 8 users	#UA3	#UA3		$2,200
1/4-inch cartridge tape and documentation	#AA0	#AA0		100
DDS/DAT tape	#AAH	#AAH		100
Network File System (NFS) License to use				
1/4-inch cartridge tape and documentation for 680X0	–	–	LA390BAD	$605
1/4-inch cartridge tape and documentation for Series 10000	–	–	LA390BBD	605

[1] Supported on HP-UX 7.X or 8.X   [2] Supported on HP-UX 8.05

[1] & [2] *Server requires a minimum of 8 MB of memory, Ethernet connection, and the appropriate LAN link product.*

Integrate HP-UX networking services on your PC

Network Services

HP Network Services 2.1/MS-DOS and HP Network Services 2.1/MS-DOS for NetWare, provide a PC running MS-DOS with Network File Transfer, and Network Interprocess Communication to your HP-UX system. These services supply a complete and sophisticated set of communication facilities between the PC and HP-UX, complementing HP's LAN Manager and NetWare solutions.

HP ARPA Services

With HP ARPA Services 2.1/MS-DOS and HP ARPA Services 2.1/MS-DOS for NetWare, a PC running MS-DOS can communicate with your HP-UX system for terminal emulation (Telnet) and information access and transfer (FTP). Save money by leveraging your investment and sharing resources through the convenience of your PC.

We have a number of options available with these products to meet your needs. You must order the product number along with the option specifying the content or license you wish.

Ordering Information

Description	Product Number	Price
HP Network Services 2.1/MS-DOS	D1811B	N/C
HP Network Services 2.1/MS-DOS for NetWare	D1819A	N/C
HP ARPA Services 2.1/MS-DOS	D1812B	N/C
HP ARPA Services 2.1/MS-DOS for NetWare	D1823A	N/C
Software, manuals, and license for one user	#001	$395
Right to copy for 1 additional user	#002	295
Right to copy for 8 additional users	#003	2000
Right to copy for 32 additional users	#004	6400
Additional user manual	#005	33

Upgrades to version 2.1 are available, please call for more information.

User Environment

HP SharedX — A Revolutionary New Communication Tool Version 1.1 NEW

If a picture is worth a thousand words, imagine showing your computer screen to someone across town instantaneously? If you're using HP SharedX, you could do it today!

HP SharedX does for computer screens what Fax did for paper documents. Instead of trying to describe your display to someone over the phone, you can send it! And it's better than Fax because you both see the real thing, real time, not a snapshot.

HP SharedX lets you share existing application windows with one or several users simultaneously. Now you can have tele-conferences where each participant can hear (via the telephone), see, and input to the information displayed on your screen, immediately!

HP SharedX allows receivers of your X.11 Windows to input to the window as if they were typing on your keyboard, and clicking your mouse. No more printing your output, sending paper, and waiting for the corrections and comments to come back.

Only the sender needs HP SharedX; receivers only need standard X Windows on their workstation or X terminal and a network connection to the sender.

With HP SharedX, sharing has never been easier!

Ordering Information

Description	HP-UX S300/S400	HP-UX S700	HP-UX S600/S800	Price
		Product Number		
HP SharedX for HP-UX				
License-to-use SharedX on any platform		B2305L		N/C
Single Node License		#UA0		$495
License for up to 8 nodes		#UA3		3,300
License for up to 24 nodes		#UA6		9,000
License for up to 48 nodes		#UA8		15,000
License for up to 96 nodes		#UAA		25,000
HP SharedX for HP-UX 7.X [1]	B2305A	–	–	N/C
1/4-inch cartridge tape and documentation	#AA0			$495
HP SharedX for HP-UX 8.0 [1]	B2306A	–	–	N/C
1/4-inch cartridge tape and installation guide	#AA0			$195
CD-ROM certificate	#AAU			N/C
Documentation	#0BJ			150
HP SharedX for HP-UX 8.05/8.07 [1]	–	B2307A	–	N/C
CD-ROM certificate for HP-UX 8.05		#UJ6		N/C
HP-UX 8.05 DDS/DAT cartridge tape		#UJ7		$195
CD-ROM certificate for HP-UX 8.07		#UJ8		N/C
HP-UX 8.07 DDS/DAT cartridge tape		#UJ9		195
Documentation		#0BJ		150
HP SharedX for 700/RX X Stations [1]	B2306A	B2307A	B2828A	N/C
1/4-inch cartridge tape and installation guide	#AA0	–	#AA0	$195
CD-ROM certificate	#AAU	#UJ6 or UJ8	#AAU	N/C
Documentation	#0BJ	#0BJ	#0BJ	150
DDS/DAT tape and installation guide	–	UJ7 or UJ9	#AAH	195
1/2-inch 9-track tape and installation guide	–	#AA1	#AA1	195

[1] Requires prior or concurrent purchase of HP SharedX License to use, B2305L

HP-PHIGS NEW

PHIGS is the ANSI/ISO standard interface for 3D graphics. HP-PHIGS is a native implementation that delivers full graphics performance in an X window via Direct Hardware Access technology.

GMR for Domain/OS

GMR is a world coordinate graphics package providing for the storage, editing, modeling, and viewing of primitives and attributes; it also includes advanced lighting, shading, and rendering functions which can be used with PHIGS data structure.

Ordering Information

Description	Product Number			Price
	HP-UX S300/S400 [1]	HP-UX S700 [2]	Domain O/S	
HP PHIGS 2.2 Development Library License to use	B1759C	B2363C	–	$3,400
Documentation	#0BJ	#0BJ		350
1/4-inch cartridge tape	#AA0	–		195
DDS/DAT cartridge tape	–	#AAH		195
CD-ROM certificate	#AAU	#AAU		N/C
HP PHIGS 2.2 Run-Time Environment License to use	B1685C	B2364C	–	$500
1/4 inch cartridge tape	#AA0	–		195
DDS/DAT cartridge tape	–	#AAH		195
CD-ROM certificate	#AAU	#AAU		N/C
PHIGS Release SR 10 License to use				
1/4-inch cartridge tape and documentation for 680X0	–	–	LA51BBAD	$3,030
1/4-inch cartridge tape and documentation for 10000	–	–	LA51BBBD	3,030
GMRD3D License to use				
1/4-inch cartridge tape and documentation for 680X0	–	–	LA24BBAD	$2,020
1/4-inch cartridge tape and documentation for 10000	–	–	LA24BBBD	2,020

[1] Supported on HP-UX 8.0   [2] Supported on HP-UX 8.05 and 8.07

PC Integration

Now run DOS applications on your HP-UX or Domain Workstation.

SoftPC for HP-UX

SoftPC is based on Insignia Solutions, Inc. software emulation technology and the Intel 80286 processor. It provides a complete PC AT environment via software-only emulation. Because the software performance is contingent on the CPU performance, customers will find better performance of the emulator software on higher performing workstations.

System Requirements:

Operating System: HP-UX revision 8.0 or later
System Memory: 16 MB minimum recommended
Disk Space/Size: 10 Mbytes
Graphic Interface: CGA, Hercules, EGA, VGA, Super VGA

PC Emulator for Domain/OS

Optional software license which provides an IBM PC–compatible DOS environment in a workstation window. Emulates monochrome, Hercules, and CGA graphics.

System Requirements:

System Memory: Minimum 4 MB
Operating System: Domain SR 10.2 plus PSK7

Ordering Information

Description	Product Number			Price
	HP-UX S300/S400	HP-UX S700	Domain O/S	
SoftPC 3.0, License to use	B2398A [1]	B2382A [2]	–	$700
1/4-inch cartridge tape	#AA0	–		195
HP-UX 8.05/8.07 DDS/DAT cartridge tape	–	#AAH		195
CD-ROM certificate	#AAU	#AAU		N/C
Documentation	#0BJ	#0BJ		150
PC Emulator Software, License to use				
1/4-inch cartridge tape media and documentation for 680X0	–	–	LA170BAD	$505

[1] Requires 8.0   [2] Requires 8.05

CASE

SoftBench

SoftBench provides an open, distributed CASE tool integration framework on multiple platforms that enables you to customize and extend your software development environment. SoftBench includes the SoftBench Framework and an integrated set of program construction tools for construction, test, and maintenance of C, and ANSI C. It allows you to design an environment that improves your software development productivity by automating tasks and processes, resulting in reduced complexity, repetition, errors, and rework.

SoftBench Encapsulator

Unique in the CASE market, HP's SoftBench Encapsulator allows you to customize and enhance your software development environment. New tools can be added to the SoftBench Framework, processes can be automated, all without having to change source code. Encapsulated tools have the same user interface as the rest of the environment and can communicate with other tools in the environment.

C++ SoftBench

C++ SoftBench hides the complexity of development in an object-oriented paradigm. It is a full-scale C++ and C programming environment based on the SoftBench Framework, allowing integration of CASE tools to create a comprehensive environment tailored to your needs. C++ SoftBench targets the construction, test, and support phases of software development with advanced C++ tools and libraries of data abstraction components. HP C++ Developer, which is tightly integrated into C++ SoftBench, allows C++ programmers to graphically view, construct, and edit classes and class hierarchies in C++. C++ Developer is offered standalone for those customers who cannot take advantage of the benefits of a fully integrated object-oriented environment.

CASE Environment Model

Ordering Information

Description	Product Number			Price
	HP-UX S300/S400	HP-UX S700	Sun SPARC	
SoftBench License to use for 1 user	B2600A	B2600A	B2600A	$2,300
SoftBench End-User kit	B2601A	B2615A	B2605A	N/C
1/4-inch cartridge tape	#AA0	–	#AA0	200
DDS/DAT cartridge tape	#AAH	#AAH	–	200
Documentation	#0B1	#0B1	#0B1	350
SoftBench Encapsulator License to use for 1 user	B2606A	B2606A	B2606A	$3,000
Requires prior or concurrent purchase of SoftBench.				
SoftBench Encapsulator End-User kit	B2607A	B2616A	B2611A	N/C
1/4-inch cartridge tape	#AA0	–	#AA0	200
DDS/DAT cartridge tape	#AAH	#AAH	–	200
Documentation	#0B1	#0B1	#0B1	350
C++ SoftBench License to use for 1 user	B2617A	B2617A	B2617A	$9,950
C++/SoftBench End-User kit	B2618A	B2620A	B2621A	N/C
C++ Language and C/ANSI C Developer's Bundle are available as options with the End-User kits.				
1/4-inch cartridge tape	#AA0	–	#AA0	200
DDS/DAT cartridge tape	#AAH	#AAH	–	200
Documentation	#0B1	#0B1	#0B1	400
HP C++ Developer	B1694A	B2406A	–	
License to use 1 workstation	#0AN	#0AN		$2,500
HP C++ Developer media	B1695A	B2407A	–	N/C
1/4-inch cartridge tape and documentation	#AA0	–		200
DDS/DAT cartridge tape and documentation	–	#AAH		200
CD-ROM certificate	#AAU	#AAU		N/C

Ordering Information

Description	HP-UX S300/S400	HP-UX S700	Domain O/S	Price
C/ANSI C Developer's Bundle License to use	B1863A	B2354A	–	$1,795
Includes C/ANSI C complier, debugger; tools for X.11, OSF/Motif, HP VUE, Starbase Display List and General Programming Tools.				
1/4-inch cartridge tape	#AA0	–		195
CD-ROM certificate for HP-UX 8.0	#AAU	–		N/C
CD-ROM certificate for HP-UX 8.05	–	#UJ6		N/C
HP-UX 8.05 DDS/DAT cartridge tape	–	#UJ7		195
CD-ROM certificate for HP-UX 8.07	–	#UJ8		N/C
HP-UX 8.07 DDS/DAT cartridge tape	–	#UJ9		195
HP-UX Developer's Toolkit License to use	B1865A	B2356A	–	$395
Includes tools for X.11, OSF/Motif, HP VUE, Starbase, Starbase Display List and General Programming Tools.				
1/4-inch cartridge tape	#AA0	–		195
CD-ROM certificate for HP-UX 8.0	#AAU	–		N/C
CD-ROM certificate for HP-UX 8.05	–	#UJ6		N/C
HP-UX 8.05 DDS/DAT cartridge tape	–	#UJ7		195
CD-ROM certificate for HP-UX 8.07	–	#UJ8		N/C
HP-UX 8.07 DDS/DAT cartridge tape	–	#UJ9		195
HP User Environment Developer's Kit License to use				
Provides software developer's tools necessary to develop X Window Systems and OSF/Motif 1.1 based applications.				
1/4-inch cartridge tape	–	–	LAC4BBAD	$940
General Programming Tools	B2379A	B2357A	–	N/C
Includes site license and version control commands.				
1/4-inch cartridge tape	#AA0	–		$195
HP-UX 8.05 DDS/DAT cartridge tape	–	#UJ7		195
HP-UX 8.07 DDS/DAT cartridge tape	–	#UJ9		195
C/ANSI C License to use	B2371A	B2413A	–	$1,500
1/4-inch cartridge tape	#AA0	–		195
DDS/DAT cartridge tape	–	#AAH		195
CD-ROM certificate	#AAU	#AAU		N/C
Documentation	#0B1	#0BJ		195
C/ANSI C-Complier, SR 10				
1/4-inch cartridge tape and documentation for 680X0	–	–	LA070BAD	$1,010
1/4-inch cartridge tape and documentation for Series10000	–	–	LA070BBD	2,525
FORTRAN 77 License to use	B2372A		–	$1,500
License to use, 700 Series	–	B2408A	–	1,800
1/4-inch cartridge tape	#AA0			195
DDS/DAT cartridge tape	–	#AAH		195
CD-ROM certificate	#AAU	#AAU		N/C
Documentation	#0B1	#0BJ		195
1/4-inch cartridge tape and documentation for 680X0	–	–	LA210BAD	1,010
1/4-inch cartridge tape and documentation for Series 10000	–	–	LA210BBD	2,525
Pascal License to use	B2373A	B2414A	–	$1,500
1/4-inch cartridge tape	#AA0	–		195
DDS/DAT cartridge tape	–	#AAH		195
CD-ROM certificate	#AAU	#AAU		N/C
Documentation	#0B1	#0BJ		195
1/4-inch cartridge tape and documentation for 680X0	–	–	LA460BAD	1,010
1/4-inch cartridge tape and documentation for Series 10000	–	–	LA460BBD	2,525
HP C++ 2.1	B2400A	B2402A	–	
True C++ compiler based on USL.				
License to use, 1 seat	#0AN	#0AN		$1,700
License to use up to 10 seats	#0A9	#0A9		13,600
C++ media and documentation	B2401A	B2403A	–	
1/4-inch cartridge tape and documentation	#AA0	–		240
DDS/DAT cartridge tape and documentation	–	#AAH		240
CD-ROM certificate	#AAU	#AAU		N/C
1/4-inch cartridge tape and documentation for 680X0	–	–	LA120BAD	1,060
Open Dialogue Developer's Kit License to use	–	B2673A	–	$1,845
DDS/DAT cartridge tape		#AAH		195
CD-ROM certificate		#AAU		N/C
Documentation		#0BJ		75

Development

An open, flexible system for management and distribution of application licenses

Network License System

HP's Network License System (NetLS) is a software toolkit that enables application vendors and end users to match software costs to actual usage. NetLS manages, enforces, and monitors application usage and usage policies across a distributed network. In fact, it has been selected by the Open Software Foundation® for inclusion in its suite of products forming a complete, open software environment.

NetLS supports CPU-locking and site licensing methods as well as the more flexible concurrent-use model. It also features a number of additional

licensing types as well as a mixed licensing scheme to tailor your software to meet your customer needs.

NOTE: *Ports of NetLS for non-HP platforms are available from Gradient Technologies, HP's partner in NetLS marketing and development, please call (508) 562-2882 for more information.*

NetLS makes the management and distribution of licenses easier.

Ordering Information

Description	Product Number			Price
	HP-UX S300/S400	HP-UX S700	Domain O/S	
Network License System				
HP-UX 8.0 License to use	B2677A	B2144A	–	$4,808
1/4-inch cartridge tape and documentation for 680X0 [1]	–	–	LA350BAD	5,050
NetLS Licenses to distribute to end users to unlock a licensed application.				
Annual license generation rights	LB42K000	LB42K000	LB42K000	5,000

[1] Requires Domain/OS SR 10.3 and higher

NCS/NIDL for HP-UX and Domain/OS

Network Computing System (NCS) software allows your customers to operate more efficiently in a multivendor computing environment. NCS is a keystone to new industry standards for distributed computing. NCS has been adapted by the Open

Software Foundation as the industry-standard remote procedure mechanism.

NCK is the run-time portion of NCS. It contains the library functions that implement the remote procedure

call facility along with global and local location brokers and administration tools. NCK is bundled with the HP-UX and Domain/OS operating system. The NIDL compiler allows application programmers to develop distributed applications using NCS.

Ordering Information

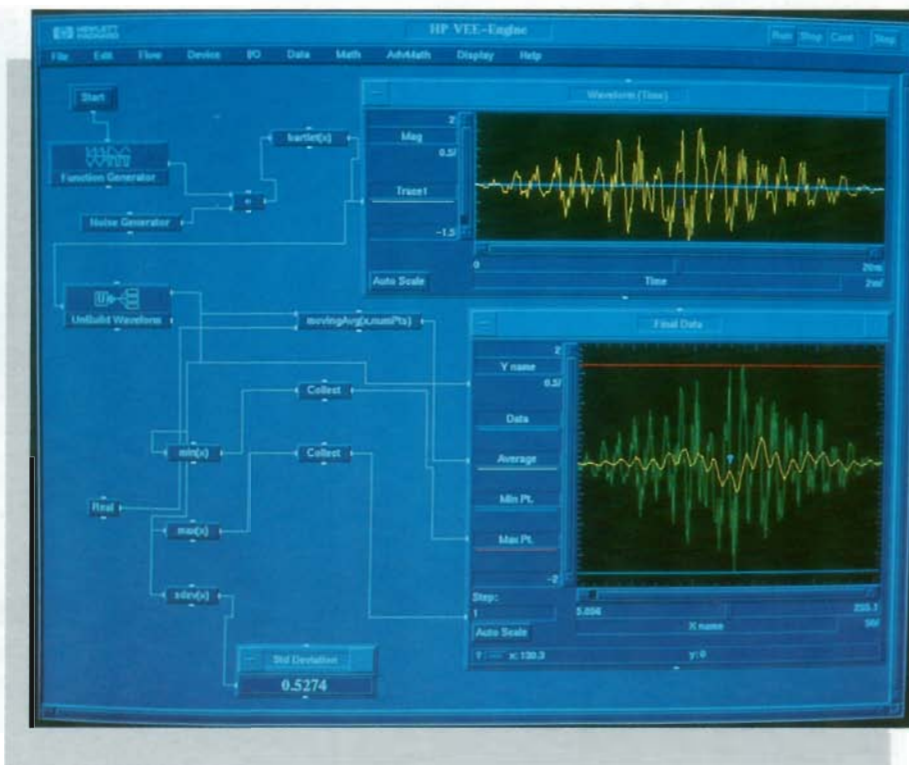| Description	Product Number			Price
	HP-UX S300/S400	HP-UX S700	Domain O/S	
NCS/NIDL License to use [1]	B1020A	B2674A	–	$1,290
1/4-inch cartridge tape and documentation	#AA0	–	–	190
DDS/DAT cartridge tape	–	#AAH	–	195
CD-ROM certificate	#AAU	#AAU	–	N/C
Documentation	#0B1	#0BJ	–	150
1/4-inch cartridge tape and documentation for 680X0	–	–	LA400BAD	1,290
1/4-inch cartridge tape and documentation for Series 10000	–	–	LA400BBD	1,290

[1] HP-UX Version 1.5.1 Domain Version 2.0

HP Visual Engineering Environment (HP VEE)

HP VEE, a state-of-the-art graphical programming environment, lets you select and link visual objects or icons to create complete solutions. If you can construct a block diagram or schematic, you can create elegant solutions to many of the problem modeling, data analysis, and data presentation problems you face each day.

HP VEE provides objects and icons which perform a function or set of functions for data collection and generation, data analysis, and data presentation. HP VEE offers over 250 objects, most of which perform functions which would take tens to hundreds of lines of code to implement in textual programming languages. Since the details of syntax, semantics, and low-level implementation are taken care of for you, you don't spend as much time programming and you can spend more time focusing on results.

HP VEE–Engine, the core product, can be ordered from this catalog. It is ideal for problem modeling and for analysis of data collected from files, other programs, or mathematically generated. HP VEE–Test, a superset of HP VEE–Engine, adds objects for instrument control from HP-IB (IEEE-488, GPIO, and RS-232 interfaces.) To order HP VEE–Test please contact your local HP Sales Office.

With HP VEE, you can spend more time focusing on results.

Ordering Information

Description	Product Number			Price
	HP-UX S300/S400	HP-UX S700	Domain O/S	
HP VEE–Engine License to use [1]	E2100A	E2101A	–	$895
1/4-inch cartridge tape	#AAO			50
CD-ROM	#AAF	#AAF		50
DDS-DAT cartridge tape	#AAH	#AAH		50
Documentation in English	#ABA	#ABA		50

[1] Supported on HP-UX 7.0 or greater

HP Software Solutions Catalog

Hewlett-Packard's HP-UX and Domain/OS Solutions Catalog provides information on applications developed by HP and its value-added businesses. The HP Solutions Catalog contains complete descriptions and contact information for more than 3,000 U.S. solutions, plus the catalog is indexed by company, market, and application.

A limited supply of HP Solutions Catalogs are available by calling HP Apollo DIRECT at 800-637-7740 and asking for publication 5091-2354EUS.

Office Automation

If you like Lotus 1-2-3 then... you'll love Lotus 1-2-3 for HP-UX

Lotus® 1-2-3® is now available on HP Apollo workstations running HP-UX! You can now take advantage of the greater power and larger memory capacity that HP workstations provide.

Lotus 1-2-3 for HP-UX is 100 percent keystroke, macro, and file compatible with Lotus on PCs and other platforms. Full compatibility with HP VUE allows access to multiple open windows and multiple work environments. The power of HP's LAN Manager/X allows information to be retrieved, updated, and shared directly from the corporate database, PC users, or other workstation users on the network. Worksheets already created on your PC are compatible with and run on HP-UX. And there's very little training involved with Lotus 1-2-3 for HP-UX since familiar 1-2-3 menus are retained.

Lotus 1-2-3 for HP-UX lets you make the most of your environment with support for multitasking, background processing, virtually unlimited spreadsheet size, Network File System, and SharedX. With Lotus 1-2-3 for HP-UX and HP SharedX you can achieve real-time sharing of X-based applications between two or more users. Thus, updates are seen by networked users immediately, making for better decisions faster.

And to ensure you get the most out of your investment in software, Lotus customer support-line offers "round the clock" service 365 days per year. This is further enhanced with extensive third-party support such as books and seminars on 1-2-3 for Scientists and Engineers to videos, user groups, and Lotus courseware.

Lotus 1-2-3 for HP-UX requires HP-UX 7.0 or later plus 8-MB memory (12 MB if using X Windows) and 17-MB hard disk space prefered.

"Floating user" licenses make access to Lotus 1-2-3 even easier and less costly. Now, any predetermined number of users can access Lotus 1-2-3, when they need it.

Ordering Information

Description	Product Number			Price
	HP-UX S300/S400	HP-UX S700	Domain O/S	
Lotus 1-2-3		**NEW**		
Single user license with media and documentation.	LOTS-1000H	LOTS-1000H7	–	$695
Add one license, for use with LOTS-1000H7. Documentation Included.	--	LOTS-1004H7	–	695

NOTE: *Quantity discount pricing available.*

Island Graphics

Integrated desktop publishing tools combine WYSIWYG word processing, advanced page layout, and graphics for HP and Apollo workstations. Comprised of three integrated packages: Island Write, Draw, and Paint, let you create impressive, brilliant documents faster and easier than you thought possible. Each program runs under the X Window system with OSF/Motif™ graphical user interface.

IslandWrite combines full-featured WYSIWYG word processing with powerful page layout tools. Write easily imports spreadsheets, graphics, EPS, TIFF, Paint, and Draw files, and includes a filter which converts FrameMaker MIF, Interleaf, Microsoft® Word, and WordPerfect files to and from IslandWrite.

IslandDraw is an object-oriented graphics editor for creating drawing, diagrams, organization charts, and overhead presentations. Its toolbox includes all grometric shapes and Bezier curves. Draw opens many graphics formats including PostScript, EPS, CGM, and HPGL. You can bring your CAD drawing into Draw for annotation and inclusion in your Write reports. Also, you can bring your Wingz and Lotus 1-2-3 graphics into Draw, and enhance and add to your reports.

IslandPaint is a raster editor that lets you create freeform art, modify clip art, and touch-up scanned images. Paint stores its files in TIFF format and reads and writes other formats including MacPaint, Sun Raster, Group 3 FAX, GIP, X.11

Impressive, brilliant documents made faster and easier.

bitmaps, X.11 Window dumps, and more. Paint is the easiest to use and the least expensive color bitmap editor available.

Island Productivity Series™ requires HP-UX 7.0 or later or Domain/OS 10.2 or later.

Wingz makes it easy to combine text, charts, and graphics into powerful spreadsheets

Wingz™ by Informix®, is a powerful spreadsheet and presentation package. Based on the X Window system, Wingz incorporates the OSF/Motif graphical user interface.

Wingz lets you combine text, 3D graphs, charts, scanned images, freehand illustrations, and worksheet data in any combination within the same spreadsheet. Now, with Wingz on your workstation, you have the additional power, functionality, and networking capabilities to produce outstanding, page-perfect presentations.

Wingz is built around a tremendously powerful application development language called HyperScript®. Even novice users can customize worksheets for maximum efficiency with this feature. Wingz also features DataLink. This utility allows your desktop to become a "point and click" front end for Informix-SQL databases.

Wingz requires HP-UX 7.03 or later or Domain/OS 10.2 or later.

Ordering Information

Description	Product Number			Price
	HP-UX S300/S400	HP-UX S700	Domain O/S	
Island Productivity Series				
Software	ISGR-1000H	ISGR-1000H7	ISGR-1000A	$995
Documentation	ISGR-DOC	ISGR-DOC	ISGR-DOC	59
Wingz				
Software	INFX-1000H	INFX-1000H7	INFX-1000A	$699
Documentation	INFX-DOC	INFX-DOC	INFX-DOC	105

NOTE: *Supplied on cartridge tape except for ISGR-1000H7 and INFX-1000H7 which are supplied on DAT.*
Quantity discount pricing available.
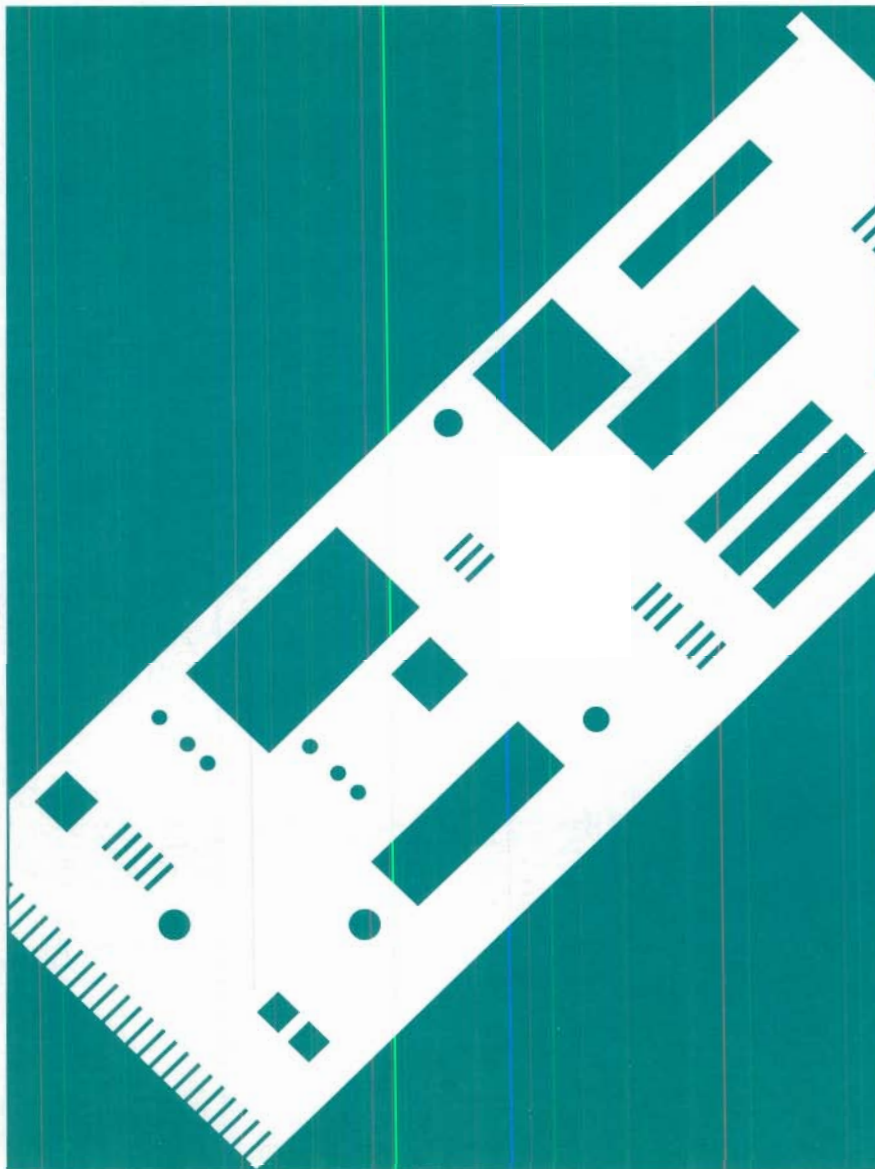
Build on the Strengths of Your Current System

When you demand more from your HP Apollo Workstation than it's equipped to give you, HP has the solution with add-ons and upgrades engineered with the same quality standards as your HP Apollo system.

Adding memory to your workstation will increase the performance of your system so that you can run more demanding applications and reduce your wait time between commands. There's no easier way to enhance your system's performance and reliability.

If it's more computing power, flexibility, or newer technology that you want, you can trade in your current CPU for a higher performing CPU. HP wants to make it easy for you to upgrade your system without the time and expense of starting over.

Increase your performance with more memory

HP memory add-on options let you keep pace with the higher memory requirements of single-user and network applications. By adding memory to your workstation, you can

- Improve data throughput
- Use more robust applications and tools such as Windows/Motif

- Increase the performance of your applications

HP gives you high-performance, high-quality memory for your workstation. The newest products—Models 345, 375, 380, and the Series 400 models— have ECC single-bit correct, double-bit detect memory.

NOTE: *We recommend Model 330, 350, 360, and 370 users consider system upgrades for best price/performance. See page 46 for more information.*

HP-UX Series 700

Ordering Information

System Model	Max. Memory	Description	Comments:	Product Number	Price
705, 710	64 MB	8-MB RAM (Four 2-MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	A2216A	$2,000
		16-MB RAM (Four 4-MB ECC RAM modules)		A2217A	4,000
		32-MB RAM (Four 8-MB ECC RAM modules)		A2218A	8,000
720, 730	128 MB	16-MB RAM (Two 8-MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	A1979A	4,000
		32-MB RAM (Two 16-MB ECC RAM modules)		A2512A	8,000
750	384 MB	32-MB RAM (Two 16-MB ECC RAM modules)	Installs as pairs; Six pairs maximum.	A2512A	8,000
		64-MB RAM (Two 32-MB ECC RAM modules)		A2513A	16,000

HP-UX/Domain Series 400

Ordering Information

System Model	Max. Memory	Description	Comments:	Product Number	Price
425e	48 MB	4-MB RAM (Two 2-MB SIMM modules)	Installs as pairs; Three pairs maximum.	A2200A	$1,000
		8-MB RAM (Two 4-MB SIMM modules)		A2201A	2,000
		16-MB RAM (Two 8-MB SIMM modules)		A2202A	4,000
400t	32 MB	8-MB RAM (Two 4-MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	98229B	2,000
425t	64 MB	8-MB RAM (Two 4-MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	98229B	2,000
		16-MB RAM (Two 8-MB ECC RAM modules)		98229D	4,000
400s	128 MB	8-MB RAM (Two 4-MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	98229B	2,000
		32-MB RAM (Two 16-MB ECC RAM modules)		98229E	8,000
425s, 433s	128 MB	8-MB RAM (Two 4-MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	98229B	2,000
		16-MB RAM (Two 8-MB ECC RAM modules)		98229D	4,000
		32-MB RAM (Two 16-MB ECC RAM modules)		98229E	8,000

Memory Add-Ons
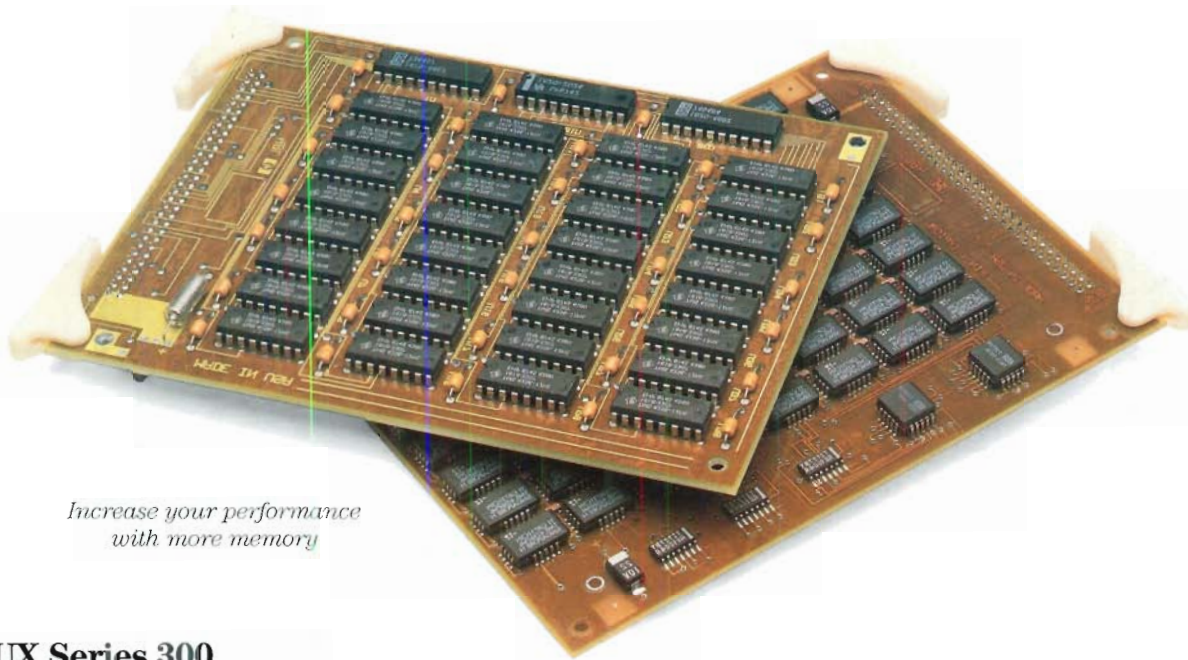
*Increase your performance
with more memory*

HP-UX Series 300

Ordering Information

System Model	Max. Memory	Description	Comments:	Product Number	Price
332	8 MB	1-MB Parity-Checking RAM board	Uses daughter interface.	98269A	$1,250
		4-MB Parity-Checking RAM board		98269B	5,000
340	16 MB	4-MB Parity-Checking RAM board	Installs on processor board.	98268A	5,000
345	64 MB	4-MB RAM (Two 2-MB ECC RAM modules)	Installs as pairs; Four pair maximum.	98229A	3,000
		16-MB RAM (Two 8-MB boards)		98229S	8,000
375, 380	128 MB	4-MB RAM (Two 2-MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	98229A	3,000
		8-MB RAM (Two 4-MB ECC RAM modules)		98229B	2,500
		16-MB RAM (Two 8-MB boards)		98229S	8,000
		32-MB RAM (Two 16-MB ECC RAM modules)		98229E	8,000

DN Series

Ordering Information

System Model	Max. Memory	Description	Comments:	Product Number	Price
3500	32 MB	4-MB RAM board	1 memory board per slot; Four memory slots maximum.	A-ADD-4MB-A	$2,600
		8-MB RAM board		A-ADD-8MB-A	5,200
3550	32 MB	8-MB RAM (Two 4-MB boards)	Installs as pairs; Two pair maximum.	A-ADD-8MB-B	5,200
		16-MB RAM (Two 8-MB boards)		A-16MB-B	10,400
4500	32 MB	8-MB RAM (Two 4-MB boards)	Installs as pairs; Two pair maximum.	A-ADD-8MB-B	5,200
		16-MB RAM (Two 8-MB boards)		A-16MB-B	10,400
5500	64 MB	16-MB RAM Add-On	1 memory board per slot; Four memory slots maximum.	A1923A	5,000
10000	704 MB	16-MB RAM daughter board	Four daughter boards per expansion board.	X-ADD-16MB	12,800
		64-MB RAM with expansion board		X-ADD-64MB	51,200

DN-Series Hard Disk Upgrades

Upgrade the internal storage space on your HP Apollo workstation. You can select a Hard Disk Upgrade Kit or a Disk Subsystem Upgrade Kit to increase your capacity. The Hard Disk Upgrade Kit includes the disk and Customer Engineering installation, however, your system must already have a disk controller, to operate. The Disk Subsystem Upgrade Kit includes the disk, disk controller, and Customer Engineering installation.

Ordering Information

Description	Supported on the following Models:					Product Number	Price
	3XXX	35XX	4XXX	5500	10000		
ESDI Drives—Disk Only Upgrades							
Upgrade 72 or 155 MB to 348 MB (Disk only)		X	X	X		U348FD	$3,200
Upgrade 155 or 348 MB to 697 MB (Disk only)		X	X	X		U697FD	7,000
Upgrade 348 MB to 700 MB (Disk only)					X	U700FD-10	10,350
Disk Subsystems							
Upgrade 72 or 155 MB to 348 MB w/ 2-function controller	X					U348FDM	$4,500
Upgrade 72 or 155 MB to 348 MB		X				U348FDS-35	4,500
w/ 3-function controller			X	X		U348FDS-45	4,500
Upgrade 155 or 348 MB to 697 MB		X				U697FDS-35	8,500
w/ 3-function controller			X	X		U697FDS-45	8,500
Upgrade 348 MB to 700 MB (Disk only)					X	X-MSD700FA	9,050
Controller required	011914-001		A-ADD-SWFC		X-ADD-TFC		

Mass Storage Subsystem Upgrades

Series 6000 Models 330S/D and 660S/D

Upgrade the storage capacity on your Series 6000 Models 330S/D and 660S/D external storage system.

NOTE: *Price includes installation by HP customer engineer. Order Option D02 and subtract $100 from the price of the Upgrade Kit if you prefer to install the unit yourself.*

Ordering Information

Description	Product Number		Price
	HP-UX O/S	Domain O/S	
332-MB Fixed disk drive	C2290A	C2290D	$4,200
664-MB Fixed disk drive	C2291A	C2291D	5,050
1.3-GB DAT drive	C2292A		4,700
CD-ROM drive	C2293A		1,250
Rewritable optical drive	C2294A		5,400

Winchester Floppy Controllers

3-Function Disk Controller

Supports ESDI hard disk drive, 5.25" flexible drive and features one SCSI port for tape cartridge or external SCSI devices. Can support up to two hard drives. Requires SR 10.1 or later and LFZ30BAD or later for multiple disk configurations. Kit includes controller board. Systems must have minimum CPU revisions as listed to the right.

2-Function Disk Controller

Supports ESDI hard disk and 5.25" flexible drive. Can support up to two drives. Kit includes controller board, product number 011914-001. (Old product number A-ADD-WFC-D).

System	CPU Minimum Revision
Series 4000	Rev 25 +
Series 3500/3550	Part #11858 Rev 9/#15862 Rev 1 +
Series 4500	Rev 5 +
Series 5500	All

Series 10000 Tape Controller

Tape controller for Series 10000. Controller for X-ADD-TC 1/4-inch Cartridge Tape drive for Series 10000.

Description	Supported on the following Models:					Product Number	Price
	3XXX	35XX	4XXX	5500	10000		
2-Function disk controller	X					011914-001	$1,050
3-Function disk controller	X	X	X	X		A-ADD-SWFC	2,000
Tape controller for X-ADD-TC					X	X-ADD-TFC	1,515

HP Series 300 CPU Upgrades

Hewlett-Packard gives you the best investment protection in the industry.

That's why it's easy to decide to buy HP systems today with the confidence that your investment will pay off for many years to come.

The CPU upgrade program allows you to trade in your current CPU (and in some cases memory) for a higher-performance CPU.

Follow these steps to return upgrade material and get proper credit:
1. Call 603-772-1500 Ext 3641 for upgrade equipment return authorization.
2. Mail product to:
   Hewlett-Packard
   200 Domain Drive
   Exeter, NH 03833
   Attn: Asset Management
   Department

3. Make sure the Upgrade Equipment Return Authorization number is marked clearly on the box and in the packaging material.

Upgrade for Models 310, 320, 332 to MC68040

CPU Field upgrade kit includes 25 MHz MC68040 SPU, 8-MB ECC RAM, and 14-inch VGA color resolution monitor.

Ordering Information

From:	To:	Description:	Product Number	Price
MC68030	MC68040	Model 310/320/332 CPU Field Upgrade Kit to MC68040	A2244A	$6,500
		Delete VGA monitor	Opt # ADY	($400)
		Substitute 1024 x 768 Graphic System for 640 x 480 Graphics System	Opt # ADX	2,500
		Return credit for 310 or 320 CPU board and monitor	Opt # 200	($1,000)
		Return credit for 332 CPU board and monitor	Opt # 201	($1,500)

Upgrade for Model 310 to Model 332

CPU upgrade kit includes MC68030 processor board with 1-MB RAM and medium resolution interface (512 x 400). You may add on 1-MB RAM (for a total of 2) or a floating-point accelerator. Requires HP-UX 6.5 or later.

Ordering Information

From:	To:	Description:	Product Number	Price
310	332	Model 310 CPU Field Upgrade to Model 332 with 1-MB RAM	98243C	$4,000
		Return credit for 310 CPU	Opt # 0H0	($1,000)
		Delete graphics subsystem	Opt # 003	($500)
		Add 1-MB RAM for a total of 2-MB RAM	Opt # 102	700
		Substitute 4 MB for 1 MB	Opt # 104	2,500
		Substitute high-resolution 1024 x 768 mono for 512 x 400 Graphics Interface Card	Opt # 544	500
		Add floating-point accelerator	Opt # 882	500

Upgrade for Model 375 to Model 380

Upgrade includes 25-MHz MC68040 chip.

Ordering Information

From:	To:	Description:	Product Number	Price
375	380	Model 375 Field Upgrade to Model 380	98244E	$2,000
		HP-UX, Version 7.05 Update media and manuals	Opt # 494	600

CPU Upgrade Guide for Models 330, 350, 360, and 370 to Model 380

Field upgrade includes 25-MHz MC68040 CPU; 8-MB ECC RAM; 4-GB virtual memory; 64-bit memory bus; SCSI, HP-HIL, Centronics, and RS-232-C interfaces; IEEE-488/ Ethernet LAN interface with Thin MAU, BNC T-connector and AUI (jumper selectable); 2-channel DMA controller; and built-in speaker.

NOTE: *HP Service Engineer installation required.*

NOTE: *Option 8ZC must be specified.*

NOTE: *To upgrade Models 330 or 350, Option OGT must be ordered. To upgrade Models 360 or 370, Option OGS must be ordered.*

Ordering Information

From:	To:	Description:	Product Number	Price
330, 350, 360, or 370	380	Model 330/350/360/370 Field Upgrade to Model 380 **Plus** Model 380 with 25-MHz MC68040 CPU	98244D Opt # 8ZC	$10,995 N/C
		Return credit for Model 330/350 CPU and System Interface boards Or Return credit for Model 360/370 CPU and System Interface boards	Opt # OGT Opt # OGS	($2,000) ($4,000)
		Substitute high-speed HP-IB (w.cable) for SCSI	Opt # ALB	N/C
		Convert original 8-MB RAM to 32-MB RAM (4-Mbit DRAMS)	Opt # AN1	7,500
		Add 8-MB ECC RAM (1 Mbit DRAMS)	Opt # AN4	2,500
		Add 32-MB ECC RAM (4 Mbit DRAMS)	Opt # AN6	10,000
		HP-UX 7.05 Update media and manuals	Opt # AAR	595
Return credit for:				
330, 350		Model 360 4-MB RAM board (98267A)	98267AN	($500)
360, or 370	380	Model 360 8-MB RAM board (98267B)	98267BN	($1,000)
		Model 360 12-MB RAM board (98267C)	98267CN	($1,500)
		Model 330/350/370 4-MB RAM controller board (98258A)	98258AN	($500)
		Model 350/370 4-MB RAM daughter board (98258B)	98258BN	($500)
		Model 350/370 12-MB RAM board (98258C)	98258CN	($1,500)
		Model 350/370 8-MB RAM board (98264A)	98264AN	($1,000)
		Model 350/370 16-MB RAM board (98264B)	98264BN	($2,000)
		Floating point accelerator (98248A)	98248AN	($1,000)
		Floating point acclerator (98248B)	98248BN	($600)
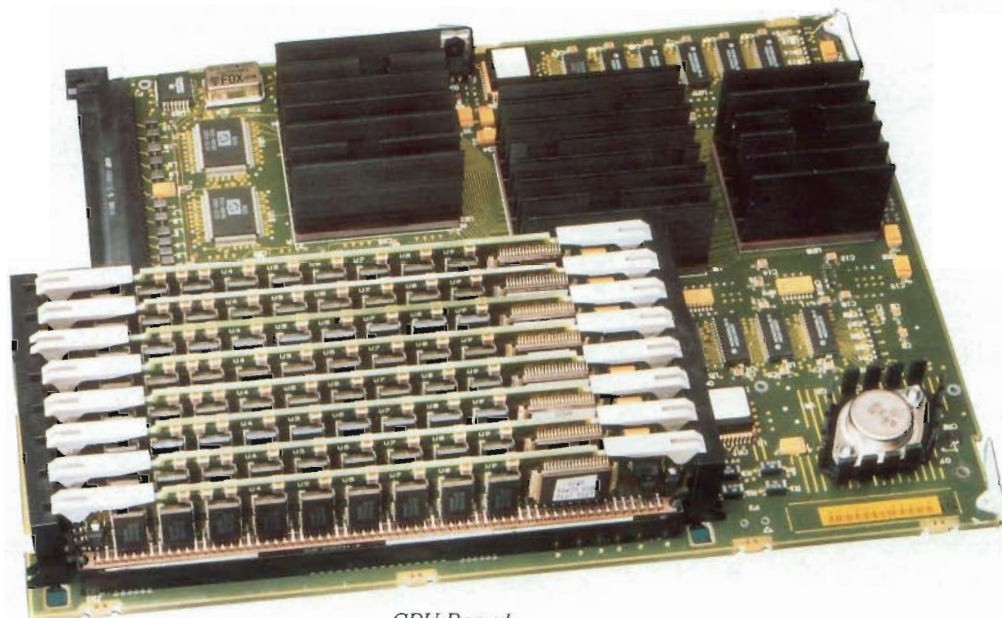
CPU Board

Series 400 and DN Series CPU Upgrades

Upgrades for Model 400s and 400t to Model 425s and 425t

Field upgrade kit includes 25-MHz MC68040 daughter board, an optional two-user license for HP-UX or Domain O/S, media, and documentation. Domain/OS 400 customers can also order an option to convert ISA slots to EISA slots.

NOTE: *To upgrade, return your 50-MHz MC68030 board to HP. Options AAR and AAS must be ordered with corresponding upgrade kits.*

Ordering Information

From	To	Description	Product Number	Price
400s	425s	HP-UX upgrade HP-UX, Version 7.05 Update media and manuals	A2044A Opt # AAR	$2,000 595
		Domain/OS upgrade Domain/OS, Version SR 10.3 Update media and manuals	A2045A Opt # AAS	2,000 595
400t	425t	HP-UX upgrade HP-UX, Version 7.05 Update media and manuals	A2040A Opt # AAR	2,000 595
		Domain/OS upgrade Domain/OS, Version SR 10.3 Update media and manuals	A2041A Opt # AAS	2,000 595

Board Upgrade for Series 3500, 3550, or 4500 to Series 5500

Now get 25-MHz MC68040 performance with a simple board upgrade, increasing performance to about 22 MIPS. Installation is included at no extra charge, but you must backup data on hard disk prior to the HP Customer Engineer's arrival. After installation, you install SR 10.3, PSK, and restore disk data.
NOTE: Special credit applies for systems purchased after 3/1/90.

Ordering Information

From	To	Description	Product Number	Price
3500, 3550, or 4500	5500	25-MHz MC68040 CPU board upgrade	A1631A	$8,995
		Return credit for Series 3500 CPU	Opt # 0H6	($1,000)
		Return credit for Series 3550 CPU	Opt # 0H7	($2,000)
		Return credit for Series 4500 CPU	Opt # 0H8	($3,000)
		Return credit for systems purchased after 3/1/90	Opt # 0H9	($1,000)

Trade-In Program

You can now trade-in your older workstations from HP Apollo, and select Sun, DEC, and IBM systems, and receive up to $4,500 credit towards the purchase of the following high-performance HP Apollo systems:

Series 700: Models 720, 730, and 750
Series 400: Models 425e, 425t, 425s, and 433s
Series 300: Models 380
DN Series: Model 5500

Call your local HP sales office or your telesales representative for more information on our trade-in program.

Series 300 DIO-II Expanders

The DIO-II Expander allows you to add two DIO-II slots and two DIO slot pairs to your 360/370/375 Workstation. If you would prefer, you can choose to delete the two DIO slot pairs to provide a total of four DIO-II slots by selecting option #004. A maximum of two 98570A's can connect to your workstation SPU as shown in the diagram to the right. You can mix the standard 98570A product and the option, or you can have two of each.

Series 300 DIO II Expanders

	Power Supply	HP 98570A Option #004 Direct-Connect 4-Slot DIO-II I/O Expander
Available DIO-II Slot		
Available DIO-II Slot		
Available DIO-II Slot		
Available DIO-II Slot		

Connects to DIO-II backbone through slot in top cover of expander

HP 98570A Direct-Connect 6-Slot DIO-II/ DIO I/O Expander

	Power Supply
Available DIO Accessory Slot	
Available DIO I/O Slot	
Available DIO Accessory Slot	
Available DIO I/O Slot	
Available DIO-II Slot	
Available DIO-II Slot	

DIO-I/O

DIO-I/O cards have a 16-bit data path and 24-bit address bus. They are 5 x 7 inches, consume one DIO slot, and have a coverplate containing the I/O cable connector that covers the slot. The cards may be placed in any DIO-I/O slot, which is the lower of each DIO pair of slots.

DIO-Accessory

DIO-Accessory cards have a 16-bit data path and are 5 x 7 inches. They have no coverplate or cable connectors and therefore use only one slot per board.

DIO-II I/O and DIO-II/System

The DIO-II I/O cards have a 32-bit data and address path, and are 8 x 11 inches. Some boards are designed to perform as a "mother" to certain "daughter" boards.

DIO-II/System Bus cards have a 32-bit data and address path, and plug into the 8 x 11 inch DIO-II slots. These System Bus boards also have a second high-speed private/synchronous 32-bit bus.

Depending on your needs for DIO or DIO-II slots, the chart to the left shows how you can add additional slots with expanders.

Ordering Information

Description	Product Number	Price
Series 300 DIO-II Expander Add two DIO-II slots and two DIO slot pairs. Delete the two DIO slot pairs for a total of four DIO-II slots.	98570A opt. #004	$2,455 ($400)
Model 340 Add-On Add one DIO slot to a 340 without a DIO slot	98013A	1,500
Series 400 DIO-Adapter Converts one DIO-II slot to a DIO-I/O slot and DIO accessory slot. Maximum of two per workstation.	A1401A	400

DIO-System

DIO-System cards also have a 16-bit data path and a 24-bit address space. These 8 x 11 inch cards fit in the bottom two slots of a 310 or 332 and in the DIO-II slots of other systems.

HELPFUL HINT:

Five different types of cards are used in the Series 300. How these cards use slots affects the type of I/O extender/expander you will need to order. While there are only two types of slots, DIO and DIO-II, there are five types of cards that fit into the slots, as well as "daughter" boards that can be added to some "mother" boards without taking up any DIO or DIO-II slots. The Series 400 has DIO-II slots only; these can be converted to DIO-I/O with an adapter.

MASS STORAGE, PRINTERS, AND PLOTTERS

Be Prepared for the Information Age

Because this is the information age, you're faced with unprecedented quantities of data. With the emergence of open systems, you're faced with multivendor environments.

You need mass storage that can manage all that information on virtually every platform or network. You also need printers and plotters to display it.

All of our mass storage products, printers, and plotters are engineered to meet the quality, reliability, and performance standards you've come to expect from Hewlett-Packard. All are backed by technical support that's unmatched in the industry.

Internal Storage Options

Internal Hard Disk Storage

HP offers a wide range of internal hard disk add-on options to increase your disk storage space. Use the ordering charts below to help you select the storage device that is compatible with your workstation.

Series 700

Ordering Information

Description	Supported on the following Models:					Product Number	Price
	705	710	720	730	750		
210-MB internal SCSI-II disk [1]	X	X				A2219A	$2,000
420-MB internal SCSI-II disk [1]	X	X				A2221A	2,500
Second 420-MB internal SCSI-II disk [2]			X	X		A1983A	2,500
1.3-GB internal SCSI-II disk					X	A1989A	6,000

NOTE:
[1] Supported on diskless system or single disk system only.
[2] Supported on systems with single internal disk only.

Series 400

Ordering Information

Description	Supported on the following Models:						Product Number	Price
	425e	400t	425t	400s	425s	433s		
210-MB internal SCSI disk	X						A2071A	$2,000
420-MB internal SCSI disk	X						A2072A	2,500
420-MB internal SCSI disk			X				A2075A	2,500
660-MB internal SCSI disk (HP-UX only)				X	X	X	A1443A	5,000
660-MB internal SCSI disk (Domain/OS only)				X	X	X	A1444A	5,000
1.3-GB internal SCSI disk					X	X	A2076A	6,000

NOTE:
Domain/OS SR 10.3 or HP-UX 8.0 required.
4XXe/t can have a maximum of 2 internal devices.
4XXs can have a maximum of 3 internal devices.

DN Series

Ordering Information

Description	Supported on the following Models:					Product Number	Price
	3XXX	35XX	4XXX	5500	10000		
155-MB ESDI internal disk [3]	X	X	X			A-ADD-155M	$2,000
348-MB ESDI internal disk [3]	X	X	X	X		A-ADD-348FA	4,000
697-MB ESDI internal disk [3]		X	X	X		A-697FA	8,000
348-MB ESDI internal disk [3]					X	X-A-348FA	4,040
700-MB ESDI internal disk [3]					X	X-A-700FA	5,050
348-MB ESDI internal disk [4]					X	X-MSD348FA	8,080
700-MB ESDI internal disk [4]					X	XMSD700FA	9,050
Controller required	011914-001	A-ADD-SWFC		X-ADD-TFC			

NOTE:
[3] Requires a disk controller to operate, see page 44 for ordering information on controllers.
[4] Product includes disk controller.

Internal Storage Options

Internal Removable Storage Devices

To provide a total storage solution, HP offers a wide range of internal removable storage devices which can be added to your workstation. The ordering charts below will help you to select the storage device that is compatible with your system.

Series 700

Ordering Information

Description	Supported on the following Models:					Product Number	Price
	705	710	720	730	750		
1.4-MB 3.5-inch Flexible disk drive [1]	X	X				A2223A	$500
1.4-MB 3.5-inch Flexible disk drive [1]			X	X		A1984A	500
1.4-MB 3.5-inch Flexible disk drive					X	A1968A	500
600-MB CD-ROM drive [1]	X	X				A2224A	1,000
600-MB CD-ROM drive					X	A1985A	1,000
2.0-GB DDS tape drive [2] [3]	X	X			X	A2274A	2,500
Add up to 8.0-GB w/DDS tape drive w/data compression [2] [3]	X	X			X	A2275A	3,500

NOTE:
[1] Supported on systems with single internal disk only.
[2] Supported on systems with single internal disk only and HP-UX 8.07.
[3] Order an upgrade kit at no charge; option #AHR for Model 710 and option #AHS for Model 750.

Series 400

Ordering Information

Description	Supported on the following Models:						Product Number	Price
	425e	400t	425t	400s	425s	433s		
1.4-MB 3.5-inch SCSI Flexible disk drive	X						A2073A	$500
600-MB CD-ROM drive	X						A2074A	1,000
1.3-GB DDS tape drive (HP-UX only)				X	X	X	A1447A	4,700
2-GB 3.5-inch DDS tape drive [4]	X				X	X	A2274A	2,500
600-MB CD-ROM drive (HP-UX only)				X	X	X	A1448A	1,000
60-MB 1/4-inch QIC tape drive (Domain/OS only)				X	X	X	A1449A	2,000

NOTE: [4] Order an upgrade kit at no charge; option #AHP for Model 425e and option #AHQ for Model 425s, 433s.

DN Series

Ordering Information

Description	Supported on the following Models:					Product Number	Price
	3XXX	35XX	4XXX	5500	10000		
1.2-MB 5.25-inch Flexible drive [5]	X	X	X	X		A-ADD-FLP	$300
60-MB 1/4-inch SCSI-1 tape drive [5]		X	X	X		A-ADD-STC	1,500
60-MB 1/4-inch QIC tape drive [6]	X	X	X	X		A-ADD-TC	1,500
60-MB 1/4-inch QIC tape drive [5]					X	X-ADD-TC	1,010
Controller required	011914-001	A-ADD-SWFC		X-ADD-TFC			

NOTE:
[5] Requires a disk controller to operate, see page 44 for ordering information on controllers.
[6] Product includes disk controller.

External Hard Disk Storage

Hewlett-Packard is continuing its commitment to the design and manufacture of world class storage solutions to meet the needs of our HP workstation customers. The HP Series 6000 mass storage product family offers several mass storage solutions in a variety of expandable packages. You can find solutions to your unique mass storage needs among the numerous compact systems offered.

The HP Series 6000 models have been designed with performance and reliability in mind. These mass storage systems have undergone extensive testing to ensure the performance and compatibility with HP workstations are optimal. Quick access to replaceable assemblies in these compact storage systems also optimizes productivity by alleviating servicing problems.

The chart below will help you determine which devices will work on your system, or the earliest operating system required, and the type of device interface.

*Model 330S/D
Mass Storage Subsystem*

Ordering Information

Description	Model Number	Interface	Fixed Drive Capacity	Cables Included	Series 300 HP-UX	Series 400 Domain/OS	Series 400 HP-UX	Series 700 HP-UX	Product Number	Price
Hard Drive	6000/330H	HP-IB	335 MB	Yes	7.0+	No	No	No	C2200A	$5,325
	6000/670H		670 MB						C2203A	8,875
Mass Storage	330S	SCSI	332 MB	No	7.0+	No	7.0+	No	C2212A	4,325
Subsystem	330D				No	10.3^	No		C2212D	4,325
(Additional options	660S		664 MB		7.0+	No	7.0+	8.0+^^	C2213A	5,175
are listed below)	660D				No	10.3^	No	No	C2213D	5,175
	670SX	SCSI-II	677 MB			No		8.0+	C2481A	5,000
	670SE				8.0*	10.3**^	8.0		C2216T	4,800
	1350SX [1]		1.3 GB		No	No	No		C2482A	6,400
	1350SE				8.0*	10.3**^	8.0		C2217T	6,200
	1350S								C2214B	6,200

*All models except 310, 318, and 320
**With PSK Q3-91
[1] Fast differential SCSI-II

^All models except 400dl
^^Model 750 only

External Hard Disk Storage Factory Options

Ordering Information

Host Product Number	Option Number	Description	Price
C2212A and C2213A	Option 001	332-MB fixed disk drive (Series 300 and 400 only)	$4,000
	Option 002	664-MB fixed disk drive (for C2213A only)	4,850
	Option 003	1.3-GB digital audio tape drive (includes DAT and head-cleaning cassettes)	4,700
	Option 004	CD-ROM drive (includes disk caddy)	1,250
	Option 005	Rewritable optical drive (includes optical disk cartridge)	5,400
	Option 022	(2) 664-MB fixed disk drives (for C2213A only)	9,700
	Option 024	(2) CD-ROM drives (Series 300 and 400 only)	2,500
C2212D and C2213D	Option 001	332-MB fixed disk drive	$4,000
	Option 002	664-MB fixed disk drive (for C2213D only)	4,850
	Option 003	1.3-GB digital audio tape drive	4,700
	Option 004	CD-ROM drive (includes disk caddy)	1,250
	Option 005	Rewritable optical drive (includes optical disk cartridge)	5,400
	Option A22	(2) 664-MB fixed disk drives (for C2213D only)	9,700

Disk Arrays

Higher capacity, performance, and data protection than ever before NEW

With the introduction of HP's Series 6000 Models 1350SA and 420SA disk arrays, HP further expands and enhances its robust product line of mass storage devices for the Series 700 workstations and servers. These new differential SCSI-II disk arrays offer high capacity, performance, and data protection features never before available from HP.

With today's technology resulting in increased SPU performance, don't let your disk drive inhibit your performance. HP's Disk Arrays can increase transfer and transaction rate through data spreading techniques such as writing bytes of information to each disk drive in a parallel fashion and spreading out larger data blocks in parallel or multiple smaller data blocks independently to take advantage of overlapping of disk accesses.

The underlying concept of arrays is the theory that Redundant Arrays of Inexpensive Disks (RAIDs) offer a number of viable advantages over single disks. Models 1350SA and 420SA offer multiple modes of operation including; RAID 0, 0/1, 3, 5, and independent mode. Each array comes standard with a utility package that allows you to choose modes of operation and data protection features to configure a system that meets your needs to the fullest.

HP Disk Arrays for the Series 700

With HP's Disk Arrays you can increase the external mass storage capacity of the Model 720 and 730 to 57 gigabytes and potentially up to 228 gigabytes for the Model 750. In addition you now can increase your file size up to 2 gigabytes, a 48 percent increase over the file sizes of previous HP product offerings.

With the data protection features available on the disk arrays, information on a damaged disk can be rebuilt from the parity information stored on other disks. Using the Models 1350SA or 420SA with data protection almost eliminates the risk of losing data when a disk is damaged, and substantially reduces time-consuming reloads.

Upgrade kits are available for each disk array to provide you the opportunity to increase storage capacity, achieve better performance, or to ensure you have a spare disk available.

Clearly with the increased storage capacities, data availability enhancements, and performance improvements, HP's new Disk Arrays are the better choice to meet your needs in data storage!

Ordering Information

Description	Model Number	Interface	Maximum Fixed Drive Capacity**	Cables Included	Series 300 HP-UX	Series 400 Domain/OS	Series 400 HP-UX	Series 700 HP-UX	Product Number	Price
Disk Arrays										
5 x 1.3-GB disk array	1350SA	SCSI-II	6.7 GB	No	No	No	No	8.07	C2427JK	$37,975
5 x 420-MB disk array	420SA	Differential	2.1 GB						C2425JK	20,575
Upgrade Kits										
1 x 1.3-GB disk	1350SA	SCSI-II	1.3 GB	No	No	No	No	8.07	C2474J *	$6,350
1 x 420-MB disk	420SA	Differential	420 MB						C2472J *	2,750
Required Disk Array Hardware										
SCSI disk array terminator									C2905A	$65
SCSI-II Differential EISA interface									25525A	1,195

*Three ordering options to select from; #ODF Customer Installable; #ODG HP Field Installable; or #OD1 Factory Installable.
** Capacity is dependent on operating mode. RAID 0 and independent modes are shown. RAID 3 and 5 reduce capacity by approximately 20%, RAID 0/1 by 50%.

Optical disk drives for larger storage capacity

Hewlett-Packard offers a full line of multifunction optical (rewritable/worm) 5.25-inch products that open the storage spectrum from the single 650-MB drive to the 144-disk, 93.6-GB Library.

With HP's multifunction optical storage, you have automated, reliable, and immediate access to vast amounts of information, at a fraction of the cost per MB of hard disk storage.

The chart below will help you determine which devices will work on your system, or the earliest operating system required, and the type of device interface.

Model #C1701A
Rewritable Optical Disk Drive

Ordering Information

Description	Model Number	Interface	Fixed Drive Capacity	Cables Included	Series 300 HP-UX	Series 400 Domain/OS	Series 400 HP-UX	Series 700 HP-UX	Product Number	Price
CD-ROM Drive standalone		SCSI	600 MB	No	7.0+	No	7.0+*	8.0+	A1999A	$1,300
Optical Disk Storage										
Optical disk drive	650A	SCSI	650 MB	No	6.5+	10.2+	7.0+*	8.05+	C1701A	$5,835
Optical autochanger	10GB/A		10.4 GB		8.0†	No	8.0*	No	C1703A	20,700
	20GB/A		20.8 GB		7.0	10.4**	7.0	8.05	C1700A	37,200
	60GB/A		57.2 GB		8.0	No	8.0	No	C1704A	78,900
	100GB/A		93.6 GB						C1705A	107,300

*All models except 400dl
** Supported only on 425S, 425T, and 433S
† Software update is required.

HELPFUL HINT

This matrix shows the latest support of HP's optical autochangers and software solutions for HP platforms. These represent optical solutions from HP.

All = Models: 10GB/A, 20GB/A, 60GB/A, 100GB/A

HP Solutions	HP S300/ S400	S700
OmniBack	HP-UX 8.0 All SR 10.4 20GB/A	HP-UX 8.05 All
Optical Storage Server	HP-UX 7.0 20GB/A	HP-UX 8.05 20GB/A
Direct Connect	HP-UX 8.0 All SR 10.4 20GB/A	HP-UX 8.05 All

Digital Data and Magnetic Tape Storage

Digital Data Storage for high capacity unattended backup NEW

Introducing the HP Series 6400 Model 2000 and Model 2000DC Digital Audio Tape (DAT) drives to provide you maximum data integrity. Both products incorporate 3.5-inch form factor DAT technology with a SCSI-II interface and HP's DATIO backup software utility. In addition, the industry-standard Digitial Data Storage (DDS) recording format provides compatibility with the HP Series 6400 Model 1300H and 1300S DAT drives.

The Model 2000 provides 2 GB of unattended backup using a single 90 meter DDS cassette. The Model 2000DC uses data compression to provide 8 GB of unattended backup using a single DDS cassette.

Model 2000DC DDS Tape Drive

Ordering Information

Description	Model Number	Interface	Fixed Drive Capacity	Cables Included	Series 300 HP-UX	Series 400 Domain/OS	Series 400 HP-UX	Series 700 HP-UX	Product Number	Price
Digital Audio Tape Drives										
DDS tape drive	2000	SCSI-II	2 GB*	No	No	No	No	8.07	C1520B	$3,150
DDS tape drive w/compression	2000DC		8 GB						C1521B	4,150
Box of 5 DDS cassettes 1.3 GB (60 M)									92283A	75
Box of 5 DDS cassettes 2.0 GB (90 M)									92283B	95

*1.3 GB when using a 60 meter DDS cassette

Magnetic Tape Storage for efficient network backup

The speed of the tape drive and the capacity of the media should be well matched to your computer system. Hewlett-Packard offers a full range of products to match your current system and improve productivity. Remember, whether you need archival storage, online data storage, data exchange, software distribution, or backup protection, HP has the right product.

The chart below will help you determine which devices will work on your system, or the earliest operating system required, and the type of device interface.

Ordering Information

Description	Tape Size	Interface	Capacity	Cables Included	DN Series	Series 300 HP-UX	Series 400 Domain/OS	Series 400 HP-UX	Series 700 HP-UX	Product Number	Price
Tape drive	1/2 inch	HP-IB	1600 BPI	Yes	No	6.2+	No	7.0+*	No	7979A	$13,400
			1600 BPI+					7.0+**		7980A	22,200
										7980XC	24,700
		SCSI		No		No	10.3**	No	No	7980S	18,500
							10.3+**			7980SX	21,000
			1600 BPI							7979S	11,200
QIC-Format tape drive	1/4 inch	SCSI	60 MB		10.2+	No	10.2+*	No	No	AADDESTCABA†	2,040
Video tape drive	8mm		2.3 GB							A-OBEX-ABAD^	11,100
										A-EX-ABA†	9,090
Microfloppy disk drive	Dual 3.5 inch	HP-IB	2.0 MB		No	6.0+	No	7.0+	8.0+	9122C	1,665
Flexible disk drive	5.25 inch	SCSI	1.2 MB		10.2+	No	10.2+	No	No	AADDSFLPABA	1,210

*All models except 400dl and 425e
**4XXs only
^ Includes OmniBack software
† DN 2500 only

Advanced printing technologies

Hewlett-Packard offers you advanced printing technologies and multiple printer features that will allow you to match your needs with just the right printer. The monochrome HP LaserJet printers on the following chart have a variety of useful features. All of these printers give you 300 dpi resolution, 14 internal bitmapped fonts (20 in the HP DeskJet), envelope handling, and the flexibility to handle most media. *Specific printer features are noted on the chart below.*

33449A HP LaserJet IIID

Performance Characteristics and Ordering Information

Features	DeskJet 500	LaserJet Series IIPlus	LaserJet Series III	LaserJet Series IIID	LaserJet Series IIIP	LaserJet Series IIISi
Print Speed PPM (up to)	3	4	4	8	8	17
Standard Printer Language	PCL 3	PCL 4	PCL 5 (HP-GL/2)	PCL 5 (HP-GL/2)	PCL 5 (HP-GL/2)	PCL 5 (HP-GL/2)
Internal Scalable Fonts	0	0	8	8	8	13
Font Cartridge Slots	2	1	1	2	2	2
Standard Input Trays	1	1	1	1	2	2
Memory Slots	2	2	2	2	2	4 SIMM slots
Standard Memory	16 KB	512 KB	1 MB	1 MB	1 MB	1 MB
Optional Memory Boards	256 KB	1 MB and 2 MB	1 MB and 2 MB	1 MB and 2 MB	1 MB and 2 MB	1 MB to 4 MB
Maximum Memory	512 KB	4.5 MB	4 MB	4 MB	4 MB	16 MB
Standard Interface	Serial, Parallel	Parallel Centronics	Serial, Parallel	Serial, Parallel, Expanded I/O	Serial, Parallel, Expanded I/O	Serial, Parallel, Modular I/O
Duplex (Two-Sided) Printing	No	No	No	No	Yes	Yes w/option
Resolution Enhancement	No	No	Yes	Yes	Yes	Yes + microfine toner
Type Scaling	Windows 3.0	Option Type Director	Yes Intellifont	Yes Intellifont	Yes Intellifont	Yes Intellifont
Optional Languages	Epson FX 80 IBM Proprinter	Adobe PostScript Epson FX 80 IBM Proprinter	Adobe PostScript Epson FX IBM Proprinter	Adobe PostScript Epson FX IBM Proprinter	Adobe PostScript Epson FX IBM Proprinter	Adobe PostScript
Dimensions WxLxH in inches with tray(s) inserted	17.3 x 14.8 x 8	13.4 x 15.9 x 10.2	13.4 x 15.9 x 10.2	18 x 25 x 10	18 x 33.2 x 13.5	21.6 x 29.5 x 16.5
Networking capability	No	No	No	Yes	Yes	Yes
Apple Macintosh connection	No	No	Yes	Yes	Yes	No
Product Number	C2106A	C2007A	33481A	33449A	33459A	33491A
Price	$599	$1,249	$1,595	$2,395	$3,595	5,495

Order these peripheral products from your authorized local HP dealer, or call 800-752-0900 for the nearest dealer location.

HP-UX interface support: *Serial supported on all Series 300, 400, and 700 models; parallel supported on all Series 400 and 700 models except 400dl; parallel supported on Models 375, 345, 380, 362 and 382 for select devices.*

33459A HP LaserJet IIIP

Color Printers

HP PaintJet Color Printer (3630A)

The HP PaintJet color printer offers high-quality color graphics printing for PCs and personal workstations. Using HP's InkJet Technology, it prints at 180 dots per inch and up to 16.8 million colors depending on your system software. The new ink formulations produce colors that are bolder and brighter than ever before. The compact, personal-sized HP PaintJet printer handles fanfold paper or manual feed of cut-sheet and overhead transparencies for more versatility in creating colorful reports or presentations. A choice of Centronics, RS-232-C Serial, or HB-IB interfaces is available.

HP PaintJet XL Color Printer (C1602A)

Faster than the HP PaintJet printer on graphics, the HP PaintJet XL color printer can meet the color output needs of a high-volume user or an entire workgroup. A typical letter-size page of graphics prints in just 1.5 minutes. The built-in paper tray automatically feeds up to 200 sheets of letter- or ledger-size paper and up to 70 sheets of letter-size transparency film. The optional HP-GL/2 cartridge includes a 2-Mbyte buffer and additional fonts.

Ordering Information

Description	Dimensions W x L x H in inches	Product Number	Price
HP PaintJet Color Printer	17.4 x 11.89 x 3.86	3630A	$1,095
HP PainJet XL Color Printer	29.53 x 17.36 x 9.06	C1602A	2,495

HP-UX interface support: *Serial supported on all Series 400 models; parallel supported on all Series 400 models except 400dl; HP-IB supported on all Series 400 models except 400dl; HP-IB supported on Series 300.*

C1602A HP PaintJet XL Color Printer

Performance Characteristics and Ordering Information

Product Number / Features	7440A	7475A	7550B
Technology Type	Pen Plotter	Pen Plotter	Pen Plotter
Number of Pens	8	6	8
Media Size	A/A4	A/A4 and B/A3	A/A4 and B/A3
Media Type*	P, G, Tf	P, G, Tf, Pf	P, G, Tf, Pf, V
Command Language	44 HP-GL Commands expandable to 58	50 HP-GL Commands	HP-GL and HP-GL/2
Print Speed	15.7 ips pen-down 20.5 ips pen-up	15.0 ips pen-down 20.0 ips pen-up	31.5 ips pen-down
Repeatability	.1 mm	.1 mm	.1 mm
Acceleration	1.2 g	2.0 g	6.0 g
Resolution: Addressable Mechanical	.025 mm .025 mm	.025 mm .025 mm	.025 mm .00625 mm
Buffer Size	60 bytes 1024 bytes (optional)	1024 bytes	32 KB 1 or 2 MB (expandable)
Interfaces Available	#001 RS-232 #002 HP-IB	#001 RS-232 #002 HP-IB	#005 HP=IB, RS-232, RS-422 or #006 Centronics, RS-232
MTBF	13.5K hrs	32.0K hrs	32.2K hrs
Power Consumption	20 W	35 W	105 W
Price	$1,395	$1,995	$4,495

* P=paper; G=glossy; Tf=transparency film; Pf=polyester film double-matte; V=vellum

ANSI — A = 8.5 x 11 in   B = 11 x 17 in
ISO — A4 = 210 x 297 mm   A3 = 297 x 420 mm

*7440A HP ColorPro
8-Pen Compact Plotter*

MicroPrint 45CH for Series 300 Systems (HP-UX)

MicroPrint 45CH from Intelligent Interfaces, Inc. is an easy-to-install HP-IB to Centronics converter. It offers a reliable and inexpensive way for HP workstation users to send data (text and graphics) to a wide array of Centronics peripherals such as HP LaserJet and DeskJet printers.

Specifications

Connector: HP-IB (Input): Standard 24-pin HP-IB connector
Centronics (Output): Standard 25-pin to 36-pin

Data rate: 15 KB/sec

Ordering Information

Product Number	Description	Price
92203J	HP-IB to Centronics converter, cables not included	$210
10833A	1-m (3.3-ft), HP-IB 24-pin cable	80
92284A	2-m (6.6-ft), Centronics (parallel) 25-pin to 36-pin cable	39

Order these peripheral products from your authorized local HP dealer, or call 800-752-0900 for the nearest dealer location.

Large Format Plotters

Performance Characteristics and Ordering Information

Product Number / Features	7570A DraftPro	7575A DXL/7576A EXL DraftPro	7595C/7596C DraftMaster SX/RX Plus	7599B DraftMaster MX Plus	C1625A/C1627A Model 250/255	C1620A Model 355	C1633A DesignJet
Technology Type	Pen Plotter	Pen Plotter	Pen Plotter	Pen Plotter	Electrostatic Plotters	Electrostatic Plotter	InkJet Plotter
Number of Pens	8	8	8	8	Black & White	Color	N/A
Media Size	C, D, Architectural	A to D/A to E and Architectural	A to E and Arch. (RX-Rollfeed)	A to E and Arch. Rollfeed	A to D/A to E Rollfeed	A to E Rollfeed	A to E and Arch. Rollfeed
# of Colors	N/A	N/A	N/A	N/A	None	2048 Dithered	Monochrome
Media Type*	P, Pf, V	P, G, Tf, Pf, V	P, G, V, Tf, Tb, Pf	P, G, V, Tf, Tb, Pf	P, V, Tf, Tb, Pf	P, V, Tp, Tf, Pf	P, V, Tp, Pf
Command Language	80 HP-GL Commands	91 HP-GL Commands	85 HP-GL Commands HP-GL/2 Compatible	85 HP-GL Commands HP-GL/2 Compatible	HP-GL and HP-GL/2 758x emulation	HP-GL and HP-GL/2 758x emulation	HP-GL/2 HP RTL
Print Speed	15.7 ips pen-down	32.0 ips pen-down	110 cm/sec	110 cm/sec	250 = 1.6 cm/sec 255 = 2.2 cm/sec	B&W = 1 min/plot CLR = 8 to 10 min/plot	6 min/plot
Repeatability	.1 mm	.1 mm	.1 mm	.1 mm	N/A	N/A	N/A
Acceleration	2 g	2 g axial, 2.8 g diag.	4 g axial, 5.7 g diag.	4 g axial, 5.7 g diag.	N/A	N/A	N/A
Resolution:							
Addressable Mechanical	.025 mm (.001 in) .013 mm	.0254 mm .0127 mm	.025 mm .00625 mm	.025 mm .00625 mm	406 dpi	406 dpi	300 dpi
Buffer Size	7.488 KB	31 KB upgrade to 1 MB or 2 MB	1 MB	20 MB	40 MB	40 MB	2 MB
Interfaces Available	RS-232 std. HP-IB opt.	RS-232 std. HP-IB opt.	RS-232/RS-422/ HP-IB Std.	4-RS-232/2-HP-IB/ RS-422 std.	RS-232/RS-422/ HP-IB std.	RS-232/RS-422/ HP-IB std.	Centronics Parallel RS-232-C
MTBF	14K hrs	24K/20K hrs	N/A	N/A	N/A	N/A	N/A
Power Consumption	80 W	80 W	125 W	125 W	365 W	365 W	90 W
Price	$3,795	7575A DXL - $4,595 7576A EXL - $5,995	7595C SX - $7,495 7596C RX - $9,495	$10,995	Model 250 $24,900 Model 255 $31,900	$49,900	$10,995

* P=paper; G=glossy; Tf=transparency film; Pf=polyester film; double-matte;
V=vellum; Tb=tracing bond; Tp= translucent paper

ANSI —	A = 8.5 x 11 in	B = 11 x 17 in	C = 17 x 22 in	D = 22 x 34 in	E = 34 x 44 in
ISO —	A4 = 210 x 297 mm	A3 = 297 x 420 mm	A2 = 420 x 594 mm	A1 = 594 x 841 mm	A0 = 841 x 1189 mm
Architectural —	C = 18 x 24 in	D = 24 x 36 in	E = 36 x 48 in		

7575A DraftPro DXL and 7576A DraftPro EXL 8-Pen Plotters

HP 7595C/96C/99B HP DraftMaster SX/RX/MX Plus Series

Save money by sharing resources

Domain/OS connectivity kits provide networked access and sharing of PCs, printers, and HP-GL/2 plotters in a Domain/OS environment. The kits come with:

- Complete instructions on how to configure the spooler software and how to connect the HP peripheral printing device utilizing the built-in RS-232-C/Centronics port or add-on Centronics board

- CGM to HP-GL/2 filter software
- Domain/OS print/plot spooler supporting HP-GL/2 devices

The chart below is to help you to choose the best Connectivity Kit for your Domain Workstation needs.
* Supported on system. See page 81 for complete RS-232-C cable ordering information.

HELPFUL HINT:

The serial kit for HP Plotter and PaintJet printers is designed primarily for HP DraftMaster SX, RX, and MX plotters. The HP 7600 Series and PaintJet XL printers will perform better when connected through the parallel port.

HP LaserJet printer Connectivity Kits

These kits connect Domain/OS workstations to HP LaserJet Series IID, IIP, III, IIIP, IIID, and IIISi printers. Kits provide raster support for X and GPR bitmaps (with X Window System and SR 10.3), X Window dumps from 1 to 8 planes, and HP-GL/2 support for PCL-5 devices. Version 2.0 now supports double-sided printing and paper tray selection on the LaserJet IIID and IIISi printers. In addition, on the LaserJet IIISi you can now switch between PCL and PostScript®. These kits provide the ideal connectivity solution for electronic publishing, CASE, and technical office applications. Requires Domain/OS SR 10.2 or later.

HP Plotter and PaintJet printer Connectivity Kits

Kits are designed for HP DraftMaster SX, RX and MX plotters; HP 7600 Series Models 250, 255, and 355 electrostatic plotters; and the HP PaintJet XL printer with HP-GL/2 cartridge. The HP PaintJet Kit provides raster support for X and GPR bitmaps (with X Window System and SR 10.3) and X Window dumps from 1 to 8 planes. All kits require Domain/OS SR 10.2 or later.

PostScript® Filter Software

Troff to PostScript translates UNIX®, device independent *TROFF* print commands into PostScript print commands. Available on 1/4" cartridge tape. Requires Domain/OS SR 10 or later.

Parallel Interface Kit

This interface kit for AT-based systems supports a Centronics parallel, Versatec Differential or Versatec TTL output port. Kit includes Centronics parallel cable, an AT bus controller board, and the software driver. Requires Domain SR 10 or later.

Versatec V.80 Plotter Interface Kit

Kit supports monochrome electrostatic Versatec plotters from "A to E" sizes. Requires Domain SR 10 or later.

Ordering Information

Product Number	Description	Series 4XXs	Series 4XXt	Series 4XXe	Series 3000 3010 3010A	Series 3500 3550 4500	Series 5500	Series 10000	Serial interface cable included	Centronics interface cable included	Price
HP LaserJet Connectivity Kits											
A1904A	Serial HP LaserJet PCL interface kit	*	*	*	*	*	*		*		$225
A1905A	Parallel HP LaserJet PCL interface kit w/IKON board	*			*	*	*	*		*	1,825
A1906A	Parallel HP LaserJet PCL interface kit wo/IKON board	*	*	*						*	195
HP Plotter and PaintJet printer Connectivity Kits											
A1900A	Serial HP-GL/2 interface kit	*	*	*	*	*	*	*	*		$225
A1901A	Parallel HP-GL/2 interface kit w/IKON board	*			*	*	*	*		*	1825**
A1902A	Parallel HP-GL/2 interface kit wo/IKON board	*	*	*						*	190**
C1608A	HP-GL/2 cartridge For PaintJet XL	*	*	*	*	*	*	*			995†
PostScript Filter Software											
LA630BAD	Troff to PostScript filter on 1/4-inch cartridge tape	*	*	*	*	*	*				$960
Other Interface Kits											
KIT-CENT10C	Parallel interface kit for AT-based systems	*			*	*	*			*	$1,665
KIT-CENT-PC	Parallel interface kit for Series 10000							*		*	1,665
LA640BAD	Versatec V.80 plotter interface on 1/4-inch cart. tape	*	*	*	*	*	*				202

** Does not support DraftMaster plotters
† Required w/connectivity kit for PaintJet XL

NETWORKING
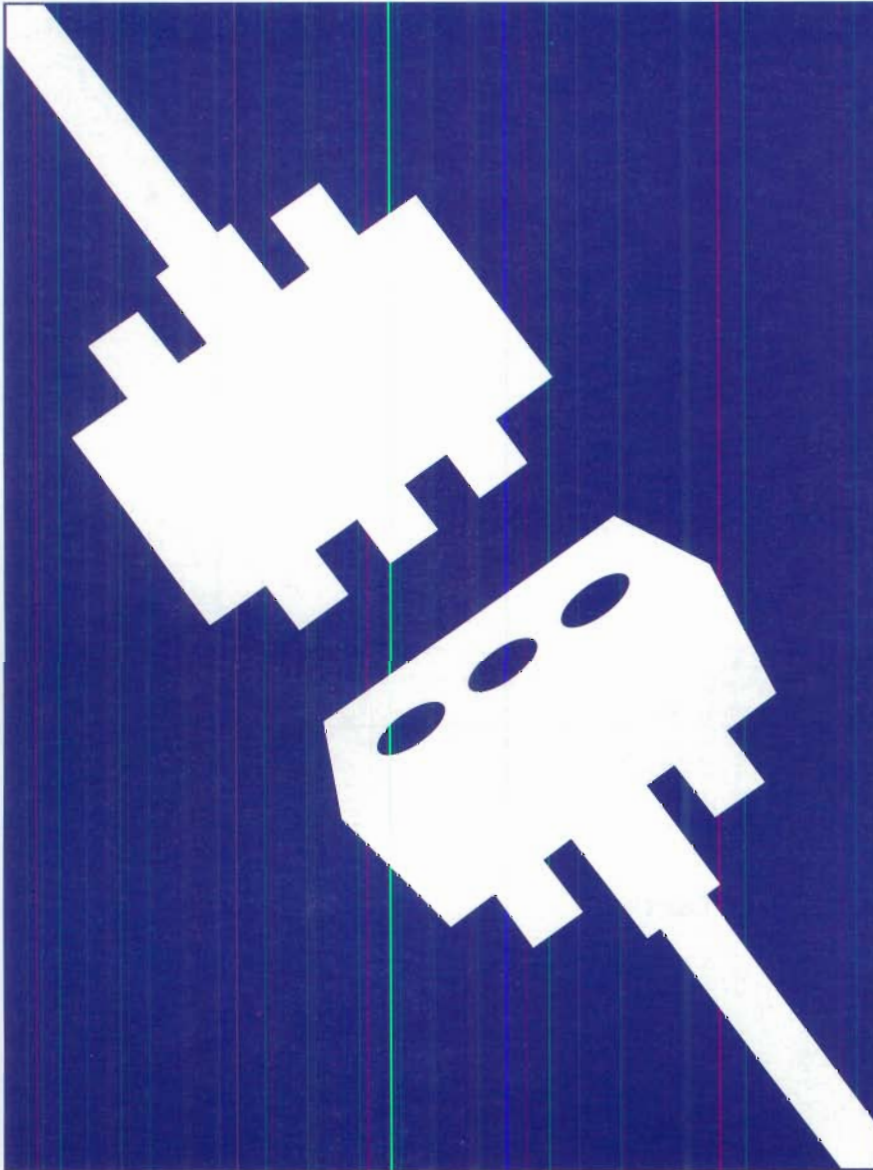
Access Power and Exchange Information

The trend today is to have workstations performing the tasks traditionally reserved for corporate mainframes. To take full advantage of their power, workstations must be networked. They must communicate with other workstations and with PCs, minicomputers, and mainframe computers.

HP Apollo Workstation networking is based on industry standards and the client/server model. It supports TCP/IP-based networking over Ethernet/IEEE 802.3 as well as FDDI, X.25, and Token Ring. The application layer allows your workstation to talk to a variety of systems using ARPA/Berkeley Services, NFS™, LAN

Manager X, NetWare, NCS, SNA 3270 and X.400.

Transparently using or providing server resources anywhere on the network can put your HP Apollo Workstation in it's most powerful position.

61
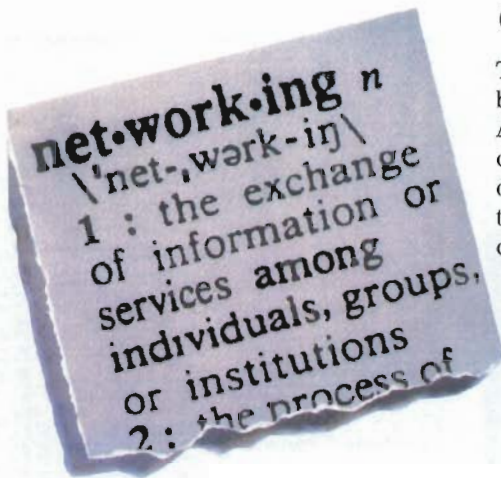
Connections for the Series 700

The Series 700 workstations have both a BNC "T" connector and an AUI connector built-in. The BNC "T" connector is the standard active default allowing for instant connection to a ThinLAN or Thin-Coax cable. If you prefer to connect to an external transceiver such as ThickMAU (Thick-Coax) or EtherTwist MAU (10Base-T), you can activate the AUI connector rather than the BNC "T" connector by selecting factory option #AL9 when ordering your workstation.

Ordering Information

Description	Product Number	Price
EISA/LAN 9000 Provides second Ethernet LAN. Includes LAN interface card, built-in ThinMAU, and BNC "T" connector.	25567A	$1,395
Options: Replace built-in ThinMAU and BNC "T" connector with AUI connector, ThickMAU transceiver, tap, and 1-meter AUI cable.	#740	395
Replace built-in ThinMAU and BNC "T" connector with AUI connector, EtherTwist MAU (10Base-T) transceiver, and 1 meter AUI cable.	#840	195
EISA/FDDI (Series 700 only) The FDDI interface comes with a single attach station (SAS) connection. The interface is fully compliant with ISO 9314 standard. Includes interface card, driver software on 4mm DAT, license to use, and installation documentation.	J2156A	4,495
Options: Delete software right-to-use and documentation.	#1AW	($995)
Software on 1/4" cartridge tape and documentation.	#AAH	195

Series 700 Communication Interfaces

Communication interfaces are interface cards and accessories that allow Series 700 workstations to communicate with peripherals, serial devices, and other non-LAN devices.

Ordering Information

Description	Product Number	Price
EISA SCSI II Host Adapter Connects SCSI II fast/differential devices through EISA slot. [1] Includes terminator (Product # 12016-80003)	25525A	$1,195
EISA HP-IB Host Adapter Connects HP-IB (IEEE 488) peripherals through the standard-speed EISA slot.	25660A	1,195

[1] Model 720 requires an add-on EISA.

HP-UX

Connections for the Series 400

The Series 400 workstations have both a BNC "T" connector and an AUI connector built-in. The BNC "T" connector is the standard active default allowing for instant connection to a ThinLAN or Thin-Coax cable. If you prefer to connect to an external transceiver such as ThickMAU (Thick-Coax) or EtherTwist MAU (10Base-T), you can activate the AUI connector rather than the BNC "T" connector by selecting factory option #AL9 when ordering your workstation. The 400e, 400t, and the 425t support only the built-in LAN connectors, however, a second Ethernet connection can be added to the 400s, 425s, and 433s with a DIO-I/O LAN 9000 interface card. If you would like additional information, please call our technical support engineers at 800-637-7740.

Series 400 Communication Interface

Communication interfaces are interface cards and accessories that allow Series 400 workstation to communicate with peripherals, serial devices, and other non-LAN devices.

Ordering Information

Description	Product Number	Price
HP-IB Interface Standard speed IEEE-488 interface kit for the 400t and 425t. (HP-UX only)	A1450A	$400
Standard speed IEEE-488 interface kit for the 400s, 425s, and 433s. (HP-UX only)	A1451A	400

Series 300 and 4XXs Communication Interfaces (DIO-I/O)

Communication interfaces are interface cards and accessories that allow the Series 300 and 4XXs to communicate with peripherals, serial devices, and other non-LAN devices.

Ordering Information

Description	Product Number	Price
GPIO Interface Provides a flexible parallel interface that will send and receive up to 16 bits of data to a variety of devices. Option:	98622A	$425
Add 4.6M unterminated cable.	#001	111
HP-IB Interface Standard-speed IEEE-488 interface card. High-speed disk interface to transfer data in bursts at a rate of 2 MB/second in word mode.	98624A 98625B	$365 1,000
RS-232-C (Serial) Interface Provides simple asynchronous I/O communication with switchable settings. Options:	98626A	$415
DTE (male) RS-232-C cable	#001	83
DCE (female RS-232-C cable	#002	83
Provides simple asynchronous interface; DTE-25F connector, no cable. No switchable settings.	98644A	212
Datacomm Interface Provides asynchronous serial communications; including RS-232-C, RS-449, and RS-423. Options:	98628A	$540
DTE (male) RS-232-C cable	#001	96
DCE (female) RS-232-C cable	#002	96
DCE (female) RS-449/423 cable	#003	196
SCSI Peripheral Host Adapter Provides SCSI connectivity for SCSI periphals. Includes DIO-I/O card, and 1-m cable (female, low-density bail-lock).	98658A	$1,000

Series 300 and 4XX Communication
Interfaces *(Continued)*

8-Channel Asynchronous Multiplexer (DIO-II)

Provides eight asynchronous RS-232-C compatible ports with full duplex modem control. Programmable data rates are available for each channel up to 19.2 K baud. Includes DIO-II interface card, RS-232-C patch panel, 2.5-meter card/panel interconnect cable, and software for loopback test utility when using HP-UX 6.2 or 7.0.

Telebit T2500 Modem

The Telebit T2500 is the fastest dial-up modem that is completely compatible with HP-UX workstations. It offers full asynchronous and synchronous compatibility with dial-up V.32 and PEP modems.

Using the PEP data communications protocol, the modem can transmit or receive asynchronous data at speeds of up to 18,000 bps over dial-up telephone lines, or up to 19,200 bps with lempel-ziv data compression.

When in PEP mode, the modem provides integrated support for UNIX® UUCP file transfer protocol, achieving throughputs faster than other asynchronous dial-up modems.

The T2500 maximizes throughput by allowing minimal data fallback rate of less than 100 bps while other modems drop back from 9600 to 4800 bps in one step. PEP modulation allows the T2500 to maintain connections where conventional modems fail. If you need to configure and test remote modems from a central site, the T2500's remote configuration and management capability will save you the expense of onsite technicians.

Supported on the following HP hardware:
- HP 9000 Series 600, 700, and 800
- P/N 98642A 4-Port Multiplexer
- P/N 98638 8-Channel Multiplexer
- P/N K2292A One-to-Three RS-232-C splitter
- Built-in RS-232-C ports on Series 700 workstations

4-Port RS-232-C Multiplexer

Provides three RJ-11 asynchronous RS-232-C ports for local or direct connect, and a 25-pin port for local RS-232-C or modem connection. Includes DIO-I/O interface card, three RJ-11 to 25-PIN (male) converters, one 5-meter 25-pin male modem cable, and three 15-meter RJ-11 cables.

DIO-I/O X.25 9000 Interface

X.25/9000 Link
The X.25/9000 Link hardware and software lets you connect from an HP 9000 Series 300 or 400 to private and public X.25 networks. With this link, you get communication from HP 9000s to HP 9000 and other systems. Complies with 1980 and 1984 CCITT recommendations for X.25. Supports ARPA/Berkeley Services, TCP/IP, programmatic user access to X.25 packet layer 3, PAD emulation for incoming and outgoing access (X.3 and X.29), and OSI services.

IBM Connectivity

HP-UX SNA Link and HP-UX Gateway (GW/SNA Link) provide communications between an HP 9000 Series 300 or 400 workstation and an IBM system 370 or compatible mainframe using SNA 3270 protocols. To access an IBM mainframe from a single Series 400 workstation, the SNA Link product is required. To access an IBM mainframe from multiple HP 9000s on a LAN, the Gateway (GW/SNA Link) product is required. For assistance in configuring your HP-UX workstation in an IBM environment call our technical support engineers at 800-637-7740 ext. W221.

Ordering Information

Description	Product Number	Price
8-Channel Multiplexer	98638A	$2,150
Options:		
Delete software (only if using HP-UX 8.0)	#1AW	N/C
Replace RS-232-C interface with RS-422 interface.	#1C8	250
Software on 1/4" cartridge tape	#AA0	50
4-Port Multiplexer	98642A	$670
Option:		
Delete all cables and connectors.	#001	($100)
DIO-I/O X.25 9000 Interface	36941A	$3,090
Product consists of the interface documentation, RS232-C (DTE) cable (5m), and software.		
Option:		
Credit for software if this is the second X.25 interface in the same Series 400 machine.	#1AW	($590)
Telebit T2500 Modem	TBIT-0T2500	$949

Domain/OS

Apollo Domain Networking Products

Apollo Domain networking offers a wide range of network solutions. Domain workstations and servers run on four networking architectures; 10 M bps Ethernet/IEEE 802.3, 12 M bps Apollo Token Ring, 4 M bps IBM Token Ring and X.25 Packet-Switch (WAN). Domain supports TCP/IP over Ethernet along with application layer products such as ARPA/Berkeley Services, NFS, SNA3270, NFS, Telnet, and Task Broker.

Ordering Information

Description	Product Number	Price
Apollo token ring controller Includes network controller board and installation documentation.	A-NET-ATR	$1,365
Ethernet/IEEE 802.3 interface Add-on Ethernet/IEEE 802.3 network controller for all ISA (AT)-bus nodes. Includes network controller board and installation documentation.	A-NET-ETH	1,365
IBM token ring controller Add-on IBM token ring controller for ISA (AT)-bus nodes. Includes network controller board and installation documentation.	A-NET-ITR	1,365
Ethernet/IEEE 802.3 controller-VME Provides connection for the DN10000 only. Includes controller board, cable, and installation documentation.	VNETETHPLUS	4,040
Apollo token ring controller-VME Provides connection for the DN10000 only. Includes controller board, cable, and installation documentation.	V-NET-ATR	4,040

Connections for the Series 400 and DN Series

To expand the LAN connectivity capabilites of your Domain workstation, you may add an Apollo Token Ring, Ethernet, or IBM Token Ring interface. Up to five add-on LAN cards can be installed on DN3XXX and DN4XXX workstations. Only one LAN card can be installed on DN2XXX workstations.

Series 400 and Domain Communication Interfaces

Communication interfaces are interface cards and assessories that allow Domain DN3XXX or DN4XXX and Series 4XXs workstation nodes to communicate within non-LAN environments.

SCAT—Serial AT Communications Controller

This is an intelligent communications controller that mounts in a DN3XXX or DN4XXX or Series 4XXs node. It provides two high-speed serial ports for SNA or X.25 communications. It supports one to three physical interfaces (RS232, RS422, V.35) for each port. The controller includes two interface cables which must be specified as part of the product number. The software portion of the product is available only on cartridge tape.

Ordering Information

Description	Product Number	Price
SCAT—Serial AT Communications Controller Physical interface choices: Select (2) sets of two character codes to replace x's in product number.	SCAT10XXXXD	$2,520

CABLE:
     RS-232-C
     RS-422
     V.35
     none
	
	 R2
	 R4
	 V-
	 N-	

Example: For SCAT board with RS-232-C and V.35 cables, order SCAT10R2V-D.		
Domain/DFL-100 Fiber Optics Line Extends a single Apollo Token Ring network between buildings by using fiber optic cable. Must have one DFL-100 unit per building to form a complete link.	COM-DFL	1,210
Domain/DFL-100-R Redundant Fiber Optics Link Used as a backup if the DFL-100s become inoperable while in operation. Also contains a connector cable to connect to a primary Domain/DFL link.	COM-DFL-R	1,265

Ethernet Transceivers

AST-5 Ethernet/IEEE 802.3 Transceiver w/LANVIEW™

The AST-5 incorporates LANVIEW, the built-in diagnostic tool that helps you solve many hard-to-find network problems. It comes with a non-intrusive cable tap that attaches to the backbone without bringing down an active network. If you prefer, a BNC tap is available, facilitating the addition of nodes to a thin-net segment for attachment of Ethernet controllers with no onboard transceivers (commonly used in PC-type LAN applications and in DECconnect™).

802.3 Ethernet Transceiver

This transceiver offers you quick and easy attachment to Ethernet 10Mbs Baseband LANs. Meets the requirements of Ethernet/IEEE 802.3 and Ethernet 1.0/2.0 specifications, providing heartbeat, jabber, halfstep signaling, and 2KV isolation voltage.

TMS-3 Ethernet Transceiver

Complete your PC LAN with the TMS-3 transceiver. Designed specifically to complement your Ethernet cabling application, the TMS-3 is an inexpensive, lightweight unit that can be installed easily, even in tight spaces. The TMS-3 provides you with LED indicators for both power and SQE (heartbeat) test. You can even select the enabling or disabling of the test without disassembling any portion of the enclosure.

Ordering Information

Description	Product Number	Price
AST-5 Ethernet/IEEE 802.3 Transceiver w/LANVIEW		
Transceiver w/non-intrusive tap	K1111	$239
Transceiver w/BNC tap	K1117	239
Transceiver w/N-type tap	K1116	239
BNC tap only	K1114	45
N-type tap only	K1113	45
Transceivers		
802.3 Ethernet	K1118	269
TMS-3 Ethernet	K1115	185

BNC Connectors

Both wrench connectors and solderless crimp connectors come in two sizes to accommodate PVC or Teflon jacketed cables. The BNC adapter acts as a coaxial cable feed-through to join two terminated cable ends coupled with BNC connectors to maintain network integrity during node disconnection.

Ordering Information

Description	Product Number	Price 1-199	Price 200-399	Price 400+
BNC Connectors				
BNC feed-thru adapter	K1502	$5.00 ea	$5.00 ea	$5.00 ea
Crimp conn., Teflon jacket	K1504	4.40 ea	4.18 ea	3.78 ea
Crimp conn., PVC jacket	K1506	4.40 ea	4.18 ea	3.78 ea
Wrench conn., Teflon jacket	K1505	6.56 ea	6.24 ea	5.62 ea
Wrench conn., PVC jacket	K1507	5.32 ea	5.04 ea	4.74 ea
BNC crimp conn., -universal	K1508	2.75 ea	2.47 ea	2.35 ea
Domain to IBM Token Ring Conn.				
Balun to D-Sub, 10' cables	K2121	$199		
Balun to BNC, 10' cables	K2120	129		

The DOMAIN/DQC™ Connect System

Network Integrity—Plug-In Convenience

DQC Outlet

The DQC outlet installs in minutes to HP Apollo specified coaxial cable using a cable stripper (K1521 see below), and two screwdrivers (one flat, one Philips head). It can be surface mounted or in-wall mounted using standard electrical mounting hardware, or even left free-standing in the housing provided.

DQC Systems

Wtih the DQC Quick Connect System, a workstation can be added to or removed from your network without interrupting the network or normal workflow. DQC systems provide make-before-break connections for HP Apollo Domain/OS workstations and servers to your Domain/OS System token ring. In order to obtain a complete DQC system, please order the Domain Quick Connect Outlet and one of four Domain Quick Connect cables. DQC cables are available in either 10- or 25-foot lengths, terminated with either D-subminiature connectors or BNC connectors to match your particular workstation requirements.
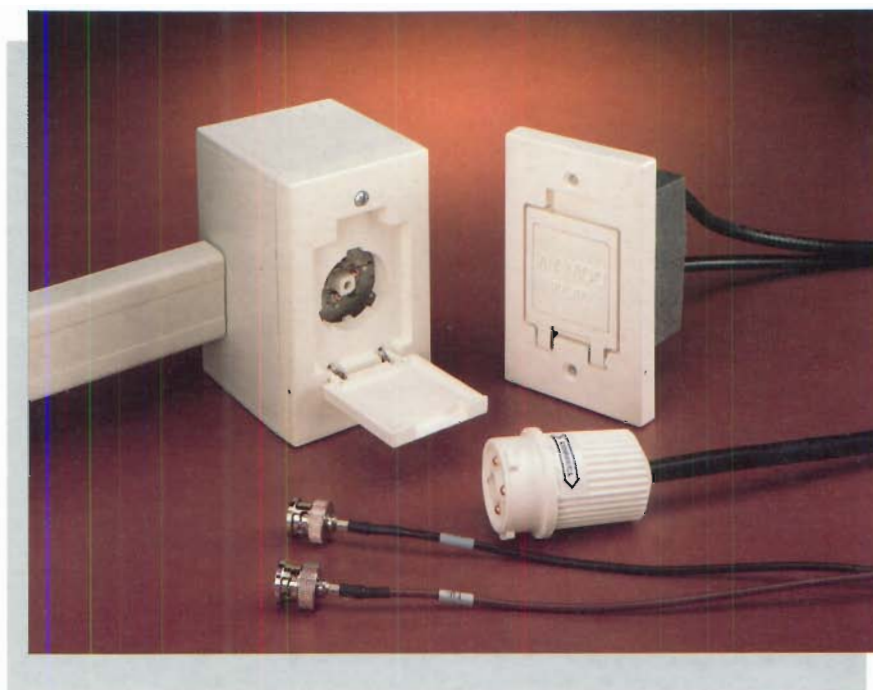
DQC Outlet

Ordering Information

Description	Product Number	Price
Domain Connect		
DQC Outlet	K1048	$69
DQC Systems		
10' DQC to BNC cable	K1049	$58
25' DQC to BNC cable	K1050	89
10' DQC to D-Sub cable	K1069	79
25' DQC to D-Sub cable	K2293	129

BNC to D-Subminiature Cable

This 18" cable mates a D-subminiature connector with dual BNC connectors.

Domain Network Switch

The Domain Network Switch helps to create an efficient multiloop network to facilitate nondisruptive trouble-shooting. You can switch out problem subloops while maintaining continuous data flows in the rest of the network.

Ordering Information

Description	Product Number	Price
BNC to D-Subminiature cable	K1503	$75
Domain Network Switch	K1522	185

Multiple DQC Connectors

Now you can add or remove up to six workstations from your Domain network without interrupting normal workflow or workstations elsewhere in the network. DQC Cluster connectors, available in both 4- and 6-outlet units, provide make-before-break connections for workstations and Apollo token ring servers.

Connect as standard DQC outlets and cascade for additional utility within the network. The aluminum backplate includes pre-drilled holes for mounting to a wall or other surface. Both the 4- and 6-outlet units are pre-wired with a DQC cable for connection to your current DQC network.

Other features include: a cable strain relief and accessible BNC connectors for creating a self-contained loop.

Crimping Tool

This useful crimping tool provides a solid connection every time. Ratchet action automatically prevents release until cycle is complete. Features rugged, professional construction and safety handles.

BNC Connector Wrench

This 7/16" open-end wrench with thin design easily accommodates wrench flats on BNC solder-on connectors; can also be used on Teflon-jacketed cables.

NOTE: *Order in multiples of two.*

Cable Stripper

Cable strippers are available with dual blade cassette for wrench connectors or triple blade cassette for crimp connectors and DQC outlet installations. These handy strippers automatically remove both the cable jacket and dielectric for fast, perfect cable preparation. Blade cassettes are also available separately.

Ordering Information

Description	Product Number	Price
Multiple DQC Connectors		
4-Unit cluster connector	K1045	$595
6-Unit cluster connector	K1046	675
Accessories		
Universal conn., crimp tool	K1518	$75
Crimping tool	K1517	170
BNC Connector wrench	K1524	2.25
Cable stripper, dual blade cassette	K1520	75
Cable stripper, triple blade cassette	K1521	89
2-Blade cassette	K1500	17
3-Blade cassette	K1501	31

We always try to make ordering from HP Apollo DIRECT as convenient as possible. If you promise to keep telling us how we can help you, we promise to listen.

SUPPLIES AND ACCESSORIES
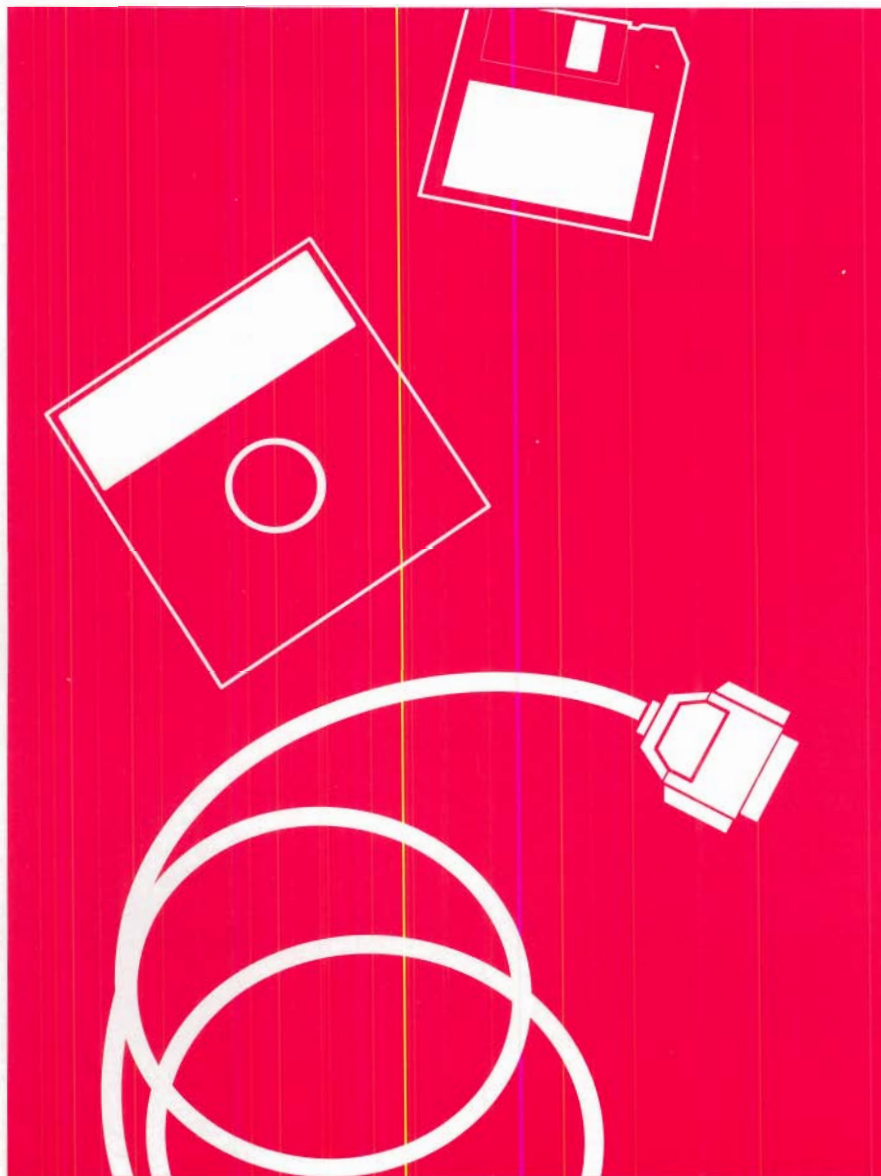
Maximize your productivity and performance

HP supplies and accessories are tested to HP high-quality specifications and testing is continued throughout the life of the product to ensure that you always get the best possible performance from your HP workstation and peripherals.

Use HP's data storage supplies and accessories to optimize the reliability and performance of your HP storage devices. To protect your HP workstation and ensure access to the data you need, specify HP power systems, surge suppressors, and cables. And to organize your work area, HP *Design Plus* furniture is designed in concert

with your workstation equipment and peripherals to be compatible and give you optimum layout of your equipment.

Choose HP supplies and accessories for the compatible, quality performance you demand from your HP workstation.

HP High-Density Cartridges

Get the extra reliability of our exclusive double certification! Each cartridge meets HP's unyielding quality control standards, which means 100 percent of the data area is defect-free. All marginally defective data blocks are electronically removed so there's no danger of even a worn or poorly maintained drive writing to an "iffy" block and causing readback problems.

And because they're already certified, you save from 15 to 75 minutes per tape. They're formated into 1-KB user data blocks and are ideal for data exchange among HP systems, software distribution, and data/transaction logging. Use with HP 7908/11/12/14, 9144A, 7942A, 7946A, and 35401A tape drives.

Double certification means no readback problems!

Ordering Information

Description	Product Number	Price
67-MB (pre-formatted and certified) 600-ft. Tape cartridge. Five per box	88140LC	$219/box
16-MB (pre-formatted and certified) 150-ft. Data cartridge. Five per box.	88140SC	169/box

HP Data Cartridges for HP 9145A Drives

Trust your valuable data to these cartridges, engineered and tested expressly for the HP 9145A drive.

Ordering Information

Description	Product Number	Price
133-MB (pre-formatted and certified) Data cartridge. Five per box.	92245L	$239/box
32-MB (pre-formatted and certified) Data cartridge. Five per box.	92245S	189/box

HP Brand Magnetic Tape

Thanks to extensive testing, you can rely on HP Brand magnetic tape to more than just "match" your HP drive. It actually optimizes drive performance, by eliminating "skip and rewrite" problems that inferior tape can cause.

HP tape is inspected over every inch to assure that it's totally error-free, certified end-to-end for use through 6250 characters per inch, and warranted against defects for five years.

Out of 26 tapes tested on the same HP drive for 220 full reel passes, only one tape passed all tests for wear, environmental and magnetic properties, signal quality, cleanliness, and durability with flying colors...HP Brand magnetic tape!

Our tapes are tested to assure optimum performance

Ordering Information

Description	Product Number	Price
600' Reel with seals (box of 10)	92150D	$135/box
1200' Reel with seals (box of 10)	92150E	175/box
2400' Reel with seals (box of 10)	92150F	229/box

Optical Disks/DDS Cassettes

HP Optical Disks

Get more reliability, performance, and longevity from your HP Optical Drive investment by selecting the disk developed with your drive in mind. Use HP Rewritable Optical Disks for disk-to-drive compatibility—the key to secure protection of your valuable data. These are the only disks tested with the HP Optical Drive (under worst-case conditions) to meet ANSI and ISO standards. Guaranteed to be 100 percent error-free. Full-year warranty. Each 5.25-inch, double-sided HP Optical Rewritable disk gives you 650 MB of removable capacity for a fraction of hard disk storage costs. You'll also save time—up to 40 minutes per disk—since these rewritable disks are pre-formatted.

Digital Data Storage Cassettes

Developed specifically for computer applications and tested to withstand multiple passes, HP's DDS cassettes meet your most demanding high-capacity storage needs. Whether you're backing up an HP commercial **NEW** system or technical workstation on an HP DDS tape drive, HP DDS cassettes have the space to get the job done. Since DDS cassettes offer true high-capacity storage (1.3 GB on 60 meter tapes and 2 GB on 90 meter) without data compression, you can backup large quantities of data unattended. Engineered to exacting standards required for DDS-format tapes and compatible with HP DDS tape drives, HP DDS cassettes are the ones to trust for your critical backup needs. Five per box.

HP Optical Disks go beyond compatibility.

Ordering Information

Description	Product Number	Price
HP Optical Rewritable Disk (1024 byte/sector)	92280A	$199
HP Optical Write-Once Disk (1024 byte/sector)	92290A	$199

Ordering Information

Description	Product Number	Price
HP DDS Cassettes 1.3 GB capacity, 60 meter	92283A	$75/box
HP DDS Cassettes 2.0 GB capacity, 90 meter	92283B	95/box

DDS Cassette Compability Guide

	HP 5.25" Full Height	HP 3.5" & 5.25" Half Height	Non-HP DDS Compatible Drives
60 meter (red label)	read write	read write	read write
90 meter (yellow label)		read write	read* write*

*Refer to manufacturers specification
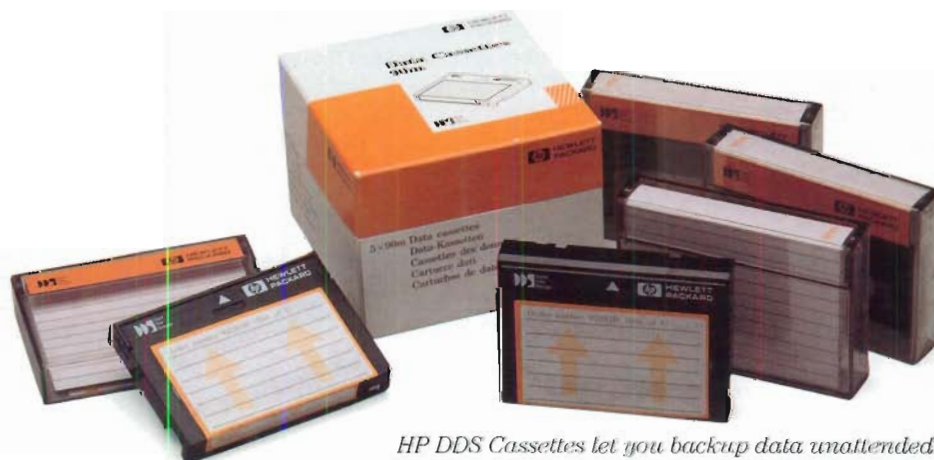
HP DDS Cassettes let you backup data unattended.

Clean your HP drives in a flash with the HP Cleaning Cartridge Kit.

Ordering Information

Description	Product Number	Price
DDS Cassette Storage Box		
Secure your HP DDS cassettes in this large capacity, lockable storage box. Holds 12 cassettes and is designed for both desktop or hanging file cabinet use. File cabinet adapter included. (U.S. & Euro sizes)	92283L	$39
DDS Cleaning Cassette		
Prevent data integrity problems with HP's DDS (DAT) cleaning cassettes. Designed to reduce the risk of dirt-related tape head clogs and scratches. A must for proper cassette maintenance! (Box of 2)	92283K	$26
Data Cartridge Tray		
Keep your 88140LC/SC and 92242L/S data cartridges safe and organized in this handsome storage tray. Features a key-locking, removable lid which nests under the base when not in use. Constructed of durable high-impact plastic with transparent antistatic acrylic lid. Cream-colored base with molded slots holds up to 10 data cartridges securely in place.	92167F	$45
Cleaning Supplies		
Video Screen Cleaning Kit. Clean your CRT terminal screens and other glass surfaces with HP's Video Screen Cleaning Solution. Kit contains two 4-ounce bottles of solution with easy-pour dispensing cap, plus fifty 3 x 5 in. lint-free wipes.	92193V	$17
HP Cleaning Cartridge Kit. Cleaning the heads on your HP 9144, 9145, 9142A, and 35401A 1/4" tape drives is as easy as inserting a media cartridge. Our kit includes a cleaning cartridge, a supply of alcohol-based cleaning solution, 13 foam pads, plastic tweezers, a cleaning maintenance record, plus instructions for each type of drive.	92281C	45
Replenish Kit with a fresh supply of alcohol-based cleaning fluid, 24 foam pads, tweezers, and a new maintenance record. There's no need to replace the cleaning cartridge from the original kit.	92281D	13

Polaroid Anti-Radiation Glare Screen for 19" – 21" Monitors

The Polaroid CP-Workstation Filter is designed to provide superior contrast enhancement and glare reduction for 19"–21" computer monitors by utilizing circular polarizing technology. This high-quality filter is made of glass with a circular polarizer that contains a transparent conductive coating which reduces electromagnetic radiation. It also reduces electromagnetic interference. This same transparent conductive coating also provides static control grounding to reduce the chance of lost data due to static electricity.

The CP-Workstation Filter comes in one size that will fit most 19" – 21" monitors thanks to a unique mounting system. The filter is an ideal solution to reducing glare for CAD/CAM, desktop publishing and other applications requiring intense visual concentration.

Polaroid CP-Workstation Filter
(K1898) $249

Design Plus Workstation Furniture

CAD Workstation lets you stretch out and design in comfort

Our spacious CAD Workstation lets you extend your work area instantly with a 36-inch pull-out surface, and tuck your keyboard away when it's not in use.

The Corner Turn and Medium System Table offer space for reviewing reference materials. The Mobile Mini-Rack offers extra work surface *plus* off-table storage for CPUs and mass storage.

Get our Ergonomic Task Lamp for non-glare light that's easy on your eyes, and our Drawing Holder to hold "C" and "D" size drawings at eye-level.

Medium System Table.......... 92214B
Task Lamp 92213Q
Corner Turn 92214J
CAD Workstation.................. 92213F
"C" and "D" Size Drawing
   Holder 92213D
Mini-Rack 92211R
(Refer to page 75 for filler panels and
   drawers for 92211R)
Mobile Drawer Unit 92211N
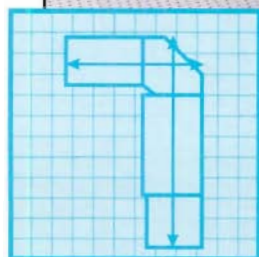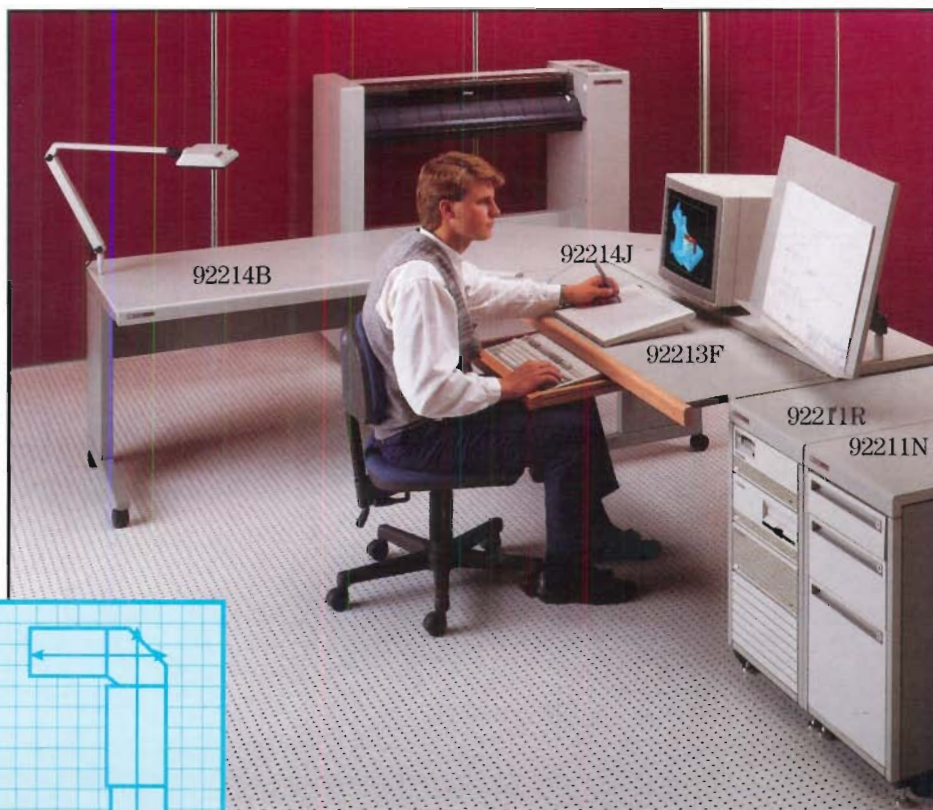
CAD Corner handles jumbo monitors and expansive drawings

Our CAD Corner Workstation supports oversized monitors, and fits perfectly between a Medium System Table and Mobile Mini-Rack System Cabinets.

Mini-Racks and Drawer Units keep peripherals and files within easy reach while offering tabletop space, as do the Corner Turn and Mobile Support Table.

Illuminate it all with the cool, non-glare light of our *Design Plus* Ergonomic Task Lamp. The result? A U-shaped configuration that optimizes CAD ease and efficiency.

This configuration incorporates:

Large System Table 92214C
Corner Turn 92214J
Task Lamp 92213Q
Medium System Table.......... 92214B
CAD Corner Workstation 92214K
Mini-Rack 92211R
(Two units—refer to page 75 for filler
   panels and drawers for the 92211R)
Mobile Drawer Unit 92211N
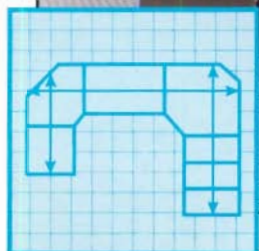
Workstation Furniture

Ordering Information

Description		Height	Width	Depth	Product No.	Price
	Design Plus CAD Mini-Workstation for use with the HP 9000 Series 300–500 computers. Comes with 362mm (14.25 in.) wide raised monitor platform, pull-out keyboard drawer, and cable management. Same height as 92211R mobile mini-rack; 92211L/M fit underneath.	720mm (28.4 in.)	1125mm (44.3 in.)	711mm (28.0 in.)	92213B	$849
	Design Plus CAD Workstation is designed for use with HP CAD Systems. It comes with a pull-out work surface, keyboard drawer, raised monitor platform and cable management. It attaches to other *Design Plus* furniture.	720mm (28.4 in.) 35.6mm (1.4 in.)	1500mm (59.0 in.) 528.3mm (20.8 in.)	711mm (28.0 in.)	92213F	$899
	Design Plus CAD Corner Workstation. Perfectly fitted for use with HP CAD systems. Workstation comes with a keyboard drawer, two adjoining brackets and cable management. It can be joined to other *Design Plus* furniture.	720mm (28.4 in.)	1125mm (44.3 in.)	1125mm (44.3 in.)	92214K	$899
	"C" and "D" sized Drawing Holder. Mounts to the monitor platform of the 92213B/F CAD table. Two-section arm for height and tilt position extends from 330mm (13.0 in.) to 505mm. (22.25 in.)	508mm (20.0 in.)	762mm (30.0)	6mm (2.6 in.)	92213D	$219
	Design Plus Mobile Terminal Support and Transport System Table. Designed to safely move terminals and small systems. Comes with cable management, locking casters and is same height as 92212R mobile rack system cabinet.	720mm (28.4 in.)	750mm (29.5 in.)	711mm (26.0 in.)	92214A	$475
	Medium *Design Plus* System Table. Comes with cable management, locking casters, and is same height as 92211R mobile rack system cabinet.	720mm (28.4 in.)	1125mm (44.3 in.)	711mm (28.0 in.)	92214B	$525
	Large *Design Plus* System Table. Comes with cable management, adjustable leveling glides, and is same height as 92211R mobile rack system cabinet.	720mm (28.4 in.)	1500mm (44.3 in.)	711mm (28.0 in)	92214C	$585
	90-Degree *Design Plus* Corner Turn. Used for joining two system tables together for a larger work area; comes with two adjoining brackets. NOTE: not intended to support CAD monitors.	Each side:	711mm (28.0 in.)		92214J	$375
	Design Plus Joining Bracket Kit. For use on all *Design Plus* furniture pieces to anchor one to another. Comes with two brackets, needed screws, and instructions for assembly and use.	N/A	N/A	N/A	92211U	$40
	Design Plus Ergonomic Task Lamp. Specifically designed for computer workstations. Two nine-watt emitters produce the same light as an 80-watt incandescent. Lamp stem fits into *Design Plus* tables. UL listed and CSA approved.	N/A	N/A	N/A	92213Q	$290

Design Plus Workstation Furniture

Design Plus system storage and support furniture

Ordering Information

Description	Height	Width	Depth	Product No.	Price
Design Plus Mobile Mini-Rack System Cabinet for HP modular peripherals and systems. Comes fully assembled with casters. Back opens for easy access. Accessories available are the 92211S mounting rail and module lock kit and 92211T filler panel kit. Internal dimensions are 325 W x 572 H mm (12.6 W x 22.44 H in.)	720mm (28.4 in.)	375mm (14.8 in.)	711mm (28.0 in.)	92211R	$685
Design Plus Mobile Drawer Unit. Rolls easily and sits next to all *Design Plus* System Tables (also same height as tables). Comes with three drawers, 104mm, 155mm, and 312mm (4 in., 5 in., and 12 in.)	720mm (28.4 in.)	375mm (14.8 in.)	711mm (28.0 in.)	92211N	$745
Large (12 inch) Drawer Unit for 92211R mobile mini-rack system cabinet. Designed for easy installation and constructed of sturdy metal. Comes with its own key lock.	305mm (12 in.) 173mm (11.62 in.)	outside dimensions: 324mm (12.75 in.) inside dimensions: 266mm (11.25 in.)	473mm (18.62 in.) 471mm (18.54 in.)	92211G	$159
Medium (6 inch) Drawer Unit for 92211R mobile mini-rack system cabinet. Designed for easy installation and constructed of sturdy metal. Comes with its own key lock.	152mm (6 in.) 143mm (5.62 in.)	outside dimensions: 324mm (12.75 in.) inside dimensions: 286mm (11.25 in.)	473mm (18.62 in.) 471mm (18.54 in.)	92211F	$149
Small (4 inch) Drawer Unit for 92211R mobile mini-rack system cabinet. Designed for easy installation and constructed of sturdy metal. Comes with its own key lock.	102mm (4 in.) 92mm (3.62 in.)	outside dimensions: 324mm (12.75 in.) inside dimensions: 286mm (11.25 in.)	473mm (18.62 in.) 471mm (18.54 in.)	92211E	$139
Rail Kit for 92211R mobile mini-rack cabinet. Comes with four sets of rails and module locks. Used to mount up to four HP computer and peripheral equipment modules.		Rail length: 638mm (25.1 in.)		92211S	$50
Filler Panel Kit for 92211R mobile mini-rack cabinet. Kit contains 20 snap-in panels used to fill empty space not occupied by computer equipment modules.	23mm (0.9 in.)	325mm (12.8 in.)	23mm (0.9 in.)	92211T	$40
Design Plus Mobile Sound Enclosure Cabinet. For use with all 293X serial impact dot-matrix printers. Rolls easily and sits level with all *Design Plus* tables. Features gas cylinder door lifts, locking casters, paper storage, paper catcher tray, and print monitoring window. Designed for rear paper exit. Comes fully assembled.	720mm (28.4 in.)	750mm (29.5 in.)	500mm (19.7 in.)	92211C	$675
Design Plus LaserJet Printer Cabinet. Features a deep cabinet with a shelf to store months of daily printing supplies. Rolls easily and sits level with system tables. Comes assembled.	720mm (28.4 in.)	508mm (20.0 in.)	711mm (28.0 in.)	92211D	$425
Design Plus Universal Support Stand. For use with HP LaserJet, HP 2932/33/34, and HP 2563A printers and small HP plotters. Comes with printout catcher shelf, casters, and leveling glides. Has slot in top for bottom feeding and slot in door for front feeding. Also has sound control pads inside.	720mm (28.4 in.)	600mm (23.6 in.)	450mm (17.7 in.)	92214P	$355
Design Plus Printer/Plotter Cabinet. For HP PaintJet XL or 7550A Plotter.	720mm (28.4 in.)	762mm (30.0 in.)	450mm (17.7 in.)	92214Q	$355

Design Plus system storage and support furniture *(Continued)*

Ordering Information

Description	Height	Width	Depth	Product No.	Price
Design Plus Mobile Support Cabinet. Rolls easily under the 92214B/C *Design Plus* system tables. Can be used as a standalone system cabinet for the HP 9000 Series 200/300/500. Comes with two sets of mounting rails, cable routing kit (92199F), and two storage shelves. Internal dimensions are 325 W x 520 H mm (12.8 W x 20.40 H in.).	620mm (24.4 in.)	425mm (16.7 in)	525mm (20.7 in.)	92211L	$310
Design Plus Small Mobile Support Cabinet. Rolls under the 92214B/C system tables. Can be used as a standalone system cabinet for the Series 200, Model 237 or 300. Comes with one set of mounting rails, a cable routing kit, and a pad to put under the Model 237. Internal dimensions are 325 W x 338 H mm (12.8 W x 13.26 H in.).	435mm (17.1 in.)	425mm (16.7 in.)	425mm (16.7 in.)	92211M	$250

Design Plus furniture compatibility guide

Equipment	Recommended cabinet
HP 9000 Series 300	92211R Mobile mini-rack system cabinet.
HP 3000 Series 37, MICRO 3000, MICRO 3000 XE	Comes mounted in 92211R cabinet. For larger configurations of disk and tape support, order an additional 92211R cabinet.
HP 9000 Series 300	92211L Mobile support cabinet. Computers mount in cabinet. Has space for two additional disk or tape peripherals.
HP 9000 Series 300	92211M Small mobile support cabinet. Computer sits on top of cabinet. Two additional disk or tape peripherals will mount in cabinet.
HP 7942/46, 795XB, 795XS, 796XB, 9144A, 9145A, 35401A mass storage devices	92211L Mobile support cabinet. 92211M Small mobile support cabinet and 92211R Mobile mini-rack. NOTE: these cabinets can accommodate peripheral devices up to 325mm (12.8 in.) wide.

HP Ergonomic Chairs and Accessories

Ordering Information

Description	Specifications		Color	Product Number	Price
HP Ergonomic Executive Chair	Seat specifications Height 413-527mm (15.25–19 in.) Width 483mm (19 in.) Depth 457mm (18 in.) Adjustment 413-483mm (16.25–19 in.)	Chair back specifications Height 457mm (18 in.) Width 445mm (17.5 in.) Adjustment 457–514mm (18–20 in.)	Gray Blue Beige	92208M 92208N 92208P	$475
HP Ergonomic Workstation/ Managerial Chair	Seat specifications Height 413-527mm (16.26–20.75 in.) Width 470mm (18.5 in.) Depth 457mm (18 in.) Adjustment 413-527mm (16.25–23 in.)	Chair back specifications Height 267mm (10.5 in.) Width 406mm (18 in.) Adjustment 267–394mm (10.5–15.5 in.)	Gray Blue Beige	92208E 92208F 92208G	$245
HP Ergonomic Workbench Chair	Seat specifications Height 483-648mm (19–25.5 in.) Width 470mm (18.5 in.) Depth 457mm (18 in.) Adjustment 483-648mm (19–25.4 in.)	Chair back specifications Height 267mm (10.5 in.) Width 406mm (16 in.) Adjustment 267–394mm (10.5–15.5 in.)	Blue	92208S	$365
Cylinder (MNP)	Replacement cylinder for 92208M/N/P—HP Ergonomic Executive Chair			92208Q	$40
Cylinder (EFG)	Replacement cylinder for 92208E/F/G—HP Ergonomic Workstation/Managerial Chair			92208H	40
Cylinder (S)	Replacement cylinder for 92208S—HP Ergonomic Workbench Chair			92208U	55
Black Armset	Optional, reversible armset for 92208E/F/G—HP Ergonomic Workstation/Managerial Chair			92208K	79
Caster Set	Replacement sets for all the above HP Ergonomic Chairs			92208L	39

Power Backup and Distribution Products

Deltec's 2000 Series Uninterruptible Power Systems for HP Workstations

Deltec's 2000 Series offers a cost-effective and reliable solution to power problems which can damage your workstation and other equipment. With the 2000 Series, you'll get a constant flow of refined, regulated, computer-grade power through virtually any utility line disturbance. Not only will it protect your hardware and data from blackouts, brown-outs, surges, and spikes, but it offers the added benefit of reduced service costs resulting from running your workstation on "clean" power.

Deltec 2000 Series UPSs have low input current distortion, isolated output voltages for noise protection, high overload capability, remote emergency power-off, and an RS-232 interface for remote monitoring and shutdown.

They both feature power monitoring and shutdown software for HP-UX, 1/4" tape, 25-pin/25-pin cable, 8-receptacle output panel. Includes Automatic Transfer Switch and ball casters.

Hardware supported:
HP 9000 Series 400s, 700s, and 800s.

Technical specs:

Input voltage: 120 Vac/60 Hz
Input plugs:
• L5-30P for 2.4 kVA UPS
• 5-50P for 3.6 kVA UPS

Output voltage: 120 Vac/60 Hz
Output connections: 8 receptacles (5-15R)
                   and one L14-30 receptacle

Battery backup time: 10 minutes at full load with 0.8PF, standard internal battery pack.

Deltec's 2000 Series provides the protection your equipment deserves.

Ordering Information

Description	Product Number	Price
Deltec 2.4 kVA UPS	DELT-2026	$3425
Deltec 3.6 kVA UPS	DELT-2036	4159

Surge Suppressors from HP

The reliable three-stage circuitry in HP Surge Protectors detect and dissipate dangerous electric surges on your power line before they beome a problem to your workstation. All three models feature a resettable circuit

breaker and EMI/RFI noise filtering. A circuit integrity lamp indicates that the protectional circuit is functional. When the lamp is out, the unit should be replaced, although unprotected power is usually still supplied.

Ordering Information

Description	Product Number	Price
(2) 5-15R Receptacles (2 W x 4.5 D x 2 H in.), no cord	92165A	$69
(4) 5-15R Receptacles (5 W x 7 D x 2 H in.), 6 ft. cord	92165B	89
(6) 5-15R Receptacles (5 W x 7 D x 2 H in.), 6 ft. cord	92165C	99

SCSI Interfaces

SCSI interfaces are single-ended connections capable of synchronous and asynchronous operation in the HP-UX and Domain/OS environment. Models 340, 345, 360, 370, 375, 380, and all Series 400 and 700 offer a factory option for SCSI. For Model 340, there is a separate SCSI interface kit which must be installed by an HP customer engineer. For Series 3XX, 4XX, and 7XX, there are additional SCSI boards that fit into either DIO, DIO-II or PC-AT slots.

SCSI Cabling for Series 300, 400, and 700

FROM \ TO	Models 705, 710, 720, 730, 750	Model 4XXs,t with threaded standoff & locktabs	Models 340, 345, 350, 360, 370, 375,* 380	HP-UX Devices [1] C1700; C1701A; C2212A,D; C2213A,D; C1512A, 7979S 7980S; A1999A	HP-UX SCSI II Fast Differential Devices C2482A	Domain/OS Devices A-660-ABA, AADDSFLPABA, AADDESTCABA, A-EX-ABA, A-OBEX-ABAD
Models 705, 710, 720, 730, 750	N/A	N/A	N/A	K2297	K2297	N/A
Models 4XXs,t with threaded standoff & locktabs	N/A	N/A	N/A	K2296 K2297	N/A K2297	K2294 K2295
Models 340, 345, 350, 360, 370, 375*, 380	N/A	N/A	N/A	92222A,B,C,D if supported	N/A	N/A
HP-UX Devices C1700;C1701A; C2212A, D; C2213A,D; C1512A; 7979S; 7980S; SX; A1999A	K2296 K2297	K2296 K2297	92222A,B,C,D if supported	92222A,B,C,D	92222A,B,C,D	K2284 K2283
HP-UX SCSI II Fast Differential Devices C2482A	K2297	N/A	N/A	92222A,B,C,D	92222A,B,C,D	N/A
Domain/OS Devices A-660-ABA, AADDSFLPABA, AADDESTCABA, A-EX-ABA, A-OBEX-ABAD	N/A	K2294 K2295	N/A	K2284 K2283	N/A	K2207 K2208 K2209 K2210 K2211

Include these SCSI device terminators when ordering cabling.

Description \ Device	Series 700 Systems	Model 4XXs,t	Series 300 Systems	HP-UX Devices	HP-UX SCSI II Systems	Domain/OS Devices
Terminator	K2291	C2904A	1252-2297	K2291	K2291	K2290
Connector	Low-density bail-locks	Threaded standoffs & locktabs	Low-density bail-locks	Low-density bail-locks	Terminator with 25525A SCSI II adapter card	Low-density thumbscrew

* Also for models with 25 MHz MC68040 upgrade

[1] C2212D + C2213D are Domain/OS devices.

SCSI Cables and Terminator

HELPFUL HINT:

Be sure to order a terminator with all SCSI cabling.

Ordering Information 🚚

Description	Product Number	Price
Replacement terminator (Series 300)	1252-2297	$67.50
SCSI 0.5-m (1.6-ft) cable (Male to Male, low-density bail-lock)	92222A	49
SCSI 1-m (3.3-ft) cable (Male to Male, low-density bail-lock)	92222B	55
SCSI 2-m (6.6-ft) cable (Male to Male, low-density bail-lock)	92222C	59
SCSI 1-m (3.3-ft) extension cable (Male to Female, low-density bail-lock)	92222D	55

SCSI-II Cabling and Terminators for the Series 700

Connecting From	To						
	Series 6000 Model 1350SE Mass Stor. Sys. C2217T	Series 6300 Mag optic devices C1700A, C1701A C1704A, C1705A	Series 6400 Model 2000* DAT Standalone C1520A, C1521A	Series 6300 CD-ROM Standalone A1999A	1/2" Mag Tape Drive 7980S	Series 6000 Model 1350SA, 420SA Disk Array C2427JK, C2425JK	Model 1350SX Fast (Differential) Disk Tower C2482A
Model 705, 710, 720, 730 and 750 Standard SCSI-II Port	For any configuration in this white area, choose one of these Thumb Screw Cables: K2296 .9 meter K2297 1.5 meter For last HP peripheral, order Terminator K2291						
Model 720, 730, 750 EISA Fast SCSI-II Port (Differential) (product # 25525A)						Cable: C2906A 2m C2907A 5m C2916A 20m Termin: C2905A	Cable: K2296 .9m K2297 1.5m Terminator incl. with SCSI-II card
Series 6000 Model 1350SE Mass Stor. Sys. C2217T	For any configuration in this white area, choose one of these cables: 92222A .5 meter or 92222B 1.0 meter or 92222C 2.0 meter For last HP peripheral, Order Terminator: K2291						
Series 6300 Magneto optic devices C1700A, C1701A, C1704A, C1705A							
Series 6400 Model 2000 DAT Standalone C1520A, C1521A							
Series 6300 CD-ROM Standalone A1999A							
1.2" Magnetic Tape Drive 7980S							
Series 6000 Disk Array Model 1350SA, 420SA C2427JK, C2425JK						Cable C2911A 0.9m	Cable C2915A 1m
Model 1350SX Fast (Differential) Disk Tower C2482A						Cable C2915A 1m	Cable 92222A .5m 92222B 1m 92222C 2m

▭ Match intersecting systems and select cable and terminator shown in white area.

▬ CONFIGURATION NOT SUPPORTED
Fast differential SCSI-II will not work with normal (single-ended) SCSI-II.
HP-UX only supports one of each removable disk-type mechanisms per system, two tape-type mechanisms per system.

* Model 2000 and 2000 DC DDS standalone devices include SCSI cable and terminator to attach directly to Series 700 SCSI port. To daisy-chain to another SCSI peripheral, order appropriate cable (92222A/B/C).

Note: *Take care not to exceed 7 SCSI-II devices when connecting expansion systems on each SCSI-II Bus. Order only one terminator per chain.*

Differential SCSI Extender Cables

Extend your current differential SCSI cable length up to 25 meters with HP's extender cables. The connectors are male low-density bail-lock to female low-density bail-lock. Recommended for the HP 25525A EISA Card (Series 700 only).

Selected SCSI connections on Series 4XX systems

Threaded standoff with locktab connector

Thumbscrew cable (for post–11/1/90 Models)

Ordering Information

Description	Product Number	Price
3-m (10-ft) cable	C2900A	$100
5-m (16.4-ft) cable	C2901A	110
10-m (32.8-ft) cable	C2902A	150
20-m (65.6-ft) cable	C2903A	200

Series 400 and 700

The following cables and components are compatible with all Series 400 systems unless otherwise noted. For the best connection, we recommend using thumbscrew cables whenever possible.

Ordering Information

Description	Product Number	Price
Low-density bail-lock terminator for last UX peripheral (Series 400 and 700)	K2291*	$40
Low-density bail-lock terminator for last Domain peripheral	K2290*	46
0.9-m (3 ft) Low-density bail-lock to low-density thumbscrew connector cable	K2284	40
1.5-m (5 ft) Low-density bail-lock to low-density thumbscrew connector cable	K2283	45
0.9-m (3-ft) Low-density thumbscrew to high-density thumbscrew connector cable	K2294	89
1.5-m (5-ft) Low-density thumbscrew to high-density thumbscrew connector cable	K2295	94
0.9-m (3-ft) Low-density bail-lock to high-density thumbscrew connector cable (Series 400 and 700)	K2296	83
1.5-m (5-ft) Low-density bail-lock to high-density thumbscrew connector cable (Series 400 and 700)	K2297	88
0.4-m (1.3-ft) SCSI cable (Male to Male)	K2207	49
2.6-m (8.5-ft) SCSI cable (Male to Male)	K2208	62
1.5-m (5-ft) SCSI cable (Male to Male)	K2209	55
0.9-m (3-ft) SCSI cable (Male to Male)	K2210	52
3-m (10-ft) SCSI cable (Male to Male)	K2211	66
Disk Array Cables		
SCSI II active terminator	C2904A	45
SCSI III active terminator	C2905A	65
1-m SCSI I to SCSI III cable	C2915A	100
2-m SCSI II to SCSI III cable	C2906A	100
5-m SCSI II to SCSI III cable	C2907A	130
20-m SCSI II to SCSI III cable	C2916A	190
1-m SCSI II to SCSI II cable	C2908A	90
0.9-m SCSI III to SCSI III cable	C2911A	120

* Cables not included w/terminator. Order separately.

HELPFUL HINT:

SCSI DOs and DON"Ts for Domain/OS

- Only HP Apollo–approved SCSI cables should be used with the Series 400 and any connected SCSI devices. Always use the shortest possible cable(s) for your configuration.
- If the Series 400 system has internal disk drives, you must count them as SCSI devices.
- A maximum of one HP Apollo .25-inch cartridge tape drive is allowed per system.
- A maximum of one HP Apollo flexible disk drive is allowed per system.
- Although a system can have up to seven disk drives (Winchester and magneto-optical), there is a limit of five mounted disk volumes per system at any one time.
- A maximum of two 8mm tape drives are allowed per system.
- When adding third-party SCSI devices, total cable length external to the Series 400 unit (both external cables and cables internal to the devices) should be limited to 4.6 meters (15.1 feet).

RS-232-C Cable Connectivity Chart

			HP DeskJet: C2106 HP LaserJet: 33449A 33459A, 33471A, 33481A, 33491A HP PaintJet XL: C1602A #1AX HP Pen Plotter: 7440 #001, 7475 #001, 7550B #006 HP DraftPro: 7575A, 7576A HP DraftMaster: 7595B/C, 7596B/C, 7599A/B	HP Pen Plotter: 7550B #005	Modems: K1498, 92203A
		Device Connector:	**DTE-25F**	**DTE-25M**	**DCE-25F**
Series or Model #	**Description**	**Host Connector:**	**Cable**	**Cable**	**Cable**
310, 332, 340	Model 310, 332, 340	DTE-25F	40242G	17255D	40242M
320, 330, 350, 360, 370 with 98561-61604 without 98561-61604	Model 320, 330, 350, 360, 370	DTE-25F DTE-9F	40242G 92221P	17255D 98561-61604	40242M 92221M
345, 375, 380	Model 345, 375, 380	PC-9M	24542G	24542H	24542M
400	Series 400	DTE-25F	40242G	17255D	40242M
700	Series 700	PC-9M	24542G	24542H	24542M
98644A	Ser.Interface for Series 3XX	DTE-25F	40242G	17255D	40242M
98628A 98628A #001 98628A #002	Datacomm Interface Card	DTE-50F DTE-25M DCE-25F	5061-4215 17255D 40242M *	5061-4216 17255F No add. cable req.	5061-4215 No add. cable req. Not recomm.
98638A	8-Channel MUX	DCE-25F	40242M	40242C**	92219Q
98642A (port 0) 98642A with 92219S 98642A (port 1, 2, 3)	4-Port Multiplexer	DTE-25F DTE-25M RJ-11(4F)	40242G 17255D 92219T plus 92219U	17255D 17255F 92219T plus 92219U and 92224F	40242M * 40242C 92219T plus 922196 and 17255D

* Or 92224M adapter, if cable present   ** Connect directly, if cable present

RS-232-C Cables

Ordering Information

Description	Product Number	Length	Price
25M to 25F	17255D	1.2-m (4-ft)	$44
25F to 25F	17255F	1.2-m (4-ft)	44
9F to 25M	24542G	3-m (10-ft)	60
9F to 25F	24542H	3-m (10-ft)	60
9F to 25M	24542M	3-m (10-ft)	60
25F to 25M	40242C	5-m (16.5-ft)	108
25M to 25M	40242G	5-m (16.5-ft)	77
25M to 25M	40242M	5-m (16.5-ft)	77
50M to 25M	5061-4215	4.9-m (16-ft)	110
50M to 25F	5061-4216	4.9-m (16-ft)	105
25M to 25M	92219Q	5-m (16.5-ft)	55
25M to 25M	92219S	5-m (16.5-ft)	55
RJ-11M to RJ-11M	92219T	15-m (50-ft)	21
9M to 25M	92221M	1.5-m (5-ft)	45
9M to 25M	92221P	1.5-m (5-ft)	42
9M to 25F	98561-61604	3-m (10-ft)	55
25M to 25F	13242-60011	4.9-m (16 ft)	95
male to male	92218A	15-m (50 ft)	110
null modem cable	K1575	3-m (10 ft)	33

Adapters

Description	Product Number	Price
RJ-11F to 25M adapter	92219U	$19
RS-232-C Female gender converter	92224F	25
RS-232-C Male shielded gender converter	92224M	25

Fiber Optic/Ethernet Cables

Fiber Optic Cable

HP Apollo DIRECT has the fiber optic cable you need. Fiber optic cable delivers wide information bandwidth with very low propagation loss, and provides your network with immunity from electromagnetic and radio frequency interference. It also gives complete electrical isolation and excellent abrasion resistance and flexibility. Choose from a variety of sizes. The 30-foot to 250-foot lengths are available in both PVC and Teflon.™

Ethernet/IEEE 802.3 Backbone Cable

Available in both PVC and Teflon™ jacket, this backbone cable is ideally suited to meet all your Ethernet transmission needs. The Teflonjacketed cable is UL approved for safe use in environmental air spaces without a conduit. PVC jacketed cable must be enclosed in conduit or restricted to use in open air spaces, such as offices or manufacturing floors. Both cables are available in four lengths: 230', 383', and 1000' spools. All cables are conveniently marked at 2.5 meter (8.2 feet) intervals, the minimum allowable distance between physical taps. Meets CL2 and CL2P N.E.C. standards.

Thin Ethernet/IEEE 802.3 Coaxial Cable

Thin Ethernet cable provides a simple, inexpensive, flexible method for connecting DN3000 to Ethernet (via multiport repeater). It's available with Teflon jacket in four pre-cut lengths (5, 10, 20, and 50 meters), and on 1000' spools and with PVC jacket in 50 meter lengths. Meets CL2 and CL2P N.E.C. standards.

Ordering Information

Description	Product Number	Price
Fiber Optic Cable		
30 ft PVC	K1126	$119
50 ft PVC	K1128	$139
75 ft PVC	K1130	$159
100 ft PVC	K1120	$179
150 ft PVC	K1122	$219
250 ft PVC	K1124	$249
30 ft Teflon	K1127	$139
50 ft Teflon	K1129	$153
75 ft Teflon	K1131	$175
100 ft Teflon	K1121	$197
150 ft Teflon	K1123	$241
250 ft Teflon	K1125	$274
Ethernet/IEEE 802.3 Backbone Cable		
230 1/4 ft PVC	K1065	$365
383 3/4 ft PVC	K1067	$615
1000 ft PVC	K1062	$1,550
230 1/4 ft Teflon	K1066	$675
383 3/4 ft Teflon	K1068	$1,095
1000 ft Teflon	K1063	$2,995
Thin Ethernet/IEEE 802.3 Coaxial Cable		
164 ft (50m) PVC	K1102	$249
16.4 ft (5m) Teflon	K1085	$35
32.8 ft (10m) Teflon	K1081	$49
65.6 ft (20m) Teflon	K1083	$69
164 ft (50m) Teflon	K1087	$139
1000 ft (304m) Teflon	K1100	$895
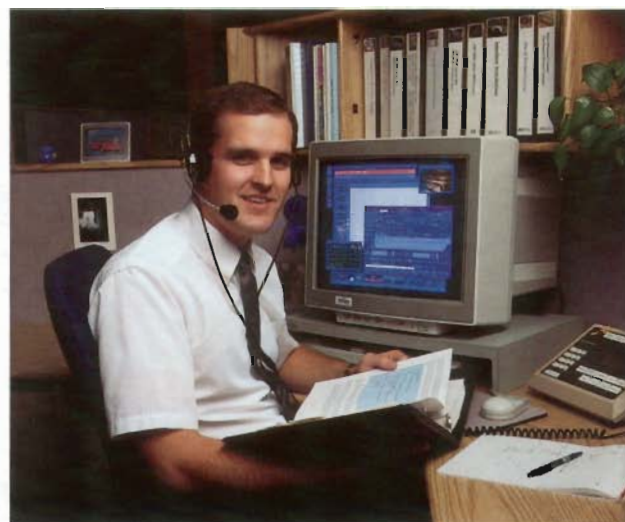
At HP Apollo DIRECT, we understand the importance of accurate information.

Whether you need product compatibility or prices, we work hard to get you the answers you need.

Coaxial Cables

Single Coaxial Cable with Teflon Jacket

Teflon eliminates the need for conduit and cuts installation costs. Meets HP Apollo specifications of 1km of clear signal performance. Made with a special flame-resistant, smoke-retardant insulation compound, this cable is UL-approved as meeting national Electrical Code 725-B. A higher temperature rating than PVC-jacketed cables eliminates the need for conduit in air plenums. Also meets CL2 and CL2P N.E.C. standards.

Ordering Information

Description	Product Number	Price 1-2	Price 3-5	Price 6+
Coaxial Cable with Teflon Jacket				
1000 (ft)	K1511	$795 ea	$715 ea	$680 ea
500 (ft)	K1513	425 ea	380 ea	360 ea
250 (ft)	K1512	225 ea	205 ea	195 ea

Single Coaxial Cable with PVC Jacket

Combine high performance and low cost with our PVC-jacketed cable. Meets HP Apollo engineering specifications of up to 1km of clear electrical signal performance. Features Duofoil™ construction with more than 61 percent tinned copper braid and black PVC jacket. Provides 100 percent shielded coverage and is UL-approved to meet all flammability standards. Also meets CL2 and CL2P N.E.C. standards.

Ordering Information

Description	Product Number	Price 1-2	Price 3-5	Price 6+
Coaxial Cable with PVC Jacket				
1000 (ft)	K1516	$145 ea	$131 ea	$123 ea
500 (ft)	K1515	85 ea	77 ea	72 ea
250 (ft)	K1514	45 ea	41 ea	38 ea

Multiple Serial Connector

Make multiple serial connections from your DN Series workstation with this 3-position serial interface cable. The 12" RS-232-C cable has a single 25-pin male connector and 3-position, 25-pin female connectors.

Ordering Information

Description	Product Number	Price
Multiple Serial Connector		
One to three 12" RS-232-C expansion cable	K2292	$300

Single 25-pin male connector to 3-position, 25-pin female connectors

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IMPORTANT: Catalog Issue Date:

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DOCUMENTATION
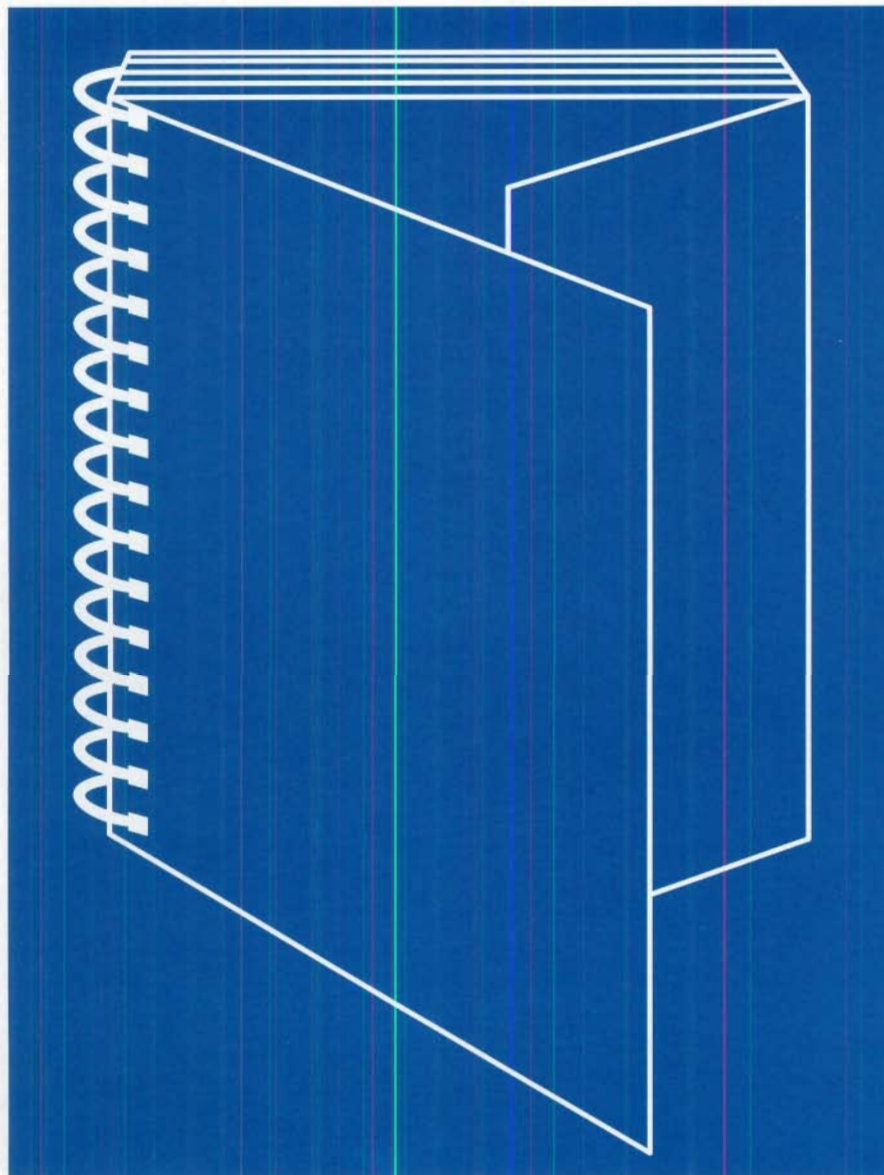
HP Apollo Documentation at Your Fingertips

At HP Apollo DIRECT, we recognize that you may need replacement documentation or more information about your HP Apollo workstation, software, or peripherals.

For your convenience, we have identified the most popular HP-UX and Domain documentation guides for your workstation environment. If you don't find the materials you need in

this section, please call us at HP Apollo DIRECT for more information.

HP-UX Manuals

General Usage

Description	Product Number HP-UX S300/400	Product Number HP-UX S700	Price
A Beginner's Guide to HP-UX		B1862-90000	$25
NEW HP VUE User's Guide		B1171-90042	25
NEW Using the X Window System		B1171-90043	29
NEW Finding Information		B2355-90013	18
NEW Finding information	B1862-90001		25

NOTE: *One set of General Usage manuals is included with each HP-UX workstation.*

System Administration & Installation

Description	Product Number HP-UX S300/400	Product Number HP-UX S700	Price
Installing & Administering LAN		98194-60526	$45
Using Serial Line IP Protocols		98194-60522	31
Networking Overview		B1012-90012	22
Using NFS Services		B1013-90008	22
Installing & Administering NFS		B1013-90009	31
Using ARPA Services		B1014-90006	27
Installing & Administering ARPA Services		B1014-90007	31
NEW HP VUE Configuration Guide		* B1171-90041	10
NEW HP VUE System Administration		* B1171-90044	14
Installing & Updating HP-UX (8.0/8.05)		B2355-90000	22
Installing & Updating HP-UX (8.0/8.05)	* B1862-90002		14
NEW Installing & Updating HP-UX (8.07)		B2355-90014	18
Master Index (HP-UX)		B2355-90008	22
Master Index (HP-UX)	B1862-90003		14
Error Message Catalog (HP-UX)		B1862-90004	18
How HP-UX Works: Concepts for the System Administrator		B2355-90005	27
How HP-UX Works: Concepts for the System Administrator	B1862-90005		27
Managing Clusters of HP 9000 Computers Sharing the HP-UX File System		B2355-90009	25
Managing Clusters of HP 9000 Computers Sharing the HP-UX File System	B1862-90006		27
Installing Peripherals		B2355-90006	25
Installing Peripherals	B1862-90007		41
System Administration Tasks		B2355-90003	41
System Administration Tasks	B1862-90008		27
HP-UX System Security		B1862-90009	22
Solving HP-UX Problems		B1862-90010	18
NEW Improving Performance w/Software Disk Striping		B2355-90015	10
HP-UX Reference		B2355-90004	72
HP-UX Reference	B1864-90000		62
Managing Software Products w/Network License System		D-11272-B	12
Managing NCS Software		D-11895-C	21

* Manuals shipped with HP-UX tape products,
B1861A, B1862A, B2352A, B2353A; and CD-ROM
media products, B2378A, and B2358A.

HP-UX Manuals

HP-UX User's Guides

Description	Product Number		Price
	HP-UX S300/400	HP-UX S700	
Remote Access: Kermit, UUCP, vt		B1862-90011	$31
Mail System: elm, mailx		B1862-90012	27
Terminal Control: curses, TermO, ITE		B1862-90013	31
Text Formatting: mm, tbl, nroff		B1862-90014	31
Number Processing: bc, bs, dc		B1862-90015	25
Text Processing: awk, ed, sed		B1862-90016	27
Shells: Bourne, C, Korn, Kayshell, PAM		B1862-90017	35
Ultimate Guide to VI and EX Text Editors		97005-90015	23.75

General Programming

	Description	Product Number		Price
		HP-UX S300/400	HP-UX S700	
	ADB Tutorial	N/A	92432-90005	$27
	LLA Programmer's Guide		98194-60524	27
	Berkeley IPC Programmer's Guide		98194-60525	45
	Net IPC Programmer's Guide		98194-60527	46
	Programming & Protocols for NFS Services		B1013-90010	27
	HP-UX Reference		B2355-90004	72
	HP-UX Reference	B1864-90000		62
	POSIX Conformance Document		B1864-90001	22
	Device I/O: DIL, HP-HIL		B1864-90002	29
	Native Language Support		B1864-90003	27
	HP-UX Assembler & Tools		92432-90001	30
	HP-UX Assembler & Tools	B1864-90004		18
	HP-UX Portability Guide		B1864-90006	25
	Programming HP-UX		B2355-90010	31
NEW	Using the Audio Application Programming Interface		B2355-90016	25
NEW	Starbase Device Drivers Library		98592-90026	52
	Starbase C Pocket Reference		98592-90031	10
	Starbase FORTRAN Pocket Reference		98592-90041	10
NEW	Starbase Beginner's Guide		98592-90048	14
	Starbase Pascal Pocket Reference		98592-90051	10
NEW	Starbase Reference		98592-90067	29
NEW	Starbase Graphics Techniques		98592-90081	62
	HP Fast Alpha/Font Manager Programmer's Starbase		98592-90093	27
	Radiosity & Ray Tracing		98885-90002	33
	Starbase Display List Programmer's		B2361-90000	35

C/ANSI C Compiler

Description	Product Number		Price
	HP-UX S300/400	HP-UX S700	
HP-UX Symbolic Debugger		B1864-90005	$33
C Programmer's Guide		92434-90002	23
C Programmer's Guide	B1864-90008		22
C Programming Tools		B1864-90009	18
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HP FORTRAN 77/HP-UX Reference Manual		92430-90005	54
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Domain/OS User's Set	D-OSDOMUS-B	58
SYSV User's Guide-Vol I	D-17269-B	14
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