

HP DIRECT

The Source for HP System and
Workstation Products

Summer 1993

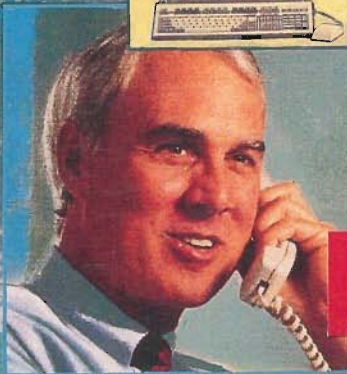
Smart people...

H



smart products...

P



smart call.

D

PRE-SALES TECHNICAL SUPPORT
EASY TOLL-FREE ORDERING

800.637.7740

Welcome to

Easy Ordering

Q. What if I already have an HP sales rep?

A. Great. HP DIRECT is just one more way you can order the products you need. HP DIRECT is an extension of your sales team and we'll let your sales rep know when you've ordered.

Q. And is it really possible to order HP products over the phone?

A. You bet. Our customer and order management representatives have been specially trained to find out what you need to do and how best to get it done. And we'll make sure you receive the same discount terms you enjoy from our sales offices.



What is HP DIRECT?



Smart Answers

Q. Can I really get answers to my particular technical questions over the phone?

A. Definitely. Our support engineers take the time to listen to your questions and they know the right questions to ask. Their main concern is to make sure you know all your options. Often our sales reps call HP DIRECT's support engineers to take advantage of their wide range and many years of technical experience.

Q. Okay, I've found something I want in the HP DIRECT catalog. How can I be sure it will work with what I already have?

A. Our engineers will make sure of that before you order. They'll ask you questions to determine exactly what you have and what new products your system will support. If you're considering a new hardware addition, our engineers will tell you what software or cabling you would need. Thinking about running a new application? Our engineers will let you know if it would require additional memory for your system.



HP Quality

Q. Are the products that are featured in the HP DIRECT catalog the same high quality Hewlett-Packard products sold elsewhere?

A. The very same. HP DIRECT offers a premier selection of the most advanced technology you can buy. And you've got Hewlett-Packard's guarantee of quality and reliability standing behind everything you order through HP DIRECT.

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

HP DIRECT



What's New?

Q. I'm too busy to take a leisurely read through the entire HP DIRECT catalog, but I'm always interested in the latest hardware and software from Hewlett-Packard. How can I find out about the newest products?

A. See the inside rear cover. You'll get a quick run-down on the latest additions to this

catalog and where to find them. When you turn to the pages listed, **N** you'll find the new products marked with our "N" symbol. One such product you won't want to miss is the new HP Windows Client. It combines the best features of both a terminal and a personal computer—and it does it for an incredibly low price. You'll find the HP Windows Client on page 86.

Smart people...
smart products...
with one smart call.

800.637.7740

Support

Q. How can I hope to stay on top of all the new software and know how to use it?

A. Easy. Turn to page 126. That's where our education section starts.



You'll find a wide selection of courses to train users, administrators, and others in HP-UX, MPE/iX, and much more. We also offer a number of self-paced courses and starter kits on page 128.

Q. What about ordering support when I order my product? Do I have to do that separately?

A. Depending on your system, your usage, and your needs, you can choose from a number of support options and you can order these options along with the product. If continuous system operation is critical, you can choose 4-hour response, seven days a week. And, if the demands on your system aren't as great, other options including installation support are available as well.



"Can I run the new HP Performance Collection Software on my system?"

"What's the best way to add users to our current system?"

"We need to increase our mass storage in a hurry. Can you help us?"

"Can we get extra copies of manuals?"

"I need technical help setting up a network solution."

HP DIRECT Answers at your fingertips

"I need to know the status of my order."

"I'm ready to order. How long does it take to place my order?"

Engineering experts on-line

When you call 800-637-7740, press '1' on your touch tone phone if you'd like to speak with HP DIRECT's support engineers. When you have technical questions—from compatibility to upgrading and much more—and you need the right answers, call us. You can take advantage of our decades of experience in multiuser systems and workstations. We are also ready to provide quotes and configura-

Before you order a single product, we want

you to have a clear understanding of what you need and how much it will cost.

Questions about your order are answered fast

Press '2' and you'll soon find that ordering Hewlett-Packard products is a breeze with our customer representatives. We can also help you order support options with your equipment. And we can provide price and availability information and check on the status of your order.

"When you call HP DIRECT and reach me, you've got 13 years of HP experience on the line. I worked 7 years as a CE supporting 9000's and 1000's. Call HP DIRECT and we'll be happy to help you."

Bob
Bob Lulich
Sales Support Engineer

The very latest in mass storage products

Press '3' and you'll reach a customer representative with the very latest information on Hewlett-Packard mass storage solutions for your HP 3000 and HP 9000 systems.

Read all about it

What's the easiest way to check out the specifications for Hewlett-Packard products? Call 800-333-1917 and HP FIRST will walk you through ordering the literature you want. The information will be faxed to you within minutes. Fast and easy!

Calling from a rotary dial phone?

If you aren't sure about the above options, or if you are calling from a rotary dial telephone, don't worry. We'll be on the line in seconds to help you.

"I was a PC engineer at Hewlett-Packard for four years before joining the HP DIRECT team two years ago. That kind of background is just part of the wide range of experience we offer you."

Lynda
Lynda Bricker
Sales Support Engineer



HP DIRECT Contents

Easy Ordering

Our customer representatives make it fast and easy to order.

Phone: It's fast and toll-free.
Call 800-637-7740.

FAX: You can FAX your purchase order to us, at 408-345-8398.

Mail: Send purchase order to:
Hewlett-Packard Co.
DMO Bldg. 51L-SE
P.O. Box 58059
Santa Clara, CA 95051-8059

Whether you call, FAX, or mail in your order, we will handle it with the same efficiency and care.

Free Pre-sales Technical Support

Our specially trained support engineers can help you take the guess work out of making a purchase decision. Just speak to your HP DIRECT engineer. Call 9 am to 5 pm, from anywhere in the continental U.S., Monday through Friday.

Corporate Discount

HP DIRECT will honor your existing corporate discounts when ordering on your account.

Customer Satisfaction

HP is committed to your satisfaction. If you are not satisfied for any reason, return your purchase in original condition within 60 days for full refund or credit. Call us at 800-637-7740 for return instructions.

HP 3000

The HP 3000 family of multiuser computer products including upgrades, memory, terminals, software, and more **4**

HP 9000

The HP 9000 family of workstation and business server products including upgrades, memory, X terminals, software, and more **24**

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HP System Support options and selected training classes **124**

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HP-UX, MPE, and Domain manuals **129**



This symbol indicates products that are ready when you are—on our shelves, ready to ship.



This symbol indicates products that have been introduced since our last catalog.

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Printed in the U.S.A. on recycled paper.

HP 3000 Moving forward

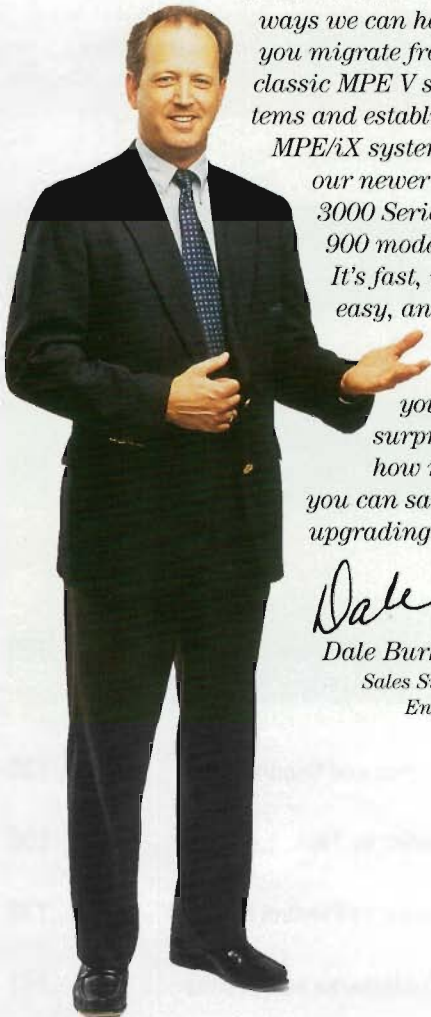
"just what you need today and tomorrow!"

"Our open HP 3000 family of systems and servers is just what you need today and tomorrow! Each product helps you manage your business today, protects your current investment, and sets your foundation for the future. Call us. We'll be happy to tell you all about the innovative ways we can help you migrate from classic MPE V systems and established MPE/iX systems to our newer HP 3000 Series 900 models. It's fast, it's easy, and

you'll be surprised how much you can save by upgrading!"

Dale

*Dale Burkhart
Sales Support
Engineer*



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HP Service and Support

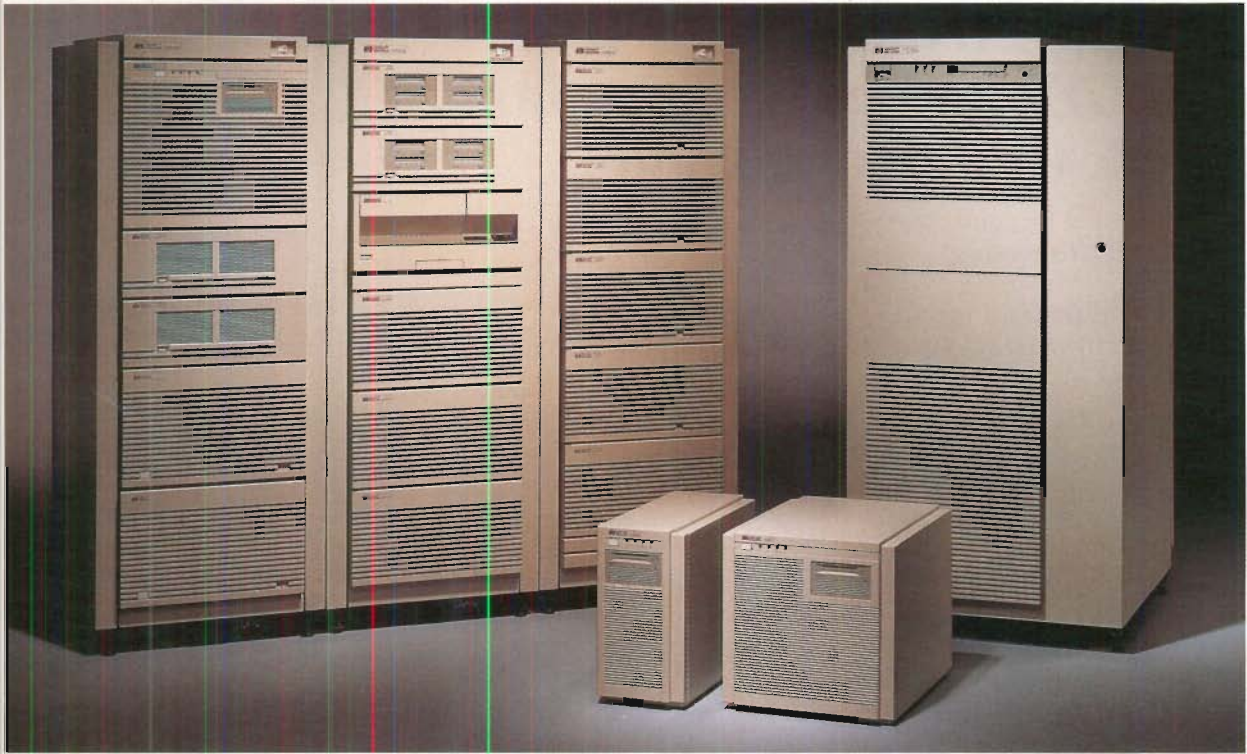
HP Support options can now be ordered with every product. For more information.....125

When ordering HP Support:

1. Choose the hardware support you want
 - Same-day response, 7 days a week
 - Four-hour response, Monday through Friday
 - Next-day response, Monday through Friday
2. Choose the software support you want
 - License-to-use updates
 - Telephone support
3. Call HP DIRECT and we'll make sure your support matches your requirements.



INTEGRATED SUPPORT
PUTTING IT ALL TOGETHER



Grow with the HP 3000 Series 900 Family

From the classic MPE V systems to the established MPE/iX systems to the newer HP 3000 Series 900 models, Hewlett-Packard's broad family of multiuser computer systems keeps evolving to meet your demands. The performance chart below shows how easy it is to upgrade to greater power and more users with the HP 3000 Series 900 family.

HP 3000 computers have the capacity to handle large, main-frame-class on-line transaction processing applications and support open systems standards, offering portability and interoperability with other manufacturers.

	927LX	937LX 937RX 937SX	947LX 947RX 947SX	957RX 957SX	967RX 967SX	987RX 987SX	987/150RX 987/150SX	990 992/100	992/200 992/300 992/400
Typical Users	1-20	24-64	48-80 64-100	64-100 64-160	64-160 128-250	100-160 164-350	100-160 164-350	200-1000 200-580	325-1000
Maximum Memory (MB)	192	192 384	192 384	192 384	192 512	768	768	2048	2048
Maximum Disk (GB)	40 98	40 68 98	40 68 98	68 98	68 98	68 98	120 250	2040	2040



Migrate from MPE V to MPE/iX and get on the fast track to performance

Now is the time for you to take advantage of all the benefits of HP's PA-RISC technology.

Simple migration means no interruption to your business

Migration to the Series 900 is a simple migration and a simple migration means just that—no interruption to your business. You'll be doing business as usual within a day of system installation. And, with the high performance of the Series 900 systems, you can benefit from performance gains without converting current applications to native mode.

True investment protection

The HP 3000 Series 900 family offers a range of processor performance, packaging, and user license options. Your investments in software and hardware are protected by the ability to increase computing power through simple board or package upgrades as your needs change.

Our Migration Toolset helps get rid of the guesswork

The MPE V to MPE/iX Migration Toolset includes a manual and two tools which run on your MPE V system. The tools help you in planning for migration to the Series 900 systems by identifying any incompatibilities that may exist in applications to be migrated to the MPE/iX system.

32428A\$100



MPEV to MPE/iX Benefits

With the HP 3000 Series 900 PA-RISC systems you'll enjoy:

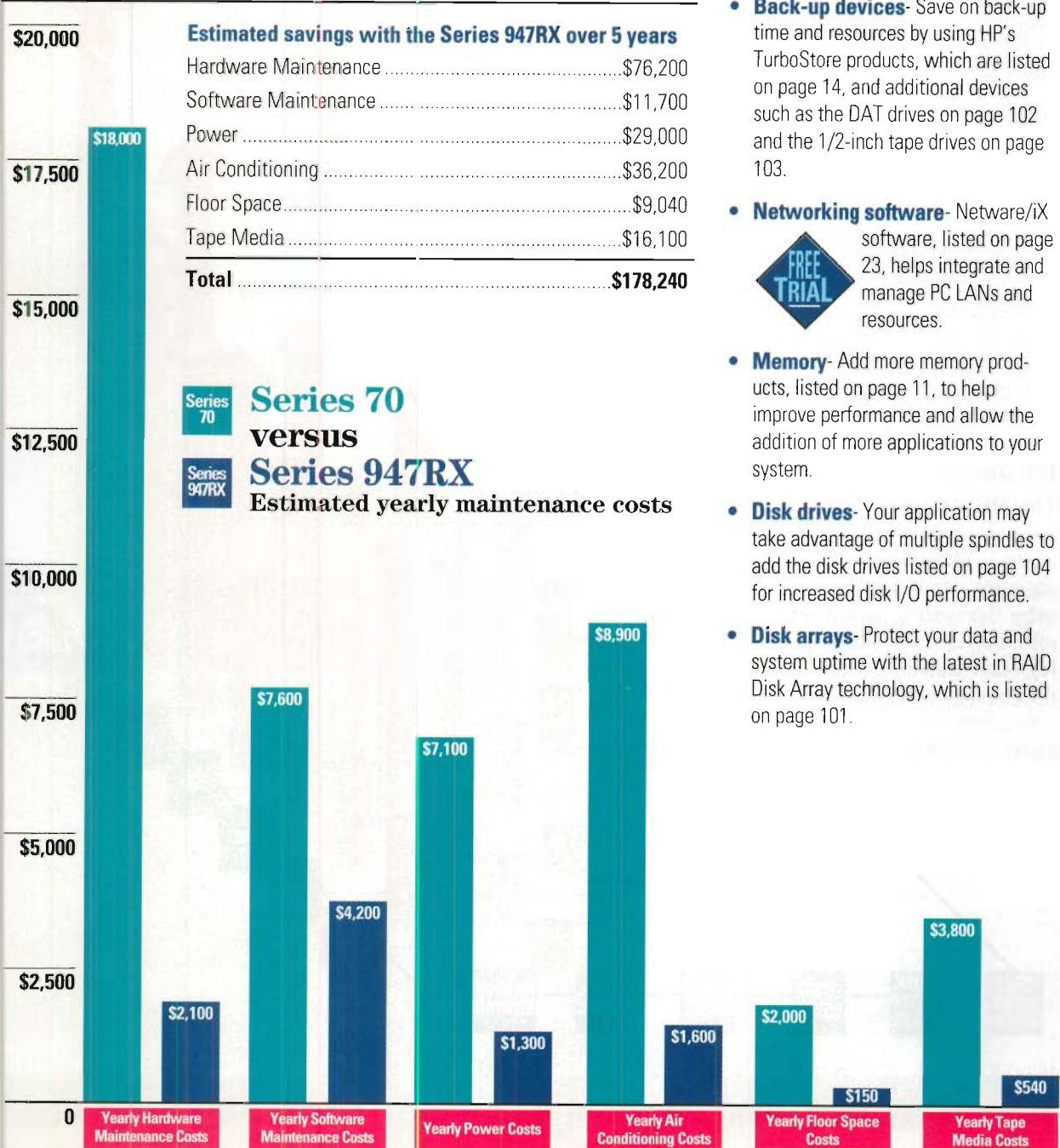
- Up to 25 times the performance of the HP 3000 Series 70
- Increased functionality such as on-line and unattended back-up
- Access to industry standards such as POSIX and SCSI peripheral interfaces
- Significantly lower maintenance costs — from support to power consumption

Nine reasons why you should upgrade today

1. Savings of up to 80% in annual operation and maintenance costs.
2. Up to ten times increased performance.
3. More cost-effective, reliable, and advanced peripherals supported.
4. More attractive, cost-effective future board and chassis upgrades.
5. Increased connectivity of terminals, disks, and printers.
6. Increased system uptime with high availability options offering up to 99.5% uptime.
7. Access to POSIX compliant software.
8. Better programmer support tools included in databases such as ALLBASE/SQL and IMAGE/SQL.
9. Relational technology with IMAGE/SQL.

Migrate now and save up to \$35,000 a year

HP's Series 900 offers more than great performance. Migrating to the Series 900 also makes good economic sense. This chart shows how quickly your savings could add up when you migrate from a Series 70 system to a Series 947RX system. You could save up to \$178,000 over five years. That's an average yearly savings of nearly \$35,600.



Series 70 to Series 947 Benefits

A cost savings of more than \$178,000 over five years is just the beginning of your benefits when you upgrade from a Series 70 to a Series 947. With your savings, you'll have room in your budget to add additional products, many of which are not available on HP's classic systems. Here are just a few of these products:

- **Back-up devices**- Save on back-up time and resources by using HP's TurboStore products, which are listed on page 14, and additional devices such as the DAT drives on page 102 and the 1/2-inch tape drives on page 103.
- **Networking software**- Netware/iX software, listed on page 23, helps integrate and manage PC LANs and resources.
- **Memory**- Add more memory products, listed on page 11, to help improve performance and allow the addition of more applications to your system.
- **Disk drives**- Your application may take advantage of multiple spindles to add the disk drives listed on page 104 for increased disk I/O performance.
- **Disk arrays**- Protect your data and system uptime with the latest in RAID Disk Array technology, which is listed on page 101.



HP 3000 Series 900 upgrades for the power your work demands

If yours is like most commercial computing environments, you require consistent, fast system response times for on-line transaction processing and high throughput for background batch work.

HP meets the workplace challenge

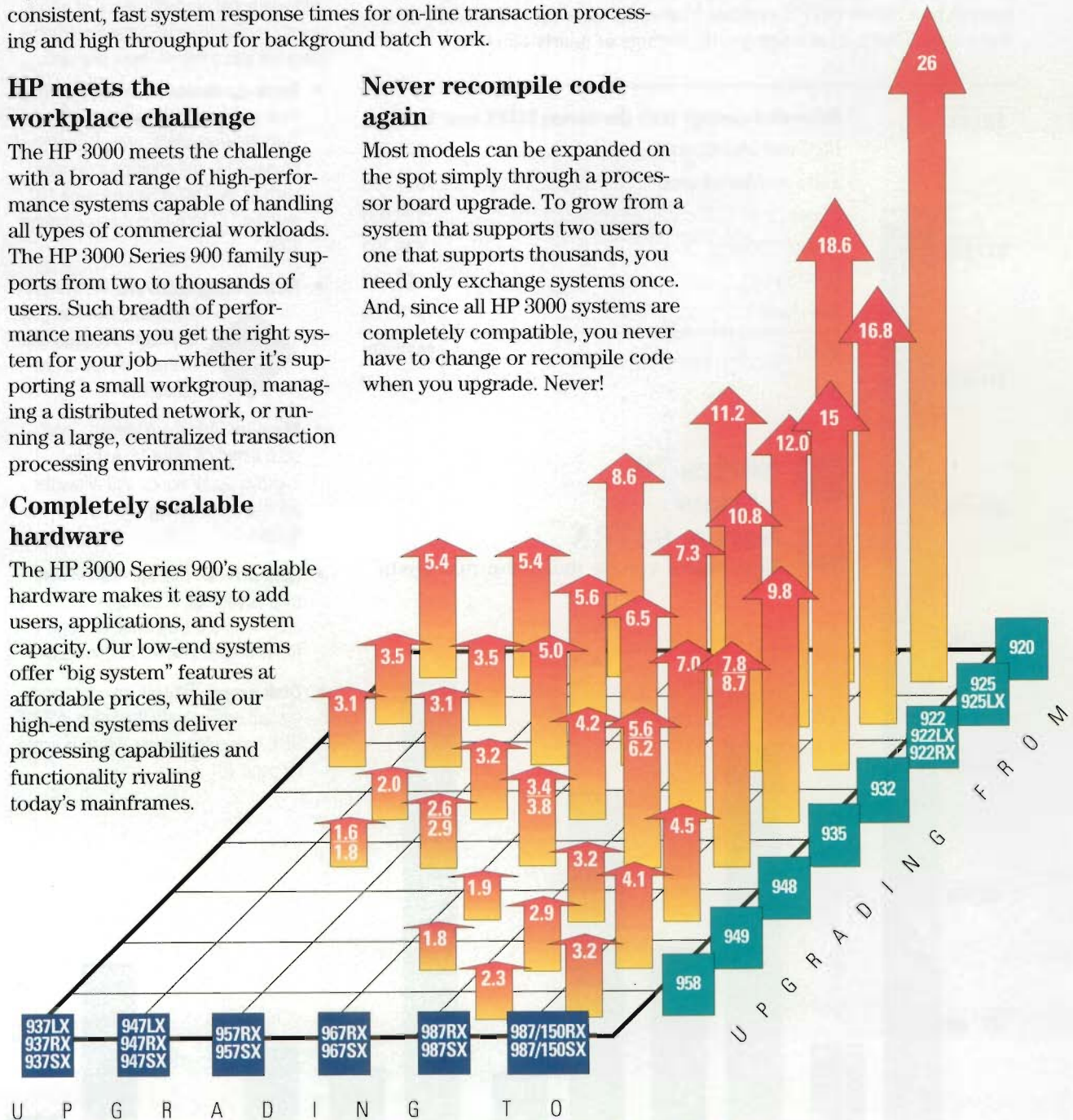
The HP 3000 meets the challenge with a broad range of high-performance systems capable of handling all types of commercial workloads. The HP 3000 Series 900 family supports from two to thousands of users. Such breadth of performance means you get the right system for your job—whether it's supporting a small workgroup, managing a distributed network, or running a large, centralized transaction processing environment.

Completely scalable hardware

The HP 3000 Series 900's scalable hardware makes it easy to add users, applications, and system capacity. Our low-end systems offer "big system" features at affordable prices, while our high-end systems deliver processing capabilities and functionality rivaling today's mainframes.

Never recompile code again

Most models can be expanded on the spot simply through a processor board upgrade. To grow from a system that supports two users to one that supports thousands, you need only exchange systems once. And, since all HP 3000 systems are completely compatible, you never have to change or recompile code when you upgrade. Never!



Performance increase when upgrading to the latest Series 900s

You've got three ways to upgrade



Three kinds of upgrades are available to the newer HP 3000 Series 900 family: processor board upgrades, user license upgrades, and "package" upgrades.

1. Processor board upgrades

increase system performance. Your current processor board must be returned to HP.

2. User license upgrades

provide the ability for more users to access your system. Since the 917LX through the 947SX all have the same performance, upgrading within these systems is considered a user license upgrade.

3. "Package" upgrades

offer the benefit of expanded configurability. There are three basic packages in this family, a 2-slot, a 4-slot package, and an expanded 12-slot package. The "LX" models are the entry level package. The "RX" models are the 4-slot package, and the "SX" expanded packages have twelve expansion slots. A package upgrade is done on your site by an HP Customer Engineer in less than an hour. You get expanded configurability from your original "LX" or "RX" investment and only the physical "LX" or "RX" cabinet is returned to HP.

Or upgrade all three ways

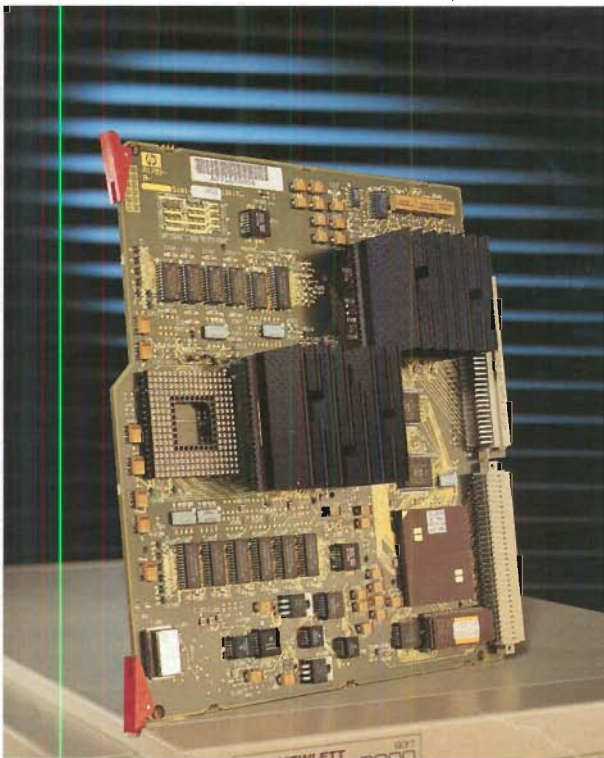
You may upgrade all three ways at once. For example, you may upgrade from a 947LX to a 967SX to get more performance, support more users, and an expanded configuration—all at once.

Upgrading is as easy as "store and restore"

Upgrading within the Series 900 family is as easy as "store and restore," and can give you significant performance increases and lower cost-of-ownership.

Features and Benefits

- **Faster processing and response**
With a significant increase in performance, your system will provide faster processing and faster response times.
- **No downtime**
Complete application compatibility means no downtime is required for upgrades.
- **Save money on peripherals**
And support for industry-standard SCSI peripherals allows you to take advantage of faster, less expensive peripherals.



HP 3000 processor board

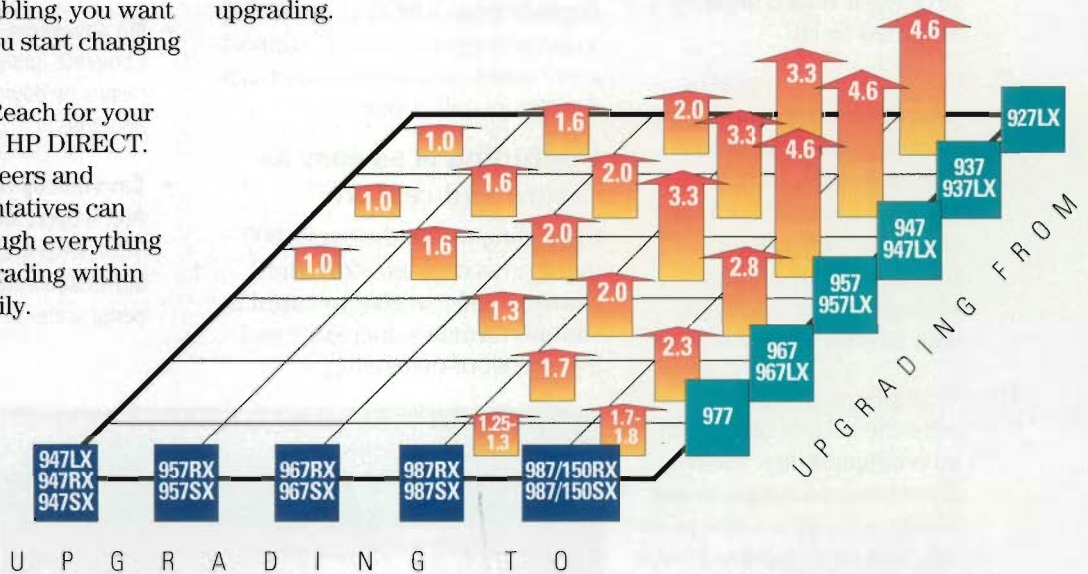
HP DIRECT has the answers when it comes to upgrades

When you're planning to upgrade your current system, you're sure to have questions and concerns. From compatibility of current applications to configurations of peripherals and cabling, you want answers before you start changing anything.

Your first move? Reach for your telephone and call HP DIRECT. Our support engineers and customer representatives can help you sort through everything involved with upgrading within the Series 900 family.

They can also help you plan your next steps, so that you'll have a clear idea of what you should expect and what options will be for further expansion or upgrading.

Call HP DIRECT now and we'll be happy to help you take advantage of Hewlett-Packard's advanced technology today and on to tomorrow.



Performance increase when upgrading within HP 3000 Series 9x7s

Answers to Common Upgrade Questions

Q. Why are there so many different upgrade options to choose from and why is the price range so large?

A. HP 3000 upgrades are structured by user license. The five choices of user license are 64, 100, 160, 256, and unlimited. You choose your upgrade depending on the user license you desire. The single greatest factor in determining your cost is the user license you choose. An additional factor is how many slots you need and if your needs require a chassis upgrade.

Q. What is the definition of user license? Is that how many users I want attached to the system?

A. Not exactly. The user license you require depends on how many concurrent users you have attached to your system. You can have many hundreds of individual users who need access to your system. If, however, only 80 need access at any one time, you would need a 100 user license. We always recommend giving yourself about a 20% bandwidth.

Q. What's involved in upgrading from my older Series 900 to a newer Series 900?

A. Whether you require a chassis upgrade for additional I/O slots or simply a new processor board, upgrading is as easy as "store and restore." All your peripherals and software applications are completely compatible requiring absolutely no altering or rework. A box swap may also be required.

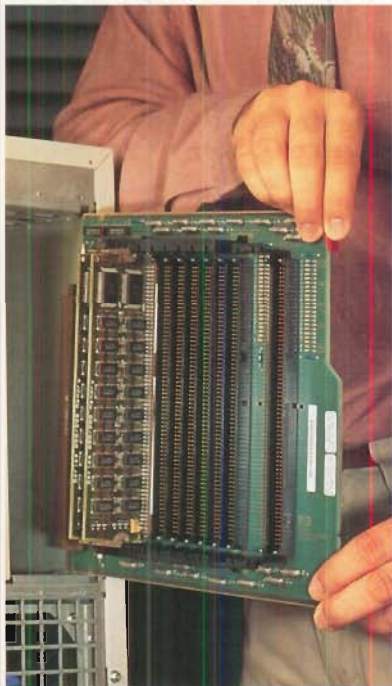
Q. What are the differences between the LX, RX, and SX chassis?

A. The only difference in these chassis is the number of I/O slots available. Additional I/O slots allow you to attach additional peripherals. The LX features 2 additional slots, the RX has 4 slots, and the SX has 12 slots. Performance and the number of users remain the same.

Realize your system's potential by adding memory

Adding additional memory to your system lets you make the most of your HP 3000 computer system investment. More memory will allow you to support more users on your current HP 3000. Adding memory will also enable you to add more applications to your system. Even if you do not need to add users or applications, additional memory may help improve the performance of all existing applications, allowing your HP 3000 to perform to its fullest potential.

Not only is additional memory simple to order, but it is also easy to install. A Hewlett-Packard Customer Engineer will install it in your HP 3000, with virtually no disruption to your system operations.



HP memory delivers performance on demand.

Series 9x7LX and 9x7

Description	Product Number	Price
8 MB ECC memory SIMM memory module	A2230A	\$ 1,400
16 MB ECC memory SIMM memory module	A2231A	2,400
32 MB ECC memory SIMM memory module	A2232A	4,000
64 MB ECC memory SIMM memory module	A2511A	6,400
128 MB ECC memory SIMM memory module	A2516A	25,600

Series 920, 922LX, 922RX, 922, 932, 948, and 958

16 MB ECC memory board	A1436A	\$21,000
32 MB ECC memory board	A1437A	42,000

Series 925LX, 925, 935, 949

8 MB ECC memory board	A1010A	\$10,500
16 MB ECC memory board	A1037A	20,000
32 MB ECC memory board	A1623A	42,000

Series 95X, 960

Memory Controller	A1103A	\$12,600
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Series 95X, 960, 980

16 MB ECC memory board	A1104A	\$15,000
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Series 980

64 MB ECC memory board	A1152A	\$57,100
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The advantage is clear

HP delivers advanced ergonomic design with our 700/96 and 700/98 terminals. The screens offer a crystal-clear display, larger characters, and a fully overscanned background to help minimize eyestrain. And the detached, low-profile, ergonomically designed keyboards have the identical layout and functionality of previous HP 3000 terminals.

The HP 700/96 and 700/98 have the quality that you expect from HP. They utilize a single-board design which minimizes hardware failures and provides a very high degree of reliability. The HP 700/96 offers 8 pages of display memory to increase productivity and both serial and parallel printer ports for printing your files locally. The HP 700/98 adds advanced capabilities to make your work easier and improve the performance of your HP 3000 computer applications. The HP 700/96 offers 8 pages of display memory to increase productivity and both serial and parallel printer ports for printing your files locally. The HP 700/98 adds advanced capabilities to make your work easier and improve the performance of your HP 3000 computer applications. The HP 700/98 stores an average of 25 forms locally, eliminating the need to download forms repeatedly from the host computer. Combined with the HP 700/98's local edit checks, modified data tag, and 16 pages of display memory, host communication traffic can be reduced to improve performance.



Our terminals are easy on the eyes with 14-inch screens that offer crisp, sharp characters. Eyestrain is further reduced with innovative overscanning, which creates a borderless full screen that's as easy to read as a printed page. And a tilt and swivel mechanism lets you position the terminal screen effortlessly.

Data Communication Specifications

Interfaces	Serial Port 1 - RS232C/422 (25 pin) Serial Port 2 - RS232C (9pin) bi-directional printer port interface
Baud rates	75 to 38.4K - handshaking may be required
Handshake	Serial Port 1 - ENQ/ACKXON/XOFF, CS Serial Port 2 - XON/XOFF, CS, SRR
Parity	None, odd, even, 1 or 0
Operating mode	Character, block, format, VT220, VT100, VT52

Physical Characteristics

Product	Weight	Height	Width	Depth
Display	19.5 lb.	13 in.	13 in.	13 in.
Keyboard	4.1 lb.	1.4 in.	18.4 in.	7.8 in.
Keyboard cable	Coiled 0.5 m (2.7 ft.), Extended 3 m (9.5 ft.)			



Terminals Ordering Information

Description	Display Color	Product Number	Price
HP 700/96	Amber	C1064A	\$ 895
	Green	C1064G	895
	White	C1064W	895
HP 700/96ES	White	C1084W	945
HP 700/98	Amber	C1065A	1,150
	Green	C1065G	1,150
	White	C1065W	1,150
HP700/98ES	White	C1085W	1,200

HP 3000 Software: The right tools for every job

Arm your HP 3000 system with the most powerful software products available. Whether you are operating under MPE V or MPE/iX, HP DIRECT has systems management products that offer reliable high performance back-up. HP's application development software lets you tame even the most demanding databases. And, when it's time to find the right programming languages, you'll have exactly what you need with HP's MPE native mode compilers. No matter what your business, it helps to communicate clearly, quickly, and efficiently within your office.

If you have questions about which products would provide the best solutions for your needs, expert answers are only a phone call away. Call HP DIRECT toll-free and you'll get years of experience on the line to help you get exactly what you need and only what you need. Just tell us the job you need done and we'll help you get the right tools to do it.

"We try to establish a relationship when you call. We really appreciate your business and take a sincere interest in trying to solve your business needs. It's this type of caring service that helps build long-term relationships with our customers."

Lynda

Lynda
Bricker
Sales Support
Engineer



Find information about
these training course
on pages 126 to 128:

- MPE/iX System Operation Skills
- MPE/iX System Management Skills
- MPE/iX System Administration for Application Users
- MPE/iX Programming Skills
- MPE/iX Account Management (CBT)
- MPE/iX Storing and Restoring Files, System Backup (CBT)
- MPE/iX System Startup, Shutdown, and Recovery (CBT)
- MPE Starter Kit (CBT)



Test-drive Turbo- STORE/iX II for free

It won't cost you a cent to try HP's powerful TurboSTORE/iX II backup software. See page 14 for a special free trial copy including full documentation!

Try NetWare iX for free

You can evaluate HP's popular NetWare iX desktop integration software in your own business environment absolutely free. See page 23 to find out how you can get your free trial copy!

Backup your HP 3000 anytime. On-line. Unattended.

With on-line backup, your users can stay on the system during the backup process. And features such as interleaving and parallel restore make HP backup lightning fast. Which means that backups which used to take the system down for several hours can now be accomplished with little or no system downtime.

TurboSTORE/iX II works with magnetic tape, low-cost HP DDS-format Digital Audio Tape or the HP Rewritable Optical Disk Library System. (For more information on these HP products, please see the Peripherals section which starts on page 99.) And future compatibility with evolving HP hardware and software is assured, protecting your investment.



Call HP DIRECT to order your free TurboSTORE/iX II trial copy with full documentation today! (B2492A)

HP TurboSTORE/iX II

This product includes two levels of software data compression which cut backup time with maximum flexibility. DDS, optical disks, and 1/2-inch tapes all realize performance improvement from software data compression. This feature provides unattended backup.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	36387A

HP TurboSTORE/iX II with On-Line Backup

On-line backup is for environments where high system availability is critical. Does not require mirrored disk drives. Data backup can occur without interruptions to users or applications.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	36388A

HP TurboSTORE/iX II with Support for Rewritable Optical Disks

Support for HP's Rewritable Optical Disk Library allows very high backup capacity, especially for large mainframe-class configurations.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	36397A

HP TurboSTORE/iX II with On-line Backup and Rewritable Optical Disk Support

This version is ideal for high end, mainframe-class configurations that run round-the-clock operations.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	36398A

Helpful Hints for Ordering

When you call HP DIRECT, we'll review your needs and expectations. That's because we want to make sure you order only what you need.

- Let us know the model number of your HP 3000, your MPE license type, and your current version of MPE, such as 4.0 or A.00.00.
- Specify the media type you'll need, such as 1/2-inch tape, DDS, or CD-ROM.

HP AutoRestart/iX

HP AutoRestart/iX performs automatic system restart in the event of a system software failure. It saves "state information" for later fault analysis. It also saves money by reducing the amount of system downtime and eliminating the need for operator intervention.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	36375A

Tune up your database with HP Application Development Software



The HP 3000 leads the industry in providing high performance database management systems that can deliver superior business solutions. If you have any questions about compatibility or concerns for future growth, call us.

HP ALLBASE/4GL

HP ALLBASE/4GL is HP's premier application development tool set for developing high-performance on-line transaction processing (OLTP) applications.

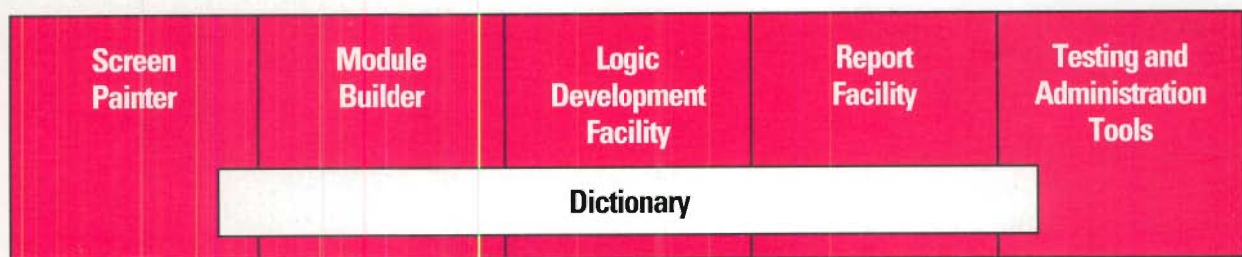
The HP ALLBASE/4GL development language is specifically tuned for unbeatable performance with HP ALLBASE/SQL.

With HP ALLBASE/SQL, you'll enjoy unbeatable performance, low prices, and streamlined support.

Features

- Fully integrated development environment that requires no additional editors, compilers, or debugging utilities
- Dictionary for definition and management of all field specifications, messages, records, and files
- Module builder for generating logic and screens to query and manage SQL tables, HP IMAGE databases, indexed sequential access method (KSAM) files, and flat files
- Screen painter for creation of what-you-see-is-what-you-get (WYSIWYG) menu screens and data input and output screens
- Comprehensive logic commands for procedural coding, plus decision tables for complex conditional expressions
- Report writer for design of report layouts and contents

System	Developer Vers.	Run-time Vers.
HP 3000 Series 900	HP 30601A	HP 30602A



HP ALLBASE/4GL Developer Version

All the elements needed to design, test, maintain, and execute business-critical applications.



HP ALLBASE/ QUERY

This is an easy-to-use, terminal based data retrieval tool for HP ALLBASE/SQL. Its flexible selection of access and reporting modules allows users to perform queries, modify data or tables, and generate reports without programming. It also provides powerful facilities for programmers to use in pre-configuring complex tasks, or to improve their own productivity when working with HP SQL databases.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	32426A

HP ALLBASE/SQL

This is HP's relational database solution for mainframe level performance and large capacity databases with more than 500 users. It enables client-server application development with PCs, workstations, and terminals as clients. The software includes ALLBASE/NET for remote database access, and DBA tools.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	30368B

HP ALLBASE/Replicate

This unique differentiator for ALLBASE/SQL allows ALLBASE databases to be "shadowed" to one or more locations either on the same system or different systems on the same network. It provides 24-hour access to data faults and system bottlenecks.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	B2494A

HP ALLBASE/DB2 CONNECT

This software permits full data interchange between HP 3000 and IBM systems. HP 3000 applications can access (read/write) DB2 data using PC NewWave Access, Interactive SQL, or through C, and Pascal (3GL). It also allows ALLBASE/SQL and DB2 to co-exist in the same environment.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	30700A

HP ALLBASE/SQL PC API

This product provides a PC-based programmatic interface to ALLBASE/SQL on the HP 3000. It enables rapid porting and development of leading client-server applications. It also supports windows-based PC tools like Gupta SQL Windows, PowerJolt's PowerBuilder, and others.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	B2463A

Helpful Hint

HP ALLBASE/SQL and IMAGE/SQL make a powerful team. SQL allows applications to be developed more quickly and allows the use of industry standard decision support tools.



"I take extra care when someone is new to our services. A good first impression is important. Then the next time, there's no thinking twice about where to call. HP DIRECT! Many people expect to be pushed around on an 800 number. But we will take the time and listen so you don't feel rushed."

Kelly

Kelly Yee
Customer
Representative





HP Business Report Writer/iX and HP Business Report Writer V

HP Business Report Writer is a high-performance report writing system for data processing professionals. An easy to use menu-driven interface, assisted by an online help facility, aids users in specifying reports. The backlog of report requests is reduced since turn-around times are shorter. "Sample Layout" features allow report developers to quickly verify the format and design of reports without compiling. Running developed reports is economical because the Business Report Writer run-time programs are free as part of the Fundamental Operating System. Intrinsic allow programmatic access to reports, without the need to exit a currently-running application.

Available on: Systems	Op Sys	Base Product Number
HP 3000	MPE V	36070A
HP 3000/900	MPE/iX	35360A

HP Toolset Program

HP Toolset is an integrated set of tools that work together to maximize the productivity of COBOL II and Pascal programmers in the coding, design and debugging phases of development.

Available on: Systems	Op Sys	Base Product Number
HP 3000	MPE V	32350A
HP 3000/900	MPE/iX	36044A

Software Performance Tuner/iX Collector

This performance software tool collects information needed for tuning and increasing MPE/iX native mode application performance. Software Performance Tuner/iX Analyzer is required.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	B1776A

HP TRANSACT Application Development

HP TRANSACT is a high level programming language that enhances productivity to two or three times that of traditional languages. TRANSACT lets developers perform several functions within a single statement; it economizes on data definitions by working in conjunction with Dictionary V and System Dictionary; and it simplifies programmers' interface to MPE subsystems like TurboIMAGE, KSAM files and forms. The result is a dramatic reduction in development and maintenance costs on the HP 3000.

HP Transact V — Interpreter HP Transact/iX — Native Mode Compiler

Available on: Systems	Op Sys	Base Product Number
HP 3000	MPE V	32247A
HP 3000/900	MPE/iX	30138A

HP EDIT

This full function, screen oriented editor is designed for application program development. HP EDIT/iX offers a user-configurable editing environment with a rich set of advanced text processing features.

Available on: Systems	Op Sys	Base Product Number
HP 3000	MPE V	30316A
HP 3000/900	MPE/iX	32656A

HP Symbolic Debugger/iX

Interactive source level debugger. This product is language sensitive and supports HP COBOL II/iX, HP C/iX, HP FORTRAN 77/iX, and HP Pascal/iX.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	31508A

Software Performance-Tuner/iX Analyzer

This product analyzes and reports the performance information collected by the SPT/iX Collector. (see left)

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	B1777A



Find information about these training course on pages 126 to 128:

- MPE/iX System Operation Skills
- MPE/iX System Management Skills
- MPE/iX System Administration for Application Users
- MPE/iX Programming Skills

Take the advantage with MPE Native Mode Compilers

The native mode compilers are optimizing compilers that maximize a program's runtime performance while minimizing its memory requirements. Hewlett-Packard developed these powerful compilers to take full advantage of the features, simplicity, and uniformity of the machine instruction set of HP Precision Architecture-RISC.

HP COBOL II

COBOL meets the ANSI X3.23-1985 COBOL standard (FIPS PUB 21-2) at the high level and includes Addendum 1.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	31500A

HP RPG

This machine-independent, problem-oriented report generation language is easy to learn, use, and code. Programs coded in another manufacturer's RPG or RPG II can be submitted directly to the Hewlett-Packard RPG/iX compiler with minimal conversion effort. In addition, the RPG/iX compiler helps detect errors at the source language level with extensive diagnostic messages.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	30318A

HP Pascal

HP Pascal is a superset of ISO and ANSI IEEE770.97-1983 and ISO 7158 standards.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	31502A

HP Business BASIC

A complete language solution. This product supports both the commercial application programmer and the novice with a variety of features to ease programming tasks.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	32715A

HP FORTRAN 77

FORTRAN is a superset of the ANSI X3.9-1978 FORTRAN standard. It conforms to MIL-STD-1753 and POSIX (P1003.2 Draft 9). The key DEC™ and VMS™ FORTRAN extensions are included.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	31501A

HP C/iX

C conforms to the recent X3.159-1989 ANSI C standard and POSIX (P1003.2 Draft 9)

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	31506A



MPE V Languages

Description	Product Number
HP COBOL II	32233A
HP RPG	32104A
HP Pascal	32106A
HP Business BASIC	32115A
HP FORTRAN 77	32116A
HP SPL/V	32100A
HP BASIC/V Interpreter	32111A

Helpful Hints for Ordering

You can help us speed up your order for a language product by having the following information ready before you call:

- Do you need an MPE/iX or MPE V compiler?
- What's the current version of your MPE operating system?
- What is the model number of your HP 3000 that will run the compiler?
- What type of compiler media do you need?

Get more from your system with HP productivity tools

As your business grows, so should your system's capabilities. Make sure your system continues to meet your needs. It's easy with this wide range of HP office software products. If you have a question about which product would be appropriate for your current and future business demands, call us.

"Welcome to one-stop shopping, where you will get accurate technical information, easy order placement, qualified people that care about your needs, and the best solutions in the marketplace at competitive prices."



*Debie Nervina
Customer Representative*



 **HP AdvanceLink for DOS**


This is the original and best known member of the AdvanceLink family. It provides monochrome and color graphics terminal emulation in addition to blockmode alpha-numeric emulation, file transfer and task automation.

D2102B.....\$385

 **Additional License of AdvanceLink for DOS**

Requires prior purchase of D2102B.

D2112B.....\$340

 **HP AdvanceLink for MS-Windows/ HP New Wave**

HP offers you the choice of installing AdvanceLink either as an MS-Windows or a native HP NewWave application from a single set of disks. The multi-tasking capability of MS-Windows permits you to establish multiple simultaneous host connections over serial or LAN links. Microsoft's DDE protocol and AdvanceLink's powerful "TermTalk" command language let you integrate host applications with your PC. Within HP NewWave, additional user interface and task automation functions are enabled.

D2104C.....\$340

 **Additional License of AdvanceLink for Windows/HPNewWave**

Requires prior purchase of D2104C.

D2114C.....\$300

 **HP AdvanceMail**

AdvanceMail is a PC mailing interface for DOS PCs, allowing users to send, receive, and manipulate electronic mail messages from their PC to HP DeskManager or HP OpenMail.

D2101B.....\$440

 **Additional License of AdvanceMail**

Requires prior purchase of D2101B.

D2111B.....\$390

Helpful Hints for Ordering

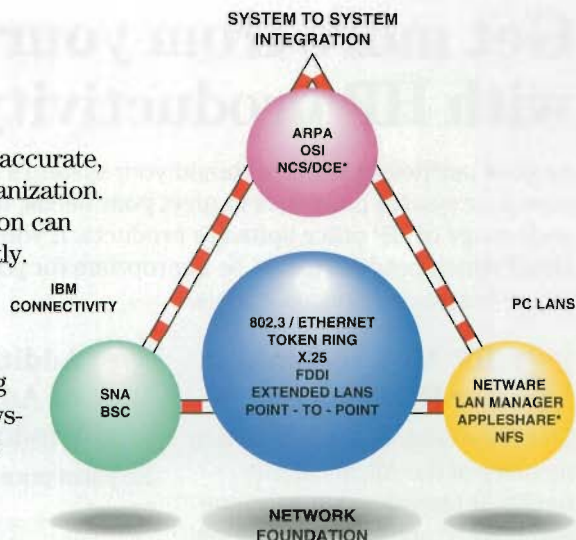
When you call HP DIRECT, we'll review your needs and expectations. That's because we want to make sure you order only what you need.

- We'll confirm that your equipment is supported by the product you order and that your system's memory meets the product's requirements.
- We'll also double-check that you order the required software versions and that your system's connection methods are supported by the product.

Put your information to work

To remain competitive, your business must deliver timely, accurate, and meaningful information all throughout your entire organization. With information actively working for you, your organization can react to change and opportunity more quickly and efficiently. Information must be readily shared not only across corporate boundaries, but also with external business partners. The HP 3000 provides networking solutions that make it easy to acquire and share information with existing mainframes, heterogeneous divisional and departmental systems, and desktop devices. And that makes your end-users more productive and your organization more successful.

HP has been a leader in providing standards-based networking for years. The HP 3000's networking solutions are based on current (TCP/IP, OSI, SNA/BSC) and emerging (OSF/DCE) networking standards. A networking solution based on standards provides you with transparent access to enterprise-wide information, accelerates your ability to initiate and react to change, gives you the freedom to choose the best solution regardless of the vendor, and protects your existing computer investment. In short, it will streamline your organization operations.



* Available soon

"We get rid of a lot of the usual red tape and delays. This catalog is great, because it provides you with basic information, technical details, product specifications, and we invite you to call for more specific data. It's a great resource to keep close at hand."

Mike Marchione
 Mike Marchione
 Customer
 Representative



Helpful Hints

When you order networking products:

- Briefly review your networking needs so we can make certain you are ordering only what you need. Let us know what you expect from this solution.
- Let us know your current configuration—your computer systems, their operating system versions and peripherals, such as printers.

HP delivers industry standards networking links

The key to putting information to work throughout your organization is support for industry-standard networking links, the hardware and software that provides the basic connectivity for HP 3000 server-to-server communication and desktop integration. The HP 3000 supports all of the major industry-standard links including 802.3/Ethernet, IEEE 802.5/IBM Token Ring, and X.25. This support of industry-standard connectivity protocols lets you have the flexibility to select the protocol that best meets your immediate needs without having to rewire or purchase additional equipment. All of this means your initial computing investment is completely protected.



LAN

ThinLAN 3000/iX Network Link

This product provides HP 3000 computers with a high performance, reliable local communication link for connecting to an industry-standard IEEE 802.3/Ethernet compatible local area network.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	36923AA

Token Ring 3000/iX Network Link

This product provides a native Token Ring connection for HP 3000 Series 900 HP Precision Bus (HP-PB) systems. With this link, an HP 3000 can connect to a Token Ring network that is compatible with IEEE 802.5/ IBM Token Ring.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	J2167A

WAN

X.25/iX System Access

This provides the TCP/IP transport for system-to-system and program-to-program access over an X.25 network. Requires DTC/X.25 Network Access Card.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	36939A



Now you can order support along with your product. See page 125.

Access the world with HP communication products

For server-to-server communication, the HP 3000 features a complete offering of standards based networking services. ARPA Services, OSI Services, and HP Network Services, provide transparent file access, file transfer, virtual terminal connectivity, and sharing of resources in a multi-system environment.

Telnet Access iX Card

The Telnet Access card product provides multivendor virtual terminal connectivity to the HP 3000 system. TELNET is a de facto standard for virtual terminal connectivity in multivendor environments. The Telnet Access card is installed in the DTC72MX and converts TELNET into the high-performance HP 3000 AFCP protocol. The Telnet Access card allows you to have up to 80 active block-mode Telnet sessions. Given the fact that the majority of Telnet overhead is being processed within the DTC, the HP 3000 host is substantially off-loaded from the CPU-intensive task of managing Telnet traffic.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX*	J2080A or J2070A Opt. 004

* Requires MPE/iX 4.0 or later MPE/iX releases.

HP ARPA File Transfer Protocol/iX

This product offers de facto industry-standard multivendor file transfer capabilities. FTP provides an easy method for transferring files between different vendors' systems.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	36957A

IBM Communication

For seamless integration into IBM computing environments, the HP 3000 offers a complete selection of IBM connectivity products supporting both Systems Network Architecture (SNA) protocol and Bisynchronous (BSC) protocol. A few of the top products include:

- HP 3000 SNA IMF, which provides 3270 emulation for interactive communication with IBM Systems
- HP 3000 SNA DHCF (Distributed Host Command Facility), which gives IBM users interactive access to HP 3000 systems

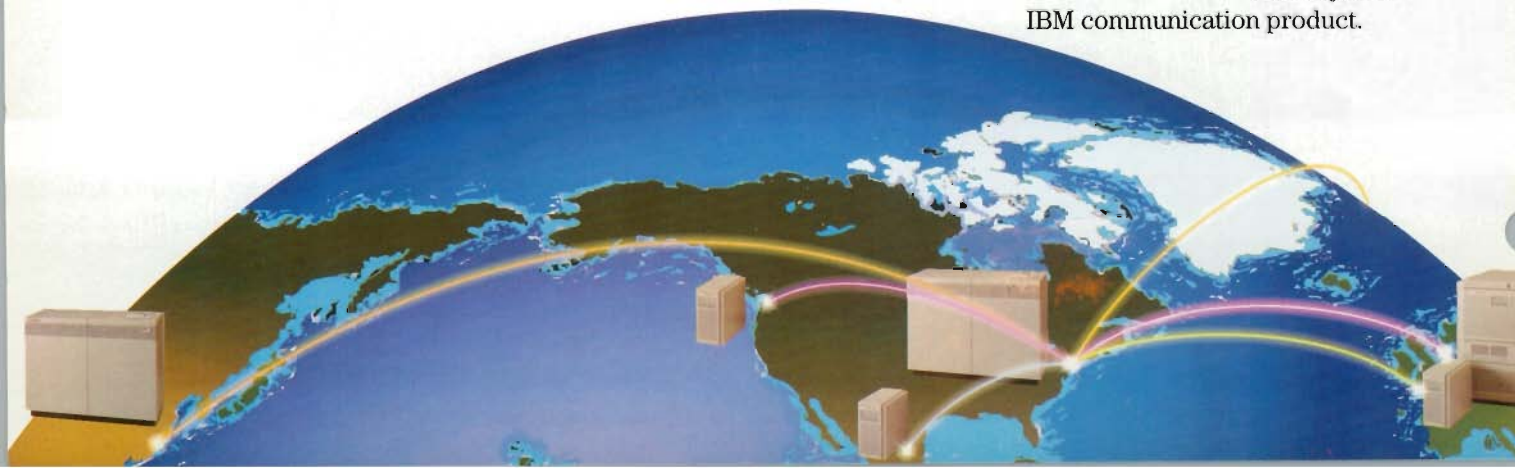


Other HP 3000 Server-to-server Products:

Description	Base Product Number
NS 3000/iX	36920A
FTAM 3000/iX	36972A
OTS 3000/iX	36971A

- HP 3000 SNA/NRJE and BSC RJE, which provide batch access to IBM systems
- HP 3000 LU6.2/PU2.1, which provides an application programmatic interface for program to program communication between an HP 3000 system and IBM mid-range and mainframe systems

Providing the networking connection for these services is the SNA/SDLC link for IBM communication in an SNA environment and the BSC link for IBM communication in a BSC environment. Please call HP DIRECT for more information on these or any other IBM communication product.



Protect your investment: integrate into your existing PC network



Getting the right information to the right person at the right place and right time is the key to staying competitive. The HP 3000 provides a powerful server solution to integrate your desktop end-users and put information at their fingertips. The HP 3000 supports the leading Personal Computing Network Operating Systems such as Novell's NetWare and Microsoft's LAN Manager. This allows the HP 3000 to be easily integrated into your existing PC networks, which protects your investment. Use the HP 3000 as a server and you'll experience power plus value added capabilities such as high availability, data integrity, back-up, security, and scalability.

NetWare iX

NetWare iX brings the most commonly installed Personal Computing Network Operating System to the HP 3000. NetWare iX provides the functionality of Novell's NetWare services including file and printer sharing and server administration functions—such as password security, connection maintenance, bindery facility, print queue management, and accounting services. The HP 3000 with NetWare services will connect to existing NetWare networks or can be used to build new NetWare networks and provide the same services as NetWare PC-based servers.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	32020A

Resource Sharing/iX

Resource Sharing gives PC users the full advantage of your computing resources by providing shared access to centrally stored files and applications, and powerful printers on your HP 3000. Resource Sharing provides the server capabilities. To receive the LAN Manager client software, order HP LAN Manager/iX.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	B1718A

HP PC NS/ARPA Services for DOS, NetWare and LAN Manager

This new product provides your PC running MS-DOS, LAN Manager, or NetWare, with Network File Transfer (NFT), Virtual Terminal Access, and Network Interprocess Communication (NETIPC) to HP minicomputers.

It also allows a PC to communicate in a multivendor environment using the services defined by the Department of Defense Advanced Research Project Agency (ARPA) and Berkeley Software Distribution (BSD) UNIX system.

This product includes a one-user license and manuals along with the software.

J2246A \$395



NetWare iX Trial Copy

The NetWare iX trial copy product provides the full functionality of the NetWare iX product and permits you to evaluate NetWare iX for 60 days in your own business environment. Experience first-hand the HP 3000's powerful NetWare server solution.

Available on: Systems	Op Sys	Base Product Number	Price
HP 3000	MPE/iX	J2253A	FREE

LAN Manager/iX

This product provides the Application Program Interface Named Pipes. Named Pipes is a method used by application programs to talk to each other and exchange data. LAN Manager Client is also provided.

Available on: Systems	Op Sys	Base Product Number
HP 3000/900	MPE/iX	32015A

HP 9000 Open for business

"high performance, expandability, and low costs"

"Our HP 9000 family offers you the broadest range of compatible UNIX systems from the world's number one UNIX supplier. These powerful workstations and business servers give you high performance, expandability, and low costs. Plus, you get the added versatility of open systems. Behind it all is a seasoned group of engineers, just one toll-free phone call away."



Scott

Scott Schneider
Sales Support Engineer

Workstations

Series 700

These workstations deliver high performance and brilliant graphics at low prices.....25

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When ordering HP Support:

1. Choose the hardware support you want
 - Same-day response, 7 days a week
 - Four-hour response, Monday through Friday
 - Next-day response, Monday through Friday
2. Choose the software support you want
 - License-to-use updates
 - Telephone support
3. Call HP DIRECT and we'll make sure your support matches your requirements.



Series 700



HP's workstations deliver the best for less!

Hewlett-Packard's Series 700 family of workstations is the best value available. The industry's top speed, the best graphics, and remarkably low prices make each model of the Series 700 an excellent choice for today's business needs.

With HP's own advanced PA-RISC technology as a foundation, the 7100 processor offers better performance for your applications, faster response time, and greater overall productivity at lower costs. Your savings will continue with upgrades for growth on demand.

A model for every need

HP's Series 700 family features a wide selection of models, configurations, and integrated options to make customizing a system solution easy. Our workstations are at home with technical and commercial applications in markets as varied as desktop publishing, CASE, EDA, molecular modeling, and scientific computations.

Your best buy in workstations today...

Series 700 workstations are easy to order, install, configure, maintain, and upgrade. Compare prices and levels of performance. You'll see that HP offers the industry's best values. With the Series 700, you'll enjoy exceptional performance from a broad range of applications. You'll also have the independence that an open system allows.

and tomorrow

As your needs grow and computers evolve, Hewlett-Packard will continue to provide intelligent solutions. Whether in client/server computing or X station networks, you will find the Series 700 playing a strategic role. A vast range of upgrades, add-ons, and other products protects your investment with total support long into the future.



Low prices and extensive upgrade opportunities make Series 700 workstations a great value now and down the road.

Series 700 performance is your competitive edge

The fastest choice you can make

The heart of the Series 700's remarkable performance is the 7100 processor. Lightning response times and solid benchmarks have earned the Series 700 a superior reputation.

Scaling new heights

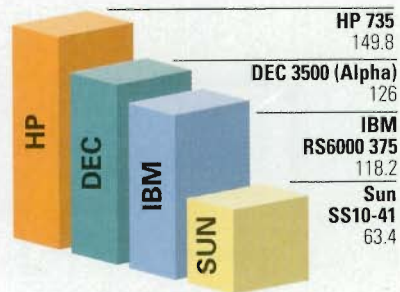
The Series 700 features "performance scaling" to add more value to your system. When you upgrade to a higher performance workstation model, you'll find the very same graphics software providing new features with added functionality. This performance scaling protects your investment because it allows maximized improvements with any upgrade.

Get the industry's best graphics

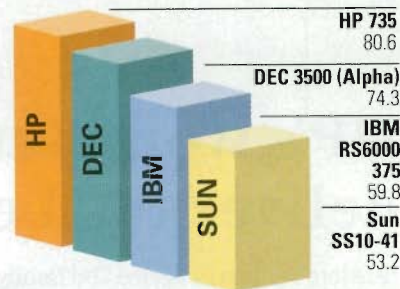
With HP's Series 700 workstations, hardware and software work together to provide the industry's best graphics. That's because the power and extensibility of PA-RISC architecture allows us to move much of the graphics processing into the CPU on our CRX family of graphics. And that means high performance at lower costs.

While your system's graphics capabilities grow as you move up from model to model, sizzling graphics are available throughout the Series 700 family. Each model can provide 2D/3D graphics that overwhelm our competitors. You'll find specifications for HP's remarkable graphics software, starting on page 30 in this section.

Benchmark for Benchmark, HP is Clearly Superior

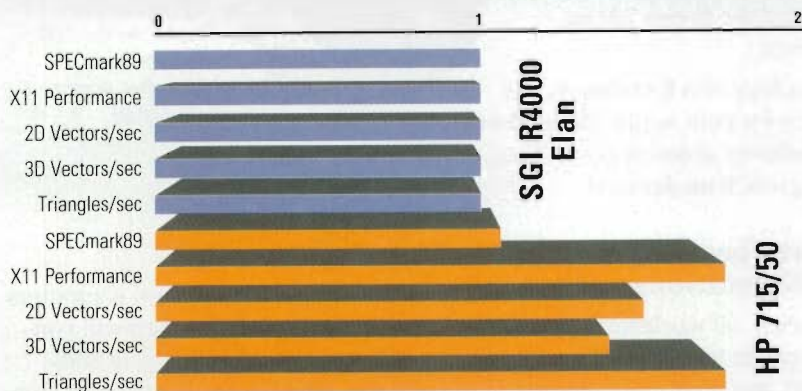


SPECfp92 performance comparison



SPECint92 performance comparison

HP Exceeds Silicon Graphics Standards

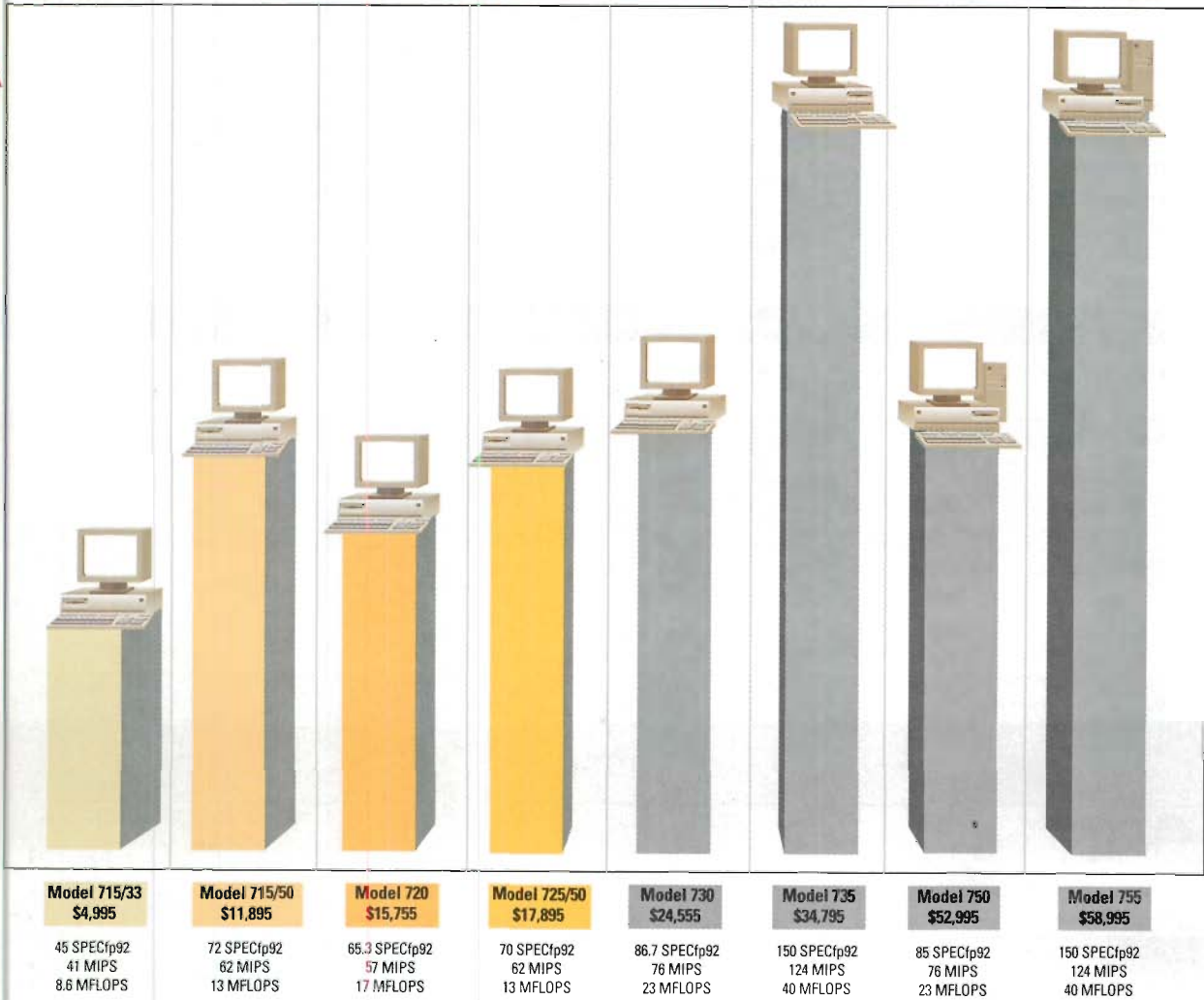


Its benchmark performance normalized to the SGI R4000, the Model 715/50 sets new levels for graphics performance.

Model 715/33	Model 715/50
The Model 715/33 offers integrated, high-resolution graphics, distributed networking, and Series 700 applications. 3D CRX graphics are available on this entry-level workstation. Its features make it suitable for the manufacturing, database, desktop production, retail, and oil and gas applications.	This mid-range workstation delivers 50% more performance than the entry-level model at a competitive price, while providing industry-leading graphics. The Model 715/50 meets and exceeds the rigorous needs of database, EDA, scientific, and retail applications.

SPECfp92

Performance Comparisons for Series 700 Models



See the glossary on page 142 for explanations of benchmarks. All prices represent entry-level system with localization kits.

Model 720	Model 725/50	Model 730	Model 735	Model 750	Model 755
<p>High performance at a mid-range price, the Model 720 offers greater configurability and expandability with one graphics slot and one optional EISA slot. This model is your flexible solution—from financial services to EDA and mechanical applications.</p>	<p>With four EISA slots for added expandability, the Model 725/50 offers performance now and room to grow. Exceptional 3D graphics are also yours with the Model 725/50. This model can keep up with the increasing needs of mechanical, manufacturing, EDA, retail, and database applications.</p>	<p>The Model 730 puts the industry's highest performance on your desktop. One graphics slot and one EISA slot allow for expandability and greater configurability alternatives. The Model 730 provides a capable solution for mechanical CAD/CAM, high-end EDA, molecular modeling, and other applications.</p>	<p>The industry's fastest desktop workstation features the fastest I/O subsystem on the market. The advanced fast-wide SCSI-2 interface allows data transfer rates of 20 MB per second. Its graphics slot and EISA slot keep it expandable. Put the speed of the Model 735 to work on your database, AEC, manufacturing, and other projects.</p>	<p>The Model 750 desktop workstation combines high performance with expandability, featuring two graphics slots and four EISA slots. And that makes it appropriate for projects involving molecular modeling, earth/energy/GIS, and high-end EDA.</p>	<p>A speedy I/O subsystem and a fast-wide SCSI-2 interface make the Model 755 the industry's fastest desktop workstation. Its two graphics slots and four EISA slots mean that you'll also have expanded configurability features. The Model 755 can add speed and versatility to EDA, database, financial services, and oil and gas applications.</p>

Choosing the Series 700 is a matter of facts

Each Series 700 workstation model features the PA-RISC 7100 superscaler processor to deliver industry-leading performance. Compare the benchmarks. You'll find superior speed in every range at lower costs than our competition. You'll also discover

strong 3D graphics available for every model.

The Series 700 software environment includes the industry standard HP-UX operating system and the award-winning, easy-to-use HP VUE

graphical user interface. With Instant Ignition, HP-UX, and other system software (such as ANSI C, FORTRAN, DEVELOPER'S TOOLKIT) can be pre-installed to save you time.

HP Series 700 Performance Characteristics

Model	Packaging Type	Processor	Clock Speed	SPECint92 ⁽¹⁾	SPECfp92 ⁽¹⁾	SPECmark89 ⁽¹⁾	Integer Performance	Floating Point	Main Memory	Expansion
715/33	Desktop	PA-RISC 7100	33MHz	24	45	46	41MIPS	8.9 MFLOPS	8-192 MB	1 EISA (opt)*+
715/50	Desktop	PA-RISC 7100	50MHz	37	72	69	62MIPS	13 MFLOPS	16-256 MB	1 EISA (std)+
720	Desktop	PA-RISC	50MHz	38.9	66.1	66.5	57MIPS	17.9 MFLOPS	16-128 MB	1 EISA (opt)*
725/50	Desktop	PA-RISC 7100	50MHz	36.9	70	69	62MIPS	13.5 MFLOPS	32-256 MB	4 EISA (std)+
730	Desktop	PA-RISC	66MHz	52	86.7	86.6	76MIPS	23.7 MFLOPS	32-128 MB	1 EISA (std)
735	Desktop	PA-RISC 7100	99MHz	80.6	150	147	124MIPS	40.8 MFLOPS	32-400 MB	1 EISA (std)
750	Deskside	PA-RISC	66MHz	51.1	85	86.6	76MIPS	23.7 MFLOPS	64-384 MB	4 EISA (std)
755	Deskside	PA-RISC 7100	99MHz	80	150	147	124MIPS	40.8 MFLOPS	64-768 MB	4 EISA (std)

* EISA optional for Model 715/33 and 720 Workstations only
 + 1 EISA expansion slot is used for CRX-24 or CRX-24Z configurations

[1] with HP-UX 9.0

[2] represents price for entry-level system configuration including Localization Kit

To compare capabilities, we use the most common benchmarks in descriptions of our Series 700 models. You can find explanations of the various benchmarks in the glossary on page 142.

After examining the performance specifications on these pages, you'll want to read more about the configurations and integrated options available through HP DIRECT.

Standard configurations are listed on pages 34 and 35. And, as always, we invite you to call HP DIRECT toll-free with any questions.

HP Series 700 Performance Characteristics									
Model	Graphics	Max. Internal Disk Capacity	Internal Drive Capabilities	Internal Hard Drive ⁽³⁾	Internal Removable Storage Options ⁽⁴⁾	Interfaces	Networks (available)	Operating System	Base Price ⁽²⁾
715/33	2D Grayscale 2D & 3D Color	2 GB	3 bays	525MB (SE) 1GB (SE)	600 MB CD-ROM 1.4 MB Flexible 2 GB 4 mm DDS 4-8 GB 4 mm DDS w/data compression	SE SCSI-2 (2) RS-232-C (9 pin) HP-HIL Centronics Parallel CD Audio I/O	IEEE-802.3, FDDI, ATR, SNA Plus, ISDN, X.25, 802.5 Token Ring	HP-UX 9.0	\$ 4,995
715/50	2D Grayscale 2D & 3D Color	2 GB	3 bays	525MB (SE) 1GB (SE)	600 MB CD-ROM 1.4 MB Flexible 2 GB 4 mm DDS 4-8 GB 4 mm DDS w/data compression	SE SCSI-2 (2) RS-232-C (9 pin) HP-HIL Centronics Parallel CD Audio I/O	IEEE-802.3, FDDI, ATR, SNA Plus, ISDN, X.25, 802.5 Token Ring	HP-UX 9.0	11,595
720	2D Grayscale 2D & 3D Color	1.5 GB	2 bays	420 MB (SE) 525 MB (SE) 1GB (SE)	1.4 MB Flexible	SE SCSI-2 (2) RS-232-C (9 pin) HP-HIL Centronics Parallel Audio Output	IEEE-802.3, FDDI, ATR, SNA Plus, ISDN, X.25, 802.5 Token Ring	HP-UX 9.0	15,070
725/50	2D Grayscale 2D & 3D Color	2 GB	3 bays	525 MB (SE) 1GB (SE)	600 MB CD-ROM 1.4 MB Flexible 2 GB 4 mm DDS 4-8 GB 4 mm DDS w/data compression	SE SCSI-2 (2) RS-232-C (9 pin) HP-HIL Centronics Parallel CD Audio I/O	IEEE-802.3, FDDI, ATR, SNA Plus, ISDN, X.25, 802.5 Token Ring	HP-UX 9.0	17,050
730	2D Grayscale 2D & 3D Color	1.5 GB	2 bays	420 MB (SE) 525 MB (SE) 1 GB (SE)	1.4 MB Flexible	SE SCSI-2 (2) RS-232-C (9 pin) HP-HIL Centronics Parallel Audio Output	IEEE-802.3, FDDI, ATR, SNA Plus, ISDN, X.25, 802.5 Token Ring	HP-UX 9.0	24,555
735	2D Grayscale 2D & 3D Color	2 GB	2 bays	525 MB (SE) 1 GB (SE or FW)	1.4 MB Flexible	SE SCSI-2, FW SCSI-2 (2) RS-232-C (9 pin) HP-HIL Centronics Parallel CD Audio I/O	IEEE-802.3, FDDI, ATR, SNA Plus, ISDN, X.25, 802.5 Token Ring	HP-UX 9.0	34,795
750	2D & 3D Color	2.6 GB	4 bays	1.3 GB (SE)	600 MB CD-ROM 1.4 MB Flexible 2 GB 4 mm DDS	SE SCSI-2 (2) RS-232-C (9 pin) HP-HIL Centronics Parallel Audio Output	IEEE-802.3, FDDI, ATR, SNA Plus, ISDN, X.25, 802.5 Token Ring	HP-UX 9.0	52,995
755	2D & 3D Color	4 GB	4 bays	2 GB (SE or FW)	600 MB CD-ROM 1.4 MB Flexible 2 GB 4 mm DDS 4-8 GB 4 mm DDS w/data compression	SE SCSI-2, FW SCSI-2 (2) RS-232-C (9 pin) HP-HIL Centronics Parallel CD Audio I/O	IEEE-802.3, FDDI, ATR, SNA Plus, ISDN, X.25, 802.5 Token Ring	HP-UX 9.0	48,995

(3) up to two internal hard drives per system
(4) limited to one removable device per system

SE=Single-ended SCSI-2
FW=Fast-wide SCSI-2

PA-RISC, X11, and CRX add up to unparalleled performance

If you've spent time working with graphics applications, you've spent time waiting. Now, your wait is over, thanks to the HP Apollo Series 700 workstation family. You can enjoy the fastest graphics available at every level of performance—from entry-level to mid-range to high-end models.

Series 700 workstations provide the fastest X11 performance in the industry. You enjoy immediate response to any input, reducing your wait time and improving productivity. Moving from the low-end to the more advanced models, you'll be able to use a wider range of graphics software with increased capabilities.

Ready, set, done

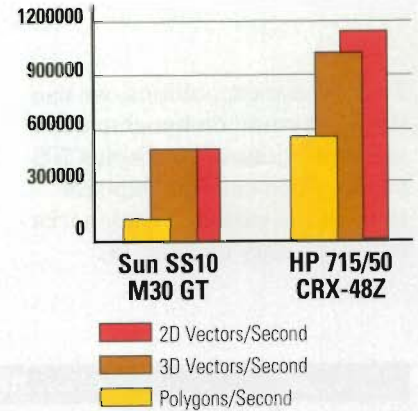
The Series 700's outstanding 2D and 3D vector performance and leadership data animation capabilities let you design, draw, rotate, and more with unrivaled speed. No other manufacturer can deliver faster graphics. Combine this speed with HP's superb graphics software and you have the industry's fastest and most capable graphics system.



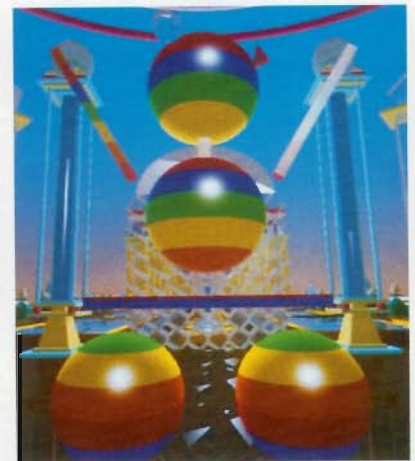
It just keeps getting better

At HP, we specially enhanced the graphics capabilities of our PA-RISC architecture. These improvements, coupled with state-of-the-art graphics system software like PowerShade (described on next page), allow you to get more features and capabilities as you move up the Series 700 family to each next model. When processor performance is improved, graphics performance likewise improves.

So, when you upgrade to a higher performance workstation model, you'll find the very same graphics system providing new features with added functionality. We call this "performance scaling." You'll call it ingenious. You'll also call it economical, because it protects your investment by allowing maximized improvements with any upgrade.



Graph above shows 48-plane 3D performance comparison between Sun and HP graphics systems



Industry leader

You can choose the best in the business with any member of the Series 700 family. Throughout various performance levels, HP graphics is the clear choice.

Graphics Options

Model 715/33	Model 715/50	Model 720	Model 725/50	Model 730	Model 735	Model 750	Model 755
Integrated grayscale	Integrated grayscale	GRX	Integrated grayscale	GRX	GRX	CRX	CRX
Integrated color	Integrated color	CRX	Integrated color	CRX	CRX	CRX-24	CRX-24
CRX-24	CRX-24	CRX-24	CRX-24	CRX-24	CRX-24	CRX-24Z	CRX-24Z
CRX-24Z	CRX-24Z	CRX-24Z	CRX-24Z	CRX-24Z	CRX-24Z	CRX-48Z	CRX-48Z
	CRX-48Z		CRX-48Z				

Getting Technical

- **Integrated grayscale**—Sharp grayscale graphics are integrated for great value on the entry and mid-range models. Fast X Window performance with 8-bit images make this graphics software appropriate for a wide variety of solutions.
- **Integrated color**—Step up to integrated color on entry and mid-range models and get fast vector performance. Add PowerShade software for lighting and shading for surface rendering plus access to high-end functionality.
- **GRX grayscale**—This high-performance grayscale system offers mid-range model users a solid solution for projects with small budgets. GRX is capable of displaying 8-bit images and is suitable for CASE, artificial intelligence, and database management.
- **CRX color**—Available on most mid-range and high performance models (see chart), CRX provides leadership graphics capabilities in X Window performance and in color vector performance at over one million vectors per second. CRX can display 8-bit color images with 8+8 double buffering. Add PowerShade software and the CRX system will supply dynamic lighting and shading.
- **CRX-24**—Widely available (see chart), the CRX-24 graphics system delivers fast and flexible 24-bit images with excellent X Window performance. Eight dedicated overlay planes allow non-destructive overlays and superb user-interface performance. Its multiple color maps and multiple display modes allow the CRX-24 system to meet your most demanding needs. With PowerShade software, you'll also enjoy dynamic lighting and shading for surface rendering, and fast volumetric rendering. Third-party stereoscopic viewing hardware is supported on the CRX-24 system.
- **CRX-24Z**—Features a 24-bit Z buffer providing fast polygons and anti-aliased lines. All the capabilities of the CRX-24 are maintained in the CRX-24Z graphics system. PowerShade software is bundled with the Series 700 CRX-24Z systems, and allows high-performance lighting and shading for surface rendering and fast data animation.
- **CRX-48Z**—This graphics system, housed in a separate desktop cabinet, delivers 48 color planes for true color double buffering, exceptionally fast polygons, and anti-aliased vector performance. PowerShade software comes bundled with CRX-48Z and provides fast data animation capabilities.

HP graphics software

A system is only as productive as its applications allow. HP's great selection of sophisticated software makes sure you get the most from your Series 700 workstation. As always, if you have any questions, call HP DIRECT toll-free.

- **ARTCore**—A library you can use in your 3D application projects to create highly realistic ("photo-realistic") images within your applications using HP's leadership radiosity and ray-tracing technology. You'll find more about this valuable software on page 72.
- **HP SharedX 2.0**—A real-time communications product that extends the industry-standard X Window System to allow sharing of X-based applications between two or more remote users or displays. By sharing the application window, all communicators can see and directly edit the original information in the document. For more information on HP SharedX, see page 74.
- **HP-PHIGS**—Hewlett-Packard's ANSI/ISO-based software that delivers full performance through standards. The HP-PHIGS Development Environment lets you add remote 3D graphics via X. That means you can run HP-PHIGS on your X station for a versatile cost-efficient system. For more on HP-PHIGS, see page 72.



- **PowerShade**—Adds 3D visualization to any Series 700 color workstation. PowerShade allows entry color workstation users the option of 3D solids-modeling through software with strong performance—a capability only delivered in hardware on competitive systems! Find out more about PowerShade on page 72.
- **HP VUE 3.0**—HP Visual User Environment (HP VUE) is a graphical user interface that is bundled with every Series 700 workstation. You can use HP VUE to integrate multimedia technologies to make your application more useful to the end user.

No growing pains!

Upgrading is easy with the Series 700 family. Whether you upgrade your workstation or your software or both, you'll find even greater performance is convenient and easy enough to do yourself. Minimal down time, maximized graphics capabilities, and reasonable prices. Your system investment is protected and better performance is always within easy reach. This chart shows the upgrade choices available.

Graphics Upgrades		
For Models 720, 730, 735, 750, 755		Product Number
Server	→ CRX	98768A
	CRX → CRX-24	A2271A
	CRX24 → CRX-24Z	A1454A
	CRX-24Z → CRX-48Z*	A2666A
*Not supported on Models 720, 730, or 750.		
For Models 715 and 725		Product Number
19" Color	→ CRX-24	A2673A
	CRX-24 → CRX-24Z	A2674A
19" Color	→ CRX-48Z	A2675A

Bring the world of video to your Series 700 workstations

The VideoLive Card is a single-slot EISA card that can display a live video window in crisp photo-realistic color on any EISA-enabled HP Apollo Series 700 workstation. Used with HP-UX 8.07 and 9.0, it can capture an image from video for subsequent use in compound documents, image databases, and hard copy output. It can also send live images in rapid succession over a LAN or WAN.

*A window to any market.
Real-time broadcast information...real-time analysis
and image communication.*

The VideoLive Card can be valuable in a wide variety of applications:

- Government agencies and financial traders can use it to monitor 24-hour news broadcasts. With the latest information, they can make better, more timely decisions.
- Design engineers at great distances can use it to speed up product development by sending numerous high quality, digitized images in seconds rather than days or hours.
- Marketing professionals can improve sales communications with live, remote product updates. By sending digitized video images of the products, marketing personnel and customers can have the latest information in minutes.
- Buildings, power plants, oil wells, and many other remote sites can be visually monitored, economically from hundreds of miles away by watching live images over a high bandwidth network.
- Manufacturing engineers can visually monitor assembly processes without leaving their workstations and capture images for communication and process improvements.
- Medical professionals can review findings from medical devices such as MRI scanners and sonograms on their workstations and digitize the images for filing.



Features

- Displays 24-bit, full motion, analog video images in a window.
- Saves images in JPEG compressed form.
- Shares images over the network in real-time using SharedX.
- Has movable video window scalable to one quarter of the screen or down to one pixel.
- Supports composite video, S-video, or RGB sources, including video from camcorders, videocassette recorders, laser discs, RGB cameras, still video, and medical scanners.
- Supports attachment of multiple sources simultaneously thus users can switch between sources easily with software.
- Provides full support of NTSC, PAL, and SECAM input formats for conformance with all international video coding standards.
- Allows single frames to be grabbed, digitized, and saved in files for use in other applications.
- Has run-time version of HP's Image Library, providing image conversion to TIFF files and image compression options, with support starting at HP-UX 8.07.
- Includes software controls for window brightness and contrast.
- Provides full-motion grayscale display capability with monochrome systems.

RasterOps VideoLive Card

Z1100A **\$2,275**

Series 700 bundles...



**preconfigured
for easy
ordering**

Hewlett-Packard's Series 700 bundles are designed to match your most popular order configurations. They're easier to order, because one part number is all you need for an entire working system. The only other items you need to order are your Localization Kit, listed below, and an appropriate Ethernet/LAN kit.

HP's Series 700 bundles feature the 715/33 and 715/50 model workstations. Shown from back to front: 19" color/CD-ROM (screen-AutoCad from Autodesk), 16" color/DAT (screen-Island Graphics), 19" greyscale/floppy (screen-Softibench/Cadre).

Series 700 Ordering Information*

Model	Operating System	Graphics	ECC RAM	Internal Disk Drive	Internal Media option	Product Number	Price
715/33	HP-UX 9.0 Run-Time Instant Ignition	19" Grayscale	16 MB	525 MB SCSI-2 (SE)	N/A	A2614A	\$ 7,590
		17" Color	16 MB	525 MB SCSI-2 (SE)	1.4 MB 3.5" Floppy	A2616A	9,115
		19" Color	16 MB	525 MB SCSI-2 (SE)	N/A	A2617A	9,990
			32 MB	525 MB SCSI-2 (SE)	N/A	A2618A	11,590
				1 GB SCSI-2 (SE)	N/A	A2619A	12,535
715/50	HP-UX 9.0 Run-Time Instant Ignition	19" Color	16 MB	525 MB SCSI-2 (SE)	N/A	A2629A	13,990
			32 MB	525 MB SCSI-2 (SE)	N/A	A2630A	15,590
				1 GB SCSI-2 (SE)	N/A	A2631A	16,535
					4mm DDS Tape Drive w/data compression	A2632A	20,210

* Additional options can not be ordered with these bundles.

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 keyboard model. Specify option #ABA for the U.S. English version and specify HP-UX release for appropriate documentation.

Localization Kits Ordering Information

Description	Product Number	Price
HP-UX Localization kit.* Includes HP-UX keyboard (HP-HIL).	A1099C Opt #ABA	\$105
HP-UX Localization kit with PC-style keyboard.* Includes PC-style keyboard.	A2205B Opt #ABA	105

* For HP-UX release 9.0, please specify option #APH.
For HP-UX release 8.0 - 8.07, please specify option #APP.

Ready to order? Step one is choosing your standard configuration

While the rest of the industry tries to impress you with technical talk, Hewlett-Packard is working hard to make matters as simple as possible.

You can order our Series 700 workstations in various pre-configured bundles or customize it with factory options on page 35 to meet your specific needs.

Complete your system with the keyboard you want by ordering a Localization Kit from page 33, and an appropriate Ethernet/LAN kit.

HP 700 Standard Configurations							
Model	Operating System	Graphics	ECC RAM	Internal Disk Drive	Internal Media Option	Product Number	Price
715/33	HP-UX 9.0	19" Grayscale	16 MB	Diskless	See page 35	A2610A	\$ 5,590
		17" Color				A2612A	6,590
715/33	HP-UX 9.0	15" Color	16 MB	525 MB SCSI-2 (SE)	See page 35	A2611A	7,290
		19" Color				A2613A	9,890
		19" CRX-24 Color				A2620A	13,890
		19" CRX-24Z Color				A2621A	18,890
715/50	HP-UX 9.0	19" Grayscale	16 MB	525 MB SCSI-2 (SE)	See page 35	A2625A	11,490
		19" Color				A2627A	13,890
		19" CRX-24 Color				A2633A	17,890
		19" CRX-24Z Color				A2634A	22,890
		19" CRX-48Z Color				A2635A	27,890
720	HP-UX 9.0	19" Grayscale	16 MB	420 MB SCSI-2 (SE)	See page 35	A1929A	14,965
		19" CRX Color				A1933A	22,550
		19" CRX-24 Color				A2263A	25,390
		19" CRX-24Z Color				A2264A	30,390
725/50	HP-UX 9.0	19" Grayscale	32 MB	525 MB SCSI-2 (SE)	See page 35	A2685A	16,845
725/50	HP-UX 9.0	19" Color	32 MB	1 GB SCSI-2 (SE)	See page 35	A2689A	19,445
		19" CRX-24 Color				A2691A	24,590
		19" CRX-24Z Color				A2692A	29,390
		19" CRX-48Z Color				A2693A	34,390

Get HP-UX and other software preloaded with Instant Ignition

If you're planning to buy a Series 700 Model 715, 725, 735, 745i, 747i, or 755 with an internal disk drive, and would like to have HP-UX 9.0 and other software* preloaded on your disk, order Instant Ignition with your workstation! You'll also receive custom recovery instruc-

tions for your workstations in the event of later disk problems. Instant Ignition offers options for CD-ROM backup media, and customer configurable disk swap space. For more information, call HP DIRECT.

* As of November 1992, preloadable layered software products include HP-UX 8-user Run-Time, C/ANSI C Developers Bundle, HP-UX Developer's Toolkit, HP-UX General Programming Tools, C Compiler, FORTRAN and Pascal.

Step two is customizing your workstation with our factory integrated options

Our Series 700 workstation can be easily tailored to your specific needs. This compatibility chart will help you choose from a full range of available options.



Description	Integrated Options				Option Number	Price
	Model 715/33	Model 715/50	Model 720	Model 725/50		
Memory						
Delete 8 MB RAM for a total of 8 MB RAM (not available on color systems)	✓	—	—	—	012	(\$700)
Add 16 MB RAM for a total of 32 MB RAM	✓	✓	—	—	AN8	1,600
Add 16 MB RAM for a total of 32 MB RAM	—	—	✓	—	AN8	2,000
Add 32 MB RAM for a total of 48 MB RAM	✓	—	—	—	ANN	3,200
Add 32 MB RAM for a total of 64 MB RAM	—	—	—	✓	ANN	3,200
Add 48 MB RAM for a total of 64 MB RAM	—	✓	—	—	AND	4,800
Add 48 MB RAM for a total of 64 MB RAM	—	—	✓	—	AND	6,000
Add 96 MB RAM for a total of 128 MB RAM-16 Mbit DRAM	—	—	—	✓	ANY	16,800
Add 112 MB RAM for a total of 128 MB RAM	—	—	✓	—	112	14,000
Add 112 MB RAM for a total of 128 MB RAM-16 Mbit DRAM	✓	✓	—	—	112	19,600
Add 176 MB RAM for a total of 192 MB RAM-16 Mbit DRAM	✓	—	—	—	UFK	30,800
Add 224 MB RAM for a total of 256 MB RAM-16 Mbit DRAM	—	—	—	✓	UFN	39,200
Add 240 MB RAM for a total of 256 MB RAM-16 Mbit DRAM	—	✓	—	—	UFB	42,000
Internal Storage						
Add second 420 MB Internal SCSI-2 Disk Drive (420 MB system)	—	—	✓	—	AMH	2,200
Replace 525 MB Single-Ended SCSI-2 Disk Drive with GB Single-Ended SCSI-2 Disk Drive	✓	✓	—	✓	013	945
Delete 525 MB Single-Ended SCSI-2 Disk Drive ^[1]	✓	—	—	—	014	(1,700)
Add 525 MB Single-Ended SCSI-2 Disk Drive	✓	✓	—	✓	AT9	1,900
Replace 420 MB Disk with 525 MB SCSI-2 Disk Drive ^{[1][4]}	—	—	✓	—	015	N/C
Add 1 GB Single-Ended SCSI-2 Disk Drive ^[2]	✓	✓	✓	✓	AT7	2,845
Add 1.4 MB 3.5-inch SCSI-2 Floppy Disk Drive ^[2]	✓	✓	✓	✓	AMB	525
Add 2 GB 3.5-inch DDS SCSI-2 Tape Drive ^[2]	✓	✓	—	✓	AMW	2,625
Add 4-8 GB DDS SCSI-2 Tape Drive w/data compression ^[2]	✓	✓	—	✓	AMX	3,675
Add 600 MB 5.25-inch CD-ROM SCSI-2 Drive ^[2]	✓	✓	—	✓	AM8	1,050
EISA Interface						
Add one EISA Expansion Slot	✓	—	—	—	ALD	1,000
Add one EISA Interface Slot	—	—	✓	—	ALD	1,575
Add EISA SCSI-2 Host Adapter (requires existing EISA slot)	—	—	✓	—	ALE	1,255
Add EISA HP-IB Host Adapter (requires existing EISA slot)	—	—	✓	—	ALF	1,255
Add EISA LAN/9000 (requires existing EISA slot)	—	—	✓	—	ALG	1,465
Other Options						
Select LAN AUI Configuration (overrides default Thin Net Ethernet connection)	—	—	✓	—	AL9	N/C
HP-UX 8.07 Run-Time Instant Ignition, 2-User License (pre-loads OS to hard disk)	—	—	✓	—	ODJ	79
HP-UX 9.0 Run-Time Instant Ignition, 2-User License (pre-loads OS to hard disk)	—	—	✓	—	ODK	79

[1] May not be ordered concurrently with options AMB or AMH
[2] May not be ordered concurrently with options AM8, AMW, AMX or 001

[3] Option available only with A2611A and A2613A
[4] Requires HP-UX 9.0

HP upgrades offer long-term growth solutions

Series 700 workstation system upgrades offer a long-term solution to your ever-changing business needs. That's because a simple upgrade can deliver higher performance to your current system. So, if your business demands are growing, a quick and easy trade-in can keep you competitive. Please note that exchanged components must be returned to Hewlett-Packard.

Series 700 System Upgrade Ordering Information				
From	To	Description	Product/Option Number	Price
705	715/50	System Box Upgrade	A2835A	\$ 6,600
710	715/50	System Box Upgrade	A2836A	5,100
715/33	715/50	CPU Board Upgrade	A2805A	5,990
720	730	CPU Board Upgrade	A1957A	9,450
720	735	CPU and I/O Board Upgrades* Install LAN AUI Configuration Install LAN FDDI Configuration	A2605A 008 009	16,000 N/C 2,000
730	735	CPU and I/O Board Upgrades* Install LAN AUI Configuration Install LAN FDDI Configuration	A2606A 008 009	10,500 N/C 2,000
750	755	CPU and Audio/Adapter Boards Select LAN AUI Configuration Install LAN FDDI Configuration	A2248AU AL9 009	10,500 N/C 2,000

*Default LAN ThinNet configuration

Run the latest applications by adding HP memory

Choose HP memory add-on boards right now and start enjoying increased performance and

100% compatibility with your HP Apollo workstations! Our reliable add-ons improve data throughput

and let you take advantage of more robust applications and tools such as Windows/Motif.

Series 700 System Upgrade Ordering Information					
System Model	Maximum Memory	Description	Comments	Product Number	Price
705, 710	64 MB	8 MB RAM (Four 2 MB ECC RAM modules)	Installs as quads; Two quads maximum	A2216A	\$ 800
		16 MB RAM (Four 4 MB ECC RAM modules)	Installs as quads; Two quads maximum	A2217A	1,600
		32 MB RAM (Four 8 MB ECC RAM modules)	Installs as quads; Two quads maximum	A2218A	3,200
715/33	192 MB	8 MB RAM (Two 4 MB SIMMs)	Installs as pairs; Four pairs maximum	A2815A	800
715/50	256 MB	16 MB RAM (Two 8 MB SIMMs)	Installs as pairs; Four pairs maximum	A2816A	1,600
725/50	256 MB	64 MB RAM (Two 32 MB SIMMs)	Installs as pairs; Four pairs maximum	A2827A	11,200
720, 730	128 MB	16 MB RAM (Two 8 MB ECC RAM modules)	Installs as pairs; Four pairs maximum	A1979A	2,000
		32 MB RAM (Two 16 MB ECC RAM modules)	Installs as pairs; Four pairs maximum	A2512A	4,000
735	400 MB	32 MB RAM (Two 16 MB ECC RAM modules)	Installs as pairs; Six pairs maximum	A2512A	4,000
		64 MB RAM (Two 32 MB ECC RAM modules)	Installs as pairs; Six pairs maximum	A2646A	11,200
750	384 MB	64 MB RAM (Two 32 MB ECC RAM modules)	Installs as pairs; Six pairs maximum	A2513A	8,000
755	768 MB	64 MB RAM (Two 32 MB ECC RAM modules)	Installs as pairs; Six pairs maximum	A2513A	8,000
		128 MB RAM (Two 64 MB ECC RAM modules)	Installs as pairs; Six pairs maximum	A2518A	22,400

Customize your internal storage with totally compatible HP options



HP provides a great selection of internal storage devices that can be added to your workstation. You can depend on HP for the right storage device that will deliver reliable service and total compatibility. For Series 400 upgrade to 715t/s see page 46.

Series 700 Internal Storage Ordering Information

Description	Supported on the following Models										Product Number	Price	
	705	710	715/33	715/50	720	725/50	730	735	750	755			
Internal Hard Disk Storage													
210 MB internal SCSI-2 disk ^[1]	✓	✓	-	-	-	-	-	-	-	-	-	A2219A	\$2,000
420 MB internal SCSI-2 disk ^[1]	✓	✓	-	-	-	-	-	-	-	-	-	A2221A	2,200
Second 420 MB internal SCSI-2 disk ^[2]	-	-	-	-	✓	-	✓	-	-	-	-	A2565A	2,200
525 MB Single-ended SCSI-2 disk ^{[2][9]}	-	-	✓	✓	-	-	-	-	-	-	-	A2800A	1,900
525 MB Single-ended SCSI-2 disk ^{[2][9]}	-	-	-	-	-	✓	-	-	-	-	-	A2809A	1,900
525 MB Single-ended SCSI-2 disk ^{[2][7]}	-	-	-	-	✓	-	✓	✓	-	-	-	A2565A	1,900
1 GB Single-ended SCSI-2 disk ^{[2][9]}	-	-	✓	✓	-	-	-	-	-	-	-	A2801A	2,845
1 GB Single-ended SCSI-2 disk ^{[2][9]}	-	-	-	-	-	✓	-	-	-	-	-	A2813A	2,845
1 GB Single-ended SCSI-2 disk ^{[2][7]}	-	-	-	-	✓	-	✓	✓	-	-	-	A2563A	2,845
1 GB Fast-wide SCSI-2 disk ^{[2][7]}	-	-	-	-	-	-	✓	-	-	-	-	A2566A	3,545
1.3 GB internal SCSI-2 disk	-	-	-	-	-	-	-	-	✓	-	-	A1989A	5,000
2 GB Single-ended SCSI-2 disk ^{[2][9]}	-	-	-	-	-	-	-	-	-	-	✓	A2556A	5,690
2 GB Fast-wide SCSI-2 disk ^{[2][9]}	-	-	-	-	-	-	-	-	-	-	✓	A2564A	7,090
Internal Removable Storage Devices													
1.4 MB 3.5-inch Flexible disk drive ^[2]	✓	✓	-	-	-	-	-	-	-	-	-	A2223A	525
1.4 MB 3.5-inch Flexible disk drive ^[3]	-	-	✓	✓	-	-	-	-	-	-	-	A2802A	525
1.4 MB 3.5-inch Flexible disk drive ^[3]	-	-	-	-	-	✓	-	-	-	-	-	A2814A	525
1.4 MB 3.5-inch Flexible disk drive ^{[2][9]}	-	-	-	-	✓	-	✓	✓	-	-	-	A1984A	525
1.4 MB 3.5-inch Flexible disk drive ^{[3][9]}	-	-	-	-	-	-	-	-	✓	✓	-	A1968A	525
600 MB 5.25-inch CD-ROM drive ^[2]	✓	✓	-	-	-	-	-	-	-	-	-	A2224A	1,050
600 MB 5.25-inch CD-ROM drive ^[3]	-	-	✓	✓	-	-	-	-	-	-	-	A2803A	1,050
600 MB 5.25-inch CD-ROM drive ^[3]	-	-	-	-	-	✓	-	-	-	-	-	A2817A	1,050
600 MB 5.25-inch CD-ROM drive ^[3]	-	-	-	-	-	-	-	-	✓	✓	-	A1985A	1,050
2 GB DDS tape drive ^{[3][4][9]}	✓	✓	✓	✓	-	✓	-	-	✓	✓	-	A2274A	2,625
Add up to 8 GB w/DDS tape drive ^{[3][4][9]} w/data compression	✓	✓	✓	✓	-	✓	-	-	✓	✓	-	A2275A	3,675

Note:

- [1] Supported on diskless system or single disk system only.
- [2] Supported on systems with single internal disk only.
- [3] Supported on systems with single internal disk only and HP-UX 8.07 or later.
- [4] Order an upgrade kit at no charge; option #AHR for Models 705 and 710, option #AHS for Models 750 and 755, option #AHV for Models 715/33 and 715/50, and option #AHW for Model 725/50.
- [5] Maximum of two disks per workstation.
- [6] Supported on systems with no other removable media device.
- [7] Requires HP-UX 9.0.
- [8] Supported on systems with an available half-height bay.
- [9] Models 735 and 755 require HP-UX 9.0.

Powerful performers for industrial environments

HP Apollo Series 700 Industrial Workstations

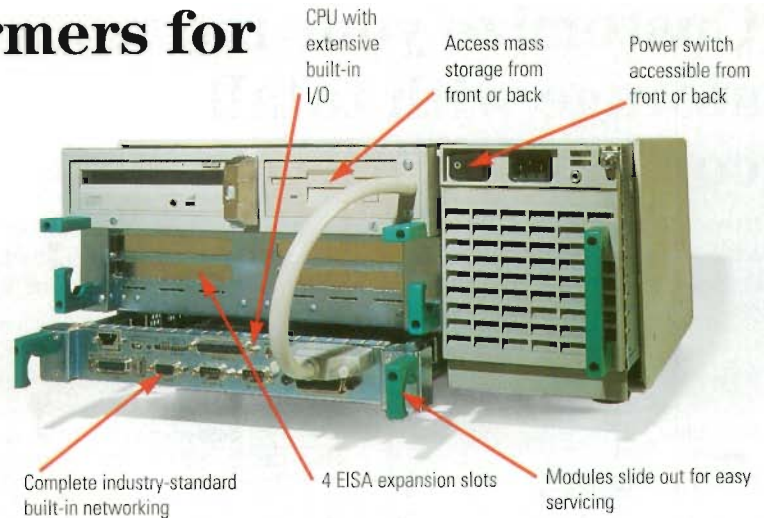
The HP 9000 745i is an entry-level industrial workstation based on HP's PA-RISC technology. With the 745i, you get the power and performance of the industry's leading technology plus the flexibility and features especially important for test and measurement, industrial process control, and electronic testing—all at the best price/performance anywhere. The 747i provides the added features especially important for process control, telecommunications servers, and software development.

The Model 745i and 747i are designed for easy use with standard rack mounting features and a modular approach for streamlined service. You can choose where you want your disk bays—front or back.

Pre-configured Model 745i

To simplify ordering, we have pre-configured a 745i to meet your general needs. The HP-UX 9.0 operating system is pre-loaded on your hard disk for immediate use, right out of the box. Be sure to complete your system by ordering a localization kit. (See page 33.)

If your business demands exceed the pre-configured system, HP gives you the ability to easily tailor the system to your exact needs. If you'd like to configure your own 745i or 747i, please call our support engineers at HP DIRECT. They are ready with information and assistance.



Back view of the HP 9000 Model 745i industrial workstation; all system modules slide out for easy access.

Model 745i and 747i Performance Characteristics

Feature	Model 745i	Model 747i
Packaging Type	Desktop/Rackmount	Desktop/Rackmount
Processor	PA-RISC 7100@ 50 MHz	PA-RISC 7100@ 50 MHz
SPECint92	36	36
SPECfp92	72	72
SPECmark89	69	69
Integer Performance	62 MIPS	62 MIPS
Floating Point	13 MFLOPS	13 MFLOPS
Main Memory	16-128 MB	16-128 MB
Expansion	4 EISA	2 EISA, 1 SGC, 6 VME
Graphics	15" med. resolution color (1024 x 768) 17" med. resolution color (1024 x 768) 19" high resolution color (1280 x 1024)	15" med. resolution color (1024 x 768) 17" med. resolution color (1024 x 768) 19" high resolution color (1280 x 1024) Multiple CRT support max 3
Internal Drive Capabilities*	3 bays	3 bays
Internal Flexible Drive	1.4 MB 3.5"	1.4 MB 3.5"
Internal Hard Drive	525 MB 1.05 GB	525 MB 1.05 GB
Internal Storage Options	600 MB CD-ROM 4-8 GB 4mm DDS 2 GB 4mm DDS	600 MB CD-ROM 4-8 GB 4mm DDS 2 GB 4mm DDS
Cache (instructions/data)	64 KB/64 KB	64 KB/64 KB
Interfaces	SCSI-2 (2) RS-232-C (9 PIN) HP-IB Instrument Only HP-HIL Centronics Parallel (1) Audio I/O Voice Quality	SCSI-2 (2) RS-232-C (9 PIN) HP-IB Instrument Only HP-HIL Centronics Parallel (1) Audio I/O Voice Quality
Networks	IEEE-802.3	IEEE-802.3
Operating System	HP-UX 9.0 or later	HP-UX 9.0 or later
Product Number	A2638B	A2639B
Price (entry level configuration)	\$13,390	\$15,990

*Up to 2 removable media options available

Move from your current environment to the powerful Series 700

HP Open Migration Program

The HP Open Migration Program helps users of many different systems move up to the Series 700 to gain outstanding desktop performance, enhance their selection of application software, standardize on the reliable and open operating environment of HP-UX, plus take advantage of HP's OpenView networking solutions and more.

The Open Migration Program consists of many products, tools, services, and incentives to make your migration as smooth as possible, and keeps costs to a minimum. Determining which of these items apply to you depends on what system you now have. HP DIRECT offers a variety of solutions to help you move to the Series 700, and they are listed below.



More information

For more information on the Open Migration Program and the solutions that apply to you, call HP DIRECT toll-free and ask for any of the following packages:

Packages available:

Open Migration Program for Domain users, X7537; Open Migration Program for HP-UX users, X7536; Open Migration Program for non-HP systems, X7532.



HP DIRECT Catalog Solutions Index

Solution	Domain Users (Series 400/DN Series)	HP-UX Users (Series 300/400)	Sun/DEC/IBM/SGI/ X terminal/PC Users
Hardware			
Trade-up to Series 700	TradeUp'93 page 42	TradeUp'93 page 42	TradeUp'93 page 42
Board upgrades	400-700 Upgrades page 46	400-700 Upgrades page 46	
Software			
Transfer of HP layered software products	Eligible with TradeUp'93 and 400-700 Upgrades	Eligible with TradeUp'93 and 400-700 Upgrades	—
Code migration	ADVISE page 75	—	—
System and Network Administration			
Connecting Series 700 into Apollo Token Ring network	ATR for Series 700 page 76	—	—
CPU task management	TaskBroker page 69	TaskBroker page 69	TaskBroker page 69
Network backups	OmniBack page 98	OmniBack page 98	OmniBack page 98
Network monitoring/troubleshooting	Network Node Manager page 96	Network Node Manager page 96	Network Node Manager page 96
User environment			
Common user interface	DMX for Domain and HP-UX page 76	—	—

Note: HP VUE is the standard, Motif based, awarding user interface bundled with all Series 700 workstations. It is also available on Domain.
*Can also be traded in via TradeUp'93. For details see page 42.

Workstation X Window performance at X Terminal Prices

With a network of HP's Series 700 workstations and 700/RX X stations, you'll enjoy great savings along with full PA-RISC workstation functionality and industry-leading performance. X stations provide an excellent solution when you need to add users to system without adding to your expenses. Compare the capabilities and you'll find an X station may be just the answer to your growing needs.



The power of network computing

With an X station network, your users can take advantage of today's network technology effortlessly. All kinds of applications reside transparently on different host servers since you can access them as easily as if they were on your primary host server. This multi-windowing system lets you work more efficiently.

Save now, save later

X stations lower the cost-per-seat for your network. You can create an efficient network with one server (for instance, a Series 700 workstation) and a number of economical X stations. Along with saving on your initial capital cost, you lower your ongoing operational costs by sharing resources and by saving on system maintenance time.

Simple, centralized localization

Using any X Window-based software (HP-UX, for example), X stations can share host resources such as CPU, disk space and the backup storage unit. System maintenance time is cut dramatically, since you can remotely configure X stations and install new application updates from a central location instead of at each station.

An open solution

If you already have a system investment made with another vendor's host server, HP 700/RX X stations can still help you make the most of your resources in a network environment. That's because you can simultaneously access any application on any host that is compliant with the X Window System.

HP's XTADM (X terminal administration script) is a fast-track, easy method of setting up your HP station software on HP or Sun host systems. And whether your host is an HP 9000 Series 300, 400, 700, or 800 system, a Sun SPARC-based system, an HP Vectra PC, or an IBM RS/6000 system, X stations can boot directly from your host.

Great graphics

With PowerShade software on the server, your X stations can support impressive 3D graphics. With 19-inch monitors, fast performance, and great ease-of-use, X stations are your best value in building a powerful workstation system for graphics.

HP's unique local user environment

HP Visual User Environment/RX (HP VUE/RX) is the only local user environment available today. It allows users to manage multiple windows and create multiple workspaces easily within the X station environment. HP VUE/RX shields users from the intricacies of the UNIX-based operating system through the use of self-explanatory icons, pull-down menus, and slide-up bars. It also gives you a control panel for fast access to personal productivity and system utilities. And that means less time getting users up to speed!

Series 700 X Terminals Characteristics

Model	19Mi	14Ci	15Ci	17Ci	17Ca	17Cs	19Ga	19Ca	19Cs
Product Number	C2702B	C2705A	C3227A	C2706B	C2710B	C3228A	C2749A	C2711A	C3226A
Performance	90000 Xstones		52000 Xstones				93000 Xstones		
Resolution	19" mono 1280 x 1024 72 Hz	14" color 1024 x 768 60 Hz *	15" color 1024 x 768 70 Hz	17" color 1024 x 768 75 Hz		17" color 1280 x 1024 72 Hz	19" grayscale 1280 x 1024 72 Hz	19" color 1280 x 1024 72 Hz	
Video Memory	0.25 MB			1.0 MB				2.0 MB	
User Memory	4.0 MB		2.0 MB		4.0 MB				
Keyboard/Mouse	PS/2 PC-101 / 3-button								

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

X Terminal Model Overview

- Model 19Mi**
 This 19-inch model offers the industry's highest performance for a monochrome X station.
90000 Xstones
0.25 MB video memory
4.0 MB user memory
- Model 14Ci**
 The Model 14Ci delivers the performance of the Model 17Ci and provides a more compact 14-inch color display that is ideal for uses where desk space is a premium.
52000 Xstones
1.0 MB video memory
4.0 MB user memory
- Model 15Ci**
 The Model 15Ci is ideal when color performance is needed at a low price.
52000 Xstones
1.0 MB video memory
2.0 MB user memory
- Model 17Ci**
 With a 17-inch color display, the Model 17Ci offers an economical solution to the needs of growing system.
52000 Xstones
1.0 MB video memory
4.0 MB user memory
- Model 17Ca**
 A powerful mid-range color X station, the Model 17Ca is a versatile partner for a demanding network.
93000 Xstones
1.0 MB video memory
4.0 MB user memory
- Model 17Cs**
 The model 17Cs delivers identical performance to the model 17Ca and has a Sony Trinitron color monitor.
93000 Xstones
2.0 MB video memory
4.0 MB user memory
- Model 19Ga**
 High performance, a 19-inch grayscale display, and a low price are features of the Model 19Ga.
93000 Xstones
2.0 MB video memory
4.0 MB user memory
- Model 19Ca**
 The Model 19Ca offers a large 19-inch color display and high performance.
93000 Xstones
2.0 MB video memory
4.0 MB user memory
- Model 19Cs**
 The Model 19Cs delivers identical performance to the Model 19Ca and has a Sony Trinitron color monitor.
93000 Xstones
2.0 MB video memory
4.0 MB user memory

Standard Features

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/Levels of Grayscale	256 (palette of 16.7 million)
Graphic Planes for Color /Grayscale Models	8
Graphic Planes for Monochrome Model	1
Display Connector	15-pin VGA (adapts to RGB)
Software	
Local Clients	HP VUE, MWM, TWM, hpterm, xterm
Window System	X.11 Release 5
Name Server	Domain-name resolver
Font Server	NFS, TFTP
Software Media Options	Tape, ROM card, CD-ROM
Supported Host Systems	HP 9000 family, Sun SPARC family, HP Vectra 386/486 PCs, IBM RS/6000
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

Ordering is easy!

The HP 700/RX stations include the base unit, power cord, monitor, PC-101 PS/2 keyboard and cable, and installation manual. Along with basic price and product information provided in the table, you'll find additional options to the right.

Multivendor Configuration System Requirements

Boot Hosts:	HP 9000 Series 300, 400, 700, 800 Sun SPARC-based systems HP Vectra 386/486 PCs, IBM RS/6000 Systems
Operating System:	HP-UX 7.0/8.0 or greater, Sun/OS 4.1, SCO ODT, IBM AIX
Interface Type:	10 Mbit/s Ethernet LAN
Protocols:	X.11 R5, TCP/IP, TELNET, UDP, and SNMP
Supplied Utilities:	TFTP, BOOTP, XDM, Font Utilities

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

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. For running local clients, we recommend 6 to 10 MB of memory for the base unit.

X-Server Software and ROM

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



Series 700 X-Server Software and ROM Ordering Information

Description	Product/Option Number							Price
	Domain S400	HP-UX S300/S400	HP-UX S700	HP-UX S800	Sun O/S	IBM AIX	SCO ODT	
HP 700/RX Server Software	-	C2715A	C2716A	C2724A	C2718A	C2723A	C2720A	\$695
1/4-inch cartridge tape	-	AA0	-	AA0	-	-	-	N/C
DDS (4mm DAT) cartridge	-	AAH	AAH	AAH	-	-	-	N/C
CD-ROM	-	AAF	AAF	AAF	AAF	-	-	N/C
QIC-24 (QIC 525 for HP-UX S800)	-	-	-	AA4	AA4	AA4	AA4	N/C
3 1/2-inch Floppy Disk	-	-	-	-	-	AAD	AAD	N/C
4 MB Flash ROM cards for all models*	-	-	-	C2725B	-	-	-	595

*Includes local clients such as mwm, hpterm and xterm, plus downloadable extensions, x server software and fonts.

Get ready for real power with HP's TradeUp'93

Whether you're trading in one system or one hundred, HP's TradeUp'93 program can help you get the power boost you want at a price you can afford. A significant discount is available when you trade in your current workstations toward the purchase of higher performance workstations.

Trade in your HP workstation or any other brand of workstation,

X terminal, or PC for a Series 700 or X station at discounts as high as 30%. And apply your standard HP purchase agreement for additional discounts.

See page 46 about converting your Series 400 into a Series 700.

TradeUp'93 is part of HP's Open Migration Program, a full suite of services, tools, and products designed to make it easy for you to

move up quickly to the power of Series 700. For more information, please see page 39.

Benefits

- Flexible configurations
- Software, X stations, and mass storage included
- Easy software license transfer
- Easy return procedures



X Terminal Ordering Information

Description	Product/Option Number	Price
HP 700/RX Models		
19Mi	C2702B	\$2,495
14Ci	C2705A	1,995
15Ci	C3227A	2,495
17Ci	C2706B	3,495
17Ca	C2710B	4,195
17Cs	C3228A	4,695
19Ga	C2749A	3,495
19Ca	C2711A	4,995
19Cs	C3226A	5,495
Localization Kit		
N. American keyboard,	ABA	N/C
N. American power cord		
Other Options		
Delete PC-101 keyboard	1A2	(60)
Delete 2-MB SIMM (DRAM) AN7		(200)
Additional User-Installable Memory (DRAM)		
Add 2-MB SIMM	C2321A	\$200
Add 4-MB SIMM	C2322A	400
Add 8-MB SIMM	C2323A	800

Choose Series 400 and pick from a world of Domain or HP-UX applications



UNIX power at a PC price

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

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.

The flexible desktop solution

Model 425t—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.

Desktop Series 400 Features		
	Model 425e	Model 425t
Packaging Type	Desktop	Desktop
Processor	MC68040	MC68040
Clock Speed	25 MHz	25 MHz
SPECint92	11.2	11.2
SPECfp92	8.5	8.5
SPECmark89	11	11
Integer Performance	22 MIPS	22 MIPS
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 Color
Internal Disk Drives	Up to 840 MB	Up to 840 MB
Internal Drive Capabilities**	2 bays	2 bays
Internal Flexible Drive	1.4 MB	N/A
Internal Hard Drive	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, Centronics Parallel, Audio in/out	SCSI, (1) RS-232-C* HP-HIL/Domain Centronics Parallel Audio
Networks	IEEE-802.3	IEEE-802.3, Apollo Token Ring IBM Token Ring
Operating System (currently offered)	HP-UX 9.0, or Domain/OS SR 10.4	HP-UX 9.0, or Domain/OS SR 10.4

*For RS-232-C expansion order product # K2292.
**Only one removable device per system

Powerful deskside system

Model 433s—The 433s is a deskside model that combines a wide selection of graphics features with options for even greater expansion capability. The 433s uses a more powerful 68040 processor,

which delivers 29 MIPS, 3.2 MFLOPS, and 14 SPECmarks. For more information on the deskside systems, call your local HP sales or telesales representative.

It's never been easier to order a Series 400 Workstation

Make your selection from a variety of pre-configured HP-UX and Domain systems. However, if you prefer to customize your own system, see the available options on page 45. Don't forget to complete your system with the keyboard you want by ordering one of the localization kits listed below.

As you examine our Series 400 systems, you might have some

"Call HP DIRECT for fast and easy technical information and friendly personalized service. You don't have to be a technical person to talk with us. Call me. With a recent 22-workstation system order, we started from the ground up and did everything over the telephone. It's fast and easy!"



Bob
Bob Lulich
 Sales Support
 Engineer

questions. Whether you need to know more about configuration, compatibility or anything else, our

support engineers are only a phone call away. They'll be happy to help you make the right choice.

Series 400 Ordering Information

Model	ECC RAM	Operating System	Graphics	Instant Ignition	Internal Disk Drive	Product Number	Price		
425e	16 MB	HP-UX 9.0	19"	No	diskless	A2130B	\$ 7,240		
			EVRX Grayscale	Yes	420-MB SCSI	A2132A	9,540		
			16"	No	diskless	A2134B	9,240		
			EVRX Color	Yes	420-MB SCSI	A2136A	11,540		
			19"	No	diskless	A2139B	11,740		
			EVRX Color	Yes	420-MB SCSI	A2141A	14,040		
			Domain/OS	19"	No	diskless	A2145B	7,240	
			SR 10.4	EVRX Grayscale	No	420-MB SCSI	A2147A	9,440	
			16"	No	diskless	A2149B	9,240		
			EVRX Color	No	420-MB SCSI	A2151A	11,440		
			19"	No	diskless	A2154B	11,740		
			EVRX Color	No	420-MB SCSI	A2156A	13,940		
425t	16 MB	HP-UX 9.0	19"	No	diskless	A2162B	11,090		
			GRX Grayscale	Yes	420-MB SCSI	A2163A	13,790		
			19"	No	diskless	A2165B	15,090		
			CRX Color	Yes	420-MB SCSI	A2166A	17,790		
			Domain/OS	19"	No	diskless	A2172B	11,090	
			SR 10.4	Grayscale	No	420-MB SCSI	A2173A	13,690	
			19"	No	diskless	A2175B	15,090		
			CRX Color	No	420-MB SCSI	A2176A	17,690		
			32 MB	Domain/OS	19"	No	420-MB SCSI	A2546A	20,290
			SR 10.4	CRX Color					

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-style keyboard model.

Specify option #ABA for the U.S. English version. Specify option #APH for HP-UX 9.0 documentation.

Series 400 Localization Kits Ordering Information

Description	Product Number	Price
HP-UX Localization Kit. Includes HP-UX keyboard (HP-HIL).	A1099C Opt #ABA & APH	\$105
HP-UX Localization Kit with PC-style keyboard. Includes PC-style keyboard. Supported with HP-UX 9.0.	A2205B Opt #ABA & APH	105
Domain/OS Localization Kit. Includes keyboard, mouse, and power cord.	A1098A Opt #ABA	105

Let HP tailor a system to your needs

When you choose HP Apollo Series 400 Workstations, you are ensuring that your computer is as perfectly-suited to your demands as possible. That's because HP allows you to customize your workstation to meet your specific operating needs. This compatibility chart will help you choose from a full range of options.



Series 400 Factory Integrated Options Ordering Information

Description	425e		425t		Option Number	Price
	Diskless	420-MB disk	Diskless	420-MB disk		
Memory						
Add 16 MB RAM for a total of 32-MB RAM	✓	✓	—	—	AN8	\$1,600
Add 16 MB RAM for a total of 32-MB RAM	—	—	✓	✓	AN8	2,400
Internal Storage						
Add 1.4 MB, 3 1/2-inch Internal Floppy Disk Drive	—	✓	—	—	AMB*	525
Add second 420 MB Internal SCSI Disk Drive	—	—	—	✓	AMT	2,200
Add 600 MB SCSI CD-ROM Drive	—	✓	—	—	AM8*	1,050
Other						
Select LAN AUI Configuration <i>(option overrides default ThinNet Ethernet connection)</i>	✓	✓	✓	✓	AL9	N/C

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

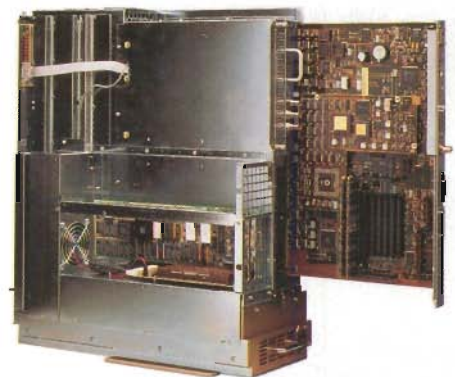
Enjoy growth on demand with Field Upgrade Kits

Field upgrade kits are available to increase the Motorola processor performance in your Series 400 Workstation. All upgrades require a minimum operating system version: either HP-UX 7.05 or Domain/OS SR10.3.4.

Note: Upgrades require return of your existing processor board to HP.

Series 400 Field Upgrade Kits Ordering Information

From	To	Description	Product Number	Price
400t	425t	HP-UX upgrade	A2040A	\$2,000
		Domain/OS Upgrade	A2041A	2,000
400s	433s	HP-UX Upgrade	A2042A	4,000
		Domain/OS Upgrade	A2043A	4,000
425s	433s	HP-UX Upgrade	A2046A	4,000
		Domain/OS Upgrade	A2047A	4,000
Operating System Upgrade Options				
Domain 10.3.4 Operating System Media and Manuals			AAS	625
HP-UX 7.05 Operating System Media and Manuals			AAR	625
Operating System Upgrade (HP-UX or Domain) if on Software Support			OLX	N/C



Simple board swaps can be completed at your site.

Take advantage of the latest technology with an upgrade from CISC to RISC



HP is the only workstation vendor to provide a board level upgrade from CISC to RISC. HP's strategy of investment protection provides you with an economical and simplified path to the leading performance and future growth of the Series 700 and HP-UX.

In recognition for the planning required for an upgrade, HP offers two planning kits at no charge. One is for Domain O/S customers and the other is for HP-UX. These kits contain manuals to make the upgrade preparation as easy as possible.

Free Kits to Simplify Upgrading

Description	Product Number	Price
Series 400 HP-UX to Series 700	A2539A	FREE
Series 400 Domain O/S to Series 700	A2538A	FREE

Upgrade Kits

The board upgrades allow you to keep your monitor, RAM memory, internal peripherals, and system serial number. The system serial number will change with box upgrades. You increase your performance to 50 SPECmark89 for a 710, 43 SPECmark89 for a 715t/33 or 715s/33, and 65 SPECmark89 for a 715t/50 or 715s/50.

Upgrade Kits Ordering Information

From	To	Description	Product Number	Option Number	Price
425e	710	HP-UX or Domain board upgrade	A2087A	—	\$5,890
		Add 420 MB SCSI-2 disk		AMY	2,000
		Add 8 MB memory		AN4	800
		Add 16 MB memory		AN8	1,600
		Add LAN AUI configuration		AL9	N/C
425e	715/50	HP-UX or Domain Box Upgrade	A 2837A		7,390
4xxt	715t/33	HP-UX or Domain board upgrade	A2089A	—	4,890
		Add 420 MB SCSI disk		AT5	2,000
	715t/50	HP-UX or Domain board upgrade	A2090A	—	7,390
		Add 420 MB SCSI disk		AT5	2,000
4xxs	715s/33	HP-UX or Domain board upgrade	A2092A	—	4,890
	715s/50	HP-UX or Domain board upgrade	A2093A	—	7,390

Localization Kits

All upgrade customers need to purchase a localization kit to have the appropriate HP-UX documentation. Two kit types are available. One supplies an HP-UX keyboard and the other includes a PC-style keyboard. HP-UX customers do not need a new keyboard and mouse and can order option #005 that deletes them.

Localization Kits Ordering Information

Description	Product Number	Option Number	Price
HP-UX 9.0 localization kit with HP-UX keyboard	A2548A	ABA	\$105
HP-UX 9.0 localization kit with PC-style keyboard	A2549A	ABA	105
Delete keyboard and mouse	—	005	(60)

Domain Disk Conversion Kits

Domain customers may also want a disk conversion kit for external disk storage systems. The kit is for models C2212D and C2213D, as well as disk upgrade kits for C2290D and C2291D.

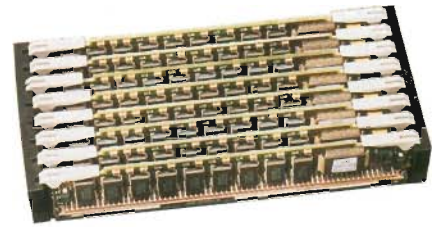
Disk Conversion Kit Ordering Information

Description	Product Number	Option Number	Price
S400 disk conversion Domain O/S to HP-UX	A2833A	—	\$200
Upgrade second disk		017	50
Upgrade third disk		018	50



Get fully supported ECC RAM from HP DIRECT

Your HP Apollo Series 400 Workstation is a valuable long-term investment that deserves RAM from HP. HP RAM assures you of 100% compatibility with your HP Apollo workstation. And HP's worldwide reputation for consistent high quality and reliability gives you peace of mind. The ECC RAM is fully supported by HP. And, as with every Hewlett-Packard product, you have our no risk guarantee.



Series 400 RAM Ordering Information

System Model	Max. Memory	Description	Comments	Product Number	Price
425e	48 MB	8 MB RAM (Two 4 MB SIMM modules)	Installs as pairs; Three pairs maximum.	A2201A	\$ 800
		16 MB RAM (Two 8 MB SIMM modules)	Installs as pairs; Three pairs maximum.	A2202A	1,600
400t	32 MB	8 MB RAM (Two 4 MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	98229B	1,200
425t	64 MB	8 MB RAM (Two 4 MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	98229B	1,200
		16 MB RAM (Two 8 MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	98229D	2,400
400s	128 MB	8 MB RAM (Two 4 MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	98229B	1,200
		32 MB RAM (Two 16 MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	98229E	4,800
425s,433s	128 MB	8 MB RAM (Two 4 MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	98229B	1,200
		16 MB RAM (Two 8 MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	98229D	2,400
		32 MB RAM (Two 16 MB ECC RAM modules)	Installs as pairs; Four pairs maximum.	98229E	4,800

Store more inside

HP provides a great selection of internal storage devices that can be added to your workstation. You can depend on HP for the right storage device that will deliver reliable service and total compatibility.

Series 400 Internal Storage Ordering Information

Description	Supported on the following Models:						Product Number	Price
	425e	425t	425s	433s	715t	715s		
Internal Hard Disk Storage								
420 MB internal SCSI disk	✓	—	—	—	—	—	A2072A	\$2,200
420 MB internal SCSI disk	—	✓	—	—	✓	—	A2075A	2,200
1.3 GB internal SCSI disk	—	—	✓	✓	—	✓	A2076A	5,000
1 GB internal SCSI disk	—	—	—	—	✓	—	A2885A	2,845
2 GB internal SCSI disk	—	—	—	—	—	✓	A2556A	5,690
Internal Removable Storage Devices								
1.4 MB 3.5-inch SCSI Flexible disk drive	✓	—	—	—	—	—	A2073A	525
600 MB CD-ROM drive	✓	—	—	—	—	—	A2074A	1,050
2 GB 3.5-inch DDS tape drive [1]	✓	—	✓	✓	—	✓	A2274A	2,625
600 MB CD-ROM drive (HP-UX only)	—	—	✓	✓	—	✓	A1448A	1,050
60 MB 1/4-inch QIC tape drive	—	—	✓	✓	—	✓	A1449A	2,100

Note:

4XXe/t can have a maximum of 2 internal devices.

4XXs can have a maximum of 3 internal devices.

[1] Order the appropriate installation kit at no charge: option #AHP for Model 425e and option #AHQ for Models 425s and 433s.

Trade up to higher performance with a CPU upgrade

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.



Upgrade for Models 310, 320, 332 to MC68040

CPU Field upgrade kit includes 25 MHz MC68040 SPU, 8-MB ECC SIMM RAM, 15-inch VGA color resolution monitor, and license to use HP-UX RunTime operating system.

Upgrade for Models 310, 320, and 332 to MC68040 Ordering Information

From	To	Description	Product/Option Number	Price
MC680X0	MC68040	Model 310/320/332 CPU Upgrade Kit to MC68040	A2244B	\$6,830
		Delete VGA monitor	Opt # ADY	(400)
		Substitute 1024 x 768 Graphics 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)

CPU Upgrade for Model 375 to Model 380

Upgrade includes 25-MHz MC68040 processor kit.

CPU Upgrade for Model 375 to Model 380

From	To	Description	Product/Option Number	Price
375	380	Model 375 Upgrade to Model 380	98244E	\$2,100
		HP-UX, Version 8.0 Update media and manuals	Opt # 494	630

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, HP Parallel, std. speed HP-IB, and RS-232-C interfaces; IEEE-802.3/Ethernet LAN interface with Thin MAU/BNC T-connector and AUI (jumper selectable); 2-channel DMA controller; and built-in speaker.

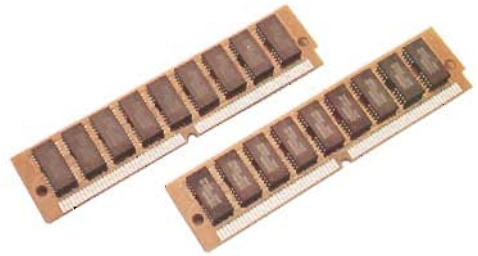
CPU Upgrade for Models 330, 350, 360, and 370 to Model 380 Ordering Information

From	To	Description	Product/Option Number	Price
330, 350, 360, or 370	380	Model 330/350/360/370 Upgrade to Model 380	98244D*	\$11,550
		Plus		
		Model 380 with 25-MHz MC68040 CPU	Opt # 8ZC	N/C
		Return credit for Model 330/350 CPU and System Interface boards	Opt # DGT	(2,000)
		Or		
		Return credit for Model 360/370 CPU and System Interface boards	Opt # DGS	(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	3,780
		Add 8-MB ECC RAM (1 Mbit DRAMS)	Opt # AN4	1,260
		Add 32-MB ECC RAM (4 Mbit DRAMS)	Opt # AN6	5,040

* **Note:** HP Service Engineer installation required. Option #8ZC must be specified. To upgrade Models 330 or 350, Option DGT must be ordered. To upgrade Models 360 or 370, Option DGS must be ordered.

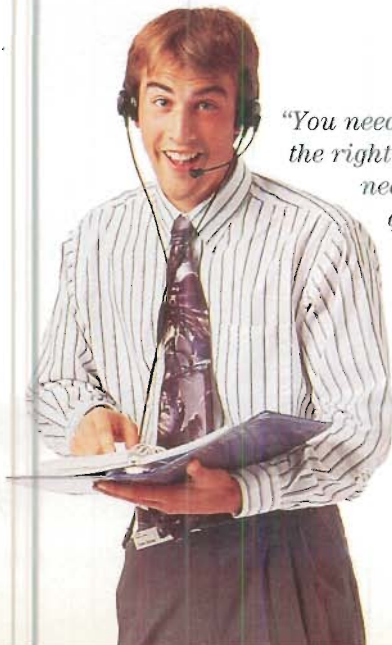
Order 100% compatible RAM for HP Series 300

The reasons are overwhelming! When you order RAM from HP, you'll be assured of 100% compatibility with your HP workstation. You'll also enjoy peace of mind, knowing that HP products are known worldwide for their consistently high quality and reliability. The ECC RAM is fully supported by HP. And, as with every Hewlett-Packard product, you'll have our no risk guarantee.



Series 300 RAM Ordering Information

System Model	Maximum Memory	Description	Comments	Product Number	Price
310, 320	7.5 MB	1 MB Parity RAM	Requires 1 DIO slot	98257A	\$1,200
332	8MB	1 MB Parity RAM daughter board	Uses daughter interface (2 max)	98269A	350
		4 MB Parity RAM daughter board	Uses daughter interface (2 max)	98269B	1,200
340	16MB	4 MB Parity-Checking RAM board	Installs on processor board (4 max)	98268A	1,200
345	64MB	4 MB ECC RAM	Installs as pairs; 4 pairs max	98229A	1,200
		16 MB ECC RAM	Installs as pairs; 4 pairs max	98229S	4,800
350, 370	32MB	4 MB Parity RAM Controller	Requires 1 DIO-II slot	98258A	3,800
		12 MB Parity RAM daughter board	Connects to 98258A	98258C	3,000
360	16MB	4 MB Parity RAM daughter board	Uses daughter interface (1 max)	98267A	1,775
		8 MB Parity RAM daughter board	Uses daughter interface (1 max)	98267B	2,500
		12 MB Parity RAM daughter board	Uses daughter interface (1 max)	98267C	3,000
362	16MB	2 MB Parity SIMM RAM	Installs as single SIMM (2 SIMMs max)	D2381A	160
		4 MB Parity SIMM RAM	Installs as single SIMM (2 SIMMs max)	D2156A	350
		8 MB Parity SIMM RAM	Installs as single SIMM (2 SIMMs max)	D2152A	525
375, 380	128MB	8 MB ECC RAM	Installs as pairs; 4 pairs max	98229B	1,200
		16 MB ECC RAM	Installs as pairs; 4 pairs max	98229D	2,400
		32 MB ECC RAM	Installs as pairs; 4 pairs max	98229E	4,800
382	32MB	8 MB ECC SIMM RAM	Installs as pairs; 2 pairs max	A2201A	800
		16 MB ECC SIMM RAM	Installs as pairs; 2 pairs max	A2202A	1,600



"You need fast information to make the right product purchase for your needs. Naturally, you expect quality from HP and you get what you expect when you call HP DIRECT."



Jeff
Jeff Byrnes
Customer Representative

Designed for comfort and HP compatibility

You can customize your HP workstations down to the input device. Each device is designed to offer complete compatibility and comfort. It all adds up to increased productivity from your HP workstation.

Helpful Hint

HP-HIL DOs and DON'Ts

- The maximum number of addressable devices is seven (eight including the HP-HIL device itself).
- Generally, the maximum cabling length is 2.4 meters (8 feet) per device, and the total length limit is 21 meters (69.3 feet). If using the 46082 remote extension, total length limit is extended to 48.6 meters (160.4 feet).
- The total power consumed by all devices on the link must be 12 Watts or less (100 mA at 12 V dc). Series 300 and 400 systems have ample power for all configurations of up to three devices, and all configurations of up to seven devices that do not include the 46085A.
- If any device has only one HP-HIL connection, it must be the last device on the link.

Spaceball SPTL-2003NA

The Spaceball™ 2003 is a peripheral input device designed specifically for working in 3D. Unlike traditional input devices, the Spaceball provides you with simultaneous six-degree of freedom control of your 3D parts (x, y, z translations and x, y, z rotations) without awkward commands or interruptive steps which slow productivity and halt your creative process.

The Spaceball extends your application's 3D capabilities by providing interactive and intuitive control of your models and images in 3D space without the limits or

Input Device Ordering Information		
Description	Product Number	Price
HIL 3-button mouse	A2838A	\$ 150
Mini-DIN 3-button mouse (700RX only)	A2839A	125
ID Module	46084A	210
Control Dial Module	46085A	1,525
32-Button Box	46086A	1,015
Digitizer Tablet (A4 size, includes tip switch stylus)	46087C	920
Digitizer Tablet (A3 size, includes tip switch stylus)	46088C	1,475
Digitizer Tablet (A4 size, includes 4-button cursor)	46090C	920
Digitizer Tablet (A3 size, includes 4-button cursor)	46091C	1,475
Quadrature Port (S300/S400 only)*	46094A	265

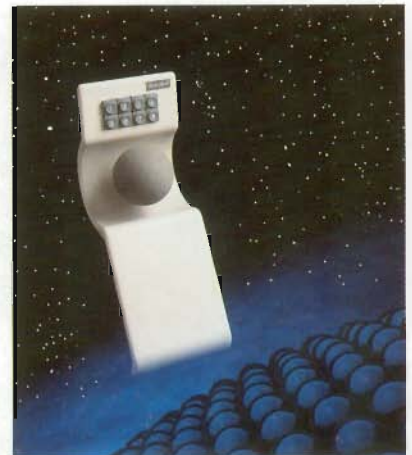
* Allows devices using Honeywell quadrature signals to be connected to HP-HIL interface, i.e. ITAC Trackballs.

HP-HIL Cables and Extensions Ordering Information		
Description	Product/Option 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	236
15-m (49.5 ft) remote extension with audio and RGB video cables.	46082A	835
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	1,170

restrictions on one and two dimensional input devices such as a knob box or mouse.

The Spaceball can be used with most 3D applications such as HP's ME-30, Solid Designer, Pro-Engineer by PTC, CADD5 by Computer Vision, Unigraphics by EDS, Patran from PDA Engineering and IDEAS from SDRC. In fact, any 3D application can benefit from the Spaceball.

The Spaceball includes cabling, power supply, and software drivers for HP-UX.



SPTL-2003NA\$1,595

Series 800

Even better than before!

Hewlett-Packard has just extended the industry's broadest UNIX platform to be the most powerful desktside server designed for client/server UNIX computing. The Series 800 family is introducing six new choices of higher-performing Business Servers based on the PA-RISC 7100 superscaler architecture. Three of these systems include a powerful symmetrical multiprocessing implementation.

The result? Unmatched midrange OLTP performance for your applications, faster response time, and increased productivity. And all of this is provided in an easily upgradeable HP 9000 Series 800 open systems Business Server family.



The advantages of PA-RISC technology

With HP's leading-edge Precision Architecture-Reduced Instruction Set Computing (PA-RISC) technology, the Series 800 servers offer you one benefit after another. Commercial computing performance is higher and support costs are lower. You'll enjoy greater reliability and give up less floor space.



	F Series			G Series			H Series				I Series			Corporate Servers			
HP 9000 Series 800 Business Servers	F10	F20	F30	G30	G40	G50	H20	H30	H40	H50	I30	I40	I50	890 1 CPU	890 2 CPU	890 3 CPU	890 4 CPU
Relative Performance	1.0	1.7	2.0	2.0	3.0	4.9	1.7	2.0	3.0	4.9	2.0	3.0	4.9	5.3	8.9	13.22	16.4
Maximum Memory (MB)	384	384	384	512	512	512	768	768	768	768	768	768	768	2048	2048	2048	2048
Maximum Disk (GB)	42	42	42	100	100	100	178	178	178	178	178	178	178	1300	1300	1300	1300
Available I/O Slots	2	2	2	4	4	4	8	8	8	8	12	12	12	112	112	112	112
	Integrated low end to midrange Ideal for office/department environments Small footprint Integrated system Easy installation													High end Designed for data center environments Maximum configurability Modular design Upgradable to multiprocessing systems			

Industry-leading lowest cost of ownership

Combining advanced VLSI within PA-RISC technologies allows the Series 800 servers to reduce the number of components needed. So, the servers are smaller and take up less floor space, consume less power, and require less cooling. Compare Series 800 servers to competitive systems and see how much you can save now and every day after.

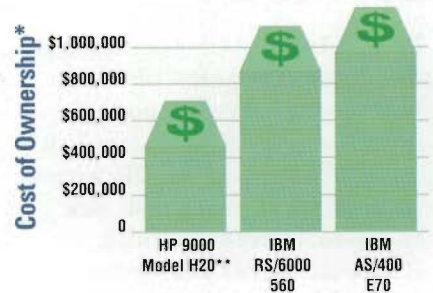
Your future is here now

Your investment in the HP 9000 Series 800 family is protected with a long-range growth path that saves you from switching architectures or rewriting applications. When you're ready to upgrade your system, HP provides the simplest and most comprehensive upgrade program available. You can upgrade your Model F/G/H/I server on-site with a processor board swap in just about one hour. And all your HP hardware and software investments are completely protected, maintaining 100% compatibility.

Also, if your performance and capacity needs grow beyond the F/G/H/I servers, HP offers return credits for your system towards the purchase of our higher-end HP 9000 Corporate Business Server 890 systems.

Robust operating environment

HP-UX is the UNIX-based operating system for the Series 800 servers. It offers the best value in a standards-based operating system. HP-UX is complemented by a wide range of development tools and other software. You can find out more about HP-UX and Hewlett-Packard software for the Series 800 business servers, starting on page 58.



* Based on like configurations over a 5-year period and includes hardware, software, and support.

** Comparable performance on the HP 9000 Model H20 to IBM RS/6000 560.

Level 70
Dual 96 MHz
2@1 MB x 1 MB Cache
w/ floating point coprocessor

Level 60
96 MHz
1 MB x 1 MB Cache
w/ floating point coprocessor

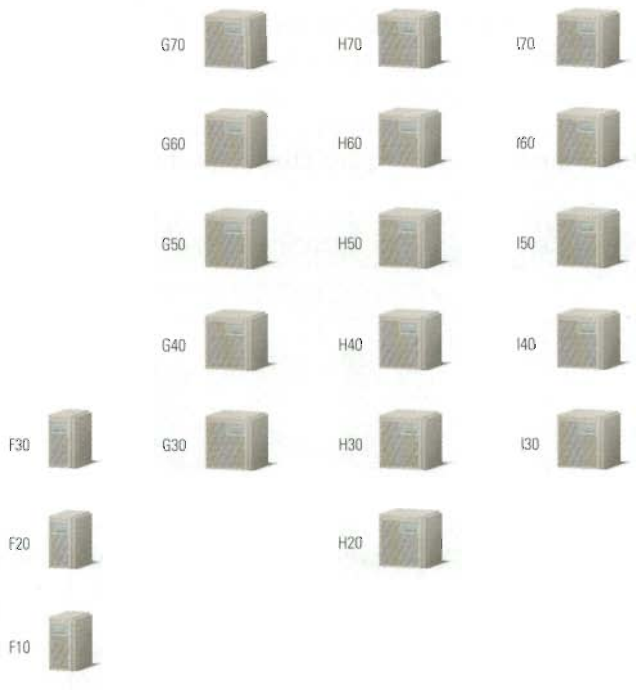
Level 50
96 MHz
256 x 256 KB Cache
w/ floating point coprocessor

Level 40
64 MHz
256 x 256 KB Cache

Level 30
48 MHz
256 x 256 KB Cache

Level 20
48 MHz
64 x 64 KB Cache

Level 10
32 MHz
32 x 64 KB Cache



I/O Slots
Base Configuration
(memory/disk)

Model F
2 HP-PB slots
16 MB/500 MB

Model G
4 HP-PB slots
32 MB/500 MB

Model H
8 HP-PB slots
64 MB/1 GB

Model I
12 HP-PB slots
64 MB/4 GB



Now you can order support along with your product. See page 125.

Upgrading your HP 9000 Business Servers offers maximum investment protection



Expand your HP system performance or I/O connectivity capabilities with the industry's most aggressive and smoothest upgrade paths available.

Convenient on-site upgrades are available for all Series 800 Models F/G/H/I. You get tremendous performance and expandability benefits from our premier upgrade offerings.

Additionally, all HP 9000 Model 8x7 servers are upgradeable to the new servers. Trade-in paths are also available for other Series 800 servers to our new models. Call HP DIRECT toll-free for more information.

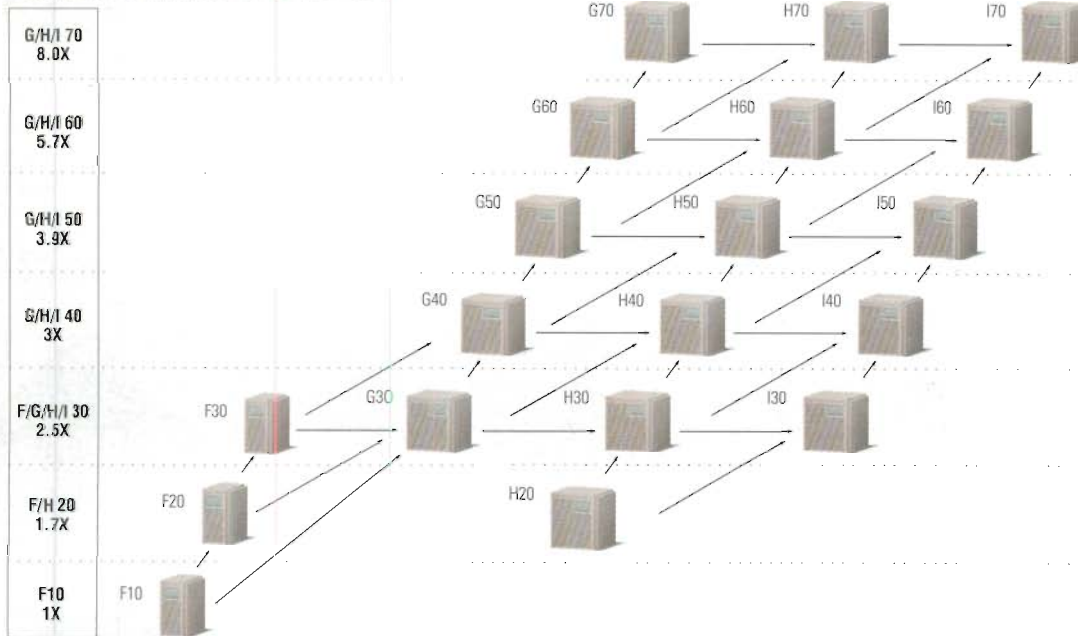
Four easy ways to upgrade

There are four easy and efficient ways to upgrade with the Models F/G/H/I of the HP 9000 family. None of these upgrade paths require any painful box swaps, yet continue to maintain 100% investment protection of your software, networking, memory, peripherals, and I/O cards.

1. Performance improvements (via processor board swap)
2. Increased I/O expandability (via chassis or backplane swap)
3. Combination of both performance and expandability improvements
4. 8x7 upgrades to the HP 9000 Series 800 Models F/G/H/I (via board and/or chassis upgrade)

Relative OLTP Performance

Relative to Model F10 @ 30.4 TPS



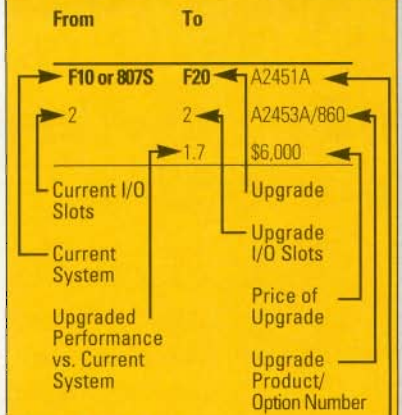
Three Upgrade Examples

	Current system	Upgrade requirements	Proposed system	Upgrade path	Product ordered	Price
Example 1	H30 (includes 8 I/O slots)	20% performance improvement needed No increase in I/O expandability needed	H40 (includes 8 I/O slots)	On-site processor board swap	A2458A, A2460A option 869	\$12,500
Example 2	F30 (includes 2 I/O slots)	20% performance improvement needed I/O expandability requires 4 slots total (2 additional slots)	G40 (includes 4 I/O slots)	On-site processor board swap and chassis swap	A2454A, A2456A option 863	13,000
Example 3	G40 (includes 4 I/O slots)	30% performance improvement needed I/O expandability requires 8 slots total (4 additional slots)	H50 (includes 8 I/O slots)	On-site processor board swap and backplane swap	A2458A, A2459A option 885	42,000

Series 800 Upgrades Ordering Guide

From:	To:	To:	To:	To:
F10 or 807S	F20 A2451A 2 A2453A/860 1.7 \$6,000	F30 A2451A 2 A2452A/860 2.5 \$10,000	G30 A2454A 4 A2457A/860 2.5 \$13,000	H20 A2458A 8 A3003A/860 1.7 \$20,000
F20 or 817S	F30 A2451A 2 A2453A/861 1.4 \$8,000	G30 A2454A 4 A2457A/861 1.4 \$8,000	G40 A2454A 4 A2456A/861 1.7 \$13,000	H20 A2458A 8 A3003A/861 1.0 \$15,000
F30 or 837S	G30 A2454A 4 A2457A/863 1.0 \$6,000	G40 A2454A 4 A2456A/863 1.2 \$13,000	G50 A2454A 4 A2455A/863 1.6 \$20,000	
G30	G40 A2454A 4 A2456A/864 1.2 \$9,000	G50 A2454A 4 A2455A/864 1.6 \$25,000	H30 A2458A 8 A2461A/864 1.0 \$20,000	H40 A2458A 8 A2460A/864 1.2 \$25,000
G40	G50 A2454A 4 A2455A/865 1.3 \$15,000	G60 A2454A 4 A2986A/865 1.9 \$31,000	H40 A2458A 8 A2460A/865 1.0 \$22,500	H50 A2458A 8 A2459A/865 1.3 \$42,000
G50	G60 A2454A 4 A2986A/866 1.5 \$17,000	G70 A2454A 4 A2977A/866 2.1 \$43,000	H50 A2458A 8 A2459A/866 1.0 \$31,000	H60 A2458A 8 A2987A/866 1.5 \$50,000
H20	H30 A2458A 8 A2461A/868 1.4 \$12,500	H40 A2458A 8 A2460A/868 1.7 \$21,500	I30 A2462A 12 A2465A/868 1.4 \$37,000	
H30	H40 A2458A 8 A2460A/869 1.2 \$12,500	H50 A2458A 8 A2459A/869 1.6 \$33,500	I30 A2462A 12 A2465A/869 1.0 \$25,000	I40 A2462A 12 A2465A/869 1.2 \$35,000
H40	H50 A2458A 8 A2459A/870 1.3 \$23,500	H60 A2458A 8 A2987A/870 1.9 \$38,500	I40 A2462A 12 A2465A/870 1.0 \$25,000	I50 A2462A 12 A2463A/870 1.3 \$42,000
H50	H60 A2458A 8 A2987A/871 1.5 \$15,000	H70 A2458A 8 A2976A/871 2.1 \$41,000	I50 A2462A 12 A2463A/871 1.0 \$25,000	I60 A2462A 12 A2488A/871 1.5 \$45,000
I30 or 857S	I40 A2462A 12 A2464A/872 1.2 \$13,500	I50 A2462A 12 A2463A/872 1.6 \$33,500	I60 A2462A 12 A2488A/872 2.3 \$47,500	I70 A2462A 12 A2975A/872 3.3 \$69,000
I40 or 877S	I50 A2462A 12 A2463A/873 1.3 \$23,500	I60 A2462A 12 A2488A/873 1.9 \$38,500	I70 A2462A 12 A2975A/873 2.7 \$60,000	
I50	I60 A2462A 12 A2488A/874 1.5 \$15,000	I70 A2462A 12 A2975A/874 2.1 \$36,500		
827S	847S — 6 A2291A/862 1.4 \$27,100	H30 A2458A 8 A2461A/827 1.4 \$18,750	H40 A2458A 8 A2460A/827 1.7 \$29,750	I30 A2462A 12 A2465A/827 1.4 \$37,000

Helpful Hints



Helpful hints for ordering

This guide shows you the possible upgrades available. Find your current system listed in the left-hand column. Then identify your desired performance improvement (current system equals 1.0) and I/O expansion from the potential upgrade paths listed on these pages.

To place your order, please include the System class product number (where included), the upgrade product number, and the upgrade path option number.

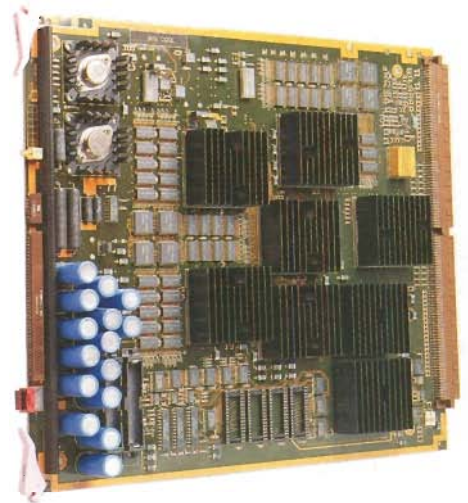


- Performance upgrade
- Expansion upgrade
- Performance & Expansion upgrade

Series 800 Upgrades Ordering Guide

From:	To:	To:	To:	To:
847S 6	857S — 12 A2292A/864 1.0 \$25,000	867S — 6 A2297A/864 1.2 \$17,350	H40 A2458A 8 A2460A/847 1.2 \$12,500	H50 A2458A 8 A2459A/847 1.6 \$30,000
	I30 A2462A 12 2955A/847 1.0 \$25,000	I40 A2462A 12 A2464A/847 1.2 \$39,000		
857S 12	877S — 12 A2298A/865 1.2 \$19,050			
867S 6	877S — 12 A2298A/866 1.0 \$26,000	887S — 6 A2320A/866 1.3 \$36,750	H50 A2458A 8 A2459A/867 1.3 \$20,000	H60 A2454A 8 A2987A/867 1.9 \$38,500
	I40 A2462A 12 A2464A/887 1.0 \$26,000	I50 A2462A 12 A2463A/867 1.3 \$47,000		
877S 12	897S — 12 A2319A/867 1.3 \$36,750			
887S 6	897S — 12 A2319A/867 1.0 \$36,750	H60 A2458A 8 A2987A/867 1.5 \$15,000	H70 A2458A 8 A2976A/887 2.1 \$41,000	I50 A2462A 12 A2463A/887 1.0 \$31,000
	I60 A2462A 12 A2988A/887 1.5 \$25,000			
870S/100 84	870/200 A1142 84 — 1.5 \$126,000			
890/1* 112	890/2* — 112 A1827/102 1.9 \$65,000	890/3* — 112 A1827/103 2.5 \$65,000	890/4* — 112 A1827/104 3.2 \$65,000	
822S 12	832S A1740A 12 — 1.7 \$16,700	842S A1750A 12 — 4.5 \$60,900		
832S 12	842S A1750A 12 — 2.6 \$50,400	852S A1750A 11 — 3.4 \$110,750		
850S 68	865S — 84 A1846A/723 3.0 \$94,500	870/100 — 84 A1141A/723 5.0 \$168,000		
855S 84	865S — 84 A1846A/724 1.8 \$94,500	870/100 — 84 A1141A/724 3.0 \$168,000		

* Model 890 upgrades must be ordered in sequence; 890/1 to 890/2 to 890/3 to 890/4. Part number and price reflect this.



Processor board upgrade

"We're very accessible. When you need someone who's responsive, can answer questions, ensure you get what you need, and will take your order right away, rely on us!"



Sue
Sue Mills
Sales Support
Engineer

Here's an easy way to boost your memory



Maximize the full benefit of your HP 9000 Series 800's system performance with ease. Simply add memory to your system. You'll help optimize your performance, therefore enabling you to fully realize the potential of your HP 9000 Business Server capabilities. Not only can your existing application benefit, but additional memory can also allow for additional users and applications.

Don't hesitate to make the most of your existing investment. Add the flexibility and power your systems need today with the extra boost memory add-on boards can provide.

Series 800 Memory Ordering Information

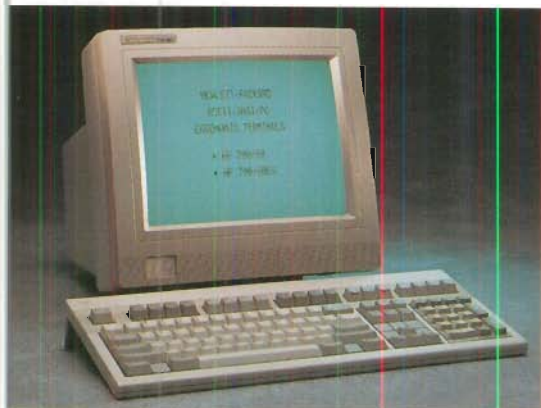
Description	Product/Option Number	Price
Models F/G/H/I/8x7S Only		
8 MB ECC memory SIMM memory module	A2230A	\$ 1,400
16 MB ECC memory SIMM memory module	A2231A	2,400
32 MB ECC memory SIMM memory module	A2232A	4,000
64 MB ECC memory SIMM memory module	A2511A	6,400
128 MB ECC memory SIMM memory module	A2516A	25,600
Memory extender board	A1793A	1,315
Models F/G/H/I/8x7S Floating-Point Coprocessor		
Floating-Point coprocessor field upgrade on HP 9000 Model 8x7 and HP 3000 Model 8x7 systems	A2293A	N/C
For HP 9000 Model 8x7, Level 10 systems <i>(for servers shipped after 3/15/92)</i>	Opt 001	500
For HP 9000 Models 877S-887S, Level 40 systems	Opt 002	2,000
For HP 9000 Models 817S-827S, Level 20 systems	Opt 003	1,000
For HP 9000 Models 837S-857S, Level 30 systems	Opt 004	1,500
32 MHz CPU board with Floating-Point Coprocessor <i>(for 807S Servers shipped before 3/15/92 without floating-point socket)</i>	Opt 101	2,625
Models 808S, 815S, 822S, 832S, 842S, and 852S Only		
8 MB ECC memory board	A1404A	8,400
16 MB ECC memory board	A1436A	21,000
32 MB ECC memory board	A1437A	42,000
Models 825S, 835S/SE, 845S/SE Only		
8 MB ECC memory board	A1010A	10,500
16 MB ECC memory board	A1037A	21,000
32 MB ECC memory board	A1623A	42,000
Models 850S, 855S, and 860S Only		
16 MB Controller	A1103A	12,600
Models 850S, 855S, 860S, 865S, and 870S/100-400 Only		
16 MB ECC memory board	A1104A	15,000
Models 865S, and 870S/100-400 Only		
64 MB ECC memory board	A1152A	57,100

Benefits

- HP uses 80-ns ECC (Error Checking and Correcting) memory, the fastest and most reliable commercially available memory which ensures maximum data integrity.
- HP's memory is competitively priced.
- Memory prices are tiered, based on the memory board capacity, and prices are most attractive on the higher capacity boards.
- Stand-alone memory boards are priced the same as system's option-based memory.
- When you buy memory from HP, you're also assured of high quality and full compatibility with your Series 800 System.

HP makes the choice very clear

The HP 700/60 maintains its position as the price/performance leader for ergonomic ASCII/ANSI/PC terminals. A position that embraces everything from ergonomics to economics, readability to reliability, flexibility to ease of use. We think you'll agree that the competition pales in the face of the HP 700/60.



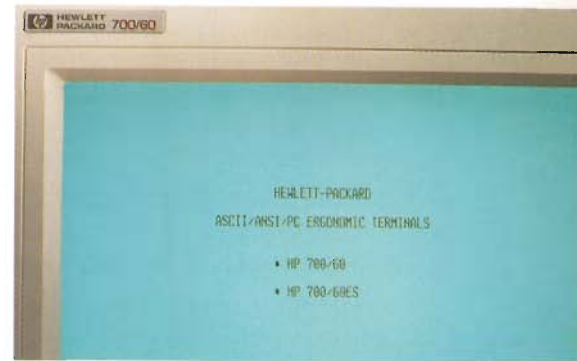
Look at the reliability

The HP 700/60 has a demonstrated Mean Time Between Failure (MTBF) rating of over 100,000 hours. That's fully 1.5 times better than the nearest competitor, and upwards of five times better than some. What that means is more uptime,

more productivity and a lower cost of ownership.

Look at the connectivity

The HP 700/60 delivers impressive flexibility in host and printer connectivity. Both serial ports support RS-232 and RS-423. In addition, the first serial port supports RS-422. Either serial port can be used for the host connection. Printers are supported on both serial ports, as well as on the



Centronics parallel port. And at the international level, the HP 700/60 features an autoranging 120/240V power supply to insure compatibility and optimum flexibility so important to global companies.

Look at the user comfort and convenience

From screen face to swivel base, the HP 700/60 is engineered for user comfort and convenience. The keyboard design focuses on the reduction of repetitive stress injuries. And it's easy to find the best screen position, thanks to an effortless tilt and swivel base mechanism.

Look at the compatibility

The HP 700/60 features the highest combined level of Wyse and DEC compatibility available today. But at HP, compatibility takes on a broader role, we comply with stringent new European standards for low emission levels that other terminal manufacturers offer only in non-U.S. versions. Our HP 700/60ES goes one step further, by meeting the toughest user safety standards, the Swedish guidelines for reduced electrostatic, x-radiation and electromagnetic emissions.

Look at the display quality

The 14-inch display on the HP 700/60 is remarkably easy to read, whether you choose amber, green or soft white phosphor. Featuring a character cell size of 10 x 16, the HP 700/60 produces impressively high resolution. HP's fully-utilized overscan lets characters extend right to the bezel. And with our Resolution Enhancement Technology, you get crisp and smooth curved surfaces.

HP 700/60 and HP 700/60ES Ordering Information

Description*	Screen Color	PC/AT2	ANSI***	Price
HP 700/60	Amber	C1080A	Opt. ABA** C1080A C1082A	Opt 1A2** Opt ABA*** \$539
	Green	C1080G	Opt. ABA*** C1080G C1082A	Opt 1A2** Opt ABA*** 539
	Soft White	C1080W	Opt. ABA*** C1080W C1082A	Opt 1A2** Opt ABA*** 539
HP 700/60ES	Soft White	C1083W	Opt. ABA*** C1083W C1082A	Opt 1A2** Opt ABA*** 589

* Supports the following terminal emulations: Wyse WY-60 (native mode and PC Terminal mode), DEC VT320, DEC VT220, DEC VT100 and DEC VT52.

** Option 1A2 deletes a PC/AT2 keyboard which comes standard with the terminals. C1082A is the product number for an ANSI (VT320) keyboard. A PC/AT2 keyboard (C1081A) is also available separately.

***Option ABA specifies English keyboard, English manual and U.S. power cord.

List price includes keyboard (select PC/AT2 or ANSI).

HP 9000 Software: The perfect complement

Hewlett-Packard software is the powerful partner your HP 9000 system needs to realize its potential. The advanced HP-UX 9.0 UNIX-based operating system, powerful language products, the industry's most popular development tools, and everything in between is available through HP DIRECT on the following pages.

More than 8,000 applications in a wide range of areas have been created for the HP 9000 family. This remarkable selection makes your HP 9000 a versatile partner in your success.

If you have questions about compatibility with your system or if you just need advice, call our technical support engineers toll-free. Our experts are always eager to help you get exactly what you need!

"My job is to listen to your needs and provide the best possible solution. From configuring complex systems to translating unfamiliar acronyms and abbreviations, I can help."



Cynthia
Cynthia Bauer
Sales Support Engineer



Find information about these training course on pages 126 to 128:

- ANSI C Programming
- C++/Object-Oriented Programming
- Fundamentals of the UNIX System
- HP ALLBASE/SQL on HP-UX and MPE/iX
- HP-UX System Administration Basics
- HP-UX Workstation Administration for Domain Users
- HP-UX Systems Administration for the HP 9000 Series 800
- UNIX System Basics I
- Fundamentals of X Windows and HP VUE
- UNIX System: (CBT)
 - Introduction for New Users
 - Managing Users and Their Environment
 - Transferring Files and Directories



Free SoftBench offer

Find out how you can get a free SoftBench evaluation kit. See page 65.

Helpful Hints for ordering:

When you call HP DIRECT, we'll briefly review your needs and expectations. We want to make sure you order exactly what you need and only what you need.

- Let us know your HP 9000 model number.
- Confirm that you need a development and/or run-time version of the product.
- Tell us your current version of HP-UX.
- Specify the media type you'll need, such as 1/2-inch tape or DDS.
- Be sure to tell us how many concurrent users will use this product.

Unbeatable value based on standards

Searching for a UNIX-based operating system that meets the needs of your organization? HP-UX is your best value in a standards-based operating system.

HP-UX protects your investment by adhering to current and emerging industry standards (POSIX IEEE 1003.2/XPG 4/SVID2/FIPS 151-1). This means that your applications are source and binary compatible across a huge range of HP 9000 computer systems. This binary compatibility and a wealth of extra value-added features, such as the easy-to-use HP Visual User Environment (HP-VUE) and extensive network capabilities, will help to save your organization time and money.

This multiuser, multitasking operating system gives you the flexibility to add to your hardware in the future, since it is binary compatible from low-end workstations all the way up to powerful superminicomputers.

S300/400/700 Ordering Information

Description	Product/Option Number		Price
	HP-UX S300/S400	HP-UX S700	
HP-UX Run-Time Environment, 2-User 8.0 1/4-inch cartridge tape	B1861A	B2352A	—
8.07 DDS/DAT cartridge tape, 8-user 9.0 1/4-inch cartridge tape	APB, AAO	—	\$ 415
9.07 DDS/DAT cartridge tape, 8-user 9.0 1/4-inch cartridge tape	—	APF, AAH	415
9.0 DDS/DAT cartridge tape, 8-user	APH, AAO	—	415
8.0/9.0 Revision upgrade license*	—	APH, AAH	415
HP-UX Run-Time Environment, 8-user	OCC	OCC	730
8.07 DDS/DAT cartridge tape	—	B2353A	1,255
9.0 DDS/DAT cartridge tape, 32-user	—	APF, AAH	415
—	—	APH, AAH	415
HP-UX CD-ROM Media			
8.0 kit	B2378A	—	N/C
8.07 kit	—	B2826A	N/C
9.0 kit	B2378B	B2826B	N/C
CD media kit [1]	AAB	AAB	625
CD-ROM disk set [2]	AAF	AAF	520

[1] includes software on CD-ROM, codeword for software ordered concurrently and HP-HIL ID module.
[2] includes software on CD-ROM.

*The system licenses must match the software revision being installed. Users upgrading software to current versions, and who do not have a software support contract are required to purchase the revision upgrade license as well as media and documentation.

Localized versions

HP-UX 9.0 and HP-UX 8.0X are available in localized versions for four Asia-Pacific countries and two European countries for the Series 400/300 and the Series 700. Localized versions of Instant Ignition are available for Japan and Germany. Localized keyboard kits contain HP-UX 9.0 and 8.0X learning products which are orderable using dependent options.

Call HP DIRECT for ordering instructions.

HP-UX Workstations

All HP-UX workstations include a 2-user license-to-use for the HP-UX Run-Time Environment. The bit-mapped console of the workstation or a terminal connected to a serial port on the system processor unit counts as one user. Local Area Network (LAN) connections count as one user. Workstations that use the bit-mapped console and the LAN interface use the 2-user license. A workstation or network server that requires more than one direct-connected or modem-connected terminal, such as a system being used in a multiuser configuration, requires that its license be upgraded to either an 8-user or 32-user license.

Licensed software can be made available for installation by:

- 1) Purchasing the appropriate media and documentation
- 2) Copying the licensed software to the licensed system
- 3) Installing the licensed software from previously purchased media.

Ordering

When ordering any Series 700 workstation, HP-UX 9.0 can be preloaded via Instant Ignition. For Models 705, 710, 720, 730 and 750, order the Instant Ignition factory integrated option #ODK for HP-UX 9.0. For Models 715, 725, 735, 745i, 747i and 755, Instant Ignition is available as a separate product.

All HP-UX Run-Time Environment products listed include installation documentation, HP Visual User Environment (VUE), Network File System (NFS), TCP/IP networking, ARPA/Berkeley networking services, System Administration Manager (SAM), and run-time support for X11, OSF/Motif, Starbase, Starbase Display List, Network Computing System (NCS), and Network License Server (NetLS).

Documentation for HP-UX is available on convenient and space-saving CD-ROM or in hardcopy form. See page 130 for ordering information.

Get a world of standards for your Series 800 system with HP-UX

HP-UX is HP's superset implementation of AT&T's UNIX System V, incorporating the best capabilities of Berkeley 4.3, plus value-added features from HP and the Open Software Foundation (OSF). This improves performance, system management, and ease of use while facilitating adaptation of software to meet the needs of business markets.

HP-UX reflects HP's strong commitment to provide interoperability and portability by adhering to industry standards. The power and versatility of HP-UX and its broad range of utilities and communication features also make it excellent for program development.

Use this chart if you want to buy HP-UX 9.0*

HP-UX 9.0 Ordering Information*

Description	Product/Option Number	Price
HP-UX 9.0 Server O/S media	B3108A	N/C
Magnetic tape, 1/2 inch	AA1	\$420
QIC 525 cartridge tape	AA4	420
DDS cartridge	AAH	420
CD-ROM	B3108C	630

* You must also order from the user license/user level specification section of the chart to the right



Find information about these training courses on pages 126 to 128:

- Fundamentals of the UNIX System
- HP-UX System Administration Basics

Documentation for HP-UX is available on CD-ROM or in hardcopy. See page 130 for ordering information.

Features

- OSF Logical Volume Manager
- LAN, ARPA, and NFS 3.2
- Run-time capability for Network Computer System (NCS) and Network License System (NetLS) applications
- Automatic restart after power failure
- A menu-driven system administration utility (SAM)
- Support for high-performance local and network backups
- Department of Defense C2 secured functionality
- Multi-terminal session manager for ANSI terminal users
- Support for disk mirroring
- Support for processor switchover
- Support for enhanced spooling
- Support for performance and capacity planning tools
- Support for CASE tools
- A screen-oriented mail system (ELM)
- Run-time support for X-Window System Version 11 Release 5, Motif Version 1.2, and Visual User Environment

HP-UX 9.0 conforms to major existing standards such as:

- XPG4 Base Profile
- IEEE's POSIX 1003.1 and 1003.2
- Federal Information Processing Specifications (FIPS) 151-1
- USL's System V Interface Definition (SVID2)

Use this chart if you own HP-UX 9.0 and want to add additional users to your current license

Series 800 HP-UX Ordering Information

Description	Product/Option Number	Price
HP-UX 9.0 User license, user level specification (must order one)		
HP-UX 9.0 User license/(user level specification)	B3108L	N/C
2-user license	UA1	\$ 1,525
8-user license	UA3	2,575
16-user license, 16-user software	UA5/AGM	4,675
32-user license, 32-user software	UA7/AGN	7,820
64-user license, 64-user software	UA9/AGP	11,025
128-user license, 128-user software	UAB/AGQ	13,525
256-user license, 256-user software	UAD/AGR	16,525
Unlimited-user license, Unlimited-user software	UAT/AGS	19,525
HP-UX User upgrade credit (may order one)		
Credit for 9.0 2-user license when upgrading to higher user level	UB1	(1,525)
Credit for 9.0 8-user license when upgrading to higher user level	UB3	(2,575)
Credit for 9.0 16-user license when upgrading to higher user level	UB5	(4,675)
Credit for 9.0 32-user license when upgrading to higher user level	UB7	(7,820)
Credit for 9.0 64-user license when upgrading to higher user level	UB9	(11,025)
Credit for 9.0 128-user license when upgrading to higher user level	UBA	(13,525)
Credit for 9.0 256-user license when upgrading to higher user level	UBC	(16,525)
Media option (may order one)		
Magnetic tape, 1/2 inch	AA1	105
Digital Audio Tape (DAT)	AAH	105
CD-ROM	AAU	N/C
QIC 525 cartridge tape	AA4	105

Operate with versatility

Domain/OS Software

Domain/OS is a single operating system that provides users with three operating environments—UNIX System V Release 4, BSD 4.3, and AEGIS. It also includes the X Window System environment, Motif user interface, HP VUE, 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.

Customers must purchase licenses to run optional Domain/OS software. All software is subject to standard HP terms and conditions. See Domain/OS license options listed below for brief descriptions of the types of licenses.



Domain/OS 10.4 now comes with HP VUE!

Domain 680X0 Ordering Information

Description	Product Number	Price
Domain/OS 10.4: includes media, documentation, 1/4-inch cartridge tape.	LF450BAD	\$ 625
HP User Environment Developer's Kit License to use: Provides software developer's tools necessary to develop X11R4 and OSF/Motif 1.1 based applications, 1/4-inch cartridge tape.	LAC4BBAD	985
C/ANSI C-Compiler, SR 10: includes media, documentation, 1/4-inch cartridge tape	LA070BAD	1,060
FORTRAN: includes media, documentation, 1/4-inch cartridge tape	LA210BAD	1,060
Pascal: includes media, documentation, 1/4-inch cartridge tape	LA460BAD	1,060
C++ Compiler:	LA130BAD	1,695
Translator	LA120BAD	1,115
Development Kit, SR 10.2	LAB20BAD	2,100

All three above include media, documentation, 1/4-inch cartridge tape

Domain/OS License Options

Node License: A license to run an application on a single node; each node using the application requires a license. Discounts are per customer's appropriate discount schedule. Node license products include media and documentation.

Development Node License: A type of Node License required for the development of application software. Only required for nodes doing development.

Run-time Node License: A type of Node License required to run resultant applications created using a development software product. Note: some resultant applications do not require run-time licenses.

Corporate License: Enables the purchase of quantities of development or run-time licenses at a reduced price. Quantity breaks are scheduled; customer discounts do not apply. Total

quantity must be on one purchase order. Network and geographical restrictions do not apply. Media and documentation are not included.

Gateway License: A communications product license which runs on a single node and services users on other nodes. Only the server node requires a license.

Complete your system with powerful HP 9000 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 provide 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. See page 61 for Domain/OS development tools.

HP offers a full complement of language products to address the widest range of application development needs. The core HP-UX languages for the HP 9000 family define high-performance, standards-compliant language products for C, C++, COBOL, FORTRAN and Pascal programming. These language products offer a highly reliable, comprehensive solution for the efficient creation of high performance applications.

COBOL

(Micro Focus) COBOL/HP-UX is based on the de facto industry standard Micro Focus COBOL. Combined with the power of HP-UX, it provides one of the most comprehensive COBOL development environments available on UNIX systems. Unlike other COBOL implementations, it will generate native code on HP Precision Architecture Reduced Instruction Set Computing (PA-RISC) platforms, delivering the performance required by demanding commercial applications.

(Micro Focus) COBOL/HP-UX is composed of three products:

(Micro Focus) COBOL/HP-UX Developer's Package

This package contains Micro Focus based COBOL Compiler, debugger, forms-2 package, and COBOL Runtime system license.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	35338A
HP 9000/700	HP-UX	B2430AB
HP 9000/800	HP-UX	B2433AB



(Micro Focus) COBOL/HP-UX Runtime

This product licenses the execution of Micro Focus COBOL applications.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	35340A
HP 9000/700	HP-UX	B2432AB
HP 9000/800	HP-UX	B2435AB

(Micro Focus) COBOL/HP-UX Compiler

This product can allow Micro Focus COBOL applications to be ported to HP-UX on HP 9000 Series 800 Business Servers.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	35339A
HP 9000/700	HP-UX	B2431AB
HP 9000/800	HP-UX	B2434AB



- C++/Object-Oriented Programming
- ANSI C Programming

C/ANSI C Compiler

HP C/ANSI C provides a comprehensive C development environment that meets industry standards, and offers proven reliability. C's primary feature is portability, critical in its role as a system programming language for UNIX, as well as for application programming.

C Language compiler is a conforming hosted implementation of the ANSI standard (X3.159-1989). This product provides a comprehensive

C program development environment and tools, including a symbolic debugger.

The C/ANSI C Developer's Bundle is available for C/ANSI C graphical application development on HP 9000 Series 300/400 and 700. The Bundle includes the C/ANSI C product and the HP-UX Developer's Toolkit.

The C/ANSI C product includes the compiler and debugger only.

C/ANSI C Developer's Bundle

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B1863A
HP 9000/700	HP-UX	B2354A

C/ANSI C

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B2371A
HP 9000/700	HP-UX	B2413A
HP 9000/800	HP-UX	B2412A

C++ Compiler

HP's object oriented C++ language is a true compiler based on AT&T's 3.0 version of C++. Optional translation to C code is retained for those users who are dependent on this mechanism. As an evolutionary enhancement to C, C++ supports object-oriented programming. Benefits of object-oriented

programming include code reuse, reduction in complexity of application development, reduction in maintenance costs, and improved code quality.

This compiler generates native code for the HP 9000 platforms directly from C++ source code. By

eliminating the intermediary translation layer, the new compiler speeds compile time by up to 75%.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B2400A
HP 9000/700	HP-UX	B2402A
HP 9000/800	HP-UX	B2405A

HP-UX Developer's Toolkit

If you use a programming language other than C, or if you already have a C compiler, you may want to order this invaluable toolkit. It includes tools for X.11, OSF/Motif, HP VUE, Starbase, Starbase Display List and General Programming Tools.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B1865A
HP 9000/700	HP-UX	B2356A
HP 9000/800	HP-UX	B1170A

General Programming Tools

This subset of the HP-UX Developer's Toolkit includes general programming commands and source control tools. These tools are bundled in with the HP-UX operating system for the HP 9000 Series 800.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B2379A
HP 9000/700	HP-UX	B2357A

 **HP Programmer's Toolset**

The HP Programmer's Toolset contains an incremental linker as well as HP's advanced DDE (Distributed Debugging Environment), a powerful source-level debugger. The incremental linker reduces time developers spend during the link phase of program development. To aid programmers in analyzing program performance, HP Toolset also includes a program performance analysis tool. With this tool, programmers can quickly determine where performance improvements can be made in their application software.

Available on: Systems	Op Sys	Base Product Number
HP 9000/700	HP-UX 9.0	B3478AB
HP 9000/800	HP-UX 9.0	B3473AB

HP-UX FORTRAN 90 Compiler

With the latest HP-UX FORTRAN/9000 compiler products, HP is pleased to announce the implementation of the FORTRAN 90 standard. The phased implementation of FORTRAN 90 features protects your investment in old FORTRAN code and delivers key FORTRAN 90 functionality now. FORTRAN 90, a superset of FORTRAN 77, is the the only international ISO standard (ISO/IEC 1539:1991), and will comply with ANSI standards as measured by NIST validation. HP is among the industry leaders in adopting the FORTRAN 90 standard.

New to the Series 800 is the optimizing preprocessor. This is the same preprocessor included with recent versions of the Series 700 HP-UX FORTRAN/9000 compiler product. The newest revision of

the HP-UX FORTRAN/9000 compiler has been specifically tuned for the latest PA-RISC machines. Programmers can specify the optimization level that best meets desired trade-offs between compile time, code size, and execution performance.

In addition to standards, HP's FORTRAN/9000 emphasizes performance and portability. FORTRAN on PA-RISC is for the power user. HP continues to improve its industry-leading compiler optimizations, while providing new features that ease FORTRAN ports to PA-RISC from Sun, DEC, IBM, and Cray.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B2372A
HP 9000/700	HP-UX	B2408A
HP 9000/800	HP-UX	B2409B

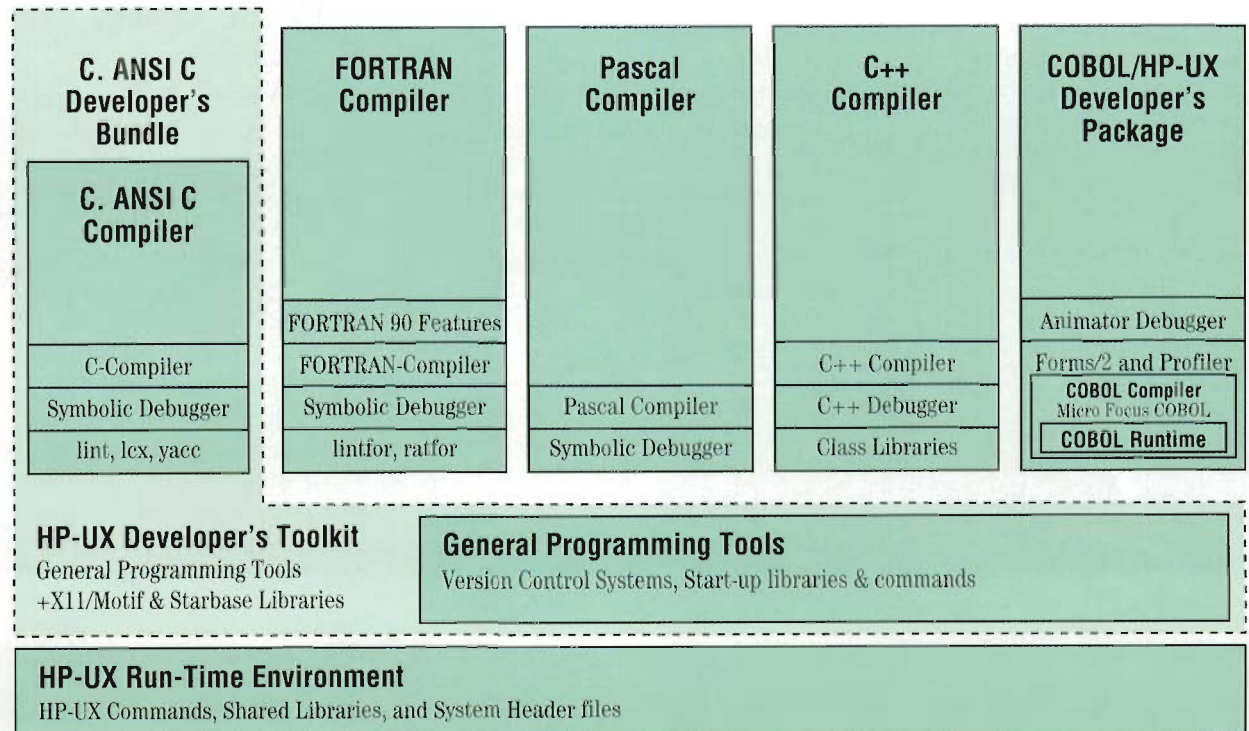
HP-Pascal Compiler

Combining Pascal with HP-UX on HP 9000 computers allows developers to produce ANSI/IEEE reliable, high performance applications.

This Pascal language compiler is a conforming superset of the ANSI/IEEE 770.97-1983 and ISO7185 standards. With tools such as the symbolic debugger, developers have a comprehensive solution for effective Pascal application creation.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B2373A
HP 9000/700	HP-UX	B2414A
HP 9000/800	HP-UX	B2415A

Development Tools Product Structure

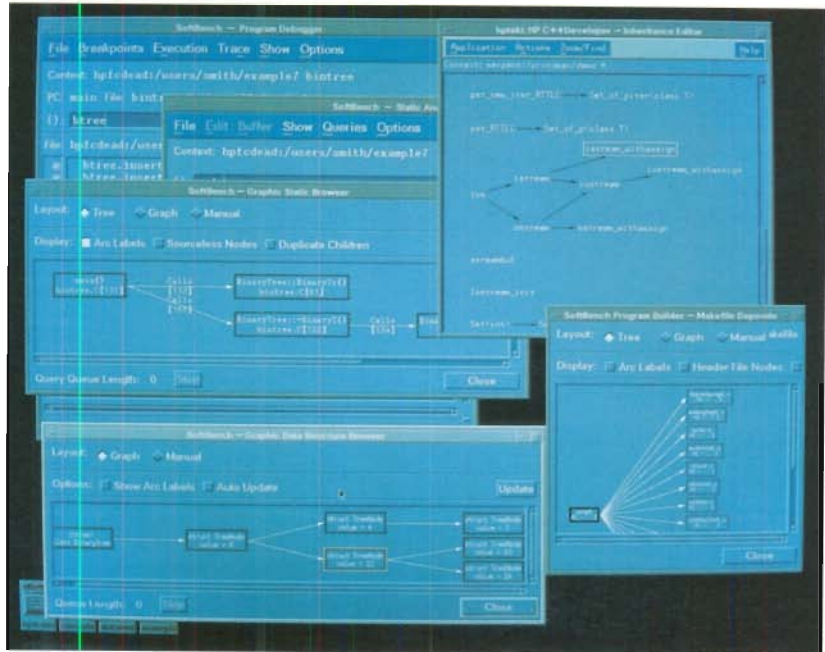


Environments ahead of their time ...for developers ahead of theirs

C++ SoftBench 3.2 and SoftBench 3.2

Get HP's newest code construction environments for your next C, FORTRAN, Pascal, and C++ software projects: C++ SoftBench 3.2 and SoftBench 3.2. These X-Window-based environments feature a robust set of software development tools integrated with the de facto standard SoftBench framework. The framework is an extensible tool integration platform that offers maximum inter-tool communication and customizability. These two environments are especially vital in speeding team development across multivendor, distributed computing environments. Both C++ SoftBench 3.2 and SoftBench 3.2 include the following new program construction tools:

- Static Graph Browser
- Dependency Browser
- Data Graph Browser
- SoftVi Editor
- Emacs Integration Package
- File Compare and Combine Tool
- Message Connector



C++ SoftBench 3.2 includes tools that help you visualize your application. Shown here are the C++ Developer Class Inheritance Editor, Static Graph Browser, Dependency Browser, and Data Browser.

C++ SoftBench 3.2

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B2617B
HP 9000/700 & 800	HP-UX	B2617B
Sun SPARC	Solaris 2.2	B2617B
Sun SPARC	SunOS	B2617B

SoftBench 3.2

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B3560BB
HP 9000/700 & 800	HP-UX	B3560BB
Sun SPARC	Solaris 2.2	B3560BB
Sun SPARC	SunOS	B3560BB



SoftBench 3.2 and C++ SoftBench 3.2 Evaluation Kit

Try before you buy! Call 800-845-0070 to obtain a FREE SoftBench Evaluation Kit. You will be able to use fully functional SoftBench 3.2 and C++ SoftBench 3.2 software for up to 60 days with no obligation whatsoever. Evaluation Kits are currently available for HP Apollo Series 700 running HP-UX 8.07 and 9.0 and for Sun SPARCstations running SunOS 4.1.1, 4.1.2, and 4.1.3.

CALL 800-845-0070
to find out how you can get your
FREE SOFTBENCH EVALUATION KIT!

C++ Developer 3.2

If you'd like to purchase the class construction and graphical browsing tool that comes with C++ SoftBench 3.2 all by itself, order C++ Developer 3.2. It is a convenient, easy-to-use functionality set that helps you create and maintain sophisticated C++ object-oriented programs. C++ Developer 3.2 also graphically browses and edits classes and class inheritance hierarchies. It also checks consistency and design rules on the program as it is being edited. C++ Developer 3.2 supports a new key feature of C++ 3.2—templates, which improve the ability to build

re-usable libraries. With C++ 3.2, you'll also be able to work with nested classes, which deliver the flexibility to define classes within classes. It also provides exception handling, which significantly reduces the size and complexity of applications by eliminating the need for testing for exceptions explicitly. C++ 3.2 is based on the AT&T C++ industry standard.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B1694B
HP 9000/700	HP-UX	B2406B
HP 9000/800	HP-UX	B1696B

SoftBench Encapsulator 3.2

Use SoftBench Encapsulator 3.2 to extend and customize your SoftBench development environments through integration of HP, customer, or third-party tools. The SoftBench framework allows newly encapsulated tools and existing tools to share a common user interface and communicate with each other via the Broadcast Message Server, the framework's control integration technology.

Tools that have been developed with a textual or a programmatic interface can be encapsulated with no source code modification. Encapsulator 3.2 features:

- The ability to encapsulate window-oriented programs, such as vi and database forms, into development environments via a new terminal object
- An on-line Encapsulator tutorial that speeds learning time

- Access to SoftBench distributed computing services, which hooks developers into network transparent data display and execution facilities
- The ability to define your own help text

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B2606B
HP 9000/700 & 800	HP-UX	B2606B
Sun SPARC	Solaris 1.0	B2606B
Sun SPARC	Solaris 2.2	B2606B

UIM/X 2.5

Developing graphical user interfaces becomes straightforward, logical, efficient, and fast with UIM/X. It's your direct path from concept to completion in GUI development. That's because UIM/X is an easy-to-use GUI builder that allows programmers to build OSF/Motif interfaces without being distracted or delayed by

the intricacies of Motif programming. It lets developers define the appearance of an application quickly and test behavior interactively with the internal C interpreter. It automates the task of generating C code and transparently links the processes of building, editing, and navigating interfaces.

UIM/X 2.5

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B1183B
HP 9000/700	HP-UX	B1183B

UIM/X Library Source Code

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B1188B
HP 9000/700	HP-UX	B1189B



SynerVision for SoftBench

SynerVision for SoftBench is a process engine that helps teams build computer-based process environments. With SynerVision, environments can be implemented to help manage processes including those frequently found in software development, business, engineering, and manufacturing. The process definition feature allows companies to model specific user processes to protect investments. Its process visibility feature means

that activities, tasks, and dependencies of each team member are visible, resulting in less errors and rework, and increased collaboration and teamwork.

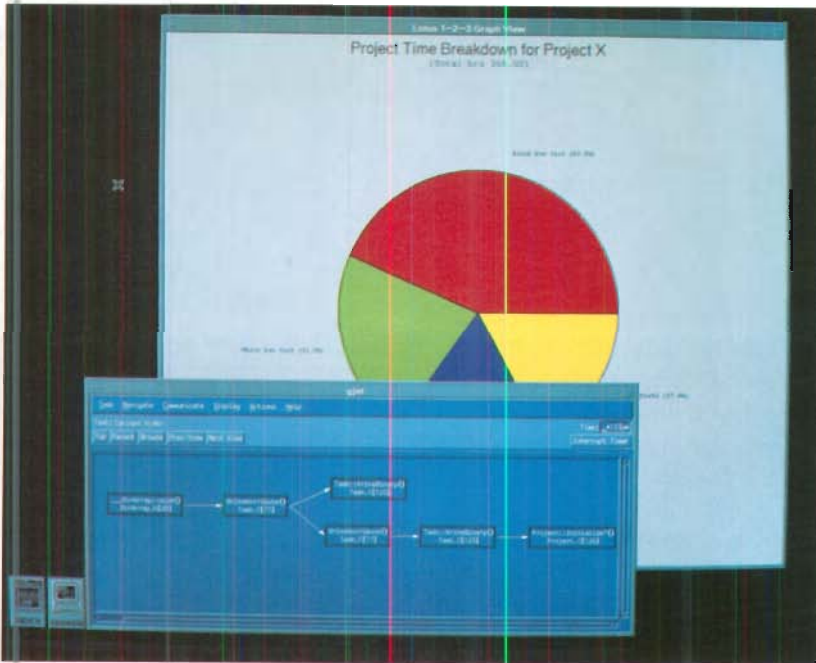
Since it is integrated with the SoftBench framework, the process environment and other tools communicate within the same SoftBench development environment.

SynerVision/ChangeVision Bundle

Available on: Systems	Op Sys	Base Product Number
HP 9000/700 & 800	HP-UX	B3260A
Sun SPARC	SunOS	B3260A

SynerVision

Available on: Systems	Op Sys	Base Product Number
HP 9000/700 & 800	HP-UX	B3261A
Sun SPARC	SunOS	B3261A



ChangeVision can assist you at every point in your process - whether you're debugging new code, fixing post-release bugs, adding new features, or porting to new platforms.

ChangeVision for SoftBench

ChangeVision for SoftBench is a powerful process management environment built on the SynerVision process engine. It requires the SynerVision process engine and is comprised of a metrics tool, a reporting tool, a standard interface to a change request (defect tracking) system, and process templates that provide HP's change management and soft-

ware release process expertise. The interface provides access to detailed information about change requests or defects that can be synthesized with data from other tools to provide aggregate metrics. The change request process environment and other SoftBench tools work together in the same user-friendly environment.

Available on: Systems	Op Sys	Base Product Number
HP 9000/700 & 800	HP-UX	B3262A
Sun SPARC	SunOS	B3262A

HP ALLBASE/4GL

This development language is specifically tuned for unbeatable performance with HP ALLBASE/SQL. HP labs have found it to be the fastest 4GL ever benchmarked on the HP ALLBASE/SQL database; in tests it outperformed the average 4GL by over 60 percent. The HP ALLBASE/4GL tool set allows you

to develop applications simply by specifying how they are to appear to the end user, without concern for detailed coding. You retain complete control over this specification process, but the HP ALLBASE/4GL Developer Version product provides everything required to run developed applications.

HP ALLBASE/4GL

System	Developer Version	Runtime Version	HP ALLBASE/SQL/4GL/QUERY Bundle
HP 9000			
Series 300-340	92471A	92470A	Not Applicable
Series 350-380	98112A	98118A	Not Applicable
Series 400	B2332A	B2333A	Not Applicable
Series 700	B2342A	B2343A	Not Applicable
Series 800	B2962A	B2963A	B2964A

HP ALLBASE/Query

Hewlett-Packard's query management facility enables both novices and advanced users to generate ad hoc queries and reports on relational databases maintained under the HP ALLBASE data management system. Novice users become immediately productive because they are prompted by

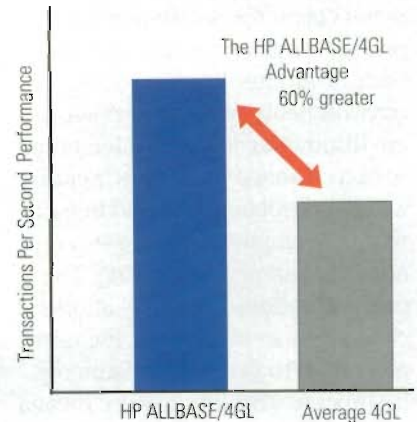
screen menus—without needing to know the database structure. Additional capabilities are provided to directly enter HP ALLBASE/QUERY and HP SQL commands. All reports, queries, and sequences of commands can be saved as scripts for future use.

HP ALLBASE/SQL

HP ALLBASE/SQL is HP's Relational Database Management System offering. Based on industry standard SQL, ALLBASE/SQL is a fully integrated, powerful information management system that combines high performance with the productivity advantages of a relational database. HP ALLBASE/SQL's high performance coupled with its low cost of ownership results in leading system level price/performance.

Available on: Systems	Op Sys	Base Product Number
HP 9000/700	HP-UX	B2451A
HP 9000/800 807, 808, 815, 817, 822, 827, 837	HP-UX	92684A
825, 832, 835, 842, 847, 857, 867, 877, 840, 845, 852, 887, 897	HP-UX	92685A
850, 855, 860, 865, 870/100-400, 890/1-4	HP-UX	92683A

Unbeatable Performance



Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B3151A
HP 9000/700	HP-UX	B2327A
HP 9000/800	HP-UX	B3148A
HP 9000/700 bundle	HP-UX	B3491AA
HP 9000/800 bundle	HP-UX	B3492AA



Find information about this training course on pages 126 to 128:

- HP ALLBASE/SQL on HP-UX and MPE/IX

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

HP OpenView Network License System



HP OpenView's Network License System

HP OPENVIEW (NetLS) is a software toolkit that enables application vendors and end users to match software costs to actual usage. It manages, enforces, and monitors application usage and usage policies across a distributed network.

HP OpenView 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.



Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B2677A
HP 9000/700	HP-UX	B2144A
HP 9000/800	HP-UX	B2678A

HP OpenView NetLS enables workgroups to purchase and share software resources more effectively.

NCS/NIDL for HP-UX and Domain/OS

Network Computing System (NCS) software allows your customers to operate more efficiently in a multi-vendor computing environment. NCS is a keystone to new industry standards for distributed computing. NCK is the run-time portion of NCS. It contains the library func-

tions 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.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B1020A
HP 9000/700	HP-UX	B2674A
DN Series 680X0	Domain	LA400BAD
DN Series 10000	Domain	LA400BBB

HP Task Broker

HP Task Broker is a software tool for distributing computational tasks across a group of heterogeneous compute servers. It provides the user with the ability to transparently select and execute a compute job on the most appropriate and available compute server. It

offers more efficient access to compute resources, improved productivity and products, greater flexibility and ease of accessing multiple servers, and a means of solving the heterogeneous interoperability problem.

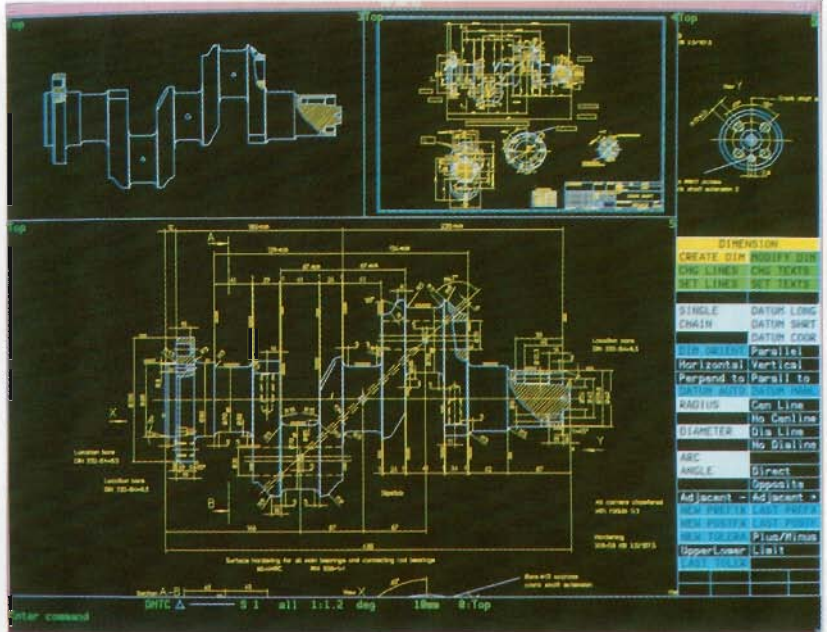
Description	Product Number
Task Broker 10 system license	B1740L
Task Broker 50 system license	B1741L
Task Broker Site License	B1742L
Task Broker Media and Documentation	B1732B

Breakthrough technology from HP

HP PE/ME10

HP PE/ME10 is the proven 2D design and drafting solution that combines traditional drafting techniques and powerful design capabilities to accelerate and simplify the generation of unambiguous, precise, and complete drawings. HP PE/ME10 offers interactive dimensioning and text capabilities to help designers create detailed, accurate documentation. Available on HP 9000 Series 300/400/700 with CRX, CRX24, CRX24Z, Sun SPARCstations, and Vectra 386 and 486.

Available on: Systems	Base Product Number
HP	B1310F
Sun	B1310R
DOS	B1314E



HP PE/ME 10

HP PE/WorkManager

HP PE/WorkManager, the powerful, yet simple to learn and use enterprise-wide data and workflow management system, increases accessibility and security of product data, facilitates the development and manufacturing process, and supports the concept of concurrent engineering. By bringing both the content and the flow of product data together into a single secure location, HP PE/WorkManager ensures the appropriate distribution of information. Supported on HP 9000 Series 300/400/700/800 (server), with X-Windows, Sun SPARC, and Vectra PCs.

Available for:	Base Product Number
Server	B2980A
Client	B2981A
AIP	B2982A



HP PE/WorkManager

HP ME30

HP ME30 is an integrated modeling, design and drafting system. It offers an intuitive approach to solid modeling and provides a smooth progression from 2D design to 3D modeling. HP ME30 provides an opportunity to design efficiently in 3D. Its user interface is logical and easy to learn. The

combination of tablet and screen menus and the use of technology and terminology familiar to mechanical engineers offers each access to system functions. Available on HP 9000 Series 300/400/700 workstations with CRX, CRX24, CRX24Z, CRX48Z.

Base Product Number**B1330F**

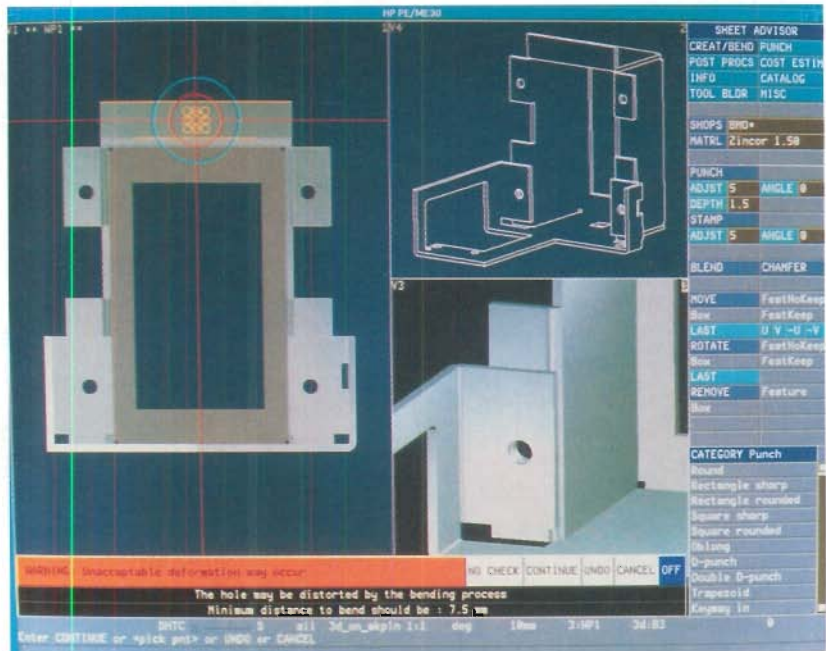
HP PE/SheetAdvisor

"If you design sheet-metal parts you should be using HP PE/SheetAdvisor."

This powerful solution is a leap ahead thanks to the on-line guidance which keeps you aware of manufacturability issues as you design. Dedicated feature-based commands, design guidance, 3D solids clarity and automatic generation of the flat contour, all contribute towards successful sheet metal design work the first time.

HP PE/SheetAdvisor supports UNIX-system based platforms from Hewlett-Packard. Available on HP 9000 Series 300/400/700, with CRX, CRX24, CRX24Z, and CRX48Z.

Base Product Number**B3006**



HP PE/SheetAdvisor

HP PE/SolidDesigner

HP PE/SolidDesigner is a high-performance, intuitive 3D design system that ensures interactive performance to capture complete, accurate, and unambiguous description of the design model. It also accelerates product design by improving the process of capturing, refining, and detailing designs. HP PE/SolidDesigner is based on a new user interaction methodology, dynamic modeling, which provides direct interaction with tools and design detail without being constrained to any particular approach. Supported on HP 9000 Series 700, with CRX, CRX24, CRX24Z, and CRX48Z.

Base Product Number**B3000A**



HP PE/SolidDesigner

It's picture-perfect

HP ARTCore

HP ARTCore means photo-realistic accuracy for your applications. With HP ARTCore, you'll enjoy simpler access to advanced, yet higher performance rendering tools than ever before. HP ARTCore lets you start developing applications that use techniques like radiosity, ray tracing, and texturing mapping that were previously out of reach. As a platform independent library of high performance tools, HP ARTCore can be used on HP and non-HP platforms, allowing you to create applications for multiple platforms. Contact your local sales representative for licensing information for HP ARTCore for non-HP workstations.



CHAPEL AT RONCHAMP — Created using HP ME30 software and rendered with HP ARTCore software on HP Apollo workstations.

HP ARTCore Development Library

Available on: Systems	Op Sys	Base Product Number
HP 9000/700	HP-UX	B2930A

HP ARTCore Run-time Environment

Available on: Systems	Op Sys	Base Product Number
HP 9000/700	HP-UX	B2931A

PowerShade

PowerShade, HP's 3D Surfaces Software, enhances the performance and functionality of your existing graphics hardware. PowerShade software enables 3D visualization on any HP Apollo Series 700 color workstation. Through PowerShade, even entry-level systems can access high levels of graphics functionality such as 3D dynamic lighting and shading. High-performance workstations obtain an even broader and more flexible set of visualization capabilities. Supported on the Series 700 only.

Available on: Systems	Op Sys	Base Product Number
HP 9000/700	HP-UX	B2153C

HP-PHIGS

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.



HP-PHIGS: Full performance through standards

HP-PHIGS Development Library

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B1759C
HP 9000/700	HP-UX	B2363D

HP-PHIGS Run-time Environment

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B1685C
HP 9000/700	HP-UX	B2364D

Advance to the head of the class with HP desktop integration software

Hewlett-Packard makes sure you can get the most from your system with the most easy-to-use software. HP's AdvanceLink family and AdvanceMail desktop integration products allow you to use your Vectra or other PC compatible system with efficiency and minimized expenses.

HP AdvanceLink for DOS

This is the original and best known member of the AdvanceLink family. It provides monochrome and color graphics terminal emulation in addition to blockmode alpha-numeric emulation, file transfer and task automation.

D2102B.....\$385

Additional License of AdvanceLink for DOS

Requires prior purchase of D2102B.

D2112B.....\$340

HP AdvanceLink/MS-Windows/HP NewWave

HP offers you the choice of installing AdvanceLink either as an MS-Windows or a native HP NewWave application, from a single set of disks. The multi-tasking capability of MS-Windows permits you to establish multiple simultaneous host connections over serial or LAN links.

Microsoft's DDE protocol and AdvanceLink's powerful "TermTalk" command language let you integrate host applications with your PC. Within HP NewWave additional user interface and task automation functions are enabled.

D2104C.....\$340

Additional License of AdvanceLink for Windows/New Wave

Requires prior purchase of D2104C.

D2114C.....\$300

HP AdvanceMail

With HP AdvanceMail, you can create messages, read incoming messages and print them without being connected to the server. So, whenever connections are costly or time-consuming, you can be independent of the server for everything except sending or receiving mail. AdvanceMail provides transfers at preset times so you mail when it is convenient and cheapest.

D2101B.....\$440

Additional License of AdvanceMail

Requires prior purchase of D2101B.

D2111B.....\$390

Helpful Hints for Ordering

When you call to order software, please briefly review your needs with us. We want to make certain that you order only what you need. Let us know what you expect from the product.

- We can help you verify that your PC models are supported by a product and that you have the memory and/or disk drives which the product requires.
- It is also important to make sure that you have the required software versions and that your current connection methods are supported by the product.

"We make the best stuff. Nobody can take care of your needs like Hewlett-Packard and HP DIRECT."


Alex Jones
Customer Representative



X A revolutionary new communication tool

HP SharedX

If a picture is worth a thousand words, imagine showing your computer screen to someone across country 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.

HP SharedX version 2.X License to Use

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B2305L
HP 9000/700 & 800	HP-UX	B2305L
HP 9000/700/RX	HP-UX	B2305L

HP SharedX Media and Manuals

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400 & HP 700/RX w/S300/400 host	HP-UX	B2306A
HP 9000/700 & HP 700/RX w/S700 host	HP-UX	B2307A
HP 700/RX w/HP 9000/800 host	HP-UX	B2828A

FAX power in your workstation and systems

HP 9000 FAX for Series 700 and 800

HP 9000 Series 700 and 800 FAX is the computer based client/server fax software that puts comprehensive fax functionality right in your system. With this product, you'll enjoy all the conveniences of fax technology while eliminating the headaches.

Imagine not having to wait at a fax machine or putting up with busy signals! Better yet, imagine high quality, easy to read messages displayed on your workstation or

sent to your printer for hard copy output. Also, you can feel more secure knowing that your incoming fax messages are routed directly to your system. And HP 9000 FAX is easy to integrate into your existing environment.

Available on: Systems	Op Sys	Base Product Number
HP 9000/700	HP-UX	B2818A
HP 9000/800	HP-UX	B2819A

Features

- Client/Server configuration provides multi-user availability for the cost of one server
- E-mail interface allows access to PCs and terminals
- Display-based markup eliminates the need to print out the fax
- Easy integration for third party application users
- Rework of documents can be eliminated since you can grab any image on the display and fax it
- Hardcopy faxing is executed via your scanner
- Multiple fax modems can be supported

MPower taps the advantages of collaborative multimedia

HP MPower integrates collaborative multimedia technologies with HP VUE 3.0 to create a media-enriched communications environment for Series 700 family workstations. This environment brings dispersed work teams together to enable more efficient decision making.

The facilities integrated into MPower are:

- HP VUE 3.0 graphical user environment
- FAX software
- Scanner software to control a ScanJet IIC color scanner (see page 105)
- Image viewer
- Audio editor with a stereo headset and stereo microphone
- RasterOps VideoLive Card (see page 32) and software for live video in a window
- Whiteboard for creating simple drawings or sketching on existing images
- Electronic mail of messages with embedded multimedia components
- HP SharedPrint (see page 98) for processing print jobs and spooling print jobs to the printer
- HP SharedX (see page 74) for real-time collaboration on a network

All of these components are instantly accessible from a media panel in HP MPower. HP VUE is used to provide quick and easy access via a mouse-driven, icon based, drag-and-drop model of interaction.

Expanding your world to the standards-based HP-UX operating system

HP ADVISE 1.1

If you are a software developer with your eye on standards-compliance, you should get your hands on HP ADVISE. HP ADVISE is a powerful migration tool that profiles your porting difficulty at the outset of your migration effort for both Domain and HP-UX applications. More importantly, HP ADVISE makes specific recommendations on what to change in your code while porting, making sure that your target environment will comply with existing standards.

ADVISE works with C, FORTRAN or Apollo Pascal source code which is being ported from a Domain/OS or HP-UX system. Hints are given to move source to any of the following standards by user's command-line options:

- ANSI-C
- POSIX 1003.1-1990
- XPG3
- FIPS 151-1
- OSF Application Environment Services (AES)
- OSF/1 Operating System Calls specifications

Supported software:

ADVISE 1.1 requires DOMAIN/OS release SR10.3.5 or SR10.4, or HP-UX release 8.07 or 9.0 for scanning source code.

SR10.4 and/or HP-UX 9.0 is required for compiling code modified to be standards-compliant.

ADVISE is intended for source code written to be compatible with the following compilers:

- Domain C compiler, version 6.8 (ANSI-C), 6.9 (all other standards)
- Domain FORTRAN compiler version 10.8 (ANSI-C), 10.9 (other standards)
- Domain Apollo Pascal compiler, version 8.8 or 8.9
- HP-UX C compiler compatible with HP-UX 8.07 or HP-UX 9.0
- HP-UX FORTRAN compiler compatible with HP-UX 8.07 or HP-UX 9.0
- HP-UX Apollo Pascal compiler

In order to run converted code in a standards-compliant environment, users will have to compile and run on Domain/OS SR10.4 or greater, or HP-UX 8.07 or later (HP-UX 9.0 or later for full OSF/AES compliance).

MPower is sold as two products: a client and a server. Eight to twelve entry-level workstations or X terminals can be configured as low-cost clients on an MPower server. Each MPower server includes a license for two devices.

MPower Ordering Information

Description	Product Number	Price
MPower Server	B1195A	\$1,495
MPower Client	B1194A	495

Note: To fully utilize the MPower environment, additional products are necessary to support some of the functions integrated into MPower. These products are a fax modem to support all clients connected to the server, DeskScan/UX for scanning support, and the RasterOps VideoLive Card in the EISA slot of the client system to add video.

Features

- **The Source Code Scanner.** This toolset consists of executables to scan C, FORTRAN and Domain Pascal source code, a set of databases containing hints which flag non-standard system and library calls, and documentation. It performs a meticulous check of your code and recommends changes for standards-compliant calls.
- **The Open-Systems Programming Guide.** A third party book which offers programming techniques and suggestions for writing to POSIX compliant programs. This guide is rich with advice to make your porting effort quicker and more efficient.
- **The GPR-to-X Conversion Utilities.** This toolset consists of source code and Makefiles for building the GPR-to-X Conversion Library, a book on porting code from GPR to X, documentation on building and using the GPR-to-X Conversion Library and release notes. Specific advice is offered for Domain GPR calls that do not have a one-to-one correspondence with standard X calls.

Available on: Systems	Op Sys	Base Product Number
HP 9000/400	HP-UX	B2897A
HP 9000/700	HP-UX	B2898A
HP 9000/400	Domain	LAC7ABLD
DN Series 680x0	Domain	LAC7ABLD
DN Series 10000	Domain	LAC7ABLD

DMX—Domain Display Manager on X Windows

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. 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. 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!

Available on: Systems	Op Sys	Base Product Number
HP 9000/400	HP-UX	B2896A
HP 9000/700	HP-UX	B2895A
DN Series 680X0	Domain	LAC6ABAD



DMX is an X-Window based implementation of some key features found on the Domain Display Manager.

Features

- 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

ATR networking for your Series 700 workstation

Apollo Token Ring Kits

If you would like to migrate your ATR networking from Domain systems to Series 700 workstations, you need HP's Apollo Token Ring kits. These kits for HP-UX HP Apollo 9000 Model 715/33, 715/50, 720, 725/50, 730, 735, 750, and 755 workstations let you plug into ATR networks. An Ethernet connection is built into each Series 700 workstation. This implementation of ATR provides support for standard TCP/IP-

based communications with added Domain-like features. That includes full support for Icnnode, bldt, ctnode, and uctnode Domain commands. This means that you can add performance to your

migration projects. The ATR controller is a reliable 16-bit AT-bus card that plugs directly into the EISA backplanes of an HP-UX Series 700 workstation.

Apollo Token Ring Ordering Information

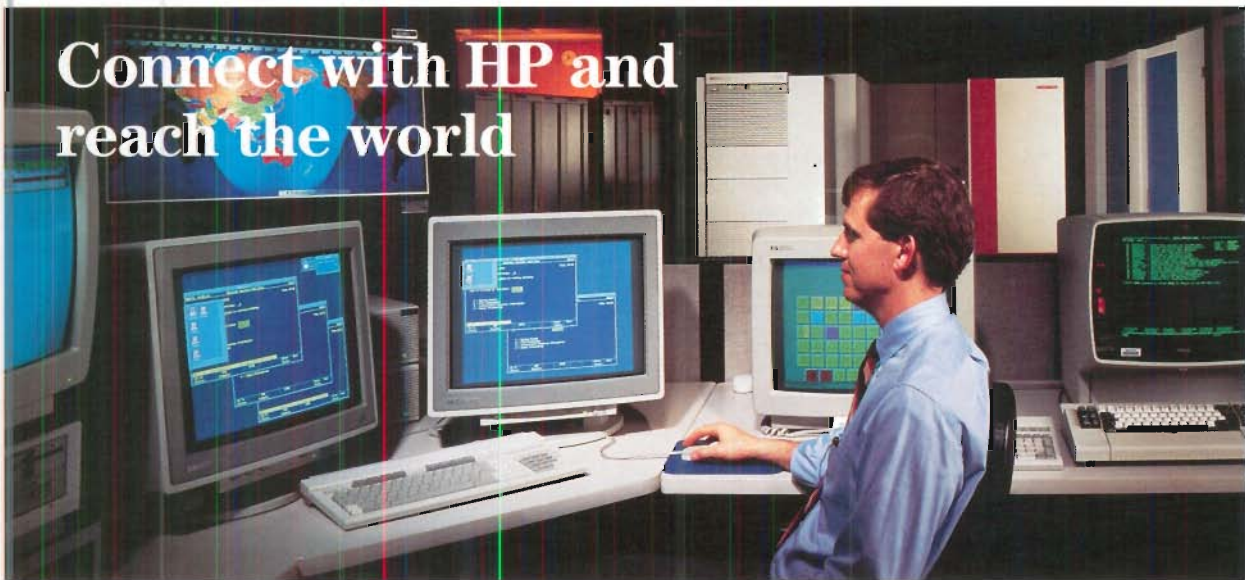
Description	Product Number	Price
ATR with EISA for Model 720 (includes EISA upgrade kit, ATR/PCI card, ATR software driver, ATR customer documentation)	A2545A	\$2,095
ATR for Models 715/33, 715/50, 725/50, 730, 735, 750, and 755 (includes ATR/PCI card, ATR software driver, ATR customer documentation)	A2544A	1,435

Passwd Etc.

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.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B2679A
HP 9000/700	HP-UX	B2681A



The HP 9000 Series are designed to communicate in all your environments. By having standards based products which run across the entire line of scalable HP 9000 Servers, HP networking provides seamless integration from the desktop to the data center.

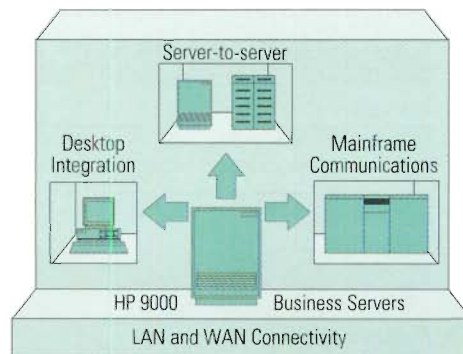
Strong network management capabilities surround these environments and enable you to manage your multivendor networks.

Server-to-server Integration

These products enable integration with other UNIX and proprietary midrange systems such as the DEC VAX. TCP/IP and OSI are the common protocols used in this environment. For assistance in server-to-server integration, call our support engineers.

Desktop Integration

These products enable the Series 800 to serve different desktop devices such as PCs, terminals, and UNIX workstations.



Mainframe Communications

These products integrate the HP 9000 into IBM mainframe environments using protocols such as SNA and BSC. This also allows integration with IBM midrange systems such as the AS/400 using these protocols. For assistance in configuring your HP-UX systems in an IBM environment, call our support engineers.

WAN and LAN Connectivity

These products provide basic connectivity in both LAN and WAN environments.

Helpful Hints for Ordering Networking Products

- We will briefly review your networking needs so we can make certain you are ordering only what you need. Also, let us know what you expect from this solution.
- What is your current configuration? Tell us about your computer systems, their operating system versions and peripherals, such as printers.

LAN connectivity

LAN/9000 Link

The LAN/9000 Link provides the hardware and software to connect an HP 9000 computer to a multivendor LAN. The link includes the hardware interface card and the device driver, network transport, network management, and C2 level security software. The link connects to either Ethernet LANs, IEEE 802.3 LANs, or both. The network software includes the industry transport standard TCP, UDP, IP, and SLIP protocols, along with the ARPA, NFS and BSD sockets API. Users may write their own software to access the network via an API, or they may purchase one of the higher level networking services (ARPA, NFS, NCS, LM/X, NS) provided by Hewlett-Packard and supported over the LAN/9000 Link.

HP FDDI/9000

FDDI (Fiber Distributed Data Interface) is the high-speed local area network standard defined by the ISO standard 9314. It offers greater capacity and distance than any existing LAN and your HP system can take advantage of FDDI with HP FDDI/9000.

In an FDDI network, a fiber optic token ring LAN is arranged in a dual counter-rotating ring, fault tolerant topology, offering 100 Mbps, with a maximum length of 2 km between stations, up to 500 stations per ring and a 100 km maximum ring circumference.

HP FDDI/9000 provides Series 800 and Series 700 computers with a Single Attached Station (SAS) connection to the FDDI network.

Series 700 LAN/9000 Link Ordering Information

Description	Product/ Option Number	Price
EISA/LAN 9000: Provides second Ethernet LAN. Includes LAN interface card, built-in ThinMAU, and BNC "T" connector.	25567A	\$1,465
Add ThickMAU transceiver, tap, and 6-meter AUI cable.	740	415
Add EtherTwist transceiver, and 1-meter AUI cable.	840	205

Series 800 Process Software Options

Available on: Systems	Op Sys	Base Product Number
HP 9000/800 excluding Model 8x7s, F, G, H, & I Servers	HP-UX	36967A*
HP 9000 S8x7s, F, G, H, & I Servers	HP-UX	J2146A*

*Hardware option must be purchased separately.

Series 700 HP FDDI/9000 Ordering Information

Description	Product Number	Price
EISA/FDDI: Includes interface card, driver software on 4mm DAT, license to use, and installation documentation.	J2156A	\$4,720

Series 800 HP-PB/FDDI Single Attach Adapter

Available on: Systems	Description	Base Product Number
HP 9000/800	HP-PB/FDDI Single Attach Adapter	J2157A



- HP-UX Network Administration:
LAN Link. ARPA/Berkeley,
NFS, NIS, and Diskless

LAN connectivity

HP Token Ring/9000

HP Token Ring/9000 provides all the necessary hardware to interface between an HP 9000 computer and a Token Ring Local Area Network. Also included in this link product is networking software corresponding to Layers 2 through 5 of the Open Systems Interconnection (OSI) Reference Model and node management software.

Users can choose to write their open user software to access Berkeley Sockets software provided, or choose one of the

higher level networking software applications provided by Hewlett-Packard.

HP Token Ring/9000 Ordering Information		
Description	Product Number	Price
Series 700: Includes an IEEE 802.5 token ring EISA card and link software	J2165A	\$1,675
Series 400 and DN Series (Domain OS only): Includes Apollo Token Ring network controller board and installation documentation.	A-NET-ATR	1,435

Series 800 Ordering Information		
Available on: Systems	Description	Base Product Number
Model 8x7, F, G, H, I, and 890	IEEE 802.5 Token Ring 9000	J2166A/20N

WAN connectivity

HP X.25/9000 Link

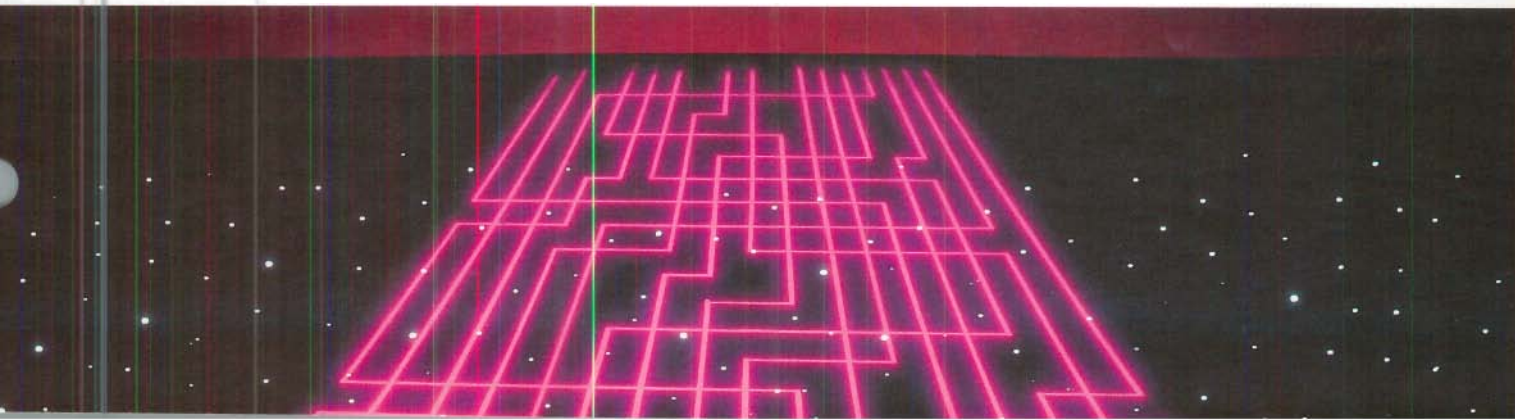
The HP X.25/9000 allows wide area connectivity on public and private X.25 networks. Multivendor X.25, HP 9000 to HP 9000, and HP 9000 to HP 3000 communication is available.

The HP X.25/9000 provides PAD emulation, UNIX to UNIX system copy, and remote PAD printing services. It complies with the CCITT 1980 and 1984 recommendations and ensures a standards-based offering.

The HP X.25/9000 Link product includes an X.25 networking card, software, documentation, and the necessary cables for connection to the modem.

HP X.25/9000 Link Ordering Information		
Description	Product/ Option Number	Price
Series 300/400: HP X.25/9000	36941A	\$3,245
Delete software	1AW	(590)
Series 700: HP X.25/9000	J2159A	4,410
Cable Option (order only one)		
RS-232-C cable	1AT	N/C
V.35 cable	1AU	N/C
Delete software	1AW	(1,200)

Series 800 Ordering Information		
Available on: Systems	Description	Base Product Number
HP 9000/800	X.25 Link/9000	36960A



Communicate across environments

HP PC NS/ARPA Services for DOS, NetWare and LAN Manager

This product provides your PC running MS-DOS, LAN Manager, or NetWare, with Network File Transfer (NFT), Virtual Terminal Access, and Network Interprocess Communication (NETIPC) to HP midrange servers.

It also allows a PC to communicate in a multivendor environment using the services defined by the Department of Defense Advanced Research Project Agency (ARPA) and Berkeley Software Distribution (BSD) UNIX system.

This product includes a one-user license and manuals along with the software.

J2246A\$395

NetWare 3.11 for HP-UX

NetWare for UNIX on the HP 9000 Series 700 and Series 800 provides shared file and print services, as well as server based applications, to desktop clients running MS-DOS, MS-Windows,

or OS/2 environments. It provides a transparent environment to Novell NetWare clients accustomed to a standard NetWare PC-based server, plus all the power and functionality of a UNIX server.

Available on: Systems	Op Sys	Base Product Number
HP 9000/700	HP-UX	J2239A
HP 9000/800	HP-UX	J2240A

Network Services

Network Services/9000 (NS/9000) provides engineering and manufacturing environments with the ability to communicate in a multivendor environment. It supports communication between the HP 9000 Series 800, 700, 600, 400, and 300; the HP 1000 A-Series, and HP 3000 over a local area or X.25 net-

work. Users can easily access remote systems while error checking is performed automatically. The NS/9000 product requires the LAN/9000 Series 800/600, Series 700, Series 300/400 Link product, or the X.25 Link product. The Token Ring and FDDI links are not supported with NS/9000.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B1012B
HP 9000/700	HP-UX	J2140A
HP 9000/800	HP-UX	B1029B

LAN Manager/U for HP-UX

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

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.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400 Version 1.x	HP-UX	B1003C
HP 9000/700 & 800 Version 1.x	HP-UX	B1011C
HP 9000/700 & 800 Version 2.x	HP-UX	J2256A

HP LAN Manager/U ver. 2.X Features

- Network file and peripheral sharing
- Sophisticated network administration and management tools
- Comprehensive printer management and print spooling
- Advanced security system
- Application Program Interfaces (APIs)

Server-to-server

HP FTAM/9000

This product is used for file transfer access, and management of files in OSI networks. HP FTAM provides an interactive interface for end-users and an Application Programmatic Interface (API) to allow application developers to create FTAM-based applications.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B1032A
HP 9000/700	HP-UX	J2163A
HP 9000/800	HP-UX	B1033A

HP OSI Transport Services/9000 (OTS)

This product provides the transport, session, and presentation layers of the OSI reference model. OTS/9000 also provides OSI network layer services over the X.25/9000, LAN/9000 Link, or FDDI. These layers supply the necessary foundation to run OSI services, such as MMS, FTAM, and X.400. These OSI products operate in

both a local area and a wide area network environment. By supporting international standards, HP's OSI products will operate in a multivendor environment.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	32069A
HP 9000/700	HP-UX	J2160A
HP 9000/800	HP-UX	32070A



Mainframe communication

HP-UX SNAplus3270

HP-UX SNAplus3270 allows interactive communications between an HP 9000 and an IBM System 370-compatible mainframe. HP terminals, monitors, and printers on the HP 9000 running SNAplus3270 emulate the functions of IBM 3278 terminals and 3287 printers.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	J2233A
HP 9000/700	HP-UX	J2227A
HP 9000/800	HP-UX	J2221A

HP-UX SNAplusAPI

SNAplusAPI includes LU 6.2 API which is a mapped conversation programmatic interface for developing applications for program-to-program communication. This allows development of applications that are distributed between an HP 9000 and either an IBM System 370 compatible mainframe or IBM peer systems such as the AS/400. SNAplusAPI also contains NetView API and LUA API.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	J2235A
HP 9000/700	HP-UX	J2229A
HP 9000/800	HP-UX	J2223A

HP-UX SNAplusLink

Provide the connectivity between an HP 9000 and an IBM System 370 or compatible mainframe. The SNAplusLink manages the SDLC line to the host and emulates the major features of an IBM 3274 cluster control unit using the lower four layers of SNA.

Available on: Systems	Op Sys	Base Product Number
HP 9000/700	HP-UX	J2226A
HP 9000/800	HP-UX	J2220A

SNAplus3179G

HP-UX SNAplus3179G allows graphics interactive communication between an HP 9000 and an IBM System 370 compatible mainframe.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	J2236A
HP 9000/700	HP-UX	J2230A
HP 9000/800	HP-UX	J2224A

HP-UX SNAplusRJE

This product provides batch data transfer between an HP 9000 computer and an IBM System 370-compatible mainframe. The HP 9000 running SNAplusRJE emulates a standard subset of capabilities of an IBM 3770 Communications Terminal.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	J2234A
HP 9000/700	HP-UX	J2228A
HP 9000/800	HP-UX	J2222A

Network Solutions

In touch with the world

"providing you with the industry's leading network solutions"

"We understand that your computer system can mean the difference between success and failure for your business. And we know that success is becoming more and more dependent on maintaining constant contact with the rest of the world. That's why we put so much effort into providing you with the industry's leading network solutions. With networking hardware and software from Hewlett-Packard, there are no locked doors!"



Diana Diffenderfer
 Order Management Representative



HP 3000 & HP 9000

HP Hardware

Take advantage of this wide range of networking products

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Everything you need for your Domain workstations and servers

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HP's high performance networking software

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HP Support

HP Support options can now be ordered with every product. For more information.....125

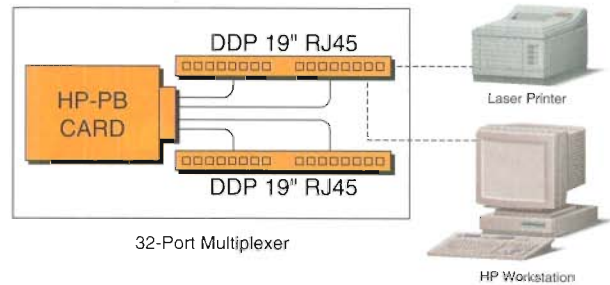
When ordering HP Support:

1. Choose the hardware support you want
 - Same-day response, 7 days a week
 - Four-hour response, Monday through Friday
 - Next-day response, Monday through Friday
2. Choose the software support you want
 - License-to-use updates
 - Telephone support
3. Call HP DIRECT and we'll make sure your support matches your requirements.



Control system traffic with HP multiplexers

The Multiplexer handles data transmission and control, inbound and outbound traffic flow control, and modem signals control. It is an intelligent and powerful I/O card which frees the system CPU of traffic overhead and guarantees data integrity with no character loss. A wide range of configurable transmission modes and formats permit hardwired and remote connection of various CRT terminals, printers, plotters, and other asynchronous devices.



HP 9000 Series 800

HP-PB 16-Port or 32-Port MUX-RS-232

EIA RS-232-C and V24/V28 compatibility for data only connections (no modem control). DB-25 female standard connectors are provided with these products. They feature line speed up to 38.4 kb/s.

J2092A (16-Ports).....	\$2,160
J2096A (32-Ports)	\$3,520

HP-PB 16-Port MUX-Modem

EIA RS-232-C and V24/V28 compatibility for connection of terminals, modems, or serial printers on DB-25 standard connectors. All lines support full-duplex modem control (8 signals per channel) which permits point-to-point dialup or leased line operation. It features line speed up to 19.2 kb/s, hardware handshake capability, and supports three types of modem control:

- Bell - 2 signals: DTR and DCD
- CCITT - 6 signals: DTR, DCD, DSR, RTS, CTS, and RI
- No protocol - user can handle 8 signals (4 input/4 output)

J2094A.....	\$2,630
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HP-PB 16-Port MUX-RS-423

EIA RS-423-A and V10 compatibility for data only connections. DB-25 female standard connectors are provided with this product. This allows the operation of RS-423 and RS-422 devices such as HP terminals (HP700/32, HP700/92, HP700/94, and HP 1291A), and HP LaserJet printers at distances up to 1,200 meters. Line speed up to 38.4 kb/s is featured.

J2093A.....	\$2,160
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16-Port MUX*

EIA RS-232-C and V24/V28 compatibility for connections of terminals, modems, or serial printers on DB-25 standard connectors. All lines support full modem control (8 signals per channel) which permits point to point dial-up or leased lines operations. It features line speed up to 19.2 kb/s and supports three types of modem control:

- Bell, 2 signals: DTR and DCD
- CCITT, 6 signals: DTR, DCD, DSR, RTS, CTS, and RI
- No protocol: Users can handle 8 signals (4 input/4 output)

98190A.....	\$6,050
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*For HP 9000 Models 825S, 835S, 845S, 850S, 855S, 860S, 865S, and 870/x00S Servers.

HP 9000 Series 300/4XXs

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 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.

98642A.....	\$705
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8-Port 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.

98638A.....	\$2,260
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Meet HP's new DTC family

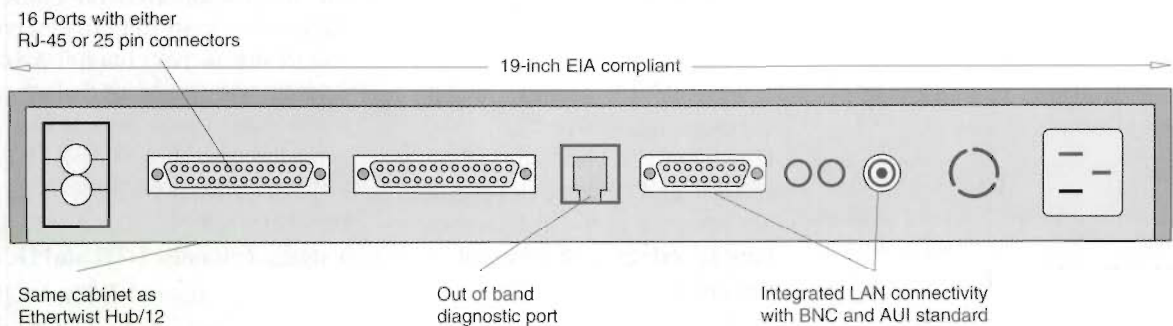
Hewlett-Packard presents a new generation of Datacommunications and Terminal Controller (DTC) products that deliver today's exciting new Terminal Server technologies at incredibly low prices. Our new DTCs are based upon a hardware architecture that yields the industry's best terminal server performance. We've made significant improvements to the DTC management software. And HP's revolutionary new Telnet/OLTP software gives you a 25-40% performance advantage over other UNIX systems.

We've made our new DTCs easier to configure, easier to order, and easier to install. If you've got questions about putting HP's new DTCs to work in your system, call HP DIRECT.



HP OPENVIEW

The HP OpenView (PC-based) DTC Manager software provides an easy-to-use graphical user interface to manage DTCs. It is possible to integrate other management applications of network elements (such as HP X.25 Switches & PADs) on the same OpenView Windows workstation. HP OpenView DTC Manager offers a means to configure DTCs for use to connect to HP 3000/900 or HP 9000/800 systems and to other systems in multivendor environments. It provides powerful network management features for complex network topologies.



DTC 72MX

The DTC 72MX is a high-port-count terminal server that offers industry-leading performance for large system configurations, as well as multi-system/multi-session connectivity. It provides up to 72 asynchronous connections (RS-232 direct, RS-232 modem connect, or RS-423 direct connect); up to three X.25 links supporting up to 256 virtual circuits at speeds up to 64 kbps; and/or one HP 3000 Telnet Access Board protocol converter.

Features

- LAN-based communication server supporting the standard Telnet-TCP/IP protocols plus HP optimized high performance protocols for demanding OLTP applications in

HP 3000/900 and HP 9000 environments

- Systems are accessed directly through system LAN links or through system asynchronous ports (via the extended switching configuration or back-to-back) for systems which do not implement Telnet-TCP/IP or the HP 3000/900 protocol

- Modular chassis compliant with the industry standard EIA 19-inch form factor
- Supports a mix of Asynchronous, X.25, and HP 3000 Telnet Access interfaces
- Provides up to 72 RS-232 direct or modem ports, or RS-423 direct ports

DTC 72MX Ordering Information

Description	Product/Option Number	Price
DTC 72MX Communications Server	J2070A(Z)	\$2,800
Replace 8 RJ-45 direct ports with 8 DB-25 modem ports	Opt UG5	300
Replace 24 RJ-45 direct ports with 24 DB-25 modem ports	Opt UG6	900
Configure with 24 RS-423 direct connect ports with RJ-45 connectors	Opt UG4	4,300
Racking kit for 1100 mm and 1600 mm computer rack	Opt 1AC	N/C
Modem racking kit for up to 5 MDPs, rear mounting	C2792A(Z)	N/C
Modem racking kit for up to 5 MDPs, front mounting	J2084A(Z)	300
Modem racking kit for up to 10 MDPs, rear/front mounting	J2087A(Z)	450

DTC 16iX

The DTC 16iX is a LAN-attached asynchronous multiplexer for HP 3000/900 systems which require low port count or distributed connectivity. It is designed for ease of use, and simple system and network integration. The DTC 16iX features 16 RS-232 direct or modem ports, or RS-423 ports in the same package as the HP Ethertwist hubs, bridges, and routers. It delivers high performance in a compact, flexible package, using a standard 19-inch chassis. It comes with two 8-port compact RJ-45 breakout

boxes for use with a simple and low-cost cabling. The DTC 16iX is designed to be a "plug & play" product, including a very easy installation process, auto-sensing

of LAN attachment, and complete self tests. It provides extended direct connect plus full modem support.

DTC 16iX Ordering Information

Description	Product/Option Number	Price
DTC 16iX async multiplexer with 16 RS-232 or RS-423 ports	J2062A	\$2,160
Replace 8 RJ-45 direct port with 8 DB-25 modem ports (you may order one or two)	Opt UG5	300
Replaces 16 RS-232-C ports with 16 RS-423 ports (you may order only one)	Opt UG4	600
Modem racking kit for up to 5 MDPs, rear mounting	C2792A	N/C
Modem racking kit for up to 5 MDPs, front mounting	J2084A	300

DTC 16TN

This 16-port Telnet only terminal server provides exceptionally high performance at a remarkably low price. The DTC 16TN's new hardware architecture offers a significant performance advantage over models previously available. Its streamlined Ethertwist Hub-like enclosure allows you to use the same racking strategy for your 10-base-T and DTC products. Also featured are RJ-45 connectors (telephone-

type) and optional 25-pin modem ports that provide industry standard connectivity. The DTC 16TN has fully integrated auto-sensing LAN options and an auto-ranging

power supply which greatly simplify configuration. And optional RS-423 connectivity and 38.4 Kb line speed support longer cables and higher data rates.

DTC 16TN Ordering Information

Description	Product/Option Number	Price
DTC 16TN Telnet Terminal Server with 16 RS-232 ports	J2060A	\$2,900
Replace 8 RJ-45 direct port with 8 DB-25 modem ports	Opt UG5	300
Add RS-423 interface	Opt UG4	600
Racking kit for 1100 mm and 1600 mm computer racks	Opt IAC	N/C

Modem

Codex 3500 Standalone DSU/CSU

The Codex 3500 Standalone DSU/CSU (Data Service Unit/Channel Service Unit) is a versatile modem which offers the functionality of multiple digital transmission devices in a single, highly compact unit. It can be connected with an HP 2335A multiplexer, an HP remote bridge, or an HP router to transmit data via DDS (DATAPHONE Digital Service) facilities from central sites to remote sites.

CODX-3500.....\$750

Features

- Supports wide range of digital transmission speeds: 2.4, 4.8, 9.6, 19.2 and 56 Kbps
- Unique rate adaptation function allows use of lower priced digital services
- Enables diagnostic testing of local and remote units in both point-to-point and multipoint configurations
- Integral timing buffer reduces data errors caused by timing variations between different digital services
- Supports asynchronous to synchronous conversion up to 19.2 Kbps

N Combine the power of a 486 PC with the system control of a terminal

The HP Windows Client is a low-cost LAN-attached, intelligent desktop that delivers both the power of a 486 personal computer and the system control of a terminal. It provides a high performance client solution that is a perfect alternative to a text terminal. The Windows Client merges a powerful 486 network-ready computer with MS-DOS 6.0, MS Windows 3.1, and Reflection for Windows terminal emulation and networking software from Walker, Richer & Quinn, Inc. (WRQ). By storing applications and data on a server, the Windows Client gives you a controlled system management environment with high data integrity and security.



Low-cost solution

Windows Client is significantly lower in price than comparably configured PCs. The hardware design eliminates components found in traditional PCs, such as fans, disk drives, and I/O slots to create a very reliable, low-cost, energy efficient system. The low-cost hardware design combined with the bundled Microsoft and WRQ software make an extremely affordable solution.

HP Windows Client Model 425SX Standard Features

PC functionality

CPU	25 MHz, 32-bit Intel486SX microprocessor
Cache	8K internal cache memory
Integrated I/O	Parallel port - Centronics (25-pin) for external printer, plotter, or floppy disk Serial port: RS-232C (9-pin) for modem and printer connection (Serial/parallel ports can be disabled) Mini-DIN keyboard & mouse ports 15-pin VGA connector

Network features

LAN	Integrated bus-mastering 16-bit LAN with a 10-Base-T (RJ45) port and an AUI port for coax or fiber optic network connection
Boot-ROM	Software-selectable multiprotocol boot for Novell NetWare (frame type 802.3 and 802.2) and Microsoft LAN Manager

Network requirements

LAN	Ethernet/IEEE 802.3
Server	HP 9000 Series 800 with Portable NetWare 3.11 or later HP 3000 MPE/iX with Portable NetWare 3.01B or later PC server with NetWare 3.11 or later PC server with LAN Manager 2.1 or later HP 9000 Series 700 with LAN Manager/X 1.3 or later (as a file server only, LAN Manager PC required as a boot or boot/file device)

Included software

Microsoft	DOS 6.0 and Windows 3.1
WRQ Terminal Emulation	Reflection 1 for Windows, for HP 700/9X and HP 2392A block mode terminal emulation Reflection 2 for Windows for DEC VT320/220/102/52 terminal emulation
WRQ Networking Software	Reflection Network Series TCP/IP, NS/VT, Telnet, LAT, SPX/IPX, NDIS, ODI, and FTP support

Internal memory

Base Memory	4 MB of RAM standard (36 MB maximum)
Memory Expansion	2 SIMM sockets for additional RAM Supported configurations: 6, 8, 10, 12, 16, 20, 24, 28, and 36 MB

Video subsystem

Ultra VGA	Integrated local-bus Ultra VGA with hardware cursor and color expansion. 512 KB of video RAM
Video Drivers	Enhanced-mode drivers for Windows 3.1

Monitor choices

Monitor	Display Resolution	Colors
14-inch Monochrome VGA	640 x 480	—
14-inch Color VGA	640 x 480	256
14-inch Super VGA	800 x 600	256
	640 x 480	256
14-inch Ergonomic Super VGA	800 x 600	256
	640 x 480	256
15-inch Ergonomic Ultra VGA	1024 x 768	16
	800 x 600	256
	640 x 480	256

Keyboard and mouse

Keyboard layout	Industry-standard 101-key layout with adjustable tilt Ergonomic tactile keys with selectable audio feedback
Mouse	2-button mouse with mini-DIN interface

Energy efficiency

SPU Power consumption	25 W maximum (EPA energy star)
-----------------------	--------------------------------

Acoustics LpA<25dB, no fan installed

HP Windows Client Server Kit* Features

The server kit provides the HP, Microsoft, and WRQ software, documentation, and licenses needed to set up a server for the Windows Client environment. It includes licenses for connection to an unlimited

number of Windows Clients as well as a license-to-use WRQ software on a system administrator's PC. Telephone support is also included for the system administrator.

*Server kit must be purchased separately. See Step 3 under ordering instructions on page 87.

Designed to perform

With a 486SX processor and up to 36 MB of memory, the Windows Client has the power to run demanding applications. The local bus video subsystem has been optimized for Windows and provides fast on-screen response. The video subsystem also supports very high resolutions up to 1024x768. A high speed bus-mastering 16-bit LAN interface accelerates network performance by allowing the LAN subsystem to move data into and out of RAM reducing processor overhead.

No compatibility headaches

The Windows Client relieves you of the potential problems of hardware and software configuration. It is a completely integrated solution, fully tested for compatibility, functionality, and performance. Adding new clients to the network is easy because boot images, configuration files, and video drivers are consistent to each new user.

Windows client environment

The Windows Client boots remotely from the server and the operating system loads into local memory. Applications can be downloaded automatically or users can request specific applications. Directories are accessed the same way PC users access local hard disks. Users can simultaneously run host resident applications, access databases, and run PC applications in different windows.



Now you can order support along with your product. See page 125.

INTEGRATED SUPPORT
PUTTING IT ALL TOGETHER

Features	Benefits
Simplified system management	
PC software is installed on the server	<ul style="list-style-type: none"> • Faster installation and updates, as software doesn't need to be installed on multiple hard disks • Fast set-up for new clients, particularly for shared applications • Simultaneous shared application upgrade for all users on the network
System Administrator defines client access to PC software installed on server	<ul style="list-style-type: none"> • Consistent and compatible software installed across network • Improved software revision control and license accountability • Users have access only to authorized software • Greater control over software purchases
Increased data integrity and security	
All client software and data stored on server-based disks	<ul style="list-style-type: none"> • Fast, easily automated, reliable back-up • Allows high availability approaches to data storage
System Administrator can require password prior to application or data access	<ul style="list-style-type: none"> • System administrator controls access to files
System Administrator loads software on server	<ul style="list-style-type: none"> • Reduced risk of virus introduction • Sensitive data can not be taken from the system by downloading to floppy disks • Fewer configuration and support problems

This simple three-step process makes ordering easy.

Step 1 – Choose the product number for the base configuration and monitor choice you want. The base configuration includes standard Model 425SX, keyboard, mouse, documentation, and license to use the following software: Microsoft DOS 6.0 and Windows 3.1, WRQ Reflection Network Series, WRQ Reflection 1 for Windows, and WRQ Reflection 2 for Windows.

Step 2 – You may add memory. Two SIMM sockets are available, one or two memory modules may be ordered. Check for supported configurations.

Additional Memory		
Description	Option Number	Price
2 MB SIMM	001	\$180
4 MB SIMM	002	245
8 MB SIMM	003	495

Base Configuration		
Description	Product Number	Price
SPU:		
With no monitor	C3401A	\$ 895
With 14-inch Monochrome VGA	C3402A	1,095
With 14-inch Color VGA	C3403A	1,225
With 14-inch Super VGA	C3404A	1,375
With 14-inch Ergonomic Ultra VGA	C3405A	1,475
With 15-inch Ergonomic Ultra VGA	C3406A	1,675

Step 3 – Choose a localized server kit and a localization option, for your keyboard, power cord, and documentation.

Localization Options/Server Kit		
Description	Option Number	Price
English server kit*	100	\$495
U.S. English localization kit**	ABA	N/C

* One server kit must be purchased for each site.
**You must choose one localization kit with each client.

Series 400 Communication Interface

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

Series 400 Communication Interface Ordering Information

Description	Product Number	Price
HP-IB Interface		
Standard speed IEEE-488 interface kit for the 400t and 425t (HP-UX only)	A1450A	\$420
Standard speed IEEE-488 interface kit for the 400s, 425s, and 433s (HP-UX only)	A1451A	420

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

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

GPIO Interface

Provides a flexible parallel interface that will send and receive up to 16 bits of data to a variety of devices.

GPIO Interface Ordering Information

Description	Product/Option Number	Price
GPIO interface	98622A	\$500
Add 4.6M unterminated cable	001	117

RS-232-C (serial) Interface

Provides simple asynchronous I/O communication with switchable settings.

RS-232-C Ordering Information

Description	Product/Option Number	Price
RS-232-C (serial) Interface	98626A	\$500
DTE (male) RS-232-C cable	001	100
DCE (female) RS-232-C cable	002	100
Provides simple asynchronous interface; DTE-25F connector, no cable, no switchable settings.	98644A	250

Datacomm Interface

Provides asynchronous serial communications; including RS-232-C, RS-449, and RS-423.

Datacomm Interface Ordering Information

Description	Product/Option Number	Price
Datacomm Interface	98628A	\$640
DTC (male) RS-232-C cable	001	120
DCE (female) RS-232-C cable	002	120
DCE (female) RS-449/423 cable	003	240

SCSI Peripheral Host Adapter

Provides SCSI connectivity for SCSI peripheral. Includes DIO-I/O card (female, low-density bail-lock) and 1-m cable.

98658A\$1,200

HP-IB Interface

Standard-speed IEEE-488 interface card.

98624A\$450

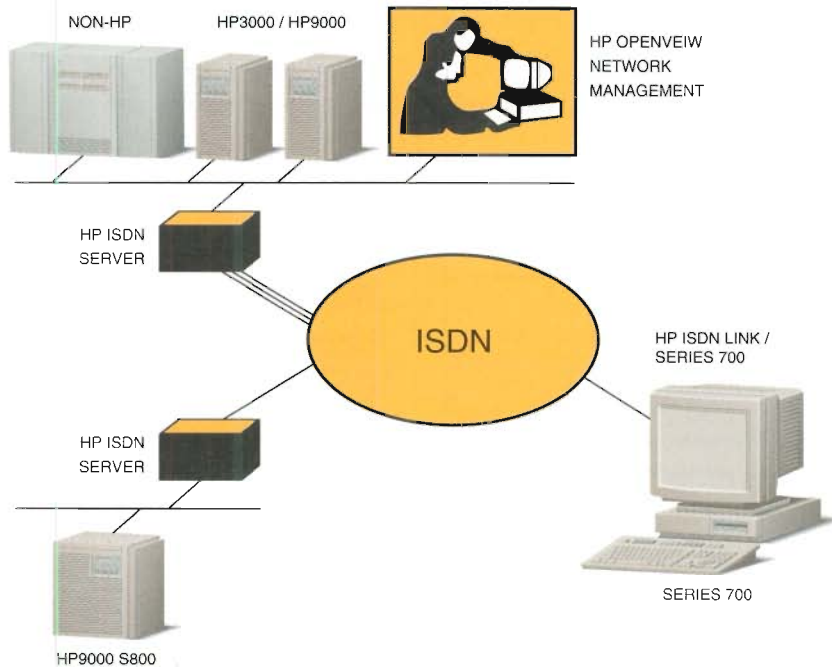
High-speed disk interface to transfer data in bursts at a rate of 2 MB/s in word mode.

98625B\$1,200

Up to 128 Kbps over wide areas at a very low cost

The HP ISDN product family is one more example of Hewlett-Packard's commitment to open, standards-based, wide-area communication. The capabilities of a LAN are extended to widely dispersed, remote locations over ISDN, the Integrated Services Digital Network.

The HP ISDN Server and the HP ISDN Link/S700 allow computers and HP Apollo Series 700 workstations to be connected over the ISDN and take advantage of ISDN circuit switching services. If you require infrequent, but important data transmission (image or file transfers) in a multiple site environment, HP's ISDN products offer you significant cost savings and reliable service.



HP ISDN Server

The HP ISDN Server (for S/700 with 1-3 EISA slots) allows for cost-effective, transparent interconnection of remote LANs over an ISDN network for any application running on top of the standard TCP/IP protocol. The ISDN Server consists of any Series 700 with one to three EISA slots and will host up to three Basic Rate Interface cards for a maximum total throughput of 384 Kbps. The TCP/IP routing software allows for the server to act as a call concentrator or router of ISDN Link/Series 700 clients.

HP ISDN Link/ Series 700 Client

Identical to the HP ISDN Server configuration listed above. The ISDN-TCP/IP Router Software (P/N J2108A) is not required.

J2109A.....\$2,885

HP ISDN Server Ordering Information

Description	Product/Option Number	Price
HP ISDN Link/S700 (112 Kbps/128 Kbps) (3 ea per workstation can be ordered)	J2109A	\$2,885
DDS cartridge	AAH	N/C
CD-ROM certificate only	AAU	N/C
SDN-TCP/IP Router Software to concentrate HP Link/Series 700 clients (must order 1 and only 1 with each HP ISDN Link /S700)	J2108A	1,310
DDS cartridge	AAH	N/C
CD-ROM certificate only	AAU	N/C

Powerful performance at a lower cost

HP 2335A: X.25 PAD and Statistical Multiprotocol PAD

This small, powerful, and low-cost solution for connecting remote peripherals offers you decisive advantages.

Connect your remote terminals, printers and PCs with the HP 2335A and let it work for you. The firmware in this system has a Mean-Time-Between-Failure (MTBF) of 219,000 hours.

This is not the only factor which increases your productivity. You can also use the dat compression

and pass up to 100 packets per second on a 64 Kbps line.

It is expandable from 4 to 16 asynchronous ports in groups of 4. You will find it the definitive low-cost solution.



HP 2335A

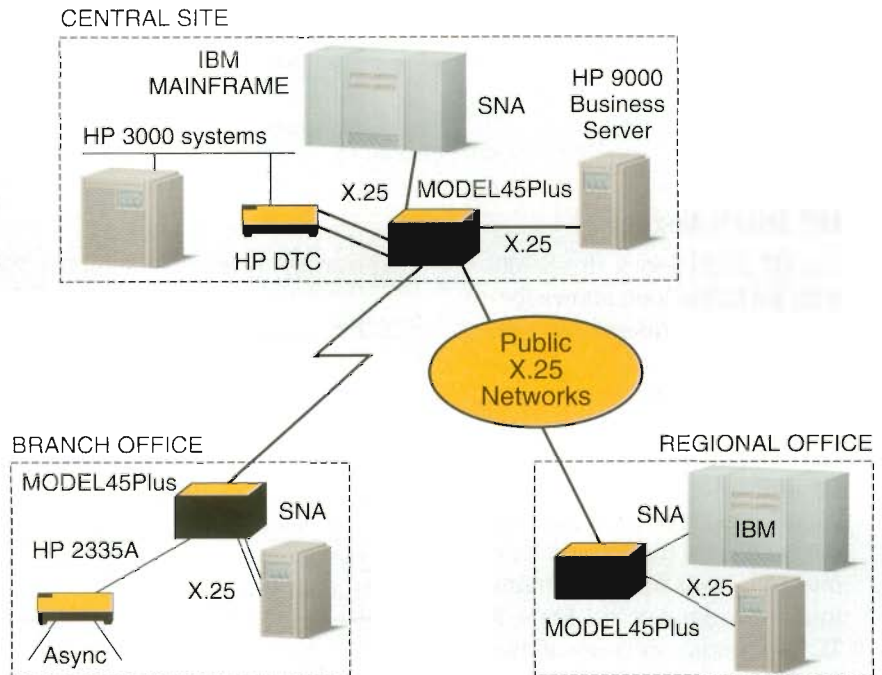
X.25 PAD Ordering Information

Description	Product/Option Number	Price
X.25 PAD and statistical multiplexer	2335A	\$1,680
4 modem connect ports (must be ordered)	Opt. 123	945
Cable for 2335A & ATP/DTC printer ports	40220A	72
Cable for 2335A & ATP/DTC terminal ports	40221A	72

HP Model 45 Plus X.25 Switch and Multiprotocol PAD

The HP Model 45 Plus X.25 Multiprotocol concentrator connects your HP 3000 or HP 9000 systems and non-HP systems, including HP and non-HP terminals, to an X.25 public or private network.

Its powerful performance (25,000 packets/second) and high connectivity, up to 30 ports, reduce communication and equipment costs by concentrating multiple X.25, SNA/SDLC, and asynchronous lines on a central HP 3000 or HP 9000 site.



Ordering Information

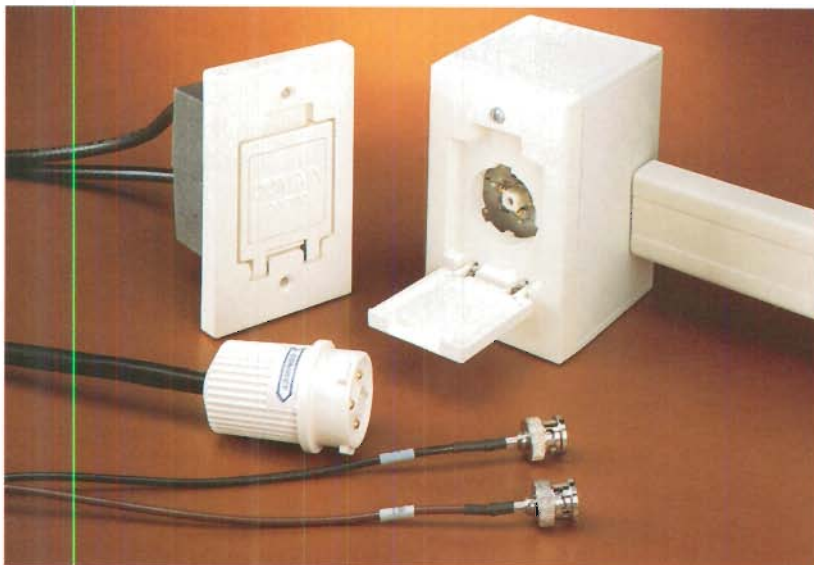
Description	Product Number	Price
6 port HP Model 45 (18 port maximum)	J2000B	\$5,985
6 port HP Model 45 (30 port maximum)	J2001B	9,450
Additional 6 port Multiprotocol card	J2004B	4,200
6 port MAP cable - 6 RS-232 ports	J2030A	525
6 port MAP cable - 2 V.35/4 RS-232 ports	J2031A	1,050

Network integrity with plug-in convenience

DQC Outlet

The DQC outlet installs in minutes to HP Apollo specified coaxial cable using a cable stripper (K1521, see page 92), and two screwdrivers (one flat, one Phillips). It can be surface mounted or in-wall mounted using standard electrical mounting hardware, or even left free-standing in the housing provided.

K1048\$79



DQC Outlet

DQC Systems

With 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. 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 Systems Ordering Information

Description	Product Number	Price
10' DQC to BNC cable	K1049	\$ 68
25' DQC to BNC cable	K1050	99
10' DQC to D-Sub cable	K1069	89
25' DQC to D-Sub cable	K2293	149

BNC to D-Subminiature Cable

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

K1503\$85

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- or 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. Also included are a cable strain relief and accessible BNC connectors for creating a self-contained loop.

DQC Systems Ordering Information

Description	Product Number	Price
4-Unit cluster connector	K1045	\$685
6-Unit cluster connector	K1046	765

Count on HP for all the extras



Crimping Tool, BNC Connector Wrench, and Cable Stripper

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.



Domain Network Switch

Crimping Tool

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

K1518\$75

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.

K1524\$12

Cable Stripper Ordering Information

Description	Product Number	Price
Cable stripper, 2-blade cassette	K1520	\$85
Cable stripper, 3-blade cassette	K1521	99
2-blade cassette	K1500	17
3-blade cassette	K1501	49

Domain Network Switch

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

K1522\$215

"We guarantee service that's fast, efficient, and consistent. We maintain a personal touch; there is definitely a human being on the other end of the line. We're personally involved; we want you to get what you need."



Garfield Windross
 Order Management Representative

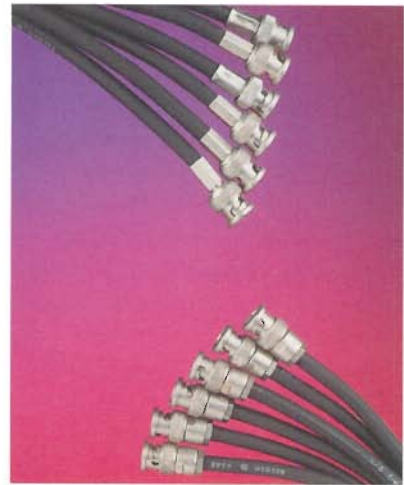
Make the right connections with HP

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.

BNC Connectors Ordering Information

Description	Product Number	Price
BNC feed-through adapter	K1502	\$14 ea
Crimp connector, Teflon jacket	K1504	14 ea
Crimp connector, PVC jacket	K1506	14 ea
Wrench connector, Teflon jacket	K1505	19 ea
Wrench connector, PVC jacket	K1507	18 ea
BNC crimp connector, -universal	K1508	12 ea
Universal connector, crimp tool	K1518	75 ea



BNC Connectors and Adapters

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.

Coaxial Cable Ordering Information

Description	Product Number	Price
Coaxial Cable with Teflon Jacket		
1000 (ft)	K1511	\$925 ea
500 (ft)	K1513	490 ea
250 (ft)	K1512	255 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.

Coaxial Cable Ordering Information

Description	Product Number	Price
Coaxial Cable with PVC Jacket		
1000 (ft)	K1516	\$175 ea
500 (ft)	K1515	85 ea
250 (ft)	K1514	55 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.

K2292\$345

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



Multiple Serial Connector

Put a full time performance manager on your team

HP PerfView

HP PerfView can add a full-time performance manager to your team without adding a person to your payroll! It's an advanced framework and powerful tool that automatically identifies and helps resolve existing and potential performance problems before they affect your system and network users.

When a performance situation that requires attention occurs within your environment, HP PerfView highlights performance exception conditions on a graphical map that represents your network and system elements. HP PerfView's user interface lets you quickly characterize existing and potential performance problems.

HP PerfView Analysis Software

Available on Systems:	Op Sys	Base Product Number
HP 9000/700	HP-UX	H5289A
HP 9000/800	HP-UX	H5324A

(requires Agent software)

HP PerfView Desktop Agent Software

Available on Systems:	Op Sys	Base Product Number
HP 9000	HP-UX	H5294A
Sun SPARC	SunOS	H5295A

HP PerfView Full Agent Software

Available on Systems:	Op Sys	Base Product Number
HP 3000/900	MPE/iX	H5291A
HP 9000/300 & 400	HP-UX	H5292A
HP 9000/700 & 800	HP-UX	H5292A
Sun SPARC	SunOS	H5293A

HP RXForecast

Integrate capacity analysis and forecasting capabilities into your system's HP LaserRX software user interface. HP RXForecast software uses HP LaserRX logfiles to produce forecasts of future system resource utilization based on time-series analysis. You can incorporate into the forecast past and projected business activity measures; display or print color forecast graphs, including confidence level and threshold lines; and display actual data against the forecast.

Available on Systems:	Op Sys	Base Product Number
HP 3000	MPE V/iX	B1764B
HP 9000	HP-UX	B1764B

HP PerfRX Analysis Software

HP PerfRX Analysis Software provides a graphical and tabular interface on an HP-UX workstation to the long-term historical performance data collected by the HP Performance Collection Software. With HP PerfRX, you can easily isolate and identify current and potential performance problems on your system. HP PerfRX lets you analyze system bottlenecks, balance workloads, and document system issues effectively. HP PerfRX runs on an HP 9000 Series 700/800 and can be used to analyze the performance data collected on HP 9000 and HP 3000 systems.

Available on Systems:	Op Sys	Base Product Number
HP 9000/700 & 800 license	HP-UX	B3467AB

HP LaserRX

HP LaserRX software provides a graphical and tabular interface on a PC to the long-term historical performance data collected by the HP Performance Collection Software. For HP 3000 systems, the HP Performance Collection Software is included in the HP LaserRX/MPE Software and the HP GlancePlus Pak Software for MPE systems. With HP LaserRX, you can easily isolate and identify current and potential problems on your systems, analyze system bottlenecks, balance workloads, and document system issues effectively.

Description	Base Product Number
MPE Software	50700B
UX Analysis Software	B1766B

HP Performance Collection Software

The HP Performance Collection Software uses a patented technology to collect and classify performance data on your HP 3000 or HP 9000 system. The HP Performance Collection Software continuously collects global-, application-, and process-level data with minimal system overhead. The performance data can be accessed directly or by using HP LaserRX or HP PerfRX.

Available on Systems:	Op Sys	Base Product Number
S/300, 400	HP-UX	B2662A
S/700	HP-UX	B1806A
S/800, 600	HP-UX	B2663A

Attack performance problems with HP GlancePlus

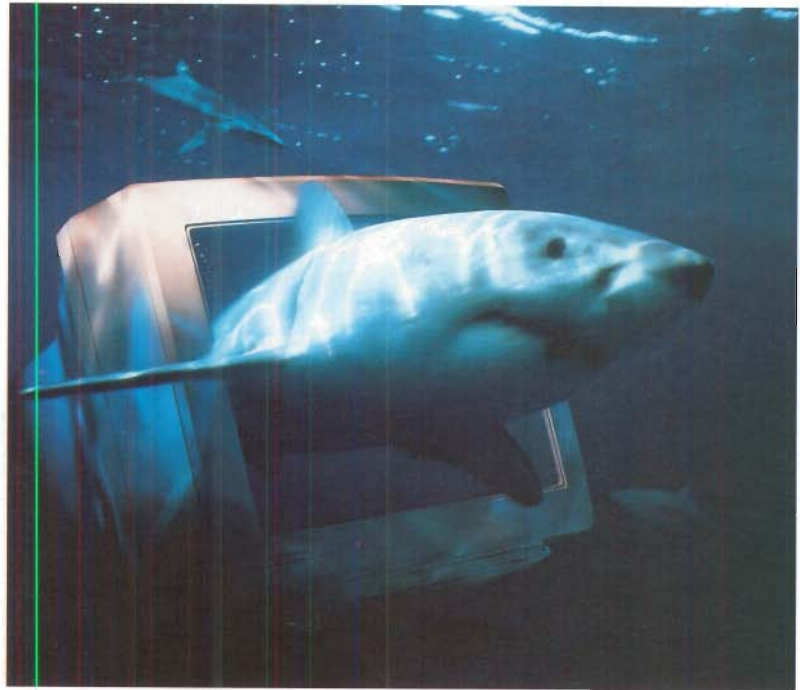
HP GlancePlus

HP GlancePlus software is an easy-to-use online performance monitoring tool that helps you get the most from your systems and workstation investments. This software tool shows, at a glance, how your system 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' applications and systems staff. Using HP GlancePlus, you can:

- Identify and correct problems when workloads are running slowly
- Monitor memory, CPU, and I/O usage by user and by process
- Balance disks and tune file systems for improved I/O performance
- Manage NFS and diskless workgroups

HP GlancePlus is available for all HP systems and Sun SPARC systems.



Available on Systems:	Op Sys	Base Product Number
HP 3000	MPE V	50733B
HP 3000/900	MPE/iX	B1787B
HP 9000/300 & 400	HP-UX	B2661A
HP 9000/700	HP-UX	B1807A
HP 9000/800	HP-UX	B2660A
Sun SPARC	SunOS	B2804A



HP GlancePlus Pak

This performance tool offering includes HP GlancePlus software and the patented HP Performance Collection Software. So, in one convenient product, you'll enjoy both online diagnostic and long-term performance data collection capabilities.

Available on Systems:	Op Sys	Base Product Number
HP 3000	MPE V	B2954A
HP 3000	MPE/iX	B2953A
HP 9000/300 & 400	HP-UX	B3170A
HP 9000/700	HP-UX	B3168A
HP 9000/800	HP-UX	B3169A

Ensure the uninterrupted flow of critical information

HP OpenView is a cohesive family of products and services enabling integrated management of multivendor computing environments.

The HP OpenView family is unique in the industry for several reasons. HP OpenView offers a breadth of open software platforms from multiple vendors on the workstation, server, and PC. HP OpenView Solution Partner applications can now manage DECNet, SNA, and Netware LANs. These best-in-class products, along with the associated training, consulting, and support, are available worldwide.

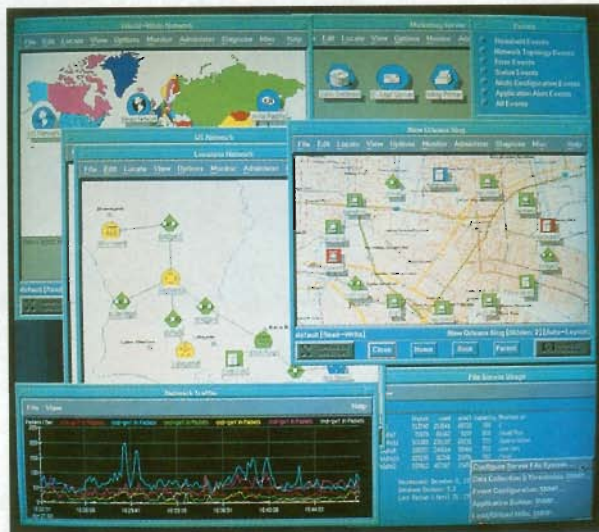
HP OpenView Network Node Manager

HP OpenView Network Node Manager enables network administrators to understand the health of their networks at a glance. With innovative capabilities including Automatic Discovery of the network and the Application Builder, HP OpenView Network Node Manager greatly reduces the time and effort network administrators 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 (Transmission Control Protocol/Internet Protocol) network using HP OpenView and other TCP/IP agents. As the network changes, the discovery capability automatically shows the changes and updates the network map.

This product includes the HP OpenView Windows Graphical User Interface (GUI). This interface allows network managers to easily monitor and control their entire environment.

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 incorporated into popular



HP OpenView Network Node Manager

spreadsheets or SQL databases.

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 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 individual workgroups—saving time, effort, and money and improving service levels. Investing in HP OpenView Network Node Manager today provides a safe path to OSF DME technology in the future.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	J2316A
HP 9000/700 & 800	HP-UX	J2317A
Sun SPARC/1+, IPC, IPX, 2, SPARC 10	SunOS	J2318A



HP OPENVIEW



Those who know best, know who's best. Above are some of the awards HP OPENVIEW has won from the industry.

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. The Extensible Agent can be easily customized without any programming, giving you more control over the complexities of your distributed system.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B1036A
HP 9000/700 & 800	HP-UX	B1037A
Sun SPARC	SunOS	B1038A

HP OpenView TCP/IP Agent

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

Available on: Systems	Op Sys	Base Product Number
Sun SPARC	SunOS	B1035A



"Sometimes one of my customers will say, 'this is exactly what I want.' Still, I like to ask them questions to make sure it's really the best fit. Things change so much so quickly that sometimes I can help them by suggesting a more appropriate solution."



Cheryl

Cheryl Weiden
Sales Support Engineer



HP TRAINING Maximize your productivity with HP training courses on pages 126 to 128.

- HP OpenView Network Node Manager Fundamentals for Network Managers

HP OpenView makes business more manageable

HP OmniBack

With HP OmniBack, you've got peace of mind knowing that a reliable global network backup management solution is protecting you with central file system backup and recovery. It automates the backup process for all computers in a distributed HP-UX, Apollo Domain and SunOS (backup clients) environment. You can even integrate DOS PCs as backup clients through incorporation of Plan-B from System Consultants.



Evaluation copies are available which provide full product functionality.

Comprehensive functionality is provided; for example, through data compression, advanced scheduling, and journaling facilities.

Available on Systems:	Op Sys	License Product Number
HP 9000/300 & 400	HP-UX	B1922A
HP 9000/400	Domain	B1922A
HP 9000/700	HP-UX	B1922A
HP 9000/800	HP-UX	B1922A
Sun SPARC	SunOS	B1922A

HP OpenSpool

HP OpenSpool Features

- Single point administration of all network-wide printing and plotting devices and services
- Options for dealing with many different forms, fonts, paper types, and printer types
- End user control over print requests
- Extensive security via access control lists, secure queues, and protected paper
- Templates definable for easing repetitive tasks

HP OmniBack/Turbo

HP OmniBack/Turbo provides high-speed backup for mid-range and high-end HP-UX systems and servers. This product combines the capabilities of HP OmniBack with high speed local backup functionality, up to 20 GB per hour, which means less downtime for your system!



Evaluation copies are available which provide full product functionality.

Available on Systems:	Op Sys	License Product Number
HP 9000/700	HP-UX	B1923A
HP 9000/800	HP-UX	B1923A

HP OmniBack/Link

HP OmniBack/Link integrates HP OmniBack into the HP OpenView management station.

Available on Systems:	Op Sys	License Product Number
HP 9000/700	HP-UX	B1926AA
HP 9000/800	HP-UX	B1926AA

HP OpenSpool is a print management solution for networked as well as stand-alone computing environments of HP 9000 systems (HP-UX) and Sun SPARCstations (Sun Solaris).



Evaluation copies are available which provide full product functionality.

With HP OpenSpool, configuration changes are made easily (and only once) to any system, then automatically replicated to all systems throughout the network. OpenSpool's graphical interface is easy to use, but flexible enough for demanding commercial and technical users.

HP SharedPrint/UX

HP SharedPrint/UX is the spooler independent printing software product that enhances the basic printing capabilities of HP Apollo Series 700 workstations and servers.

Features include ease of use for the workstation user and versatile printing features commonly found on commercial desktop systems. SharedPrint/UX is a true client/server implementation in which the client portion of the software contains the user interface. The print server contains the components that process the print job, such as file/device recognition, invoking the filters to process the print job, automatic switching between the PCL and PostScript, and spooling the print job to the printers using either lp or OpenSpool.

Available on Systems:	Op Sys	Product Number
HP 9000/700	HP-UX	B2154A
HP 9000/800	HP-UX	B2159A

A set of document and bitmap conversion filters (SharedPrint/UX) is included with the HP OpenSpool SharedPrint product.

Available on Systems:	Op Sys	License Product Number
HP 9000	HP-UX	B1900B
Sun SPARC	Sun Solaris	B1900B
OpenSpool SharedPrint/700	HP-UX	B1900B
OpenSpool SharedPrint/800	HP-UX	B1900B

HP OpenSpool/Link

HP OpenSpool/Link integrates HP OpenSpool into the HP OpenView management station.

Available on Systems:	Op Sys	License Product Number
HP 9000/700	HP-UX	B1912AA
HP 9000/800	HP-UX	B1912AA

Peripherals Gold medal winners

"They're all winners"

"Our peripheral products remind me of the old Olympics motto: altius, citius, fortius—higher, faster, stronger. Higher performance, faster access times, and stronger protection for your data. Whatever product you choose, you'll get world champ performers. Disk arrays, DAT drives, optical disk drives, magnetic tape drives, scanners, printers ... you name it! They're all winners."



*Hector Curiel
Order
Management
Representative*



Mass Storage

Series 600

The safe place your data deserves

Series 600 Mass Storage System...	100
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Color Scanner

ScanJet IIc

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Printers

Impact Printers

A wide range of printers to meet a wide range of needs.....106

Cards and Converter

Jet Direct

Let your UNIX-based network take advantage of HP peripherals.....108

HP Support

HP Support options can now be ordered with every product. For more information.....125
When ordering HP Support:



1. Choose the hardware support you want
 - Same-day response, *7 days a week*
 - Four-hour response, *Monday through Friday*
 - Next-day response, *Monday through Friday*
2. Choose the software support you want
 - License-to-use updates
 - Telephone support
3. Call HP DIRECT and we'll make sure your support matches your requirements.

More than 20% faster average access times

New HP SCSI disk drives

The new HP Series 6000 Mass Storage systems offer increased capacity, performance, and reliability for HP systems. This new generation of disk drives has twice the reliability of previous products. Enclosure options provide either a compact minitower that is suitable for desktop use, or a 325-mm wide enclosure that allows easy rackmounting in HP Design Plus or 19-inch EIA cabinets. Either enclosure integrates the following high-performance SCSI devices:

- 2 GB 5.25-inch full-height SCSI-2 disk drive
- 1 GB 3.5-inch half-height SCSI-2 disk drive
- Up-to-8GB half-height DDS-format DAT drive with data compression
- 2 GB half-height DDS-format DAT drive
- 600 MB half-height CD-ROM drive
- 650 MB rewritable optical 1-1/2 height drive

The minitower system has seven half-height slots that can be configured with a combination of devices.

The rackmount version can have up to four half-height devices, plus one half-height disk, or three full-height devices.

New fast wide drives

Designed and manufactured by HP, these SCSI-2 disk drives offer 10.5- and 11.5-ms average seek and up to 20 MB/s channel transfer rate. This rate is four times as fast as single-ended drives and twice as fast as the earlier fast narrow drives. Fifteen disks per SCSI bus are supported, compared with seven for earlier products.

Features

- Up to 7 GB of disk storage: an increase from the 4.6-GB maximum of previous storage systems.
- Easy-to-order, preconfigured storage systems: preconfigured with four 1-GB disks, two 2-GB disks, or seven 1-GB disks.
- Same minitower enclosures: floor-standing minitower enclosures house up to seven half-height enclosures.
- HP workstation support: fully tested and supported on Series 700 with HP-UX 9.01.




Support for HP 9000 Series 700 and 800 and HP 3000 Series 900

System	Support
S/700-Fast wide	HP-UX 9.0-9.01
S/8x2, 8x7, 890	HP-UX 9.0
S/900	MPE/iX 4.0*

* Software patch required for diagnostic and predictive support.

SCSI Disk Drives Ordering Information†

	Description	Product Number	Price
Mass Storage Systems			
Disk & DAT	1 GB disk & 2 GB DAT	C3020T or C3020R	\$ 6,595
	2 GB disk & up to 8 GB DAT	C3021T or C3021R	10,440
Disk Drives	1 GB disk	C3022T or C3022R	3,945
	2 GB disk	C3023T or C3023R	6,790
	2 x 2 GB disks	C3024T or C3024R	12,480
Fast Wide Mass Storage Systems			
	1 GB disk	C3032T	4,395
	2 GB disk	C3033T	7,690
	2 x 2 GB disks	C3034T	14,280
	4 x 1 GB disks	C3035T	14,280
	7 x 1 GB disks	C3036T	24,165
Expansion Kits			
 Disk	1 GB disk	C3027U	2,845
	2 GB disk	C3028U	5,690
DAT*	2 GB DAT	C2297U/2477U	2,650
	8 GB DAT	C2298U/2478U	3,650
CD-ROM**	600 MB CD-ROM	C2293U	1,250
Optical Disk	650 MB rewritable optical disk	C2294A for rack	5,400
	650 MB rewritable optical disk	C2294T for tower	5,400
Fast Wide Disk	1 GB expansion kit	C3037U	3,295
	2 GB expansion kit	C3038U	6,590
Accessories			
Cabling	0.9 meter, SPU to peripheral	K2296	83
	1.5 meter, SPU to peripheral	K2297	88
	SCSI terminator	K2291	40
	0.9 meter, fast wide	C2911A	120
	2.5 meter, fast wide	C2924A	140
	10 meter, fast wide	C2925A	200
	20 meter, fast wide	C2926A	240
	Fast wide SCSI terminator	C2905A	65

† Suffixes: T= minitower, R= rackmount, U= upgrade kit.

* C229x for Series 700/C247x for Series 8x2, 8x7, 890 & 900.

** C2293U is not supported on S/900.

Note: Option 001 specifies workstation firmware on fast wide drives and must be ordered on all fast wide products.

Data protection, increased capacity, and higher performance

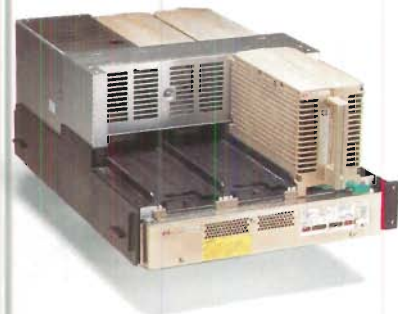
Disk arrays offer a new high capacity storage device that can protect your data in the event of a disk failure. A drive may fail, yet the system can still have uninterrupted access to all data. A user on the system would typically be unaware that a failure has even occurred. In addition to this new higher level of data availability, disk arrays also offer tunable performance. Different operating modes can be configured to increase transfer rates or transaction rates based on a system's particular application. Disk connectivity is also significantly increased. An entire disk array of many disk drives uses only one address on the host interface. To learn more about these new mass storage devices, ask for the HP Disk Arrays Primer, part number 5091-1396E.

Upgrade kits

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

C2251A Additional Disk Drive Module

This product provides a 1.3 GB 5.25-inch disk module designed with a built-in handle to "hot plug" the drive, even while the system is running. Upgrades either the C2252B, C2252HA or C2254B disk array. Allows existing C2252B or C2254B disk arrays to add the data protection feature. Also allows C2252B array or C2252HA to increase capacity from 2.7 GB to 5.4 GB by buying two modules.



C2474J Disk Array Upgrade Kit

This kit includes one 1.3 GB 5.25-inch full-height disk drive to upgrade the five-mechanism C2427JK. It increases capacity from 6.7 GB to 8.1 GB for applications using RAID 0 or Independent Mode. It also allows operation in RAID 0/1, providing striping across disks and redundant mirroring of data.

C2257A Additional Disk Drive Module

This product provides a 2.0 GB 5.25-inch disk module. This module is to be used only with C2258B, C2258HA, and C2259B HP-FL disk arrays.



HP Disk Arrays

Disk Array Upgrade Kit Ordering Information

Description	Base Model Number	Product Number	Price
1 x 1.3-GB disk	C2252/4	C2251A	\$ 6,305
1 x 1.3-GB disk	C2427JK	C2474J *	6,350
1 x 2 GB disk	C2258/9	C2257A	7,702

* Order #ODG HP Field Installable.

Gigabytes of unattended backup

These 4mm Digital Audio Tape (DAT) drives provide you with the high capacities to meet the increasing demands of Hewlett-Packard high performance workstations, network servers, and multi-user systems. Both products incorporate the latest 3 1/2-inch form factor DAT technology with a SCSI-2 interface and HP's DATIO backup software utility.

Model 2000

The Model 2000 is a low-cost backup solution offering 2 GB of unattended backup on 90m DDS cassette at up to 650-MB/hour transfer rate.

Find HP DDS DAT tapes on page 111.

Model 2000 DC

The Model 2000 DC uses data compression to provide additional performance and capacity. It delivers up to 8 GB of unattended backup using a single 90m DDS cassette and the industry standard method of data compression (DCLZ), at effective transfer rates up to 2.5 GB/hour.

DAT Drives Ordering Information ^[1]

Description/ Model Number	Formatted Capacity	Interface	Business Computer Systems						Workstations				Product Number	Price
			HP 3000			HP 9000			HP Apollo 9000					
			Classic MPE V	S/900 MPE/iX	S/9x7 MPE/iX	S/8x0 HP-UX	S/8x2 HP-UX	S/8x7 HP-UX	S/300 HP-UX	S/400 Domain	S/400 HP-UX	S/700 HP-UX		
2000	2.0 GB	SCSI-2	N/A	4.0	3.1	8.06	9.0	8.02	8.0	10.3 [2]	8.0	8.07	C1520B	\$3,150
2000DC	up to 8.0 GB	SCSI-2	N/A	4.0[3]	N/A	9.0	9.0	9.0	9.0	No Plans	9.0	8.07	C1521B	4,150

[1] Cables included (K2296)

[2] 400T and 400S SR10.3.0.2
425T and 425S SR10.3.4
425E SR10.3.5
433S Planned

[3] Supported on HP 3000 NIO systems, to read/write up to 8 GB order option number AG9. CIO systems supported: 920, 922, 932, 948, 958, 925, 935, 949, 950, 955, 980, 9X7S, 990, and 992.



Model 2000 DAT Drive

Save both space and time

Hewlett-Packard magnetic tape drives deliver more than just data storage. They offer your system excellent archival storage, data exchange with other computer systems, software distribution, and on-line data storage for data logging and large file manipulation. With HP's wide range of drives, you're assured of getting the one best suited to your interchange standards, budget, future growth needs, and backup performance and capacity requirements.

The speed of the tape drive and the capacity of the media should match your particular computer system. As the disk storage on a computer increases, you should upgrade to a tape drive with higher capacity and performance. This will help minimize backup time and operator intervention and improve data storage efficiency.

Workstations and multi-user systems requiring high capacity, unattended backup are best matched with DDS-format DAT drives.

Midrange and high-end multi-user systems with disk capacity greater than 2 GB should consider a 1/2-inch tape drive. They write data in the industry-standard formats of 1600 or 6250 bytes per inch (bpi). A data compression tape storage format can be utilized to provide up to four times greater reel capacity and higher performance, saving both space and time.



HP Magnetic Tape Drive

Find HP magnetic tape on page 110.

1/2-inch Magnetic Tape Drive Ordering Information

Description/ Model Number	Storage Capacity	Interface	Business Computer Systems				Workstations				Product Number	Price	
			HP 3000		HP 9000		HP Apollo 9000						
			Classic MPE V	S/900 MPE IX	S/9x7 MPE IX	S/800 HP-UX	S/8x7 HP-UX	S/300 HP-UX	S/400 Domain	S/400 HP-UX			S/700 HP-UX
HP7979A	1600-bpi	HP-IB	UB-Delta3 V-MIT	Yes	3.1	Pre-7.0	8.02	6.2+	No	7.0+*	No	7979A	\$13,400
HP 7979S	1600-bpi	SCSI	No	No	No	8.02		No	10.3**	No	8.07+	7979S	11,200
HP7980A	1600/6250-bpi	HP-IB	UB-Delta3 V-MIT	Yes	3.1	Pre-7.0	8.02	6.2+	No	7.0+**	8.07+	7980A	22,200
HP7980S	1600/6250-bpi	SCSI	No	No	No	8.0	8.02	No	10.3**	No	8.07+	7980S	18,500
HP7980SX	1600/6250-bpi [†]	SCSI	No	No	No	8.0	8.02	No	10.3+**	No	8.07+	7980SX	21,000
HP7980XC	1600/6250-bpi [†]	HP-IB	UB-Delta3 V-MIT	Yes	3.1	Pre-7.0	8.02	6.2+	No	7.0+**	No	7980XC	24,700

* Supported on all models except 400dl and 425e

** Supported on 400s, 425s, 433s only

† With data compression



**Now you can order support
along with your product.
See page 125.**



"When you call HP DIRECT, you will be working with a team whose ultimate concern is customer satisfaction!"

Double your data storage with Optical Libraries from HP

Hewlett-Packard now offers double density optical storage products (1.3 GB/disk capacity). Now you can choose from the 20 GB Library (one drive, 16 disk) to the 144 disk, 187 GB (4 drives) Library.

Take advantage of HP's multifunction optical storage technology now. You'll have automated, reliable, and immediate access to vast amounts of information, at a fraction of the cost per MB of hard disk storage.

This is what you'll get with optical disk drive technology:

- Rugged, removable disks with long, maintenance-free shelf life
- Affordable access to huge volumes of previously off-line data
- Unattended high capacity backup



Models 650C and 20LT Optical Storage products.

Optical Drives Ordering Information

Description/ Model Number	Storage Capacity	Interface	Business Computer Systems				Workstations				Product Number	Price	
			HP 3000		HP 9000		HP Apollo 9000						
			Classic MPE V	S/900 MPE IX	S/9x7 MPE IX	S/800 HP-UX	S/8x7 HP-UX	S/300 HP-UX	S/400 Domain	S/400 HP-UX			S/700 HP-UX
CD-ROM Drive	600 MB	SCSI	N/A	N/A	N/A	8.0	8.02	7.0+	N/A	7.0+*	8.0+	A1999A	\$ 1,300
High Performance Optical Drive [2][3]													
650 C	650 MB	SCSI	N/A	N/A	N/A	9.0	9.0	8.0	N/A	8.0+*	8.07*	C1701C	4,995
T Products													
20LT	20 GB	SCSI	N/A	N/A	N/A	9.0	9.0	N/A	N/A	N/A	9.0	C1708T	12,100
40T	40 GB	SCSI	N/A	N/A	N/A	9.0	9.0	N/A	N/A	N/A	9.0	C1700T	31,800
120T	114 GB	SCSI	N/A	N/A	N/A	9.0	9.0	N/A	N/A	N/A	9.0	C1704T	73,600
200T	187 GB	SCSI	N/A	N/A	N/A	9.0	9.0	N/A	N/A	N/A	9.0	C1705T	99,600
Optical Library with High Performance Optical Drive [2]													
10 LC [3]	10.4 GB	SCSI	N/A	N/A	N/A	9.0	9.0	N/A	N/A	N/A	9.0	C1708C	10,095
20 C	20.8 GB	SCSI	N/A	N/A	N/A	9.0	9.0	N/A	N/A	N/A	9.0	C1700C	28,400
60 C	57.2 GB	SCSI	N/A	N/A	N/A	9.0	9.0	N/A	N/A	N/A	9.0	C1704C	67,800
100 C	93.6 GB	SCSI	N/A	N/A	N/A	9.0	9.0	N/A	N/A	N/A	9.0	C1705C	90,900

[1] HP's new double capacity, high performance optical drive that delivers 37 ms average seek time, 600 KB/sec. write transfer, and 1.2 MB/sec. read transfer (max. sustained).

[2] HP's high performance multifunction drive that delivers 32 ms average seek time, 500 KB/sec write transfer rate (max. sustained), and 1 MB/sec read transfer rate (max. sustained).

[3] does not include Optical media

+ earliest and follow-on releases

* check for models supported

Find optical media on page 111.

Get the scanner the critics call “blazingly fast!”

ScanJet IIc

HP's ScanJet IIc has won the hearts of reviewers throughout the industry. Award after award shows that nobody comes close to offering the quality color, integrated scanning solution of the ScanJet IIc.

The ScanJet IIc's 8-bit grayscale (256 levels) and 24-bit color (16.7 million colors) ensure that both black and white, and color images will be of the highest professional quality.

The ScanJet IIc includes everything you need—scanner, cables, software—to start integrating hardcopy images into your documents. Whether you're new to scanners or an old hand, you'll find the ScanJet IIc offers you plenty of control with great ease of use.

The ScanJet IIc provides a wide variety of features, including friendly on-line help that puts reference and tutorial materials on your screen anytime you need them. The live preview feature shows you the results of changes immediately, saving you time and frustration.

You'll enjoy custom scaling in one percent increments, which makes it easy to get just the right size. Another convenient feature is the ScanJet IIc's Automatic Exposure, which selects the optimum brightness and contrast settings for you. And a layered user interface provides basic function on the top screen with a complete set of advanced features easily accessible as pull down menus or floating tools.

The ScanJet IIc produces image



ScanJet IIc Ordering Information

Description	Product / Option Number	Price
HP ScanJet IIc scanner (includes A2229A Interface Kit)	C1788A	\$2,880
Software on DDS (4 mm DAT) tape	AAH	N/C
CD-ROM certificate	AAU	N/C
Interface Kit (includes SCSI cable, terminator, DeskScan/UX software and user manual)	A2229A	995
Software on DDS (4 mm DAT) tape	AAH	N/C
CD-ROM certificate	AAU	N/C
Automatic Document Feeder	C1751A	559

file formats which are supported by the leading word processing, desktop publishing, presentation, and spreadsheet software packages. It supports all HP monochrome and color printers. It also supports the Automatic Document Feeder (ADF) for multiple page input, making it especially useful as a FAX input device and third party OCR capability.

Specifications

- System Hardware**
 HP Apollo 9000 Series 700 PA-RISC workstations with 16 MB of main CPU memory.
- Operating System**
 HP-UX 8.07 and higher.



Now you can order support along with your product. See page 125.

HP knows how to make an impact

Highlights

- **Wide Range of Printing Speeds**
From 420 lpm up to 1,600 lpm in draft mode.
- **Maximum Flexibility**
Several character sets and raster graphics support for the worldwide market.
- **Heavy Duty Cycle Products**
Supporting printing loads from 12,000 pages per month (ppm) up to 650,000 ppm.
- **High Reliability and Availability**
Highest MTBF in the industry for line impact dot matrix printers.
- **Full Range of HP SPU's Connectivity**
HP 3000, HP 9000, HP 1000
- **Full Set of Interface Options**
(See Ordering Information)
- **Efficient Paper Handling**
Users enjoy conveniences such as paper-out and paper-jam detection, a 16-channel downloadable vertical forms control, and easy forms alignment. Slew over blank lines and top of form indicator.

HP 2566C and HP 2567C

The HP 2566C and HP 2567C impact printers offer superior quality plus fast and reliable printing for commercial, industrial or data processing environments. They are designed for applications requiring printing volumes of 230,000 to 650,000 pages per month and print speeds up to 1,600 lines per minute. Their high speeds and extraordinary duty cycles make these two printers ideal for highly demanding print applications. Both are equipped with a power paper stacker that stacks a full box of paper with minimal operator intervention, fulfilling the need for high-volume, unattended printing applications. **2566C & 2567C**

HP 2562C

The HP 2562C is rugged enough to handle 12,000 to 25,000 pages per month. It's designed for harsh industrial environments where high reliability and endurance are a must. It delivers high quality graphics for barcoding and other automatic identification processes. It also labels packages accurately and in conformance with the regulatory agencies. Along with top quality industrial graphics and a surprisingly competitive price, this printer features the longest intervals between service calls of any printer in its category. **2562C**

HP 2563C

When your printing needs call for speeds up to 420 lines per minute, quiet operation and outstanding paper handling abilities, the HP 2563C is your best option. It features a new standard sound-reduction enclosure. Operating at only 48 dbA, it is as quiet as the HP LaserJet IIISi. An additional benefit is that paper is neatly stacked at the back of the printer, reducing operator intervention. Thorough testing ensures many years of productive and dependable operation. **2563C**



HP2566/67C



HP2300/840L/1100L

HP 2300/840L

This printer offers the best for both office and industrial environments. If your business is conducted in the quietness of a typical office, the HP 2300/840L with its new sound enclosure is a great choice. It is designed to support printing volumes of 63,000 to 230,000 pages per month. It combines the benefits of high speed with silent operation. The improved multi-language control panel allows fast set-up and configuration. **C2354A**

HP 2300/1100L

The result of listening to our customers' input, joined with meticulous design and implementation, produced the brand new HP 2300/1100L. Its combined characteristics allow it to successfully meet widely different needs at the office and in industrial environments. For printing speeds up to 1,100 lines per minute and volumes up to 280,000 pages per month, the HP 2300/1100L is a great option. With its standard sound enclosure, this printer operates at 55 dbA. **C2356A**

HP Label Card 4256

The HP Label Card 4256 is a new generation controller option that provides powerful labeling, barcoding, forms creation and QMS® Code V version II graphics capabilities. QMS Code V version II offers powerful industrial graphics commands such as scalable and rotatable fonts, box and line

draw commands, and barcoding capabilities. This powerful command language also reduces the user's CPU overhead, since all graphics calculations are performed by the HP Label Card, rather than the host CPU. It is fully compatible with the previous HP Label Card version.



Print Samples

LAN Connectivity (TCP/IP)

The LAN interface cartridge provides HP Line Impact Printers with an easy way to connect to an Ethernet, Coaxial, or Twisted Pair Local Area Network using the

TCP/IP Network Operating System. The interface option offers full compatibility with all HP 256xC and 2300 Series Line Impact Printers. The network interface

delivers the speed, improved performance, and shareability your LAN environment needs. Server loading is minimized by transferring data in large blocks.

Impact Dot Matrix Printers Ordering Information

Description	Draft Speed	Normal Speed	Duty Cycle	Product Number	Option Number	Price
Industrial Line Impact Printer	420 lpm	300 lpm	25,000 ppm	2562C	---	\$ 5,777
Line Impact Printer	420 lpm	300 lpm	63,000 ppm	2563C	---	8,717
Line Impact Printer	840 lpm	600 lpm	230,000 ppm	C2354A	---	12,340
Line Impact Printer	1100 lpm	800 lpm	280,000 ppm	C2356A	---	15,695
Line Impact Printer	1200 lpm	900 lpm	530,000 ppm	2566C	---	27,554
Line Impact Printer	1600 lpm	1200 lpm	650,000 ppm	2567C	---	34,835
Standard power configuration is 120 VAC, 50/60Hz for all 256xC printers						
220 VAC 50/60 Hz				---	015	
100 VAC 50/60 Hz				---	016	
240 VAC 50/60 Hz				---	017	
Standard power configuration for Series 2300 printers: Four positions: 100,120, 220-230, 240 VAC at 50/60 Hz switchable						
Interface option must be specified for all 256xC and /2300 printers except 2562C						
HP-IB interface subsystem					256xC ^[1] 046 Series 2300 ^[1] 1A8	
Multiple I/O - RS-232-C, Centronics, & TCP/IP expandable					1AX 1AX	
Multiple I/O - RS-422-A, Centronics, & TCP/IP expandable					ALZ ALZ	
TCP/IP for HP-UX (adapter box)					ALY ALY	
Graphics Options						
Enhanced HP Label Card 4256				---	400	2,595
Kits						
Graphics Upgrade for the 2563B					002	250
Graphics Upgrade for the 2564B					004	225
Graphics Upgrade for the 2566B					007	250
Graphics Upgrade for the 2567B					008	250
HP Label Card II (4256) Upgrade Kit. For the 256xC (except 2564C) and 2300 Series.				C2345A	---	2,966
Interface Upgrade Kit for HP 256xC printers and 2300 Series.				C2342A	---	N/C
Upgrade Kit for 256xC printers to work with C2342A I/O card #1AX or #ALY or #ALZ					256	197
RS-232 and Centronics Interface					1AX	655
Add TCP/IP LAN Interface. To provide LAN connection, order #ALY & HP JetDirect Card					ALY	175
RS-422 and Centronics Interface					ALZ	690

Note: Only one C2342A may be ordered per 256xC and 2300 Series printers. It is not available for printers 2563A/B, 2564B/C, 2566A/B and 2567B. Holds Print-ronix (P-Series) and Epson (FX-80) emulations. Includes an open slot to receive the HP TCP/IP cards. Always order option #256 when C2342A is for 256xC printers, plus option #1AX or #ALY or #ALZ. Interface manual included. Cable not included.

[1] Option pricing may vary depending on printer compatibility. Please call for further information.

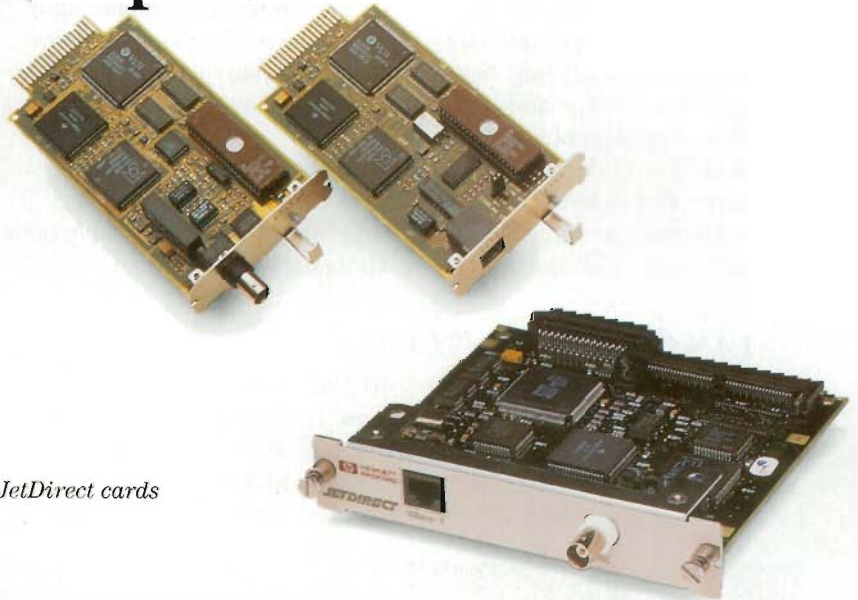
Your interface to speed!

HP JetDirect network interfaces are network-peripheral interface cards that let you connect HP peripherals to your UNIX-system-based network. That means you can avoid slowdowns caused by standard serial or parallel interfaces. Your printer or plotter connects directly to your network and takes advantage of the much faster network data transmission speeds.

Use HP JetDirect cards to add HP LaserJet II, IID, III, IIID, 4, 4Si, 4SiMX, and 4M printers as well as DesignJet and DesignJet 600 and 650C plotters and HP PaintJet XL300 and DeskJet 1200C printers to your HP-UX network. Also supported are SunOS/ Solaris and Santa Cruz Operation (SCO) UNIX operating systems using the TCP/IP Ethernet protocol. HP JetDirect cards are compatible with standard UNIX-system-based diagnostics and spooler systems as well.

With HP JetDirect cards, you'll enjoy improved performance for both graphics and complex documents, especially in the case of the HP LaserJet 4Si printer which requires a faster interface to support its powerful engine.

Along with performance, HP has designed convenience into the HP JetDirect cards. That's because there are no external boxes to install, no additional client workstation software to interfere with your applications, and no restrictions on where you can connect your peripheral. It's as easy as sliding the HP JetDirect card into your HP peripheral's I/O slot and connecting it to your network cabling.



JetDirect cards

HP JetDirect Ordering Information

Description	Product Number	Price
For LaserJet 4, 4M, 4Si, 4SiMX, PaintJet XL300 DeskJet 1200C, DesignJet and DesignJet 600C plotters Ethernet/802.3 (10Base-T) (Novell NetWare, Microsoft LAN Manager, Windows NT, Windows for Workgroups, IBM LAN Server, EtherTalk, and UNIX) ¹	J2371A ¹	\$449
Ethernet/802.3 (10Base-T and 10Base2) (Novell NetWare, Microsoft LAN Manager, Windows NT, Windows for Workgroups, IBM LAN Server, EtherTalk, and UNIX) ²	J2372A ¹	499
JetDirect Software for HP-UX systems	J2374A	199
JetDirect Software for SunOS/Solaris systems	J2375A	199
For LaserJet II, IID, III, IIID printers UNIX (HP-UX, SunOS/Solaris & SCO UNIX) /Ethernet (10Base-T)	C2071S ²	449
UNIX (HP-UX, SunOS/Solaris & SCO UNIX) /Ethernet (10Base2)	C2071T ¹	449

¹ For UNIX customers one HP JetDirect software kit must be purchased. One kit can be used for loading onto multiple host systems and will support multiple HP JetDirect cards.

² Supports HP-UX, SunOS/Solaris and SCO UNIX.

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.

MicroPrint 45CH Ordering Information

Description	Product Number	Price
HP-IB to Centronics converter, cables not included	92203J	\$210
1-m (3.3-ft), HP-IB 24-pin cable	10833A	90
2-m (6.6-ft), Centronics (parallel) 25-pin to 36-pin cable	92284A	39

Supplies & Accessories

Maximizing your productivity

“only the best for your equipment”

“All our supplies and accessories are tested to demanding specifications and we continue testing throughout the life of the product. That means you get only the best for your equipment! HP data storage supplies and accessories ensure top performance from your HP storage devices. Our power systems and surge suppressors will protect your systems and our cables provide access to the data you need. And stylish HP Design Plus furniture is strong on function to organize your workstation equipment and peripherals with comfort in mind!”

Veronica
Veronica Kunis
Order Management Representative



Cartridges, Tape, and Optical Disks

HP Media

- If it's worth saving, it deserves HP media
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Furniture

**Design Plus
HP Ergonomic**

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Cables, Interfaces, and Terminators

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and Supplies
Resellers

800.637.7740

Optimized performance

When you choose HP media, you ensure your data is as safe and error-free as possible. From meticulous design engineering to continuous testing and quality control, HP media is unparalleled for consistently superior performance.

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 formatted into 1-KB user data blocks and are

ideal for data exchange among HP systems, software distribution, and data/transaction logging. Tapes are pre-certified for use with HP 7908/11/12/14, 9144A, 7942A, 7946A, and 35401A tape drives.

Ordering Information		
Description	Product Number	Price
67 MB 600 ft tape cartridge	88140LC	\$219/box
16 MB 150 ft tape cartridge	88140SC	169/box

Each box contains 5 tape cartridges.



Double certification means no read-back problems!

HP Data Cartridges for HP 9145A Drives

Trust your valuable data to these cartridges, engineered and tested expressly for the HP 9145A drive. Each box contains five pre-certified and formatted cartridges.

Ordering Information		
Description	Product Number	Price
133 MB tape cartridge	92245L	\$239/box
32 MB tape cartridge	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.

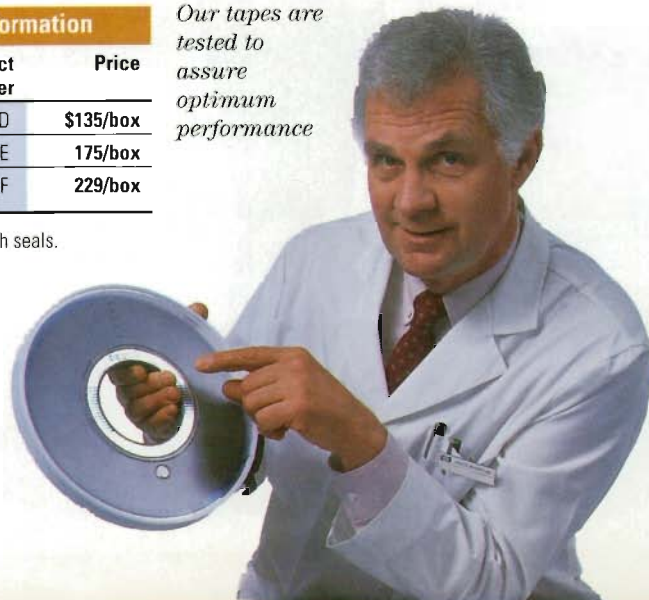
Out of 26 tapes tested on the same HP drive for 220 full reel passes, only one tape passed all tests for

wear, environmental and magnetic properties, signal quality, cleanliness, and durability with flying colors ... HP Brand magnetic tape!

Ordering Information		
Description	Product Number	Price
600 ft/reel	92150D	\$135/box
1200 ft/reel	92150E	175/box
2400 ft/reel	92150F	229/box

Each box contains ten reels with seals.

Our tapes are tested to assure optimum performance



Products on this page are also available through authorized HP Dealers and Supplies Resellers

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. HP disks are guaranteed to be 100 percent error-free. In fact, our confidence

in our disks is supported by a 30-year limited 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.

HP Optical Disk Ordering Information		
Description	Product Number	Price
HP Optical Rewritable Disk (1024 byte/sector)	92280A	\$159
HP Optical Write-Once Disk (1024 byte/sector)	92290A	159

HP Optical Disks go beyond compatibility.

Digital Data Storage Cartridges

Digital data storage (DDS) cartridges have always provided better protection for data than digital audio tape (DAT) because DDS tape was designed specifically for computer-generated data.

HP DDS cartridges are enhanced for the Media Recognition System,

offering an extra measure of security by enabling your new HP DDS drive to differentiate between DDS and DAT. This means you are protected from inadvertently writing valuable data to inferior DAT media.

These enhanced cartridges are still compatible with previous

generation drives, so you're still able to read DAT cartridges and write data stored on DAT to DDS cartridges.

Depend on HP DDS cartridges to meet the exacting needs of most any application where high data integrity is critical.

Digital Data Storage Cartridge Ordering Information		
Description	Product Number	Price
HP DDS Cartridges 1.3 GB capacity, 60 meter	92283A	\$75/box
HP DDS Cartridges 2.0 GB capacity, 90 meter	92283B	95/box



Use only HP DDS Cartridges to ensure high data integrity.

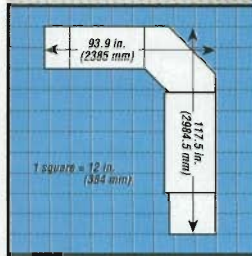
CAD Workstation lets you stretch out and design in comfort

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.

- | | | |
|----------|---|--------|
| 1 | Medium System Table | 92214B |
| 2 | Task Lamp | 92213Q |
| 3 | Corner Turn | 92214J |
| 4 | CAD Workstation | 92213F |
| 5 | "C" and "D" Size Drawing Holder | 92213D |
| 6 | Mini-Rack
(Refer to page 114 for filler panels and drawers for 92211R) | 92211R |
| 7 | Mobile Drawer Unit | 92211N |



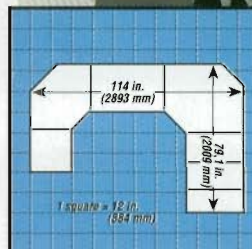
CAD Corner handles jumbo monitors and expansive drawings

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.




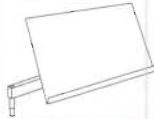



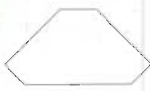

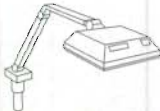
- | | | |
|----------|---|--------|
| 1 | Large System Table | 92214C |
| 2 | Corner Turn | 92214J |
| 3 | Task Lamp | 92213Q |
| 4 | Medium System Table | 92214B |
| 5 | CAD Corner Workstation | 92214K |
| 6 | Mini-Rack
(Two units—refer to page 114 for filler panels and drawers for the 92211R) | 92211R |
| 7 | Mobile Drawer Unit | 92211N |







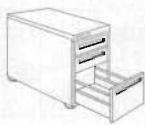





Workstation furniture



Design Plus Ordering Information

	Description	Height	Width	Depth	Product Number	Price
	<i>Design Plus</i> 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 fits underneath.	720mm (28.4 in.)	1125mm (44.3 in.)	711mm (28.0 in.)	92213B	\$940
	<i>Design Plus</i> 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 <i>Design Plus</i> furniture.	720mm (28.4 in.) 35.6mm (1.4 in.)	1500mm (59.0 in.) 528.3mm (20.8 in.)	711mm (28.0 in.)	92213F	990
	<i>Design Plus</i> 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 <i>Design Plus</i> furniture.	720mm (28.4 in.)	1125mm (44.3 in.)	1125mm (44.3 in.)	92214K	990
	"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)	66mm (2.6 in.)	92213D	240
	<i>Design Plus</i> 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	590
	Medium <i>Design Plus</i> 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	640
	Large <i>Design Plus</i> System Table. Comes with cable management, adjustable leveling glides, and is same height as 92211R mobile rack system cabinet.	720mm (28.4 in.)	1500mm (59.0 in.)	711mm (28.0 in.)	92214C	690
	90-Degree <i>Design Plus</i> 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: 711 mm (28.0 in.)			92214J	390
	<i>Design Plus</i> Joining Bracket Kit. For use on all <i>Design Plus</i> 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	50
	<i>Design Plus</i> 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 <i>Design Plus</i> tables. UL listed and CSA approved.	N/A	N/A	N/A	92213Q	290




Design Plus system storage and support furniture

Design Plus Ordering Information					
Description	Height	Width	Depth	Product Number	Price
 <i>Design Plus</i> 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	\$785
 <i>Design Plus</i> Mobile Drawer Unit. Rolls easily and sits next to all <i>Design Plus</i> 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	840
 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.)	outside dimensions: 324mm (12.75 in.)	473mm (18.62 in.)	92211G	180
	295mm (11.62 in.)	inside dimensions: 286mm (11.25 in.)	471mm (18.54 in.)		
 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.)	outside dimensions: 324mm (12.75 in.)	473mm (18.62 in.)	92211F	170
	143mm (5.62 in.)	inside dimensions: 286mm (11.25 in.)	471mm (18.54 in.)		
 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.)	outside dimensions: 324mm (12.75 in.)	473mm (18.62 in.)	92211E	160
	92mm (3.62 in.)	inside dimensions: 286mm (11.25 in.)	471mm (18.54 in.)		
 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	55
 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	45
 <i>Design Plus</i> Mobile Sound Enclosure Cabinet. For use with all 293x serial impact dot-matrix printers. Rolls easily and sits level with all <i>Design Plus</i> tables. Features 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.)	92211W	775
 <i>Design Plus</i> 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	490
 <i>Design Plus</i> 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	420
	<i>Design Plus</i> Printer/Plotter Cabinet. For HP PaintJet XL or 7550A Plotter.	720mm (28.4 in.)	762mm (30.0 in.)	450mm (17.7 in.)	92214Q

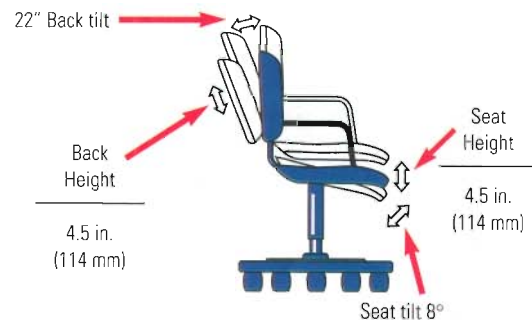
Design Plus system storage and support furniture



Design Plus Ordering Information

Description	Height	Width	Depth	Product Number	Price
 <p><i>Design Plus</i> Mobile Support Cabinet. Rolls easily under the 92214B/C <i>Design Plus</i> 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.).</p>	620mm (24.4 in.)	425mm (16.7 in.)	525mm (20.7 in.)	92211L	\$355
 <p><i>Design Plus</i> 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.).</p>	435mm (17.1 in.)	425mm (16.7 in.)	425mm (16.7 in.)	92211M	285
 <p><i>Design Plus</i> 483 mm (19 in.) wide EIA rack cabinet. Available in 720 mm (28.4 in.), 100 mm (40 in.) and 1600 mm (63 in.) heights. Basic rack includes frame with EIA standard hole pattern, top, bottom, and side panels. Select front and rear doors, filler panels, rails, drawer, and work surface as needed.</p>	720 mm (28.4 in.)	600 mm (23.6 in.)	800 mm (31.5 in.)	46298A	950

HP Ergonomic chairs: from the bottom up, they redefine your entire concept of comfort



HP Ergonomic Chair Ordering Information

Description	Specifications	Color	Product Number	Price	
HP Ergonomic Executive Chair	<p>Seat specifications</p> <p>Height 413-527mm (15.25-19 in.)</p> <p>Width 483mm (19 in.)</p> <p>Depth 457mm (18 in.)</p> <p>Adjustment 413-483mm (16.25-19 in.)</p>	<p>Chair back specifications</p> <p>Height 457mm (18 in.)</p> <p>Width 445mm (17.5 in.)</p> <p>Adjustment 457-514mm (18-20 in.)</p>	<p>Gray</p> <p>Blue</p> <p>Beige</p>	<p>92208M</p> <p>92208N</p> <p>92208P</p>	\$475
HP Ergonomic Workstation/Managerial Chair	<p>Seat specifications</p> <p>Height 413-527mm (16.26-20.75 in.)</p> <p>Width 470mm (18.5 in.)</p> <p>Depth 457mm (18 in.)</p> <p>Adjustment 413-527mm (16.25-23 in.)</p>	<p>Chair back specifications</p> <p>Height 267mm (10.5 in.)</p> <p>Width 406mm (16 in.)</p> <p>Adjustment 267-394mm (10.5-15.5 in.)</p>	<p>Gray</p> <p>Blue</p> <p>Beige</p>	<p>92208E</p> <p>92208F</p> <p>92208G</p>	245
HP Ergonomic Workbench Chair	<p>Seat specifications</p> <p>Height 483-648mm (19-25.5 in.)</p> <p>Width 470mm (18.5 in.)</p> <p>Depth 457mm (18 in.)</p> <p>Adjustment 483-648mm (19-25.4 in.)</p>	<p>Chair back specifications</p> <p>Height 267mm (10.5 in.)</p> <p>Width 406mm (16 in.)</p> <p>Adjustment 267-394mm (10.5-15.5 in.)</p>	<p>Blue</p>	<p>92208S</p>	365
Black Armset	Optional, reversible armset for 92208E/F/G—HP Ergonomic Workstation/Managerial Chair		92208K	79	

System cabinets

HP offers the perfect solution to house your HP 3000 Series 9x7/S and HP 9000 Series 8x7/S multiuser systems. Our cabinets are ideal for your system as well as supported peripheral devices such as disk drives, tape drives, and distributed terminal controllers (DTCs). Two models (1100mm and 1600mm) are offered for your peripheral bays and locally customized multiuser system configurations.

You'll appreciate a variety of features that make assembly, adjustments and maintenance simple and quick. Side panels lift off to allow easy access; rails lock into keyed slots in the vertical mounting

columns for accurate vertical positioning. The base of the HP racks stop 100mm short of the rear door to give power and signal cables ample access for improved cable management and cooling. These cabinets offer you a space-saving and attractive rack mount solution for your systems and peripherals.

Features

- For cooling, a top-mounted extractor fan is standard on 1600mm (C2786A) cabinet. Available as an option on 1100mm (C2785A) cabinet.
- 16-amp power distribution unit with front panel ON/OFF switch.
- Anti-tip foot and 3-inch casters are included for safety and mobility.



C2786A 1600mm Cabinet

The 1600mm rack cabinet comes standard with 240V, even in North America. This is to prevent current overloads when the rack is fully loaded since the current capacity of the PDU is 16 amps. This current limit is based on the common 20 amp limit of most U.S. building codes. Equipment uses half the current at 240V than at 120V, so a 240V PDU allows more equipment to be run off a single PDU and off a single wiring circuit in your building.

Autoranging equipment like the HP9000 Series 8x7S, the HP3000 Series 9x7S and the Series 6000 mass storage products will automatically work at both 120V or 240V. Other equipment that is not autoranging should be ordered with a 240V power supply or, existing equipment can usually be modified to work at 240V. The correct IEC-320 power cord is included in C279X rack mount kits or can be ordered separately as 8120-1860.

For those special situations where 120V is required even for a 1600mm rack cabinet, you can order the C2786A with power option AW3.

System Cabinets Ordering Information

Description	Product Number	Price
1100 mm-high computer cabinet includes three 1.75-inch filler panels. Requires localization option	C2785A	\$1,700
This North American power option includes a 100/120V 16 amp distribution unit, six IEC-320 receptacles, and a 20 amp input power cord terminated with non-locking 5-20 plug.	AW3	N/C
North American 200/240V power distribution unit with six IEC-320 receptacles and a 20 amp input power cord terminated with a locking 6-20 plug.	AW4	N/C
1600 mm-high computer cabinet includes an extractor fan, two 1.75-inch filler panels. Requires localization option.	C2786A	2,100
This North American power option includes a 200/240V 16 amp power distribution unit, ten IEC-320 receptacles, a 20 amp input power cord terminated with a locking 6-20 plug.	AW4	N/C
North American 100/120V power distribution unit with 10 IEC-320 receptacles, 20 amp input power cord terminated with a locking 5-20 plug.	AW3	N/C

Accessories Ordering Information

Description	Product Number	Price
Adds extractor fan. Substitutes vented top for solid top:		
100-120B fan	E4470A	\$130
200-240B fan	E4471A	130
Adds perforated, lockable front door for C2786A cabinet.	E4465A	190
Adds perforated, lockable front door for C2785A cabinet.	E4464A	190
Rack mount kit for HP 3000 Series 9x7LX and HP 9000 Series 807/817/837S includes rails, bezel, mounting hardware, IEC-320 power cord.	C2797A	140
Rack mount kit for HP 3000 9x7 and HP 9000 Series 827/847/857S includes rails, bezel, mounting hardware, IEC-320 power cord.	C2798A	190
Rack mount kit for HP DTC48 (part number 2345A) includes rails, bezel, mounting hardware, IEC-320 power cord.	C2799A	150
Rack mount kit for HP 6000 disk drive models 335H, 670H/XP/FL & 1.35FL (part numbers C220xA) includes rails, bezel, mounting hardware.	19508A	150
Support rail kit for HP computer and peripheral products includes one pair of rails, ten mounting screws and ten sheet metal nuts.	C2788A	50
Anti-tip ballast kit (14kg/30lb) and mounting hardware	C2790A	120
IEC-320 Female to male power cord (2.5 feet)	8120-1900	12
Filler Panel Kit- 6 one-EIA unit panels.	C2791A	75



C2799A Rack mount kit

American Power Conversion Smart-UPS

American Power Conversion's Smart-UPS 600 VA and 1250 VA Uninterruptible Power Systems offer cost-effective, reliable solutions to power problems that can damage your equipment and cause data corruption. The Smart-UPS is ideally suited for use as a standalone UPS. It protects your hardware and data from blackouts, brown-outs, surges, and spikes. A 1 year unit repair/replacement warranty and technical support are provided by American Power Conversion at 800-541-8896 in the U.S., and 800-443-4519 in Canada.

Technical Specifications

Hardware supported:	HP 9000 Series 400, 700, 800
Input voltage:	103-132 VAC/60 Hz
Input plugs:	5-15 P (6 feet)
Output voltage:	120 VAC/60 Hz
Output connections:	4 receptacles (5-15R) (6 for 1250VA UPS)
Battery backup time:	20 minutes at half load, 6 minutes at full load.



System Cabinets Ordering Information

Description	Product Number	Price
APC 600VA Smart UPS and HP-UX Power Mon software	APCC-600UX	\$ 895
APC 1250VA Smart UPS and HP-UX Power Mon software	APCC-1250UX	1,495

Deltec's 2000 Series Uninterruptible Power Systems

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, DAT media, 25-pin/25-pin and 25-pin/9-pin cables, and documentation. Includes Automatic Transfer Switch and ball casters.

Technical Specifications

Hardware supported:	HP 9000 Series 700, 800
Input voltage:	120/208 Vac/60 Hz
Input plugs:	L5-30P for 2.4 kVA UPS 5-50P for 3.6 kVA UPS
Output voltage:	120/208 Vac/60 Hz
Output connections:	6 receptacles (5-15R) and one L14-30 receptacle
Battery backup time:	10 minutes at full load 30 minutes at half load, standard internal battery pack.

Deltec 2000 Series Ordering Information

Description	Product Number	Price
Deltec 2.4 kVA UPS/120 Vac and Power Mon software	DELT-2026	\$3,720
Deltec 3.6 kVA UPS/120 Vac and Power Mon software	DELT-2036	4,420
Deltec 2.4 kVA UPS/208 Vac and Power Mon software	DELT-2026C2	3,720
Deltec 3.6 kVA UPS/208 Vac and Power Mon software	DELT-2036C2	4,420

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 and 400

Connecting from:	Connecting to:			
	Model 4xxe/t/s	Models	HP-UX Devices [1]	Domain/OS
	362, 382	340, 345, 350 360, 370, 375*, 380	C1512A; C1520B/21B; C1700/01A; C2212A/D; C2213A/D; C2214B; C2216T/17T; 7979S; 7980S; A1999A	A-660-ABA, AADDSFLPABA, AADDESTCABA, A-EX-ABA, A-OBEX-ABAD
Models 4XXe/t/s 362, 382	N/A	N/A	K2296 K2297	K2294 K2295
Models 340, 345, 350, 360, 370, 375, 380	N/A	N/A	92222A,B,C	N/A
HP-UX Devices [1] C1700/01A; C2212A/D; C2213A/D; C2214B; C2216T/17T C1512A; C1520B/21B; 7979S; 7980S; A1999A	K2296 K2297	92222A,B,C	92222A,B,C, C2927A, C2928A	K2283 K2284
Domain/OS Devices A-660-ABA; AADDSFLPABA; AADDESTCABA; A-EX-ABA; A-OBEX-ABAD	K2294 K2295	N/A	K2283 K2284	K2207, K2208 K2209, K2210 K2211
Include these SCSI device terminators when ordering cabling. Terminator	C2904A	1252-2297	K2291	K2290

* Also for models with 25 MHz MC68040 upgrade

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

SCSI Cables and Terminator

SCSI Cable & Terminator 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 3-m (9.9ft) cable (Male to Male, Low-density bail lock)	C2927A	79
SCSI 5-m (16.5ft) cable (Male to Male, Low-density bail lock)	C2928A	99
SCSI 1-m (3.3-ft) extension cable (Male to Female, low-density bail-lock)	92222D	55


Helpful Hint

Be sure to order a terminator with all SCSI cabling.

SCSI-2 Cabling and Terminators for Series 700

Series 700 SCSI-2 Cabling and Terminators								
Connecting	To:							
	Series 6000 Model 1350SE Mass Stor. Sys. C2217T, C2216T	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	
From:	For any configuration in this white area, choose one of these cables: K2296 .9 meter or K2297 1.5 meter For last HP peripheral, order Terminator K2291							
Model 705, 710, 720, 730 and 750 Standard SCSI-2 Port*								
Model 720, 730, 750 EISA Fast SCSI-2 Port (Differential) (product # 25525A)							Cable: C2906A 2m C2907A 5m C2916A 20m Termin: C2905A	Cable: K2296 .9m K2297 1.5m Terminator incl. with SCSI-2 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, or C2927A 3.0 meter, or C2928A 5.0 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 C2927A 3m C2928A 5m

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

 **CONFIGURATION NOT SUPPORTED**
Fast differential SCSI-2 will not work with normal (single-ended) SCSI-2. 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: Make sure not to exceed 7 SCSI-2 devices when connecting expansion systems on each SCSI-2 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).

Differential SCSI Extender Cables 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.

Series 400 and 700 Cables and Components Ordering Information

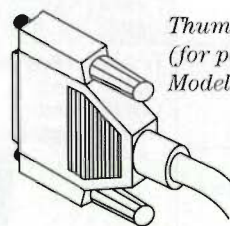
Description	Product Number	Price
Low-density bail-lock terminator for last UX peripheral (Series 400 and 700)	K2291*	\$ 40
Low-density bail-lock terminator for last Domain peripheral	K2290*	46
0.9-m (3 ft) Low-density bail-lock to low-density thumbscrew connector cable	K2284	40
1.5-m (5 ft) Low-density 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-2 active terminator	C2904A	45
SCSI-3 active terminator	C2905A	65
1-m SCSI-1 to SCSI-3 cable	C2915A	100
2-m SCSI-2 to SCSI-3 cable	C2906A	100
2.5-m SCSI-3 to SCSI-3	C2924A	140
5-m SCSI-2 to SCSI-3 cable	C2907A	130
10-m SCSI-3 to SCSI-3	C2925A	200
20-m SCSI-3 to SCSI-3	C2926A	240
20-m SCSI-2 to SCSI-3 cable	C2916A	190
1-m SCSI-2 to SCSI-2 cable	C2908A	90
0.9-m SCSI-3 to SCSI-3 cable	C2911A	120

* Cables not included w/terminator. Order separately.

Selected SCSI connections on Series 4xx systems



Threaded standoff with locktab connector



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

Helpful Hints

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 (QIC) 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

Connecting from (Host):			Connecting to (Device):		
Series or Model #	Description	Host Connector	DTE-25F Cable	HP Pen Plotter: DTE-25M Cable	Modems: DCE-25F 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	17255D 98561-61604	40242M 92221M
345, 375, 380	Model 345, 375, 380	PC-9M	24542G	24542H	24542M
400 (except 425e)	Series 400	DTE-25F	40242G	17255D	40242M
700, 425e	Series 700	PC-9M	24542G	24542H	24542M
98644A	Ser.Interface for Series 3XX	DTE-25F	40242G	17255D	40242M
98628A	Datacomm Interface Card	DTE-50F	5061-4215	5061-4216	5061-4215
98628A #001		DTE-25M	17255D	17255F	No add. cable req.
98628A #002		DCE-25F	40242M *	No add. cable req.	Not recomm.
98638A	8-Channel MUX	DCE-25F	40242M	40242C**	92219Q
98642A (port 0)	4-Port Multiplexer	DTE-25F	40242G	17255D	40242M *
98642A with 92219S		DTE-25M	17255D	17255F	40242C
98642A (port 1, 2, 3)		RJ-11(4F)	92219T plus 92219U	92219T plus 92219U and 92224F	92219T plus 92219U and 17255D

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

RS-232-C Cables

RS-232-C Cables Ordering Information			
Description	Length	Product Number	Price
25M to 25F	1.2-m (4-ft)	17255D	\$ 44
25F to 25F	1.2-m (4-ft)	17255F	44
9F to 25M	3-m (10-ft)	24542G	45
9F to 25F	3-m (10-ft)	24542H	45
9F to 25M	3-m (10-ft)	24542M	45
25F to 25M	5-m (16.5-ft)	40242C	108
25M to 25M	5-m (16.5-ft)	40242G	77
25M to 25M	5-m (16.5-ft)	40242M	77
50M to 25M	4.9-m (16-ft)	5061-4215	110
50M to 25F	4.9-m (16-ft)	5061-4216	105
25M to 25M	5-m (16.5-ft)	92219Q	55
25M to 25M	5-m (16.5-ft)	92219S	55
RJ-11M to RJ-11M	15-m (50-ft)	92219T	21
9M to 25M	1.5-m (5-ft)	92221M	40
9M to 25M	1.5-m (5-ft)	92221P	42
9M to 25F	3-m (10-ft)	98561-61604	55
25M to 25F	4.9-m (16 ft)	13242-60011	95
male to male	15-m (50 ft)	92218A	110
null modem cable	3-m (10 ft)	K1575	33

RS-422 Cables Ordering Information		
Description	Product Number	Price
Mini-Din 8M to DB-25M 3-m (10 feet) Connects HP PaintJet XL 300 printer to HP/Apollo workstations.	C2923A	\$80

Adapters Ordering Information		
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

Products
on this page are
also available through
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HP ThickLAN Cables

Depend on HP's 10 mm thick backbone coaxial and AUI (attachment unit interface) cable for interior wiring and long-distance networks. These cables meet IEEE 802.3 standards and are available with external jacket material of PVC or FEP Teflon to prevent excessive signal reflection and distortion.

ThickLAN (AUI) Cables* Ordering Information			
Description	Length	Product Number	Price
Terminated, FEP	6 m (19.7 ft)	92254A	\$135
Terminated, FEP	12 m (39.4 ft)	92254B	200
Terminated, FEP	24 m (78.7 ft)	92254C	345
Terminated, FEP	48 m (157.5 ft)	92254D	635
Terminated, PVC	6 m (19.7 ft)	92254E	85
Terminated, PVC	12 m (39.4 ft)	92254F	110
Terminated, PVC	24 m (78.7 ft)	92254G	160
Terminated, PVC	48 m (157.5 ft)	92254H	250

*For use with 30241A LAN MAU and LAN coaxial cable tap.

ThickLAN Backbone Coaxial Cables Ordering Information			
Description	Length	Product Number	Price
Unterminated, FEP	23.4 m (76.8 ft)	92253A	\$ 400
Terminated, FEP	23.4 m (76.8 ft)	92253B	425
Unterminated, FEP	117 m (383.9 ft)	92253C	1,500
Unterminated, FEP	500 m (1640 ft)	92253D	6,000
Unterminated, PVC	23.4 m (76.8 ft)	92253E	200
Terminated, PVC	23.4 m (76.8 ft)	92253F	225
Unterminated, PVC	117 m (383.9 ft)	92253G	500
Unterminated, PVC	500 m (1640 ft)	92253H	2,100

ThickLAN Connection Tools Ordering Information		
Description	Product Number	Price
Crimp tool (requires die in 92256A kit)	92229B	\$199
LAN coaxial cable installation/tool kit (die requires 92229B crimp tool)	92256A	185

HP ThinLAN Cables

These cables are terminated and have PVC jacket material and molded connector strain relief casing for durability.

Ordering Information		
Length	Product Number	Price
1 m (3.3 ft)	92227A	\$ 25
2 m (6.6 ft)	92227B	27
4 m (13.1 ft)	92227C	29
8 m (26.2 ft)	92227D	33
16 m (52.5 ft)	92227E	39
32 m (105 ft)	92227F	51
64 m (210 ft)	92227G	76
128 m (420 ft)	92227H	126

ThinLAN Connection Tools and Accessories Ordering Information		
Description	Product Number	Price
Crimp-on style BNC connectors (2 per package)	92227L	\$ 22.50
ThinLAN tool kit with crimping tool and cable stripper	92227M	450.00
ThinLAN Tee connector with insulating cover	92227N	27.50
ThinLAN loopback (connector, terminator pair, insulating cover, pre-assembled)	92227Q	45.00
ThinLAN insulating cover for connector	92227R	19.50
ThinLAN terminator pair (no ground wire connection)	92227P	23.00

Products on this page are also available through authorized HP Dealers and Supplies Resellers

Twisted-Pair Cables

These cables are designed to connect various HP EtherTwist products via the twisted-pair ports via 8-conductor 24 AWG solid copper twisted-pair cables used for both voice and 10-Mbit/s data transmission.

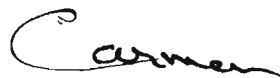
Twisted-Pair Cables Ordering Information			
Description	Length	Product Number	Price
Terminated	4 m (13.1 ft)	92268A	\$10
Terminated	8 m (25.2 ft)	92268B	12
Terminated	16 m (52.5 ft)	92268C	14
Terminated	32 m (105 ft)	92268D	22

HP-IB Cables

HP-IB cables can be used to connect two devices or can be "daisy-chained" to connect several devices, including printers and plotters.

HP-IB Cables Ordering Information		
Length	Product Number	Price
0.5 m (1.6 ft)	10833D	\$ 90
1 m (3.3 ft)	10833A	90
2 m (6.6 ft)	10833B	100
4 m (13.2 ft)	10833C	110

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Carmen Rouhi
Order Management Representative



HP-IB Connection Adapter

This shielded HP-IB to HP-IB adapter is designed for difficult cabling situations. It provides additional clearance between the cable and the rear panel of the instrument. This allows easier access to switches, cables and other connectors. The adapter extends the first cable approximately 2.3 cm away from the rear panel.

10834A\$35.00

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Barbara
Johnston Fay
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- **Software media and documentation updates** offer the latest from HP. HP System Support Options includes updates to your HP software products.
- **HP SupportLine** gets you the most up-to-date information. You also gain access to HP SupportLine electronic support at the times most convenient to your schedule.
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- **Installation services** maximize the effectiveness of your computing environment. HP's installation services are the best way to prepare your computing environment—whether you're setting up a new computer environment for your company or adding equipment to an existing one.

Installation Options

Option OS4	Installation and network configuration (when applicable) for products that do not include installation in product purchase price.
Option OSZ	Network configuration for products that include installation in product purchase price.

HP System Support Options

Option OS0	Hardware: Warranty upgraded to next-day on-site repair. Software: The license to use updates; media and documentation updates; and HP SupportLine access.
Option OS1	Hardware: Warranty upgraded to 4-hour on-site repair. Software: The license to use updates; media and documentation updates; and HP SupportLine access.
Option OS2	Hardware: Warranty upgraded to next-day on-site repair. Software: Telephone support; the license to use updates; media and documentation updates; and HP SupportLine access.
Option OS3	Hardware: Warranty upgraded to 4-hour on-site repair. Software: Telephone support; the license to use updates; media and documentation updates; and HP SupportLine access.
Option OS5	Hardware: Warranty upgraded to 24-hours, seven days a week. Software: The license to use updates; media and documentation updates; and HP SupportLine access.
Option OS6	Hardware: Warranty upgraded to 24-hours, seven days a week. Software: Telephone support; the license to use updates; media and documentation updates; and HP SupportLine access.

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For more complete scheduling information, contact 800-HP CLASS (800-472-5277), ext. 1160 in the United States. In other locations, contact your nearest HP sales office.

MPE/iX System Operation Skills

System operators will learn to perform daily operations tasks including file organization, system backup, and troubleshooting.

B2801S \$1,240

MPE/iX System Management Skills

System managers will learn features of MPE/iX. Topics include file creation, configuring node management services, and security.

31119S \$1,550

MPE/iX System Administration for Application Users

System administrators and operators will learn basic administration and operation functions in an application run-only environment for the HP 3000 Series 900 computer system.

B2802S \$1,550

MPE/iX Programming Skills

Programmers on an HP 3000 Series 900 MPE/iX system will learn fundamental concepts and commands.

31118S \$1,550

HP ALLBASE/SQL on HP-UX and MPE/iX

Database administrators and programmers will learn to create and maintain databases and write application programs.

36389S \$1,820

HP-UX System Administration Basics

Users, operators, and administrators will learn to perform the system administration tasks necessary to maintain their HP-UX system.

50722S \$930

Fundamentals of the UNIX System

System administrators and software developers will receive comprehensive coverage of the UNIX operating system and learn fundamentals of shell programming.

51434S \$1,550

HP-UX Systems Administration for the HP 9000 Series 800

System administrators will learn the overall management of an HP-UX system including configuration, setup, and file management.

51482S \$1,795

UNIX System Basics I

Application users or system administrators will learn basic UNIX system concepts required for day-to-day operation in a runtime only environment.

51489S \$620

C++/Object-Oriented Programming

Programmers will learn and apply object-oriented concepts and develop C++ software. One year of programming experience is a requirement.

B1810S \$1,550

HP-UX Network Administration: LAN Link, ARPA/Berkeley, NFS, NIS, and Diskless

HP-UX and diskless-cluster system administrators will learn to administer systems and networks in an HP-UX environment.

H2550S \$1,820

ANSI C Programming

Software developers will learn programming syntax, control flow, functions, pointers, and structures and the interface to the HP-UX operating system.

35130S \$1,550

HP OpenView Network Node Manager Fundamentals for Network Managers

Network managers will learn to manage and configure a network using HP OpenView Network Node Manager.

B3304S \$1,530

HP-UX Workstation Administration for Domain Users

Experienced system administrators operating the Domain/OS system will learn technical aspects of implementing interoperability solutions.

H5364S \$1,795

Fundamentals of X Windows and HP VUE

Application programmers and users will learn to develop and run programs with the X11 Window system and HP VUE.

H5366S \$1,090

For more complete scheduling information, contact 800-HP CLASS (800-472-5277), ext. 1160 in the United States. In other locations, contact your nearest HP sales office.

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You can improve your work skills at your own convenience with the flexibility of HP's self-paced training. You can plan courses according to your schedule, any time of the day or night. Self-paced courses are also a cost-effective solution for limited budgets. Several users can share one course, without incurring travel time or travel expense. You can use courses again to train new staff members or review materials. Many courses feature an interactive, hands-on approach for optimal learning. Call for hardware requirements.

UNIX

UNIX System: Introduction for New Users

Users learn to:

- Describe the UNIX file system
- Log in to the UNIX system and work with files and directories
- Execute basic UNIX system commands
- Edit files using the vi editor

HP B1799A (2 hours)\$500

UNIX System: Managing Users and Their Environment

Users learn to:

- Add and remove user accounts to and from the system
- Interpret logon scripts
- Set terminal characteristics
- Set default file permissions

HP B1800A (2 hours)\$500

Course Format

Format for all courses in this section:

- CBT (Computer Based Training) with audio
- A compact disc read only memory (CD-ROM) requires CD-ROM drive
- One student manual

UNIX System: Transferring Files and Directories

Users learn to:

- Copy and move directories and files between directories
- Transfer data to and from magnetic media
- Archive multiple files and directories in one shell archive file
- Transfer a file with FTP

HP B1801A (2 hours)\$500

MPE/iX

MPE/iX Account Management

Users learn to:

- Create and delete groups in an account
- Display and alter program and group capabilities
- Display the used and available file space for groups and files
- Set and display account-level UDCs

HP B1769A (1-2 hours)\$500

MPE/iX Storing and Restoring Files, System Backup

Users learn to:

- Store and restore single or multiple files
- Store files using wild-card characters and character sets
- Check the progress of files being stored
- Perform and verify a full or partial MPE/iX system backup

HP B1770 (2-3 hours)\$500

MPE/iX System Startup, Shutdown, and Recovery

Users learn to:

- Perform the steps needed to start up and shut down the MPE/iX system
- Recover the MPE/iX system after a system failure
- Perform an MPE/iX system memory dump
- Perform an emergency shutdown

HP B1771A (2-3 hours)\$500

Save \$550 on our Starter Kits

Buy an MPE or UNIX Starter Kit and get all three of the MPE or UNIX courses listed above (a \$1,500 value) for less than the price of two—just \$950.

Starter Kit Ordering Information

Description	Product Number	Price
MPE Starter Kit	H2563A	\$950
UNIX Starter Kit	H5105A	950

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Melissa
Melissa Dare
Customer Representative



HP-UX Manuals

HP 9000

The latest documentation for
Series 300, 400, and 700130
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Domain Manuals

HP 9000

Domain SR 10.4 to Domain graphics
documentation132

MPE Manuals

HP 3000

Documentation for MPE/iX system
management134

HP-UX Manuals

HP-UX Operating System Documentation

Description	Product /Option Number		Price
	HP-UX S300/400	HP-UX S700	
HP-UX 8.0	B1864A	---	N/C
HP-UX 8.05/8.07 (options include material for both versions)	---	B2355A	N/C
HP-UX 9.0	B1864B	B2355B	N/C
Documentation on CD-ROM; includes 1-user License.	#0BC	#0BC	\$ 835
CD Complementary Documentation; provides hardcopy documentation currently not available on CD-ROM.	#0BJ	#0BJ	158
Adds up to 4 users for CD-ROM documentation.	#UA2	#UA2	415
General Usage hardcopy, user's guides for HP-UX, HP VUE, and X Windows (set is shipped w/each Workstation).	#0BD	#0BD	137
HP-UX System Administration and Installation hardcopy manuals for HP-UX, networking, and HP VUE.	#0BE	#0BE	685
HP-UX User's Guides; includes manuals for UUCP, mail, text formatting and processing, shells, and editors.	#0BG	#0BG	184
General Programming hardcopy manuals for assembler, device I/O, native language support, and general HP-UX programming techniques.	#0BF	#0BF	340
User Environment hardcopy programming manuals for X Toolkit, Intrinsics, Xlib, HP VUE and OSF/Motif.	#0BL	#0BL	730
Starbase hardcopy programming manuals for Starbase, Starbase Display List, and Radiosity and Ray Tracing.	#0BM	#0BM	1,025
C/ANSI C, and symbolic debugger hardcopy manual.	#0BT	#0BT	205

Popular individual HP-UX manuals

General Usage

Description	Product Number		Product Number	
	8.0 HP-UX S300/400	8.07 HP-UX S700	9.0 HP-UX S300/400	9.0 HP-UX S700
A Beginner's Guide to HP-UX	B1862-90000		N/A	
Using HP-UX	N/A		B2910-90001	
HP VUE User's Guide	B1171-90042		B1171-90061	
Using the X Window System	B1171-90043		B1171-90064	

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Remote Access; Kermit, UUCP, vt	B1862-90011		B2355-90037	
Shells: Bourne, C, Korn, Kayshell, PAM	B1862-90017		B2355-90046	
Ultimate Guide to VI and EX Text Editors	97005-90015		97005-90015	

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HP VUE User Environment Programmer's Guide	B1171-90024		N/A	
Mastering Motif 1.1	5010-7168		N/A	
Mastering Motif Widgets	N/A		B1171-90057	



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Using NFS Services	B1013-90008		N/A	
Installing & Administering NFS	B1013-90009		B1013-90009	
Using ARPA Services	B1014-90006		B1014-90009	
Installing & Administering ARPA Services	B1014-90007		B1014-90008	
HP VUE Configuration Guide	B1171-90041		N/A	
HP VUE System Administration	B1171-90044		N/A	
Installing & Updating HP-UX	B2355-90014		B1864-90019	B2355-90039
Master Index (HP-UX)	N/A	B2355-90008	B1864-90013	B2355-90043
Error Message Catalog (HP-UX)	B1862-90004		B1862-90004	
How HP-UX Works: Concepts for the Sys. Admin.	B1862-90005	B2355-90005	B1862-90005	B2355-90029
Managing Clusters of HP 9000 Computers Sharing the HP-UX File System	N/A	B2355-90039	B1864-90015	B2355-90038
Installing Peripherals	B1862-90007	B2355-90006	B1864-90011	B2355-90041
System Administration Tasks	B1862-90008	B2355-90003	B1864-90010	B2355-90040
HP-UX System Security	B1862-90009		B2355-90045	
Solving HP-UX Problems	B1862-90010		B2355-90030	
Improving Performance w/Software Disk Striping	N/A	B2355-90015	N/A	
HP-UX Reference	B1864-90000	B2355-90004		B2355-90033
Managing Software Products w/Network License Sys.	D-11272-B		D-11272-B	
Managing NCS Software	D-11895-E		D-11895-E	



Find information about these training course on pages 126 to 128:

- ANSI C Programming
- C++/Object-Oriented Programming
- Fundamentals of the UNIX System
- HP ALLBASE/SQL on HP-UX and MPE/iX
- HP-UX System Administration Basics
- HP-UX Workstation Administration for Domain Users
- HP-UX Systems Administration for the HP 9000 Series 800
- UNIX System Basics I
- Fundamentals of X Windows and HP VUE
- UNIX System: (CBT)
 - Introduction for New Users
 - Managing Users and Their Environment
 - Transferring Files and Directories

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HP-UX Portability Guide	B1864-90006		B2355-90025	
Programming HP-UX	B2355-90010		B2355-90026	

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C Programmer's Guide	N/A	92434-90002	B1864-90008	92434-90002
C Programming Tools	B1864-90009		B1864-90009	
C Reference	N/A	92453-90024	N/A	92453-90024

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HP FORTRAN 77/HP-UX Reference Manual	92430-90005		B2408-90010	
HP FORTRAN 77/HP-UX Quick Reference Guide	92430-90008		N/A	
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SR 10 Programming & Reference

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Programming with Domain/OS Calls	D-5506-B
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SYSV Programmers Guide-Vol II	D-17625-B
SYSV Programmers Reference	D-5799-E

General Usage

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Using Domain Diagnostic-Vol 2	D-11775-C
Using Domain Diagnostic-Vol 3	D-11776-C

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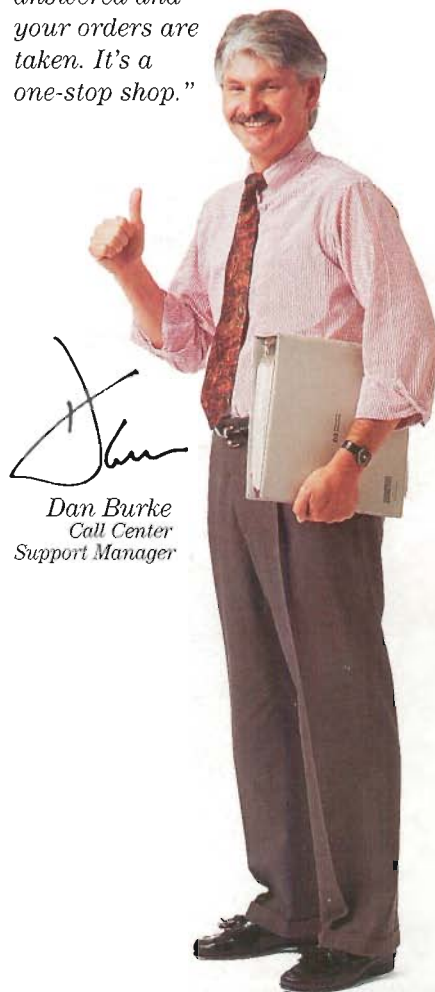
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Description	Product Number
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Domain FORTRAN Language Reference	D-0530-B
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- MPE/iX System Operation Skills
- MPE/iX System Management Skills
- MPE/iX System Administration for Application Users
- MPE/iX Programming Skills
- MPE/iX Account Management (CBT)
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Glossary

ARPA: The Department of Defense's Advanced Research Project Agency (ARPA) has defined the de facto networking standards for electronic mail, file transfer, and terminal access over local and wide area networks. These standards allow you to transfer files and access other vendors' computer systems.

CASE: Computer-Aided Software Engineering is the term that identifies computerized tools and the environment that supports and facilitates the software development process. HP SoftBench is considered a de facto industry standard CASE framework.

DAT/DDS: Digital Data Storage is the industry standard format for 4 mm Digital Audio Tape drives.

DOMAIN/OS: This is the HP Apollo workstation operating system which runs on both the HP Apollo Series 400 workstations and the Apollo DN workstations. HP has a number of excellent software and hardware migration programs for customers moving from DOMAIN/OS to HP-UX.

ECC Memory: This type of memory performs error checking and correcting to provide greater system uptime.

EISA: Extended Industry Standard Architecture is a 32-bit bus architecture that is backward compatible to the Industry Standard Architecture (ISA).

HP-IB: Parallel interface bus which conforms to the IEEE-488 specification.

HP-HIL: HP-Human Interface Link is a Hewlett-Packard interface that allows up to seven devices to be connected to your system while using only one interface port.

HP-UX: Hewlett-Packard's operating system is based around the AT&T UNIX kernel. This UNIX based operating system is more tightly coupled with the hardware, creating an extremely efficient environment.

MFLOP: This stands for Millions of Floating-point Operations. The number of MFLOP per second performed serves as a processor benchmark, relative to floating point operations. HP MFLOP ratings are based on the Linpack benchmark. The higher the MFLOP number the greater the speed. See SPECmark for a more accurate representation of processor performance.

MIPS: This stands for Millions of Instructions Per Second. The number of MIPS performed is a processor benchmark, based on integer calculations relative to the MIPS performance of DEC VAX 11/780™. Higher MIPS indicating greater speed. See SPECmark for a more accurate representation of processor performance.

MPE: MultiProgramming Executive is the open operating system on HP 3000 platforms.

MPE V: This is the operating environment for "classic" HP 3000 models.

MPE/iX: MultiProgramming Executive with POSIX Integration is the new name for the MPE XL operating environment for HP 3000 Series 900.

MPE XL: MultiProgramming Executive with Extended Language addressing is the operating environment for HP 3000 Series 900.

PA-RISC: This is Hewlett-Packard's Precision Architecture, Reduced Instruction Set Computing. Hewlett-Packard's RISC processor family is employed in the Series 700 workstations and Series 800 and 900 multiuser computer systems. The newest member is the superscaler PA-RISC 7100, which delivers high performance to Series 700 workstations.

POSIX: POSIX is an IEEE standard which provides for portability of applications across UNIX operating systems.

SCSI: Pronounced "scuzzy", this stands for Small Computer System Interface. It is an interface standard for connecting peripheral devices such as disk drives, tape drives, and CD-ROM drives. The single-ended SCSI-2 bus has a bandwidth of 5 MB/sec. The differential SCSI-2 bus's bandwidth of 10 MB/sec offers increased speed for data transferral. The fast-wide SCSI-2 bus has a bandwidth of 20 MB/sec, which means data can be transferred at a very rapid rate. A SCSI terminator is needed for the last device on the bus.

SPECmark: The SPECmark is considered the best method for comparing processor performance among UNIX workstations. Standard Performance Evaluation Cooperation combines a set of standard benchmarks to create a more well-rounded performance evaluation. The 1989 SPEC rating is called a SPECmark rel. 1. The newer ratings are based on a new set of integer and floating-point benchmarks and are called SPECint92 rel. 2 and SPECfp92 rel. 2. A higher SPECmark indicates higher processor performance.

SNA: This stands for Systems Network Architecture, a common IBM connectivity protocol.

TCP/IP: Transmission Control Protocol/Internet Protocol refers to a widely used protocol suite which allows communication between various types of computers.

User base: Your user base defines a maximum amount of concurrent users on a system. For example, 350 people may have access to a system. But, if only 85 are on the system at one time, you would require only a 100 User Base License.

X11: This MIT-developed protocol allows graphics to be ported between systems independent from other applications. X11 is a baseline open systems standard for graphics applications.

Xstones: This performance benchmark for X stations measures refresh rates, graphic drawing speeds, and other specifications.

X Terminal: This is a graphical terminal which provides no local computational support but manages the X Window display and data entry. An X terminal can be used in a workstation network when connected with X Window based software. Performance is currently measured in Xstones.

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InterWorks: A user group for HP-UX and Domain/OS Workstation users

InterWorks, the international HP Workstation Users Group, is an independent, not-for-profit user group, dedicated to developing and providing forums for sharing and exchanging technical information, directions, and experiences.

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What's New!



Here are some of the new products you'll find in this issue. Just look for this symbol.

HP 3000 Networking

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Telnet Access iX Card
Installed in your DTC 72MX, this card delivers multivendor virtual terminal connectivity to your HP 3000 system.

HP 9000 X Terminals



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Model 17Cs
With the highest performance available in X terminals, the 17Cs is a powerful mid-range color X Station and a strong value.

HP 9000 Series 400



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425e Upgrade Kit
Turn your 425e workstation into a powerful Model 715/50 with this low-priced kit. Ask for one of our free upgrade planning kits also listed on this page.

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SoftBench 3.0 and C++ SoftBench 3.0 Evaluation Kit

Test-drive the hottest development environments from HP with an free evaluation kit!



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HP Programmer's Toolset

This powerful toolset's incremental linker, source-level debugger, and program performance analysis tool help speed the development process for application software.

Network Solutions

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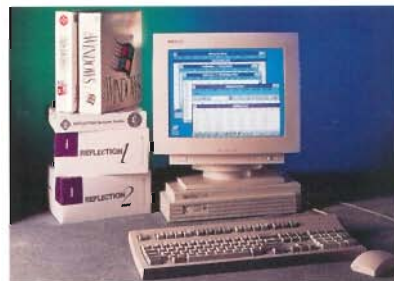
DTC 72MX, 16iX, and 16TN

Hewlett-Packard presents a new generation of Datacommunications and Terminal Controller products that deliver today's exciting new Terminal Server technologies at incredibly low prices.

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MPOWER

Take advantage of collaborative multimedia technologies with this client/server software for HP Apollo Series 700 family workstations.



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HP Windows Client
The new Windows Client delivers the power of a 486 personal computer and the system control of a terminal in one low-cost LAN-attached, intelligent product.

Peripherals

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HP PerfRX Analysis Software

With HP PerfRX Analysis Software, you can easily isolate and identify current and potential performance problems on your system.

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