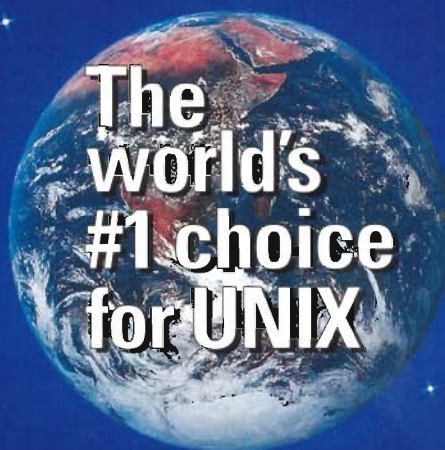




HP DIRECT

Your source for HP 9000 products

Spring 1994



The
world's
#1 choice
for UNIX



Make **HP DIRECT** your #1
choice. **800.637.7740**

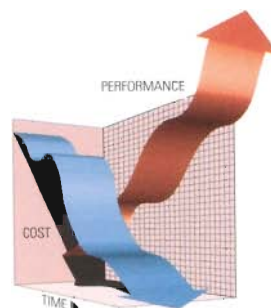
PRE-SALES TECHNICAL SUPPORT
EASY TOLL-FREE ORDERING

Welcome to the new HP 9000 catalog

This catalog is devoted exclusively to the industry-leading HP 9000 line of workstations and servers. As the #1 UNIX vendor in the world, Hewlett-Packard offers you quality, reliability, and openness

through standards compliance.

HP DIRECT is the fast and friendly service that provides the latest hardware, software, peripherals, and more to make your HP 9000 system your total business solution.



More power, more performance, lower purchase and ownership costs: that's what has driven thousands of workstation users over to HP.



...and the age of the Enterprise Desktop

While other computer manufacturers are busy trying to satisfy the world's demands for openness, transparency, user-friendliness, and power, only HP has the answer now. It's the Enterprise Desktop and it delivers all the most desirable qualities of workstations, personal computers, Macintosh computers, and mainframes.

The Enterprise Desktop is a very high performance desktop with a multi-tasking, multi-user operating

system, distributing computing capabilities, and other advanced features of a workstation. It runs shrink-wrapped PC applications right off the shelf just like a PC. Enterprise desktops also maintain the benefits of a mainframe, including security, system and network administration, and ease of upgrading.



Most people have heard of Hewlett-Packard and our reputation is a big comfort. We're the second largest computer company in the U.S. right now. People often call and say they're not comfortable with their current computer system and they want to know about HP. I'm more than happy to tell them all about us!



Don Gerber - HP DIRECT Customer Representative

Enterprise Desktop

- Performance and reliability needed to run business-critical applications
- Access to enterprise resources, such as databases, mainframe applications, and shared printers
- Collaboration with team members throughout the organization
- Ability to run PC applications
- Ability to manipulate data and images locally
- Ability to manipulate text, graphics, audio, and video elements on the desktop
- Security for applications and data
- Consistent user interfaces throughout the organization

On the cover: Select HP and you'll be choosing the #1 Worldwide Commercial RISC/UNIX Vendor

Source: Aberdeen Group, February, 1993

HP Computer Museum

www.hpmuseum.net

For research and education purposes only.



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 standard corporate discounts when ordering.

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.



“It's a smart choice to call us. We have so many resources and smart people with a lot of experience. HP DIRECT is an excellent place to start the moment you need anything. HP's always come out with the most powerful products and competitive pricing. And our support is outstanding.”

Marie

Marie Olmos - **HP DIRECT** Customer Representative

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From the E-Class servers to the ScanJet IIcx, here's the latest

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Servers, workstations, and upgrades, too

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X stations, terminals, and more

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All your HP 9000 networking needs

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Reliable storage solutions for your data

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Impact printers plus a new scanner

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Take advantage of support services and HP training

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Products that have been introduced since our last catalog



These are products that are ready when you are, on our shelves, ready to ship.



This indicates products that can help you build your Enterprise Desktop solution



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



We put it on the line for you



“HP DIRECT is here to serve you. When you call us, you are calling all of Hewlett-Packard. We offer the right resources for the right solution, right now.”

Homer

Homer Wong—HP DIRECT General Manager



Pre-sales technical support



Experienced engineers are at your fingertips to answer your configuration and compatibility questions. Get advice, recommendations, and friendly guidance from **HP DIRECT's** own experts.

Literature requests

Just ask us, and we'll mail the latest information on Hewlett-Packard products to you. And HP FIRST can quickly send datasheets to your fax machine.

Quotes over the phone

We can help you find the best solution for even the most complex configurations and give you a verbal quote fast. If you're not sure exactly what you need or how much it costs, just ask.

Product availability checks

We can let you know the most current product availability status. Knowing what's immediately available can give you an early lead on scheduling new product installation.

Fast and easy ordering

Your order can't get into the system any faster than with one call to **HP DIRECT**.

Corporate discounts honored

When you order products from us, you get the same standard corporate discount you'd get from your HP sales representative.



Same HP product warranties

Enjoy the same peace of mind HP customers have enjoyed for years. Just call **HP DIRECT**.

Money-back guarantee



We guarantee your complete satisfaction. Products returned within 60 days get a full refund. See page 101 for complete details.

Instant order status

Need to know what's happening with your order right now? We'll tell you where it is and when you should expect arrival.

Call forwarding

If we can't answer your questions or help you, we'll make sure we connect you with someone who can!

“All of us at HP are part of one big team, dedicated to your complete satisfaction. HP DIRECT is a great service that helps both you and our own sales people. It's great to have HP DIRECT to rely on for the right answers all the time.”

Dale Lisa Paul Dan Chris Jason

(clockwise from left rear) Dale Stump, Lisa Priapi, Paul McGillicuddy, Dan Pearson, Chris Jensen, Jason Haynes—Sales representatives



Call 800.637.7740

We've got answers

Call us. It's a toll-free call and we're here from 9 to 5, no matter where you're calling from. We've got sales support engineers who love to solve your technical problems. We also have customer representatives who make ordering fast and easy.

Need advice?

PRESS 1 When you call 800.637.7740, press '1' on your touch tone phone if you'd like to speak with **HP DIRECT's** support representatives. They can help you with technical questions—from compatibility to upgrading and more—and any other concerns you might have. Our support engineers can help you with verbal quotes and configurations, too. One call is all it takes.

Ready to order?

PRESS 2 Press '2' and you'll reach one of our customer representatives. Along with hardware and software, they can help you order support options. They can also provide price and availability information, and check on the status of your order, too.

The latest on mass storage products

PRESS 3 If you'd like information on the very latest mass storage products, press '3' on your touch tone phone. One of our customer representatives will help you determine the very best mass storage solution for your HP 9000 systems.

For even more answers...

Let's get technical

Would you like datasheets on particular Hewlett-Packard products? No problem. Call 800.333.1917 and press '1' to reach **HP FIRST**. **HP FIRST** will walk you through ordering the datasheets you want. The information will be faxed to you within minutes. It's fast, free, and easy!



You'll find this **HP FIRST** icon throughout this catalog to remind you that more information is just a toll-free phone call away.

Tips by phone

HP also offers audio troubleshooting tips over the phone. Call 800.333.1917 and press '2' for these special pointers.

Calling from a rotary dial phone?

If you're not sure about the above options, or if you're calling from a rotary dial phone, don't worry. Someone will be on the line in seconds to help you.

Call forwarding

If we can't answer your questions or help you, we'll make sure we connect you with someone who can!

“With new peripherals and new software, it can be confusing whether something is compatible with the system you have. Just call HP DIRECT. I'm here to help you get one step closer to solving your problem.”

Bob Lulich-**HP DIRECT** Sales Support Engineer



What's New!



Here are some of the new products you'll find in this issue. Just look for this symbol.

System Hardware



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10

HP 9000 E-Class servers

Want to get that famous HP 9000 Series 800 performance for smaller situations? The E-Class servers answer the call with outstanding PA-RISC power at low entry-level prices.



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Model 712 workstations

Enter the world of the Enterprise Desktop with the Model 712/60 and the 712/80i workstations. They deliver high performance, special user-friendly features, and integrated networking and multimedia capabilities at remarkably low prices.



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18

Model 715/75 and 725/75 workstations

We've added another level of performance to our Model 715 and 725 workstation lines. The Model 715/75 and 725/75 workstations offer powerhouse benchmarks for your more demanding projects.

Enterprise Desktop Software

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22

HP Wabi 1.1

Ever wish you could run your favorite PC applications right out of the box on your workstation? Your wishes have come true. With HP Wabi, your workstation emulates a PC.

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Ready-to- Wear Desktop Builder Kit

Get the tools you need to create Enterprise Desktop systems. This kit is your first step in building a powerful, easy-to-use, responsive system.

Software

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86

HP MPower

A media-enriched communications environment, HP MPower integrates collaborative multimedia with HP VUE 3.0 to let widespread users work together like one team, no matter how remote their sites and resources.

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HP TeleShare

Put a telephone, a fax machine, and a modem in your Model 712 workstation with HP TeleShare. This software lets you look up a number, dial it, and redial it—all from your workstation. You can even record and replay messages.

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HP DCE/9000

HP Distributed Computing Environment (DCE) products offer you the most comprehensive and standards-based platform for developing and running DCE-based distributed applications.

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HP Apollo Pascal Compiler on S700

Migrate from your current Domain Apollo Pascal platform to HP's PA-RISC platform with this compiler. It supports the Domain Apollo Pascal language on HP-UX.

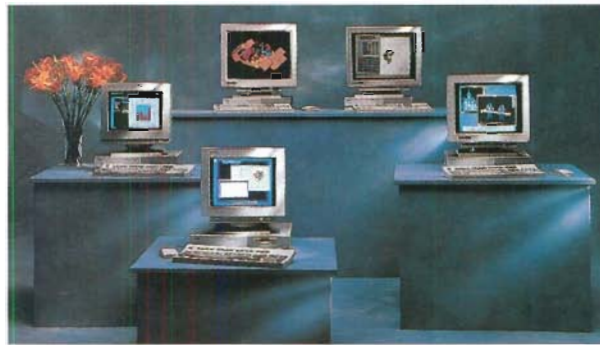
User Input Devices

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HP ENVIZEX

You've got an industry-leading 165,000

Xstones of performance with HP's new ENVIZEX family of X stations. These new stations offer breakthrough resolution, RISC performance, and multimedia capabilities.



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42

HP ENWARE

HP ENWARE is the new X station software

that complements the new HP ENVIZEX and HP ENTRIA families.

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Graphics Tablets

2D CAD projects on your

Series 700 workstations just got easier and faster! HP's new graphics tablets are comfortable, smooth, and precise.

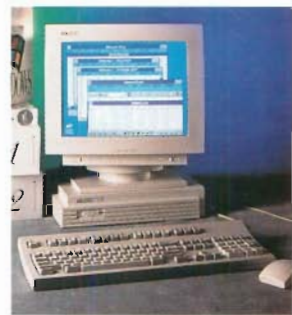


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HP ENTRIA

The next step in text terminal evolution is the

HP ENTRIA graphical desktop. With ENTRIA's graphical user interface, you'll enjoy increased user productivity.



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HP Windows Client Model 433SX

The new Model

433SX includes a video subsystem offers graphics acceleration for a 300% increase in graphics performance. Discover the versatility your system will enjoy with the high performance Model 425SX and Model 433SX Windows Clients.

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Supra and Mirage Headsets

As multimedia demands expand, you've got HP quality for your headset needs. With a wide selection of stereo, monaural, and binaural headsets, you can customize your workplace just the way you want.



Print Peripherals

PAGE
76

ScanJet IIcx

Get HP's lowest-priced, highest-performance color and grayscale

flatbed scanner! With 1,600 dpi enhanced resolution and 400 dpi optical resolution for both image and text scanning, the ScanJet IIcx also sets speed records, cutting grayscale scanning time down to just 8 seconds!

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77

HP 5000 Printers

HP's new 5000 C30 and C30D printers offer crisp laser quality output at a

fast 30 page-per-minute rate for your computer room environment! Take advantage of an outstanding new level of performance at unbeatable low prices!

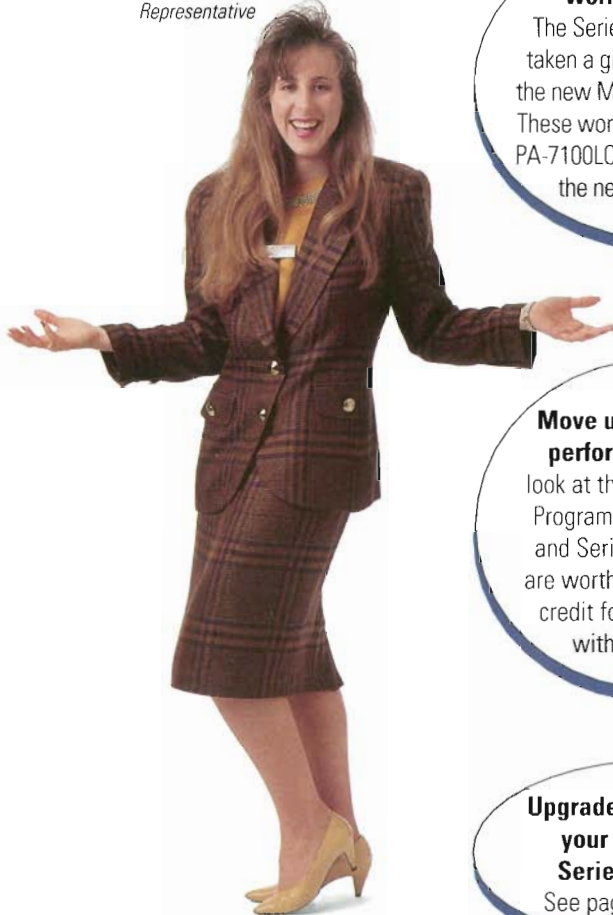


Welcome to the industry's best hardware

“We can take some of the guesswork out of your jobs. When it comes time for a change, and you aren't sure of all the products and solutions available, we can help you see the whole picture.”

Holly

Holly Coyle - **HP DIRECT** Customer Representative



Very affordable Series 800 power—
Check out the new E-Class servers.

More performance from your Series 800 server—See the easy ways to upgrade or add memory.

The world's best workstation values—

The Series 700 family has just taken a giant leap forward with the new Model 712 workstations. These workstations use the same PA-7100LC processor that powers the new E-Class servers.

Move up to Series 700 performance—Take a look at the Open Migration Program. Your Series 300 and Series 400 hardware are worth valuable trade-in credit for new hardware with TradeUp'94.

Upgrades and add-ons for your Series 400 and Series 300 systems—See pages 32 through 35.

Business Servers

Series 800

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Workstations

Series 700

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Series 400

For HP-UX or Domain/OS	
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Series 300

Keep your Series 300 a vital partner	
Add-ons	35

Series 800 Servers

Nobody can match the range of our server solutions

Compatibility

The HP-UX operating system on Series 800 servers is object-compatible with the HP-UX on the Series 700 workstations. That means no compatibility issues, no system management puzzles... just one open operating system from factory floor to finance department, from desktop to data center.

PA-RISC technology

No matter which Series 800 server you choose, you'll have HP's powerful leading edge Precision Architecture-Reduced Instruction Set Computing (PA-RISC) technology.

PA-RISC offers higher commercial computing performance, lower support costs, and greater reliability for less floor space.

Scalability

No other UNIX vendor matches the sheer scalability of HP's Series 800 servers. HP's PA-RISC technology and HP-UX goes all the way from small branch- and department-level servers to multi-processor corporate servers offering mainframe-class performance. For you, that means smooth, effortless transitions to more and more powerful systems as your business needs grow.

“Only Hewlett-Packard with its HP 9000 Series 800 has a complete solution for downsizing and/or re-engineering the data center. HP has emerged as the best-positioned open systems, client/server vendor in the industry.”

*Summit Strategies - Market
Research and Analysis Company*

Connectivity

HP's Series 800 offers standards-based connectivity to multi-vendor systems and networks, so whatever you need to communicate or share information with—from PCs to mainframes—HP has the solution. Backing up our strength in client/server computing is a wide range of client solutions: from ergonomic terminals to ultra-fast workstations, X Stations, and the innovative Windows Client.

Manageability

Series 800 has proven software tools and the powerful HP OpenView toolset to productively manage your entire network, from a few nodes to an entire corporation.



Unleash your potential with HP Series 800 servers

While some small workstation installations can function adequately without a server, the majority of workstation environments can benefit greatly by moving to a client/server computing platform.

Don't dilute the power of your workstation

When you team up your workstation with a purpose-designed server, you take storage, file-management, and networking loads off individual workstations. This means that the full capability of each workstation is available to the workstation user. The workgroup as a whole benefits from server-specific functionality, such as high throughput and high availability.

Make some powerful connections

A server can connect a previously 'isolated' group of workstation users to other networks and services inside and outside the enterprise, even if these networks and services are on non-HP hardware and software platforms. With this kind of integration, workstation users can enjoy the same access to mail services, information services, and databases as other personnel in the organization.



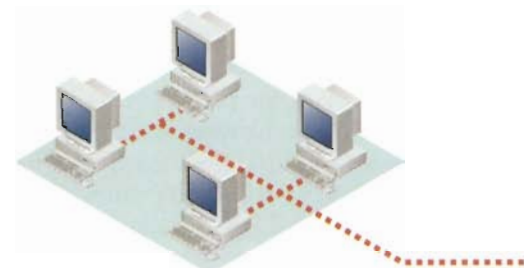
Power beyond your desktop

As users become dependent on their server, the remarkable characteristics of a purpose-designed Series 800 server become extremely important. For example, Series 800 servers have special enhancements in the areas of multi-processing, peripheral handling, input/output, and power-failure recovery. And, of course, Series 800 servers are far more configurable than most workstations. You can load them with more storage, more backup options, and more external connections because they're designed for the task.

“HP 9000's proven performance and expandability, combined with HP's support and integration services, made HP an ideal partner to help us meet our IS (information systems) needs.”

*Paul Martz - Vice President of MIS
Accounts Receivable, Equifax*

HP's networking solutions for Series 800 business servers allow you to communicate within distributed, multivendor environments



Workstation Network

Series 800 will serve you well into the future

HP is the industry leader in open systems. As your organization moves towards an open, client/server computing environment, an HP Series 800 server can make the move as easy as possible. Beyond the immediate concerns of performance and value, the Series 800 offers a wealth of features, such as the robust HP-UX operating environment. You'll have a wide range of software choices, because the Series 800 is supported by a large application portfolio. Your investment is protected with easy upgrade paths for growth and adaptability. And HP's famous worldwide support is top-rated.

Find out how Series 800 servers can make your workstations even more productive. Call **HP DIRECT** now for more information.

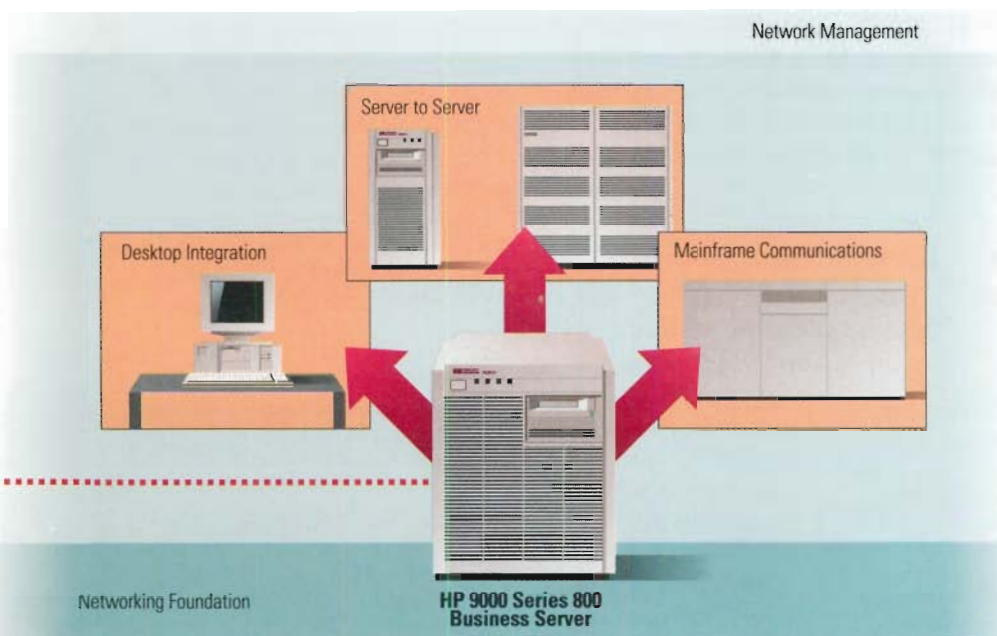
“Only HP and its channel partners had the ability to put the conversion and migration processes together. And Hewlett-Packard had the best pricing in the commercial UNIX environment.”

John Jazwiec - Chief Information Officer, Barber-Colman



Now get high performance at entry-level prices

How could we improve the industry's broadest UNIX platform? By putting its tremendous power in your hands for entry-level demands! The new E-Class servers allow small and medium-sized businesses to enjoy the same benefits as the larger firms that have been using Series 800 servers. From industry-leading performance to dependable HP quality, the advantages of the Series 800 family deliver outstanding value. For more on the new E-Class see the following pages.



Series 800 servers cover all your needs

For office/department environments right through to corporate environments supporting thousands of users, HP 9000 Series 800 provides the broadest family of commercial UNIX servers.



	E-Class	G-Class	H-Class	I-Class	Corporate servers
Models	E25-E45	G30-G70	H20-H70	I30-I70	T500
Standard/max memory (MB)	16/512	32/768	64/768	64/768	256/2048
Max total supported disk (GB)	156	156	300	330	1900
Standard/max I/O slots	2/4	4/4	8/8	12/12	14/112
Base price from	\$4,130	\$10,750	\$19,750	\$47,950	\$149,000



Strategic computing solutions for your future



The new E-Class answers the call of small and medium-sized businesses that have been seeking a reliable, powerful, and affordable standards-based business system. An incredibly robust set of features provide mission-critical reliability, commercial solution availability, office integration capability, and investment protection previously unavailable.

Replicated site solutions

Branch banking, retail stores and hotels within a chain are examples of replicated site environments. They require complete secure systems that can also exchange information quickly and easily with the computer system at their headquarters.

The E-Class empowers site managers with a strong server solution that works efficiently with a larger system.

The PA-7100LC processor: The heart of the new E-Class

The PA-RISC 7100LC is HP's newest CPU. The advanced PA-RISC architecture enables the E-Class servers to deliver more performance than any other entry-level system in the industry. These servers provide a low-cost solution with enough performance headroom to add additional applications, add additional users, and meet the ever increasing demands for more powerful software solutions.

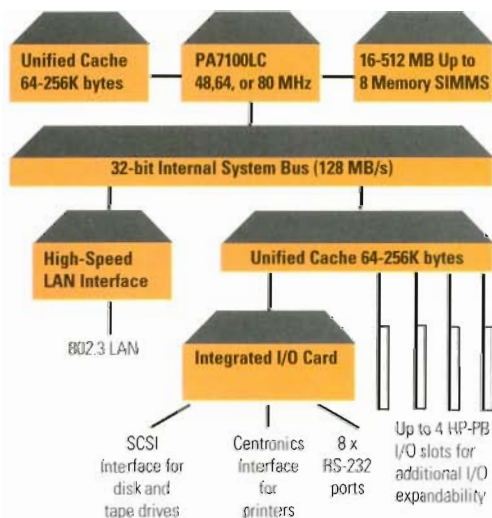
Flexible *and* secure

E-Class servers give greater configuration flexibility, with a choice of 2 or 4 HP-PB I/O slots.

You also get lower cost and expanded personality card functionality with integrated LAN, SCSI, and 16 multiplexer ports. And the servers' security ring allows physical security in a replicated site environment.

Low costs and high reliability.

The PA-7100LC processor and integrated I/O devices minimize product complexity and combine for unmatched system reliability for the E-Class servers. Meantime between failure (MTBF) is an unheard-of 5 years.

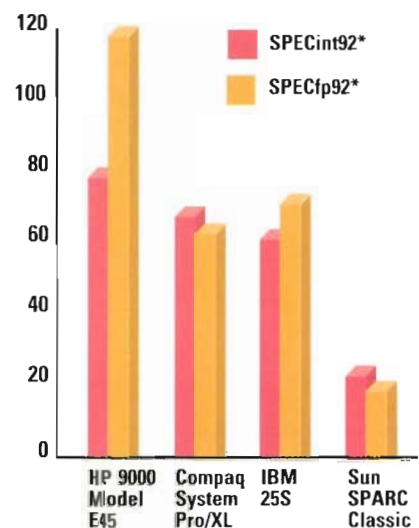


Now get HP-UX and other software preloaded with Instant Ignition

When you purchase a Series 800 and would like to have HP-UX 9.04 and other software* preloaded – order Instant Ignition with your server. Instant Ignition offers options for owner configured disk swap space and directory sizes right from the factory.

*As of January 1994, preloadable, layered software products include: **HP-UX** multiple user levels, **Mirror Disk**, **Switchover**, **C/ANSI C**, **COBOL**, **C++**, **SNAplus**, and **Streams**.

E-Class sets new standards in performance



*SPEC performance results are preliminary.

Find out how the new E-Class servers can give you high performance at entry-level prices. Call **HP DIRECT** now for more information.

Grow with the power to meet your future needs



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 G/H/I servers. These premier upgrade offerings deliver tremendous performance and expandability benefits.

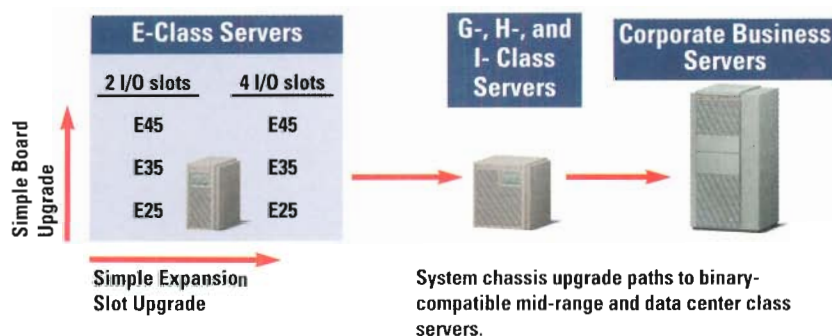
Since the E-Class servers use a different processor and memory technology, they can not be upgraded to the Model G/H/I servers, which use a different CPU/memory backplane. The E25, E35, and E45 servers can be returned for credit toward the purchase of any Model G/H/I servers.

The HP 9000 Model 8x7 servers are upgradeable and trade-in paths are also available for other Series 800 servers. Call **HP DIRECT** toll-free to find out how easy it is to grow with an upgrade or trade-in.

Five easy ways to upgrade

There are five easy and efficient ways to upgrade within the HP 9000 family.

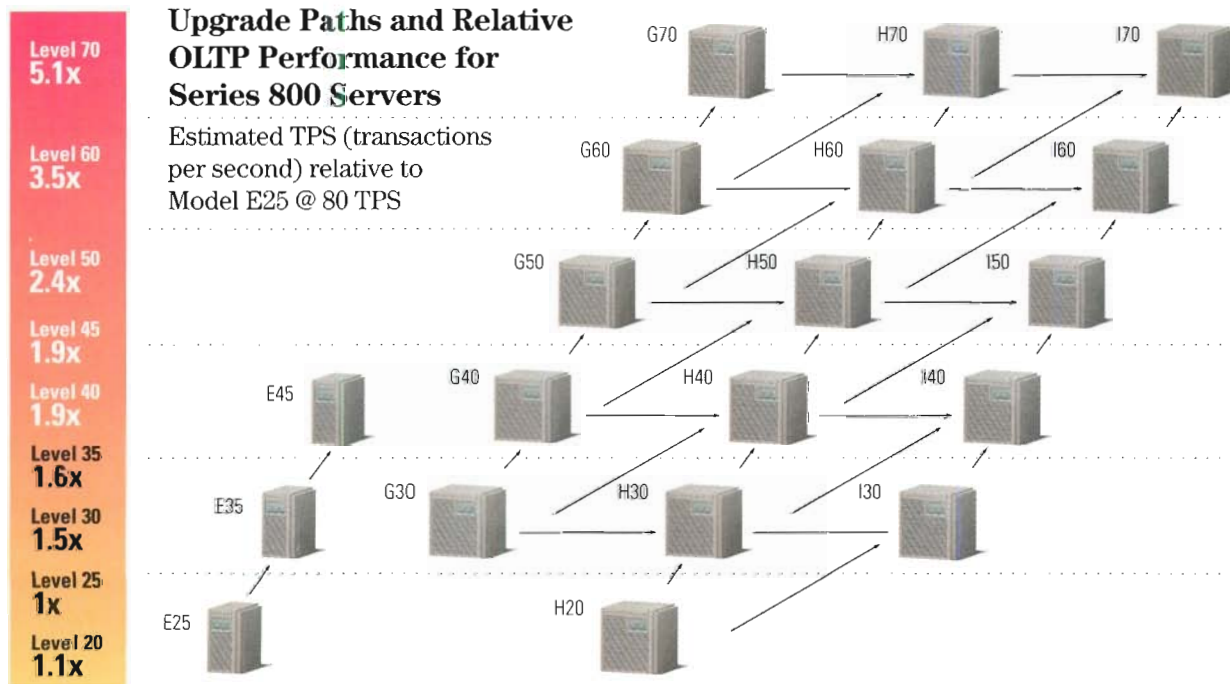
1. Performance improvements (via processor board swap)
2. Increased I/O expandability (via chassis or backplane swap)
3. Combination of both performance and expandability improvements
4. 8x7 upgrades to the newer Series 800 Models F/G/H/I (via board and/or chassis upgrade)
5. E-Class trade-in for the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



The E Class servers provide simple and affordable performance and expandability upgrades

Upgrade Paths and Relative OLTP Performance for Series 800 Servers

Estimated TPS (transactions per second) relative to Model E25 @ 80 TPS



Choose HP memory to optimize your system



Maximize the full benefit of your HP 9000 Series 800's system performance with ease. 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	\$ 1,100
16 MB ECC memory SIMM memory module	A2231A	1,280
32 MB ECC memory SIMM memory module	A2232A	2,560
64 MB ECC memory SIMM memory module	A2511A	5,120
128 MB ECC memory SIMM memory module	A2516A	17,920
Memory extender board for Models 807S-857S only	A1793A	1,315
Models F/G/H/I/8x7S Floating-Point Coprocessor		
Floating-Point coprocessor field upgrade on HP 9000 Model 8x7	A2293A	N/C
For HP 9000 Model 8x7, Level 10 systems (for servers shipped after 3/15/92)	Opt 001	500
For HP 9000 Models 877S-887S, Level 40 systems	Opt 002	1,000
For HP 9000 Models 817S-827S, Level 20 systems	Opt 003	1,000
For HP 9000 Models 837S-857S, Level 30 systems	Opt 004	1,000
32 MHz CPU board with Floating-Point Coprocessor (for 807S Servers shipped before 3/15/92 without floating-point socket)	Opt 101	2,500
Models 808S, 815S, 822S, 832S, 842S, and 852S Only		
8 MB ECC memory board (remanufactured)	A1404AR	700
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 (remanufactured)	A1010AR	4,000
16 MB ECC memory board (remanufactured)	A1037AR	1,200
32 MB ECC memory board (remanufactured)	A1623AR	5,800
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.

Thinking of adding memory?

Speak with one of our technical support engineers first!

Our technical experts can help you determine if your needs can be better served with additional memory or with a new server.

HP DIRECT is here to make sure you get the best solution to your growing needs. Call us!

Series 700

Fast-lane technology in each workstation

Hewlett-Packard's Series 700 family of workstations puts you behind the wheel of high-performance PA-RISC technology. With the industry's top speed, the best graphics, and remarkably low prices, the Series 700 gives your business the winning advantage you need today.

The 7100 and 7100LC processors offer better performance for your applications, faster response time, and greater overall productivity at lower costs. With upgrades for growth on demand, your Series 700 workstations will keep you in the fast lane for years to come.

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 easy. You can build a solution that brings together the power of a workstation, the applications availability of a PC, the intuitive ease-of-use of an Apple Macintosh, and the security and system management of a mainframe—all at an outstanding low price. We call this the Enterprise Desktop.

Your best buy in workstations today...

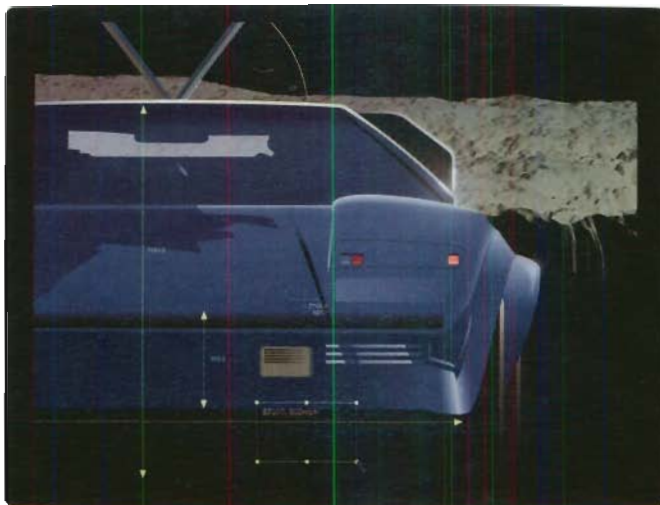
Series 700 workstations are easy to order, install, configure, maintain, and upgrade. Compare prices and levels of performance. You'll see that HP offers the industry's best values. With the Series 700, you'll enjoy exceptional performance from a broad range of applications. You'll also have the independence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



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

and tomorrow

As your needs grow and computers evolve, Hewlett-Packard will continue to provide intelligent solutions. Whether in client/server computing or X terminal 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.



If, over the last five years alone, the development of the automobile had matched that of HP's workstations, today's sports cars would be capable of 1,200 mph and cost around \$5,000. This analogy provides an insight into the remarkable pace and direction of the development of the HP 9000 Series 700 workstations.

N Introducing HP's Model 712, your passport to the Enterprise Desktop



Take your first step toward Enterprise Desktop solutions with the Model 712 workstations. High performance, special user-friendly features, and integrated networking and multimedia capabilities at remarkably low prices make the Model 712 an outstanding value.

Two new high performance models

The Model 712/60 and 712/80i (the 'i' stands for integer performance enhanced) are powered by the revolutionary PA-RISC 7100LC processor. Both offer stunning benchmarks that place them far forward of the competition.

Your team's most valuable player

Outstanding graphics capabilities, superior integer performance, and networking make the Model 712 ideal for financial services, customer service, oil and gas, aerospace, and 2D technical applications. And, whatever your field, you'll appreciate how all the advanced features accent ease of use, performance, and scalability.



Get high power at a low price with the Model 712 workstations.

An integral part of your Enterprise Desktop computing

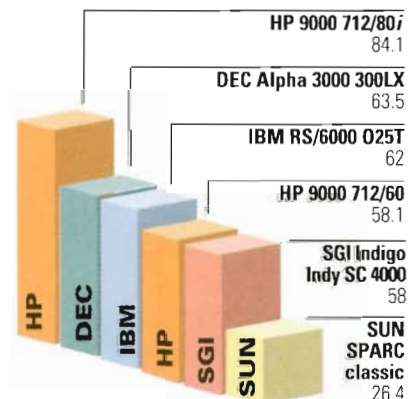
Simple installation, expansion, and serviceability make the Model 712 workstations ideal Enterprise Desktop systems. A selection of inexpensive networking and multimedia devices lets you enjoy great application flexibility. Managing your enterprise-wide system is simplified, thanks to network control products such as OpenView (see page 50) and Ready-to-Wear Desktop Builder Kit (see page 22).

Scalability

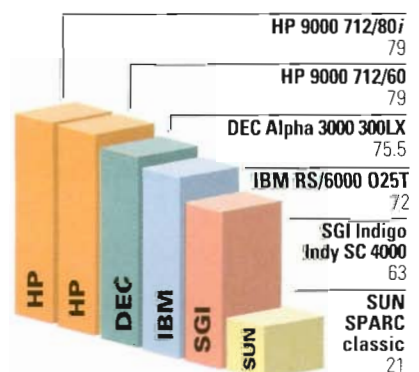
Scalability is one more plus. While PCs are not scalable beyond the low end of the Series 700 family, the HP 9000 family is scalable all the way up to the data center, with one architecture and one operating environment.

Model 712 Performance Leads The Field

SPECint92 performance comparison



SPECfp92 performance comparison



Ready for multimedia

MPower

Add this product to integrate such facilities as audio, video, and image to your HP VUE environment. See page 86.

Telephony slot

This slot lets you add the innovative HP TeleShare card which puts telephone, fax, and modem capabilities on your screen. See page 88 for more information.

HP Wabi

This software allows you to run PC applications right off the shelf on your Model 712. See page 22 for more information.

Model 712/60 and 712/80i Ordering Options

Description	Operating System	Product Number	Price
712/60	HP-UX 9.03	A4023A	\$ 2,085
712/80i	HP-UX 9.03	A4027A	5,135
Monitor - Must select ONE			
15-inch color (1024 x 768) [1]		AQ3	625
17-inch color (1024 x 768)		AQ4	1,800
17-inch color (1280 x 1024)		AQ5	2,200
19-inch color (1280 x 1024)		ADJ	3,800
11.8-inch flat panel color display (1024 x 768)		AQ2	10,595
Memory Configuration - Must select ONE			
16 MB (two 8 MB boards)		ANB	1,280
24 MB (two 8 MB boards and two 4 MB boards)		ANF	1,920
32 MB (four 8 MB boards)		ANC	2,560
32 MB (two 16 MB boards)		UFS	3,840
64 MB (two 32 MB boards)		ANE	7,680
Internal Disk Drive - Must select ONE			
Add 260 MB single-ended SCSI-2 disk drive		ATK	500
Add 525 MB single-ended SCSI-2 disk drive		AT9	1,200
Add 1 GB single-ended SCSI-2 disk drive		AT7	2,100
Factory Integrated Removable Media*			
Add 1.4 MB 3.5-inch SCSI-2 floppy disk drive		AMB	125
Networking Options - Select ONE only*			
Add second serial interface port		UGA	295
Add second LAN AUI port with second serial port		UGB	695
Add X.25 port with second serial port (software on DDS tape)		UGC	795
Add HP Token Ring/9000 (software on DDS tape)		AL4	695
Workstation Localization Kit/Localized Option - Required			
PC-101 keyboard (with mouse, power cord & documentation)		A4030A	105
North American local option		ABA	N/C

[1] Available only on Model 712/60.

* Optional

Model 712 innovations

- **Easier to use and less expensive**
- **Soft power-down** - The Model 712 writes any new data to disk, discontinues processes, and shuts itself down by just pressing the power button.
- **Fast boot** - Boot time is reduced to no more than 60 seconds, while the competition makes you wait up to four minutes.
- **Modular design** - The compact, snap-together construction eliminates the need for tools and fasteners, and results in a small footprint and minimized service requirements.
- **Flat panel display (optional)** - The 11.8-inch active matrix display is perfect when desk space is at a premium and transportability and location flexibility are critical.
- **Enhanced connectivity** - Standard features include Ethernet or AUI LAN, SCSI, Serial, and Centronics Parallel for greater versatility.

Model 712 Add-on Products

Description	Product Number	Price
Additional Memory		
8 MB RAM (two 4 MB SIMMs)	A2577A	\$ 640
16 MB RAM (two 8 MB SIMMs)	A2578A	1,280
32 MB RAM (two 16 MB SIMMs)	A2829A	3,840
64 MB RAM (two 32 MB SIMMs)	A2827A	7,680
Internal Storage Devices		
260 MB single-ended SCSI-2 disk drive	A4065A	500
525 MB single-ended SCSI-2 disk drive	A4066A	1,200
1 GB single-ended SCSI-2 disk drive	A4067A	2,100
Floppy disk kit	A4068A	125
External Storage Devices*		
External CD-ROM drive	A2655A	1,095
External 2 GB DAT drive	A2656A	2,495
External 1 GB single-ended disk drive	A2657A	2,495
Other		
HP Token Ring/9000 for Model 712	A4011A	695
Software driver on DDS tape	AAH	N/C
Second serial port	A4013A	295
Second LAN AUI and second serial port	A4014A	695
Second monitor port	A2878A	1,495
Add X.25 port with second serial port	A4015A	795
Software on DDS tape	AAH	N/C

Series 700 performance is your competitive edge

The fastest choice you can make

The heart of the Series 700's remarkable performance are the 7100 and 7100LC processors. 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.

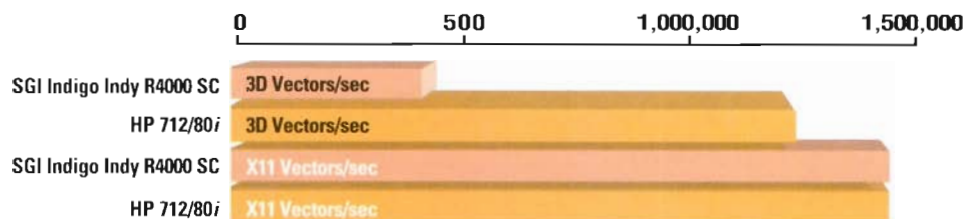
Get the industry's best graphics

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 20 in this section.

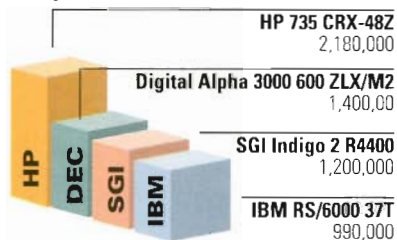
Superior Performance at Every Price Level

HP 712/80i vs. SGI Indigo Indy R4000 SC performance comparison

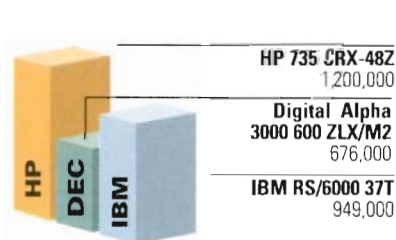


HP 712/80i 3D performance is achieved through Powershade software.

3D Vectors/sec performance comparison

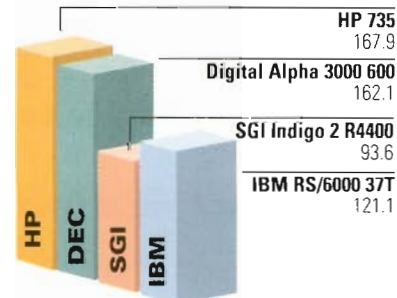


X11 Vectors/sec performance comparison

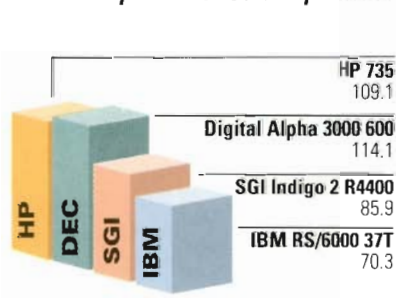


X-11 performance for SGI Indigo 2 R4400 has not been published.

SPECfp92 performance comparison



SPECint92 performance comparison



Model 712/60

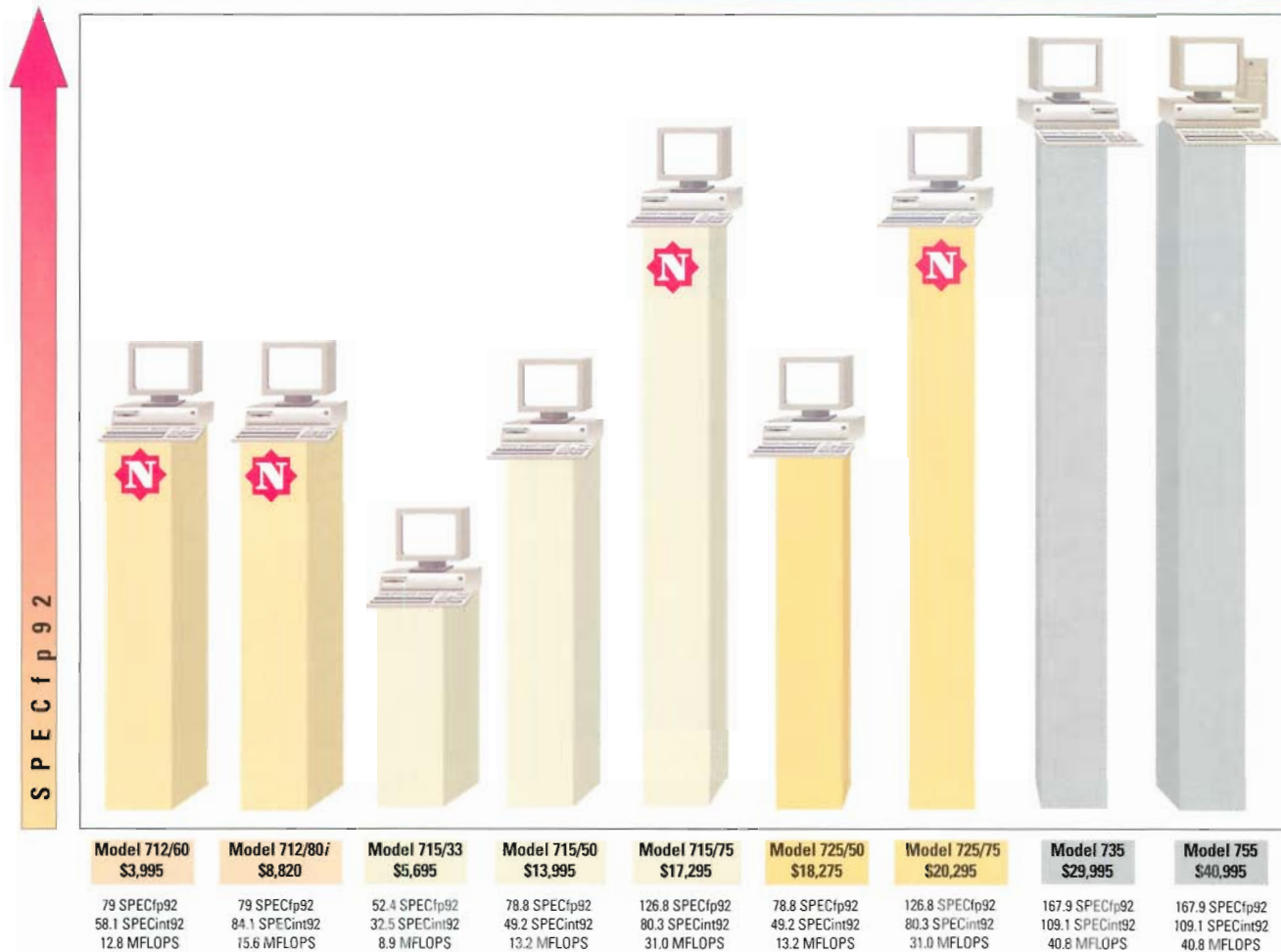
Your workstation of choice for applications that require fast X Window System performance and low-cost 2D graphics, the Model 712/60 is suitable for financial trading, customer service, brand management, telesales, and other fields in which the Enterprise Desktop excels. Its unequalled integer performance and breakthrough low price offer an outstanding value.

Model 712/80i

This higher power Model 712 workstation provides enhanced integer performance. The Model 712/80i is an excellent choice for customer service, brand management, telesales, and especially outstanding PC emulation. Its telephony slot and other Enterprise Desktop features put it at the head of its class.



Performance Comparisons for Series 700 Models



All prices represent entry-level system color configuration with localization kits.

Model 715/33	Model 715/50	Model 715/75	Model 725/50	Model 725/75	Model 735	Model 755
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.	The Model 715/75 workstation delivers fast X window performance at a cost-effective price. Electronic design automation and other design and drafting needs are met by 2D/3D wire-frame grayscale and color graphics as well as high-end CRX graphics.	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.	With the Model 725/75 workstation, multimedia projects are supported with CD-quality audio and add-on video card options. Quality graphics capabilities are also supported.	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.	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.

Choosing the Series 700 is a matter of facts

The Series 700 workstations feature the PA-RISC 7100 and 7100LC processors 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 superior 3D graphics available for every model.

The Series 700 family, complemented by the standards-based HP-UX operating system, offers strong performance and great ease of use.

HP Series 700 Performance Characteristics

Model Type	Packaging	Processor	Clock Speed	SPECint92[1]	SPECfp92[1]	Integer Performance	Floating Point	Main Memory	Expansion
 712/60	Desktop	PA-RISC 7100LC	60MHz	58.1	79	73MIPS	12.8 MFLOPS	16-128 MB	1 General [2] 1 Teleshare [3]
 712/80i	Desktop	PA-RISC 7100LC	80MHz	84.1	79	92MIPS	15.6 MFLOPS	16-128 MB	1 General [2] 1 Teleshare [3]
715/33	Desktop	PA-RISC 7100	33MHz	32.5	52.4	41MIPS	9.5 MFLOPS	8-192 MB	1 EISA (opt)*+
715/50	Desktop	PA-RISC 7100	50MHz	49.2	78.8	63MIPS	14.3 MFLOPS	16-256 MB	1 EISA (std)+
 715/75	Desktop Deskside	PA-RISC 7100	75MHz	80.3	126.8	92MIPS	31.0 MFLOPS	32-256 MB	1 EISA (std)+
725/50	Desktop	PA-RISC 7100	50MHz	49.2	78.8	63MIPS	14.3 MFLOPS	16-256 MB	4 EISA (std)+
 725/75	Desktop Deskside	PA-RISC 7100	75MHz	80.3	126.8	92MIPS	31 MFLOPS	32-256 MB	1 EISA (std)+
735	Desktop	PA-RISC 7100	99MHz	109.1	167.9	124MIPS	45.4 MFLOPS	32-400 MB	1 EISA (std)
755	Deskside	PA-RISC 7100	99MHz	109.1	167.9	124MIPS	45.4 MFLOPS	64-768 MB	4 EISA (std)

* EISA optional for Model 715/33 only

+ One EISA expansion slot becomes inaccessible when using CRX-24, CRX-24Z, or CRX-48Z configurations

[1] With HP-UX 9.03

[2] See page 15 for networking options

[3] See page 88 for information on HP Teleshare

To compare capabilities, we use the most common benchmarks in descriptions of our Series 700 models. Just compare and you'll find that Hewlett-Packard offers the strongest value in performance and price.

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 and options are listed on pages 15, 24, and 25. 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	Internal Removable Storage Options[5]	Interfaces	Networks (available)	Operating System	Entry Color Base Price [6]
 712/60	2D & 3D Color [7]	1 GB	2 bays	260MB (SE) 525MB (SE) 1GB (SE)	1.4 MB Flexible	SE SCSI-2 RS-232-C (9 pin) Centronics Parallel (2) PS/2 Connectors CD Audio I/O	IEEE-802.3, X.25, 802.5 Token Ring	HP-UX 9.03	\$ 3,995
 712/80i	2D & 3D Color [7]	1 GB	2 bays	260MB (SE) 525MB (SE) 1GB (SE)	1.4 MB Flexible	SE SCSI-2 RS-232-C (9 pin) Centronics Parallel (2) PS/2 Connectors CD Audio I/O	IEEE-802.3, X.25, 802.5 Token Ring	HP-UX 9.03	8,820
715/33	2D Grayscale 2D & 3D Color	2 GB	3 bays	525MB (SE) 1GB (SE) [4]	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, ATR, SNA, ISDN, X.25, 802.5 Token Ring	HP-UX 9.0	5,695
715/50	2D Grayscale 2D & 3D Color	2 GB	3 bays	525MB (SE) 1GB (SE) [4]	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, ATR, SNA, ISDN, X.25, 802.5 Token Ring	HP-UX 9.01	13,995
 715/75	2D Grayscale 2D & 3D Color	2 GB	3 bays	525 MB (SE) 1.05GB (SE) [4]	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, ATR, SNA, ISDN, X.25, 802.5 Token Ring	HP-UX 9.01	17,295
725/50	2D Grayscale 2D & 3D Color	2 GB	3 bays	525 MB (SE) 1GB (SE) [4]	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, ATR, SNA, ISDN, X.25, 802.5 Token Ring	HP-UX 9.0	18,275
 725/75	2D Grayscale 2D & 3D Color	2 GB	3 bays	525 MB (SE) 1.05GB (SE) [4]	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, ATR, SNA, ISDN, X.25, 802.5 Token Ring	HP-UX 9.01	20,295
735	2D Grayscale 2D & 3D Color	2 GB	2 bays	525 MB (SE) 1 GB (SE or FW) [4]	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, ISDN, X.25, 802.5 Token Ring	HP-UX 9.0	29,995
755	2D & 3D Color	4 GB	4 bays	2 GB (SE or FW) [4]	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, ISDN, X.25, 802.5 Token Ring	HP-UX 9.0	40,995

[4] Up to two internal hard drives per system
[5] Limited to one removable device per system

[6] Price represents entry-level system color configuration with localization kit
[7] 3D color is available through software

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

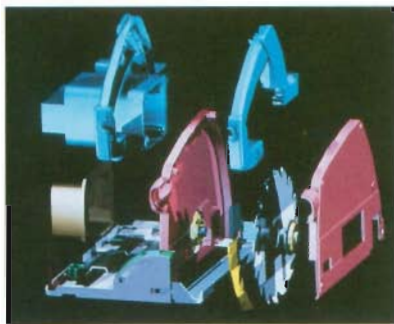
PA-RISC and tightly integrated HP graphics add up to unparalleled performance

If you've spent time working with graphics applications, you've spent time waiting. Now, your wait is over, thanks to the HP 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. So, when you upgrade to a higher performance workstation model, you'll find your same graphics system goes further. 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.

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.

HP graphics software

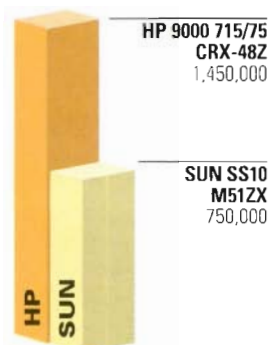
A system is only as productive as its applications allow. HP's great selection of sophisticated software makes sure you get the most



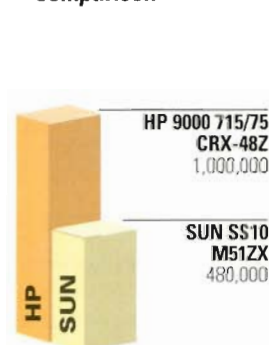
from your Series 700 workstation. See pages 86 and 88 for multimedia products and page 90 for graphics software. As always, if you have any questions, call **HP DIRECT** toll-free.

HP Graphics Eclipse Sun

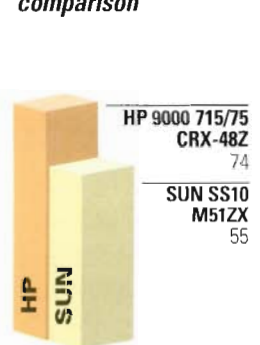
3D Vectors/sec performance comparison



X11 Vectors/sec performance comparison



3D Solids performance comparison



Base Accelerated Graphics

Integrated 8-bit Grayscale System

256 shades of gray • 8 plane, or 4/4 double buffer • X11 performance: 15,900 • 920,000 2D vectors/second • Scan rate: 72 Hz • Resolution (19-inch monitor) 1280 x 1024

Integrated 8-bit Color

256 simultaneously displayable colors • 8 plane, or 4/4 double buffer (8/8 virtual) • X11 performance: 15,900 • 960,000 2D/3D vectors/second • 18,000 triangles/second • 10,000 lit, shaded quads/second • Scan rate: 72 Hz • Resolution (19-inch monitor) 1280 x 1024

CRX- 8-bit Color

256 simultaneously displayable colors • 8 plane with 8/8 double buffer • X11 performance: 19,115 • 1.16 million 2D/3D vectors/second • 40,000 triangles/second • 25,000 lit, shaded quads/second • Scan rate: 72 Hz • Resolution (19-inch monitor) 1280 x 1024

Mid-range Performance

CRX-24- 24-bit Color

16.7 million simultaneously displayable colors • 24 plane, or 12/12 double buffer • 8 overlay planes • X11 performance: 18,788 • 680,000 2D/3D vectors/second • 40,000 triangles/second • 30,000 lit, shaded quads/second • Scan rate: 72 Hz • Resolution (19-inch monitor) 1280 x 1024

CRX-24Z- 24-bit Z Buffer Color

16.7 million simultaneously displayable colors • 24 plane, or 12/12 double buffer • 8 overlay planes • X11 performance: 18,788 • 680,000 2D/3D vectors/second • 150,000 3D anti-aliased vectors/second • 175,000 triangles/second • 95,000 lit, shaded quads/second • Scan rate: 72 Hz • Resolution (19-inch monitor) 1280 x 1024 • Includes PowerShade software

Advanced Performance

CRX-48Z- 24-bit Double Buffer Color

16.7 million simultaneously displayable colors • 5 color maps • 24 plane, double buffered image planes • Dedicated 24-bit double buffer • 8 overlay planes • X11 performance: 18,788 • 2.1 million 3D vectors/second • 1.2 million 3D anti-aliased vectors/second • 600,000 triangles/second • 150,000 lit, shaded quads/second • Scan rate: 72 Hz • Resolution (19-inch monitor) 1280 x 1024 • Includes PowerShade software

Please note:

Performance varies with CPU; figures for the integrated graphics are based on the 715/75 and 725/75 models; figures for CRX, CRX-24, CRX-24Z, and CRX-48Z are based on the 735 model.

Graphics Options

Model 712/60	Model 712/80i	Model 715/33	Model 715/50	Model 715/75	Model 725/50	Model 725/75	Model 735	Model 755
Accelerated CRX	Accelerated CRX	Integrated grayscale Integrated color CRX-24 CRX-24Z	Integrated grayscale Integrated color CRX-24 CRX-24Z CRX-48Z	Integrated grayscale Integrated color CRX-24 CRX-24Z CRX-48Z	Integrated grayscale Integrated color CRX-24 CRX-24Z CRX-48Z	Integrated grayscale Integrated color CRX-24 CRX-24Z CRX-48Z	GRX CRX CRX-24 CRX-24Z CRX-48Z	CRX CRX-24 CRX-24Z CRX-48Z

Choosing the Right Bits

8 Choose 8-bit color for basic color work and to aid user comprehension and productivity. Add HP's PowerShade software to an 8-bit graphics system for light to medium 3D/high-end graphics use.

24 Choose 24-bit color if you regularly work with detailed color images, photos, and scans. It is also appropriate for photo-realism and smooth graduations of color, and for video imaging, multimedia, and video conferencing capabilities.

Z Choose HP's Z buffer graphics system (CRX-24Z) for top-end 3D performance, or our double buffer system (CRX-48Z) for even faster, smoother 3D imaging and animation.

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
CRX → CRX-24	A2771A
CRX-24 → CRX-24Z	A1454A
CRX-24Z → CRX-48Z*	A2666A

*Not supported on Models 720, 730, or 750.

For Models 715 and 725	Product Number
Integrated color → CRX-24	A2673A
Integrated grayscale → CRX-24	A2674A
Integrated color → CRX-48Z	A2675A
Integrated grayscale → CRX-48Z	

Build your Enterprise Desktop with advanced software



Along with the Model 712 workstations and other innovative hardware, HP has created advanced software to make the Enterprise Desktop even stronger. The Ready-to-Wear Desktop Builder Kit provides tools to create Enterprise Desktop systems that are easy to use and to deploy. HP Wabi 1.1 lets you take advantage of the wealth of PC software on your Enterprise Desktop system.

Ready-to-Wear Desktop Builder Kit



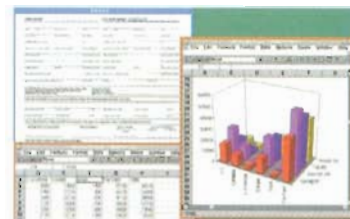
The RTW Desktop Builder Kit provides tools to accelerate and simplify desktop configuration and integration. The RTW DBK provides tools that let MIS depart-

ments deliver a simple, and customized desktop user interface that increases end-user productivity. The RTW DBK includes configuration files for the HP VUE environment that produce a simple and tightly integrated desktop for end-users. The RTW DBK provides guidelines for integrating third-party and internally developed software applications into the desktop with consistent behavior and appearance. The RTW DBK also reduces the resources and expertise needed to configure, deploy, and support UNIX desktops; freeing resources to focus on other mission-critical activities.

Take the first step to a desktop that is easier to use and easier to maintain. Call HP DIRECT toll-free to ask for information about the RTW Desktop Builder Kit. Localized language versions of the RTW DBK are also available. For your most complex customizations of your Enterprise Desktop systems, ask for additional information on the RTW Integration Toolkit. For exciting promotional pricing on the HP RTW Desktop Builder Kit and HP MPower, ask for information on the HP Enterprise Desktop Jumpstart Promotion.

HP Wabi 1.1

HP Wabi 1.1 allows your users to run 13 of the most popular Microsoft Windows and Intel applications unaltered on their HP-UX 9.0 based Series 700



Workstations and X Terminals, ranging from Microsoft Word 2.0 to Lotus 1-2-3 1.1. It is a software emulation of the Microsoft Windows-based applications. In terms of performance, HP Wabi 1.1 utilizes a second generation architecture allowing 486-class performance. For those in need of networking capabilities and a DOS emulator, Insignia Solutions offers a similar emulation program, SoftWindows, with those features that Wabi does not, including more supported applications. For more information about SoftWindows, please call 508.682.7600 within the U.S.. Outside the U.S., call +44-494-459426. Find out how HP Wabi 1.1 can take the most widely used software off the shelf and get it working on your Series 700 workstations and X Terminals.

Enterprise Desktop Tools Ordering Information

Description	Product Number	Price
HP RTW Desktop Builder Kit-Client		
License-to-use	B3231AA	\$195
End-user documentation	B3232AA	100
Series 700 media (requires previous or concurrent purchase of B3231AA) Select one of the following	B3233AA	
DD5 (4 mm DAT)	AAH	205
CD-ROM certificate only	AAU	N/C
HP RTW Desktop Builder Kit-Server		
License-to-use	B3234AA	995
System configuration documentation	B3235AA	100
Series 700 media (requires previous or concurrent purchase of B3234AA) Select one of the following	B3236AA	
DD5 (4 mm DAT)	AAH	205
CD-ROM certificate only	AAU	N/C
HP Wabi 1.1		
License-to-use	B3249AB	\$395
Series 700 media (requires previous or concurrent purchase of B3249AB) Select one of the following	B3248AA	
DD5 (4 mm DAT)	AAH	205
CD-ROM certificate only	AAU	N/C
This option must be ordered: HP-UX Revision 9.0	APH	N/C
Series 700 documentation	B3250AA	30

Series 700 bundles...




Our Series 700 bundles make ordering as easy as one product number. The only other items you need to order are a localization kit, listed below, and an Ethernet/LAN kit, on page 25.

Need a configuration different from these bundles? Just create your own customized system with the standard configurations and factory integrated options on the next two pages. And, as always, the technical experts at **HP DIRECT** are eager to answer your questions.

*Get up and running with industry-leading performance and outstanding graphics. It's fast and simple! Call **HP DIRECT** and ask us about our Series 700 bundles.*

Series 700 Ordering Information*

Model	Operating System	Graphics	ECC RAM	Internal Disk Drive	Internal Media option	Product Number	Price
 712/60	HP-UX 9.03	15" Color	16 MB	260 MB SCSI-2 (SE)	N/A	A4010A	\$ 3,890 [1]
715/33	HP-UX 9.0 Run-Time Instant Ignition	19" Grayscale	16 MB	525 MB SCSI-2 (SE)	N/A	A2614A	6,895
		17" Color	16 MB	525 MB SCSI-2 (SE)	1.4 MB 3.5" Floppy	A2616A	8,420
		19" Color	16 MB	525 MB SCSI-2 (SE)	N/A	A2617A	9,495
			32 MB	525 MB SCSI-2 (SE)	N/A	A2618A	10,775
				1 GB SCSI-2 (SE)	N/A	A2619A	11,675
715/50	HP-UX 9.0 Run-Time Instant Ignition	19" Color	16 MB	525 MB SCSI-2 (SE)	N/A	A2629A	13,995
			32 MB	525 MB SCSI-2 (SE)	N/A	A2630A	15,275
				1 GB SCSI-2 (SE)	N/A	A2631A	16,175
					4mm DDS Tape Drive w/data compression	A2632A	18,675


* Additional options can not be ordered with these bundles.

[1] No other discounts apply

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
 Workstation Localization kit Includes PC-101 keyboard for 712 bundle	A4030A Opt #ABA	\$105
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

Products
on this page are
also available
through authorized
HP Dealers.

Models 715/33, 715/50, and 725/50 workstations

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 preconfigured bundles or customize it with factory options on page 25 to meet your specific needs. Complete your system with the keyboard you want by ordering a Localization Kit from page 23, and an appropriate Ethernet kit from page 25.

HP 700 Standard Configurations						
Model	Operating System	Graphics	ECC RAM	Internal Disk Drive	Product Number	Price
715/33	HP-UX 9.0	15" Color	16 MB	525 MB SCSI-2 (SE)	A2611A	\$ 6,790
		19" Color			A2613A	9,390
		19" CRX-24 Color			A2620A	13,390
		19" CRX-24Z Color			A2621A	18,390
715/50	HP-UX 9.0	19" Grayscale	16 MB	525 MB SCSI-2 (SE)	A2625A	11,290
		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
725/50	HP-UX 9.0	19" Grayscale	32 MB	525 MB SCSI-2 (SE)	A2685A	15,570
		19" Color			A2689A	18,170
725/50	HP-UX 9.0	19" CRX-24 Color	32 MB	1 GB SCSI-2 (SE)	A2691A	23,070
		19" CRX-24Z Color			A2692A	28,070
		19" CRX-48Z Color			A2693A	33,070

Models 715/75 and 725/75 workstations

Use this chart to order Model 715/75 and 725/75 workstations. To complete your system, see the Localization Kits on page 23 and the factory integrated options and Ethernet/LAN kits on page 25.

Model 715/75 and 725/75 Configuration Options				
Description	Operating System	ECC RAM	Product Number	Price
Base Configuration:				
715/75	HP-UX 9.0	32 MB	A2896A	\$ 12,590
725/75	HP-UX 9.0	32 MB	A2897A	15,590
Graphics and Monitor - Must select ONE				
Grayscale, 19" monitor			AQ6	800
Color, 19" monitor			AQ7	3,400
CRX-24 Color, 24-plane CRX graphics, 19" monitor			AQ8	7,400
CRX-24Z Color, 24-plane CRX with accelerator and Z-buffer, 19" monitor			AQ9	12,400
CRX-48Z Color, 24-plane double-buffered CRX with accelerator and Z-buffer, 19" monitor			AQA	17,400
Internal Disk Drive - Must select ONE (maximum of two internal disks available)				
Add 525 MB single-ended SCSI 2 disk drive			AT9	1,200
Add 1 GB single-ended SCSI 2 disk drive			AT7	2,100



Step two is customizing your workstation with our factory integrated options



Integrated Options Ordering Information							
Description	Model 715/33	Model 715/50	Model 715/75	Model 725/50	Model 725/75	Option Number	Price
Memory							
Add 16 MB RAM for a total of 32 MB RAM	✓	✓	—	—	—	AN8	\$ 1,280
Add 32 MB RAM for a total of 48 MB RAM	✓	—	—	—	—	ANN	2,560
Add 32 MB RAM for a total of 64 MB RAM	—	—	✓	✓	✓	ANN	2,560
Add 48 MB RAM for a total of 64 MB RAM	—	✓	—	—	—	AND	3,840
Add 96 MB RAM for a total of 128 MB RAM-16 Mbit DRAM	—	—	✓	✓	✓	ANY	11,520
Add 112 MB RAM for a total of 128 MB RAM-16 Mbit DRAM	✓	✓	—	—	—	112	13,440
Add 176 MB RAM for a total of 192 MB RAM-16 Mbit DRAM	✓	—	—	—	—	UFK	21,120
Add 224 MB RAM for a total of 256 MB RAM-16 Mbit DRAM	—	—	✓	✓	✓	UFN	26,880
Add 240 MB RAM for a total of 256 MB RAM-16 Mbit DRAM	—	✓	—	—	—	UFB	28,800
Internal Storage							
Replace 525 MB Single-Ended SCSI-2 Disk Drive with a 1 GB Single-Ended SCSI-2 Disk Drive	✓	✓	—	✓	—	Q13	900
Delete 525 MB Single-Ended SCSI-2 Disk Drive [3]	✓	—	—	—	—	Q14	(1,200)
Add 525 MB Single-Ended SCSI-2 Disk Drive	✓	✓	—	✓	—	AT9	1,200
Add 1 GB Single-Ended SCSI-2 Disk Drive[4]	✓	✓	—	✓	—	AT7	2,100
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	2,150
Add 4-8 GB DDS SCSI-2 Tape Drive w/data compression [2]	✓	✓	✓	✓	✓	AMX	2,500
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
Recommended: Ethernet Kit [5]							
Add-on ThinLAN Ethernet Transceiver	✓	✓	✓	✓	✓	A2670A	175
Add-on EtherTwist Transceiver	✓	✓	✓	✓	✓	A2671A	175

[1] May not be ordered concurrently with options AMB or AMH

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

[3] Option available only with A2611A and A2613A

[4] Requires HP-UX 9.0

[5] ThickLAN (AUI) connector is standard

Order Instant Ignition for convenient preloaded software

We can pre-load your new Series 700 model with HP-UX and other software* along with custom recovery instructions for your workstations. Order Desktop HP-UX Instant Ignition if your commercial client workstation runs, but does not develop, X-Window applications. Order RunTime HP-UX Instant Ignition if your Series 700 runs software development applications, Starbase-based

graphical applications or acts as a multi-user system. Instant Ignition offers options for customer configured disk swap space and backup media right from the factory.

* As of January 1994, your choice of preloadable software products include HP-UX 8-user Run-Time, C/ANSI C Developers Bundle, HP-UX Developers Toolkit, HP-UX General Programming Tools, C Compiler, FORTRAN, Pascal, MPower, and Ready-to-Wear Desktop Builder Kit. Your software choices must be specified at time of ordering.

Ordering Information		
Description	Product Number	Price
English Desktop HP-UX Instant Ignition <i>This option must be ordered with workstation on which instant ignition is to be preloaded:</i>	B3530AA	
HP-UX 9.03 version	APH	\$ 125
English Run-Time HP-UX Instant Ignition <i>This option must be ordered with workstation on which instant ignition is to be preloaded:</i>	B2910A	
HP-UX 9.03 version	APH	\$ 125

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. For Series 400 Upgrades to Model 715, see page 30.

Series 700 System Upgrade Ordering Information

From	To	Description	Product/OptionNumber	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
715/33	715/75	CPU Board Upgrade	A2806A	10,500
715/50	715/75	CPU Board Upgrade	A2807A	6,500
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
725/50	725/75	CPU Board Upgrade	A2808A	6,500
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

Series 700 RAM Ordering Information

System Model	Maximum Memory	Description	Comments	Product Number	Price
715/33	192 MB	8 MB RAM (Two 4 MB SIMMs)	Installs as pairs; Three pairs maximum	A2815A	\$ 640
		16 MB RAM (Two 8 MB SIMMs)	Installs as pairs; Three pairs maximum	A2816A	1,280
		32 MB RAM (Two 16 MB SIMMs)	Installs as pairs; Three pairs maximum	A2829A	3,840
		64 MB RAM (Two 32 MB SIMMs)	Installs as pairs; Three pairs maximum	A2827A	7,680
715/50 715/75 725/50 725/75	256 MB	8 MB RAM (Two 4 MB SIMMs)	Installs as pairs; Four pairs maximum	A2815A	640
		16 MB RAM (Two 8 MB SIMMs)	Installs as pairs; Four pairs maximum	A2816A	1,280
		32 MB RAM (Two 16 MB SIMMs)	Installs as pairs; Four pairs maximum	A2829A	3,840
		64 MB RAM (Two 32 MB SIMMs)	Installs as pairs; Four pairs maximum	A2827A	7,680
720, 730	128 MB	16 MB RAM (Two 8 MB ECC RAM modules)	Installs as pairs; Four pairs maximum	A1979A	1,280
		32 MB RAM (Two 16 MB ECC RAM modules)	Installs as pairs; Four pairs maximum	A2512A	2,560
735	400 MB	32 MB RAM (Two 16 MB ECC RAM modules)	Installs as pairs; Six pairs maximum	A2512A	2,560
		64 MB RAM (Two 32 MB ECC RAM modules)	Installs as pairs; Six pairs maximum	A2646A	8,960
750	384 MB	32 MB RAM (Two 16 MB ECC RAM modules)	Installs as pairs; Six pairs maximum	A1987A	4,000
		64 MB RAM (Two 32 MB ECC RAM modules)	Installs as pairs; Six pairs maximum	A2646A	8,960
755	768 MB	64 MB RAM (Two 32 MB ECC RAM modules)	Installs as pairs; Six pairs maximum	A2513A	5,120
		128 MB RAM (Two 64 MB ECC RAM modules)	Installs as pairs; Six pairs maximum	A2518A	17,920

100% compatible HP add-ons



The only choice for optimum performance

When you need to add more performance and capability to your workstations, look no further than HP. Only HP add-ons are designed, optimized, and tested to ensure the highest levels of performance.

Series 700 Internal Storage Ordering Information														
Description	Supported on the following Models												Product Number	Price
	705	710	715/33	715/50	715/75	720	725/50	725/75	730	735	750	755		
Internal Hard Disk Storage														
525 MB single-ended SCSI-2 disk [2] [5]	-	-	✓	✓	✓	-	-	-	-	-	-	-	A2800A	1,200
525 MB single-ended SCSI-2 disk [2] [5]	-	-	-	-	-	-	✓	✓	-	-	-	-	A2809A	1,200
525 MB single-ended SCSI-2 disk [2] [7]	-	-	-	-	-	✓	-	-	✓	✓	-	-	A2565A	1,200
1 GB single-ended SCSI-2 disk [2] [5]	-	-	✓	✓	✓	-	-	-	-	-	-	-	A2801A	2,100
1 GB single-ended SCSI-2 disk [2] [5]	-	-	-	-	-	-	✓	✓	-	-	-	-	A2813A	2,100
1 GB single-ended SCSI-2 disk [2] [7]	-	-	-	-	-	✓	-	-	✓	✓	-	-	A2563A	2,100
1 GB fast-wide SCSI-2 disk [2] [7]	-	-	-	-	-	-	-	-	-	✓	-	-	A2566A	2,400
1.3 GB internal SCSI-2 disk	-	-	-	-	-	-	-	-	-	-	✓	-	A1989A	5,000
2 GB single-ended SCSI-2 disk [2] [5]	-	-	-	-	-	-	-	-	-	-	-	✓	A2556A	4,200
2 GB fast-wide SCSI-2 disk [2] [5]	-	-	-	-	-	-	-	-	-	-	-	✓	A2564A	4,850
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 [6]	-	-	✓	✓	✓	-	-	-	-	-	-	-	A2802A	525
1.4 MB 3.5-inch flexible disk drive [6]	-	-	-	-	-	-	✓	✓	-	-	-	-	A2814A	525
1.4 MB 3.5-inch flexible disk drive [2] [9]	-	-	-	-	-	✓	-	-	✓	✓	-	-	A1984A	525
1.4 MB 3.5-inch flexible disk drive [8] [9]	-	-	-	-	-	-	-	-	-	-	✓	✓	A1968A	525
600 MB 5.25-inch CD-ROM drive [2]	✓	✓	-	-	-	-	-	-	-	-	-	-	A2224A	1,050
600 MB 5.25-inch CD-ROM drive [6]	-	-	✓	✓	✓	-	-	-	-	-	-	-	A2803A	845
600 MB 5.25-inch CD-ROM drive [6]	-	-	-	-	-	-	✓	✓	-	-	-	-	A2817A	845
600 MB 5.25-inch CD-ROM drive [8]	-	-	-	-	-	-	-	-	-	-	✓	✓	A1985A	845
2 GB DDS tape drive [3] [4] [6]	✓	✓	✓	✓	✓	-	✓	✓	-	-	✓	✓	A2274A	2,150
Add up to 8 GB w/DDS tape drive [3] [4] [6] w/data compression	✓	✓	✓	✓	✓	-	✓	✓	-	-	✓	✓	A2275A	2,500

Notes:

- [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 9.03.
[8] Supported on systems with an available half-height bay.
[9] Models 715, 725, 735 and 755 require HP-UX 9.0.

Move from mature technology of the 80s to open systems of the 90s!

As your computing needs change and technology evolves, HP offers the finest investment protection with system replacement programs and technology bridges that help you build a better environment for the 90s.

Running HP-UX on your Series 300 or Series 400 systems? You can improve the performance of your desktop systems by 3 to 30 times just by upgrading to PA-RISC, the architecture with a future. HP is the only vendor offering a complete seat replacement solution that includes cost-effective board upgrades or trade-ins, software transfers, and leasing options.

Are you running Domain/OS on DN Series or Series 400 systems? You can experience outstanding performance improvements and new application functionality when you move to PA-RISC based workstations, and base your new environment on HP-UX, a 10-year veteran of UNIX operating systems designed for mission-critical computing. HP's Open Migration Program offers a complete set of interoperability and migration tools, services, and total system replacement solutions that make the transition as smooth as possible. We will continue to support Domain/OS through the year 2000 and provide interoperability between the old and the new. Your HP sales rep and technical consultant are ready to partner with you to ensure success in moving to open systems.



How to find out more!

You can get much more information on the Open Migration Program and the solutions that apply to you. Just call **HP DIRECT** toll-free and ask for any of the following packages:

- Open Migration Program for Domain users, **X7537**
- Open Migration Program for HP-UX users, **X7536**

HP Series 300, Series 400 HP-UX Users

Source Code Compatibility

Enjoy a full source code-compatible, open, standards-based operating system when you upgrade to HP-UX 9.X.

Total System Replacement

Hardware

A simple board upgrade will turn your Series 400 into a Series 700, and every HP workstation can be traded in for a new Series 700.

Software

HP transfers most layered software and certain HP applications for free or at a discounted price. And, more than 20 HP Channel Partners now offer application upgrades at very attractive prices when you upgrade your hardware with HP.

Leasing

If you're already leasing a system, return it early and get the first two months of a newly leased Series 700 for free.

Series 700

• Power

Industry leading price/performance

• Productivity

Telephone, faxing, conferencing, sharing of documents, and videos all from the desktop

• Applications

More than 4,000 of the most popular applications run on the Series 700

HP Apollo DN Series, Series 400 Domain Users

Interoperability

You'll have enhanced OS functionality (including OSF/AES and NFS support), DMX, the Display Manager-like user interface; collaboration tools, network connections (including ATR); and systems admin tools.

Porting Tools

HP provides tools for porting code to HP-UX including: ADVISE, Programmers Toolkit, X/Dialog, X2D/GMR, and ClearCase for DSEE users.

Operating Systems Support

HP will support Domain/OS through the year 2000 and provide interoperability enhancements to a mixed Domain/HP-UX environment.

Consulting/Education

Take advantage of HP's full range of consulting, planning, implementation, and education services.

Total System Replacement

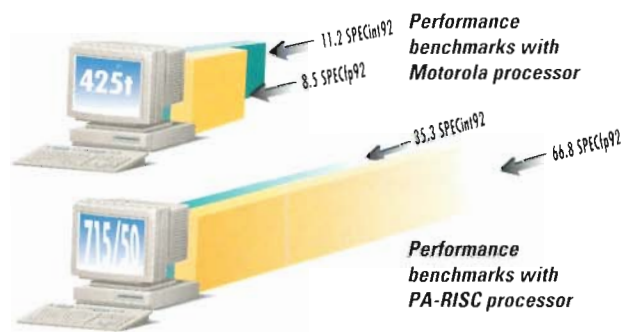
HP helps you replace the full value of each user's system, not just the hardware. See opposite page.



Series 400 to 700 Board Upgrades

Your Series 400 workstation can be quickly and inexpensively upgraded to our latest Series 700 workstations with a board upgrade. More than just a new CPU, these upgrades give you a 3 to 16 times increase in CPU performance, 2.5 to 46 times faster graphics, new features (such as CD-quality audio), and much larger RAM and disk expansion capabilities.

For information on ordering board upgrades for your Series 400 workstation, see pages 30 and 31.



Series 300/400, DN Series Trade-ins with TradeUp'94

You can save from 5 to 15% (and more if you trade in 20 or more systems at one time) when you trade in your older system from HP (and other vendors as well) for a Series 700. HP offers the most extensive list of systems eligible for trading in, plus the broadest selection of new systems and peripherals to choose from, and software license transfers that save you a bundle. HP makes the transaction easy with simple discounting, "pick-up-at-your-desk" system removal, and proper disposal. All you have to do is choose your favorite system and HP will handle the rest. For more information on TradeUp'94, turn the page.



HP-UX

• Easy & Open

HP VUE, award-winning user interface and chosen for CDE (Common Desktop Environment)

• Graphics

Superb 2D and 3D graphics on every model of the Series 700

Trade up to the Series 700 and Series 800

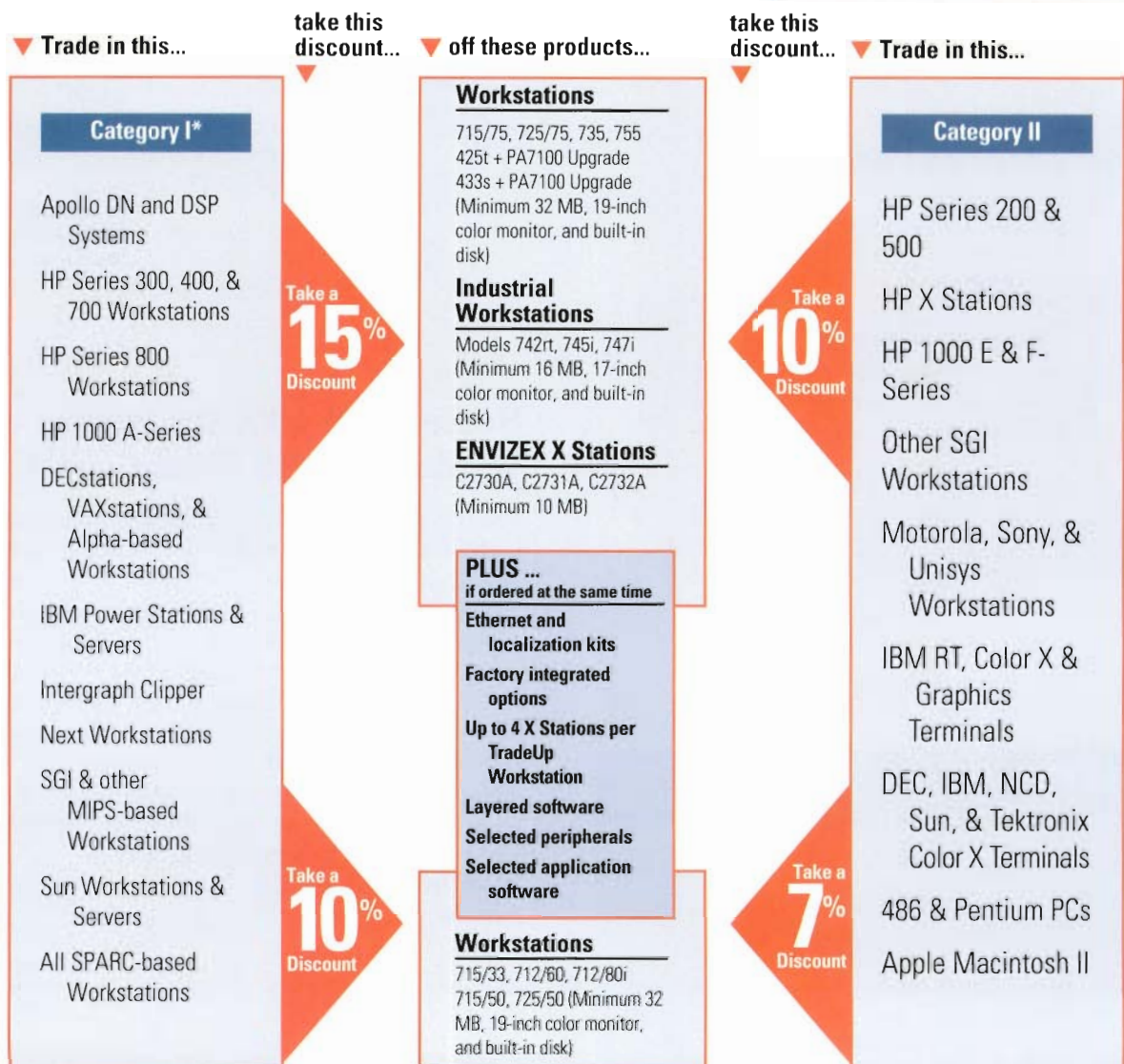
Now it's easier than ever to move up to the power of HP 9000 systems. For 1994, HP is offering TradeUp'94, the most comprehensive trade-in program available today.

We've made it easy. You can trade up to your choice of HP X Stations, Series 700 workstations, and

Series 800 business servers. TradeUp'94 also offers companion discounts on layered software, options, peripherals, and services. And your old systems are picked up right at your desk—at no charge to you.

See just how much you can save by looking at the following charts.

Based on your trade-in systems, you'll get a substantial credit toward the new products—and you can apply your standard HP purchase agreement for an additional discount.



▼ **Trade in this...**

Category III

Apollo DN4500, DN5500, DN10000
HP 750, 755
IBM M20, 220, 320 through 370, 520 through 58H, 950 through 98B, AS400 B, C, D, E, F Series, Series 35, 38
Data General 43XX, 46XX, 52XX, 62XX, MV Eclipse Series
DEC VAX 4XXX, 5XXX, and MIPS-based Servers Sun3, Sun10/XXX, Sun 6XX, and 1000/2000 Servers
NCR 34XX, 35XX, Pyramid MIS Servers
Prime 50 Servers
Sequent S2000
Wang VS and BR Series

Take a
10%
Discount

take this
discount...

▼ **off these products...**

Series 800

Models G40, G50, G60, G70
Models H40, H50, H60, H70
Models I40, I50, I60, I70 (Minimum 64 MB, and built-in 2 GB disk)

**PLUS ...
if ordered at the
same time**

HP-UX License-to-Use
Up to 16 X Stations per Server
Selected Layered Software
Selected Peripherals



TradeUp/94 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 to the power of Series 700 and 800 systems. You can find out more about HP's Open Migration Program on page 28.

N Series 800 Business Servers Now Included!

Here's your opportunity to trade-in outdated midrange and mainframe systems for the latest Series 800 PA-RISC servers. Get better price/performance for your mainframe-class applications.

Category IV

Any IBM Mainframe
Any Amdahl Mainframe
Any DEC VAX 6XXX/ 7XX/8XXX
Any Fujitsu Mainframe
Any Hitachi Mainframe
Any NEC Mainframe
Any Unisys Mainframe

Take a
10%
Discount

Servers

Series 800

Model T500
(Minimum 2 CPUs and 256 MB RAM)

Category V

IBM 3270 Type Terminals from
IBM
Apartus
Harris-Adacom
IDEA
Lee Data IIS
Memorex Telex
386 PCs with 3270 Emulation Cards

Take a
7%
Discount

Terminals

**HP ENTRIA
X Terminals**

**Replace 3270 terminals,
with X Stations**

Protect your ability to emulate 3270 terminals when you trade up to HP ENTRIA X Terminals—and still benefit from the power of PA-RISC technology.

Category V

Cluster Controllers
IBM 3274, 3174, 3276

Take a
7%
Discount

HP 715 Cluster
Controller
Configuration

Based on your trade-in systems, you'll get a substantial credit toward the new products—and you can apply your standard HP purchase agreement for an additional discount.

Get Series 700 RISC performance with HP-installed board upgrades

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.



Series 400 board upgrades give you

more power...

- Reduced application run time
- The ability to run larger, more complex applications
- Access to all applications available on PA-RISC, including HP MPower environment, complete with CD-quality audio



more investment protection...

- Investment protection, since you keep existing RAM, disk, monitor, external peripheral support, and most internal peripherals
- Transfer of your layered software products to Series 700 for free in most cases, or for a minimal fee

Series 400
Workstation

Series 700
Workstation

Simple board upgrades can transform your Series 400 workstation into the Series 700 PA-RISC workstations, delivering performance increases of up to 16 times.

Free Planning Kits

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.

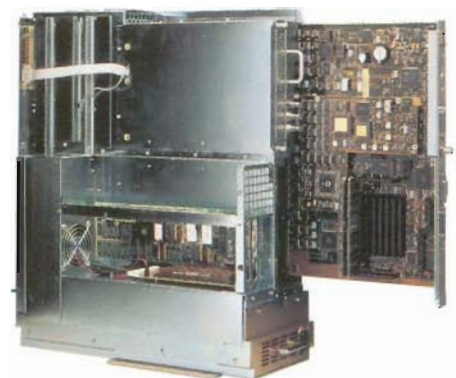
Free Kits to Simplify Upgrading

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

HP's commitment to Series 400 and DN Series owners using the Domain operating system

If you wish to remain with your current Domain environment, or are bound to it, we offer dedicated, quality support services. These services include:

- The support of Domain and HP-UX operating systems on Motorola 68000-based Series 400 and DN Series systems at least through the year 2000
- Domain and HP-UX interoperability features that enable you to add Series 700 systems over time



Simple board swaps can be completed at your site.

Upgrade Kits

The board upgrades allow you to keep your monitor, RAM memory, internal peripherals, and system serial number. With your HP-installed board upgrade, you'll get HP-UX 9.01, increased graphics performance, ATR card upgrade, CD-quality audio, HP-UX or PC-style keyboard, mouse, and documentation. You'll also get free transfer of most layered software products. You'll keep your processor chassis and serial number, RAM, Token Ring network and wiring if applicable. You also keep your monitor and peripherals. 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.

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.

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
4xxt	715s/33	HP-UX or Domain board upgrade	A2092A	—	4,890
		Add 420 MB SCSI disk		AT5	2,000
	715s/50	HP-UX or Domain board upgrade	A2093A	—	7,390
Localization Kits					
		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)

* The system serial number will change with box upgrade

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

Grow within your Series 400 system with our 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.

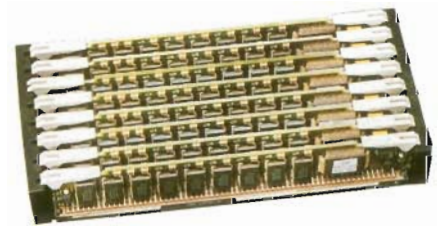
Series 400 Field Upgrade Kits Ordering Information				
From	To	Description	Product Number	Price
400t	425t	HP-UX upgrade	A2040A	\$2,000
		Domain/OS Upgrade	A2041A	2,000
400s	433s	HP-UX Upgrade	A2042A	4,000
		Domain/OS Upgrade	A2043A	4,000
425s	433s	HP-UX Upgrade	A2046A	4,000
		Domain/OS Upgrade	A2047A	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

Series 400



Fully supported ECC RAM

Your HP Series 400 Workstation is a valuable long-term investment that deserves RAM from HP. HP RAM assures you of 100% compatibility with your HP 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	2,100
2 GB internal SCSI disk	—	—	—	✓	—	✓	A2556A	4,200
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	2,150
600 MB CD-ROM drive (HP-UX only)	—	—	✓	✓	—	✓	A1448A	1,050
60 MB 1/4-inch QIC tape drive	—	—	✓	✓	—	✓	A1449A	2,100

Notes:

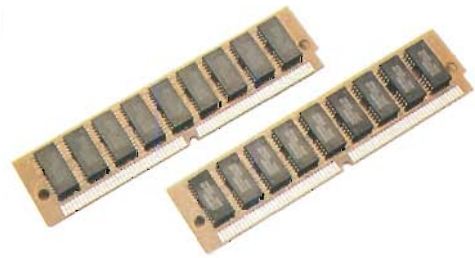
4XXe/t can have a maximum of 2 internal devices.
4XXs can have a maximum of 3 internal devices.

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

Series 300



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.

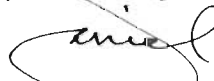
You'll also enjoy peace of mind, knowing that HP products are known worldwide for their consistently high quality and reliability.

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	4 MB Parity RAM daughter board	Uses daughter interface (2 max)	98269B	1,200
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
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	249
		8 MB Parity SIMM RAM	Installs as single SIMM (2 SIMMs max)	D2152A	479
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

“There's no hassles, absolutely no pressure. If you know what your job needs, we'll help you get it quickly. If you're not sure, just ask!”


Daniel Orozco - HP DIRECT Customer Representative



HP's commitment to Series 300 owners using the HP-UX operating system

If you wish to remain with your current environment, or are bound to it, HP offers dedicated, quality support services. These services include the support of the HP-UX operating system on Motorola 68000-based Series 300 systems at *least* through the year 2000.

User Input Devices

**“We’re seasoned consultants,
with knowledge on everything
from terminals to special deals.”**



Debie Nervina - **HP DIRECT**
Customer Representative



Make the move from your current text terminal to high-performance HP ENTRIA.

HP ENWARE X Station software makes the most of your HP ENTRIA and HP ENVIZEX stations.

Take advantage of the latest HP workstation multimedia features with HP headsets.

Speed up your 2D CAD projects with HP graphics tablets.

Put Spaceball to work on your next 3D project.

The new HP ENVIZEX family of X stations offer breakthrough resolution, RISC performance, and multimedia capabilities at low prices.

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The new Model 433SX offers even more graphic performance.



HP Service and Support

HP Support options can now be ordered with every product 101



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.**

N Multimedia capabilities with ENVIZEX!

Get ready for multimedia

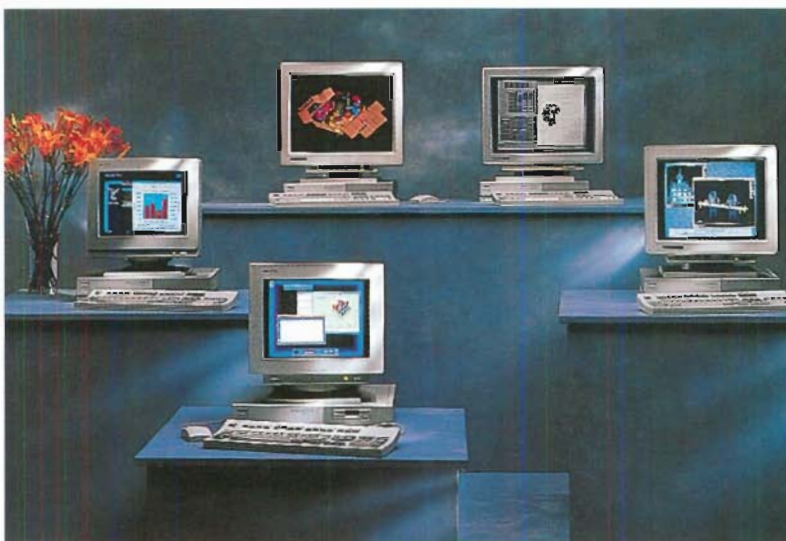
ENVIZEX stations deliver the multimedia options you've been looking for: audio for annotating electronic documents, a floppy drive for easy transfer of files between DOS and UNIX platforms, and a scanner port to get paper documents into your system. Now through the use of HP MPower, ENVIZEX is the best X terminal choice for multimedia-ready client/server companion environments. You can find more about MPower on page 86.

Power and more

Hewlett-Packard's revolutionary ENVIZEX family will set your expectations of X terminal performance at a new height. Start with a RISC processor that delivers 165,000 Xstones of graphics performance. Add advanced software with flexible window management to create multiple X terminals on your desk at once. Then, picture your next graphics project with resolution that's crisp enough for the most demanding applications. HP's ENVIZEX family of X stations lets your users work smarter and get results that look sharper, at great low prices.

Plenty of Options

A versatile selection of options, from user-installable memory modules to audio cards, allows you to get a customized X terminal solution right now. You can focus on the rapidly expanding world of multimedia with special multimedia bundles built around the ENVIZEX accelerated models. And, no matter which model you begin with, you can keep up with growing demands with expansion options that keep you flexible into the future.



Visionary X terminals — HP's new ENVIZEX stations offer breakthrough resolution, RISC performance, and multimedia capabilities. Low prices and flexible expansion options make these X terminals the clear choice for all your multi-user needs.

Two new higher levels of performance

The Intel i960CF RISC processor unleashes breakthrough performance that almost doubles our previous family of X station performance from 93,000 Xstones to 165,000 Xstones. HP ENVIZEX stations are available in the "i" Series, which gives you intermediate performance of 115,000 Xstones. The "a" Series delivers accelerated performance of 165,000 Xstones.

Convenient, trouble-free software

Thanks to HP's easy to use installation and administration scripts, your ENVIZEX station is up to speed, minutes out of the box. The multi-host CD features our X server software configured for the most commonly-used hosts. You can even order the X server software on an installable ROM card which can boot multiple X terminals. To make the most

of your ENVIZEX stations, HP has developed HP ENWARE X station software. Never before has leadership performance and functionality been so user-friendly.

Expand on demand

With ENVIZEX, you can respond at a moment's notice when your current needs grow. Add single inline memory modules (SIMMs) to the standard 6 MB of RAM (12 MB of RAM for multimedia bundle models), and expand to 132 MB for immediate higher performance at low costs. That kind of expandability keeps you and your investment valuable as future opportunities arise.



19CaS

Model 19CaS

A 19-inch Sony color monitor and an Intel i960 RISC processor make this the choice for CAD/CAM, color imaging, and more.

- 165,000 Xstones
- 2 MB video memory
- 6 MB base RAM

Model 19Ca

A large 19-inch color monitor offers a high 1280 x 1024 color resolution. Accelerated performance suitable for CAD/CAM and high-end desktop publishing.

- 165,000 Xstones
- 2 MB video memory
- 6 MB base RAM



17CaS/17Ca

Model 17CaS

The Intel i960 RISC processor teams with a 17-inch Sony color monitor for medium resolution and accelerated performance. Applications include CAD/CAM, financial analysis, and trading.

- 165,000 Xstones
- 2 MB video memory
- 6 MB base RAM

Model 17Ca

The 17Ca's 17-inch color monitor provides 1024 x 768 resolution and its i960 processor powers applications for CAD/CAM, color imaging, and more.

- 165,000 Xstones
- 2 MB video memory
- 6 MB base RAM



Model 15Ca/15Ci

Model 15Ca

A 15-inch color monitor with 1024 x 768 resolution makes this RISC-powered station suitable for presentation graphics, patient monitoring, and general business applications.

- 165,000 Xstones
- 2 MB video memory
- 6 MB base RAM

Model 15Ci

A 15-inch color screen, 1024 x 768 resolution, and intermediate performance are suitable for word processing and inventory management.

- 115,000 Xstones
- 6 MB base RAM
- 1 MB video memory

Standard Features	
Architecture	
RISC Processor	25 and 28 MHz Intel i960CF
Compact Design	Desktop, deskside, floor-mount
Memory Slots	2 single inline memory slots (SIMM)
Optional Memory	2,4,8,16 & 32 MB SIMMs supported
Graphics	
Colors/Levels of Grayscale	256 (palette of 16.7 million)
Display Connector	15-pin VGA (adapts to RGB)
Software	
Window System	X11 Release 5
Local Clients	HP VUE/RX, Frontend HP VUE, mwm, twm, xterm, hpterm, xflash
Name Server	Domain-name resolver
Font Server	NFS, TFTP
Software Media Options	ROM card, CD-ROM, floppy
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	
Multimedia Accessories	Local floppy, audio, headset and SCSI/adaptor card for local scanner
Network Connectors	BNC and AUI
Network Speed	10 Mbits/sec
Network Protocols	TCP/IP, 8-bit TELNET
Bidirectional Serial Port	RS-232-C for local system printer or plotter
Parallel Port	Centronics for local printer or plotter
Keyboard Layout (and Interface)	PC-101/102 layout (PS/2), HP-UX layout (HP-HIL), Sun type-4 layout (PS/2)
Mouse Ports	PS/2 and HP-HIL
Other HP-HIL Devices Supported	Tablet, knob box, button box



Model 17Ci

Model 17Ci

The 17Ci's 1024 x 768 resolution 17-inch color monitor and intermediate performance are appropriate for CAD/CAM, financial applications and desktop publishing.

- 115,000 Xstones
- 6 MB base RAM
- 1 MB video memory



Model 14Ci

Model 14Ci

RISC-powered performance and a 14-inch color monitor with 1024 x 768 resolution make the 14Ci a great value for patient monitoring, inventory management, and word processing.

- 115,000 Xstones
- 6 MB base RAM
- 1 MB video memory



Model 19Ga

Model 19Ga

A 19-inch grayscale monitor offers high-resolution of 1280 x 1024 for medical and photographic imaging, document imaging, and CASE.

- 165,000 Xstones
- 6 MB base RAM
- 2 MB video memory

Helpful Hint

To compare graphics performance among X terminals, the Xstones benchmark is used as a relative measurement. It is a single number that is a weighted average of several tests. In general, the higher the Xstone number, the better the performance from an X terminal.

Choose the model that meets your needs



Whatever your current demands, whatever your projected demands, whatever you do that you want to do more of, you can do it all with ENVIZEX. HP's newest family of X stations helps you manage your largest projects and create sparkling results with two remarkable levels of Xstone performance. The accelerated ("a" Series) models are rated at 165,000 Xstones and intermediate ("i" Series) models are rated at 115,000 Xstones.

Accelerated models provide a cost-effective solution for such graphics-intensive fields as CAD/CAM/CAE/CASE, color imaging, and general business applications. The intermediate ENVIZEX X station models keep expenses under control for less demanding applications, such as patient monitoring, inventory management, and word processing. All models offer plenty of expansion choices through user-installable SIMMs when it's time to grow.

We've also created multimedia bundles that offer accelerated "a" Series performance with audio card, microphone, 1.44 MB floppy drive, and 12 MB of user memory. Bundles are available with models 19CaS, 19Ca, 17CaS, 17Ca, 15Ca, and 19Ga.

“We get lots of calls from all kinds of people from all kinds of businesses. Because you're all different, there's never one solution that fits everybody. That's why HP has so many products. We can help you create just what you need.”

Diana Diffenderfer - **HP DIRECT**
Order Management Representative



ENVIZEX Station Characteristics									
Model	19CaS ^[1]	19Ca ^[1]	17CaS ^[1]	17Ca ^[1]	15Ca ^[1]	19Ga ^[1]	17Ci	15Ci	14Ci
Performance	165,000 Xstones						115,000 Xstones		
Monitor	19" color (Sony)	19" color	17" color (Sony)	17" color	15" color	19" grayscale	17" color	15" color	14" color
Resolution	1280 x 1024			1024 x 768		1280 x 1024	1024 x 768	1024 x 768 ^[1]	
Refresh Rate	72Hz			75 Hz	70 Hz	72 Hz	75 Hz	70 Hz	60 Hz
Video Memory	2 MB						1 MB		
Base RAM	6 MB								
Keyboard/Mouse	PS/2 HP-HIL / 3-button								
Processor	Intel i960 RISC processor								
Expansion	132 MB max								
Price	\$4,890	\$4,590	\$4,190	\$3,890	\$2,890	\$2,990	\$3,390	\$2,390	\$2,290

[1] Also available in multimedia-ready models with 12 MB of RAM, audio, and local floppy drive.

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

Add ENVIZEX performance to your system in 4 easy steps!

Step 1 — Choose your HP X station. You may also order multimedia bundles, complete with the following factory-installed options:

- Audio card
- Internal 3.5-inch, 1.44 MB DOS format floppy drive
- Total of 12 MB DRAM
- One microphone

HP ENVIZEX Station Models

Model	Display	Monitor	Product Number	Option Number	Price
19Ca	Color	19-inch (1280 x 1024)	C2731A	191(1)	\$ 4,590
19CaS	Color	19-inch Sony (1280 x 1024)	C2731A	192(1)	4,890
17Ca	Color	17-inch (1024 x 768)	C2731A	170(1)	3,890
17CaS	Color	17-inch Sony (1280 x 1024)	C2731A	171(1)	4,190
15Ca	Color	15-inch (1024 x 768)	C2731A	150(1)	2,890
19Ga	Grayscale	19-inch (1280 x 1024)	C2731A	190(1)	2,990
17Ci	Color	17-inch (1024 x 768)	C2730A	170(1)	3,390
15Ci	Color	15-inch (1024 x 768)	C2730A	150(1)	2,390
14Ci	Color	14-inch (1024 x 768)	C2730A	140(1)	2,290

Multimedia Bundles*

19Ca	Color	19-inch (1280 x 1024)	C2732A	191(1)	\$ 5,190
19CaS	Color	19-inch Sony (1280 x 1024)	C2732A	192(1)	5,490
17Ca	Color	17-inch (1024 x 768)	C2732A	170(1)	4,490
17CaS	Color	17-inch Sony (1280 x 1024)	C2732A	171(1)	4,790
15Ca	Color	15-inch (1024 x 768)	C2732A	150(1)	3,490
19Ga	Grayscale	19-inch (1280 x 1024)	C2732A	190(1)	3,590

* Multimedia bundles are available only with the "a" Series of accelerated HP ENVIZEX stations.

(1) This option number for a Northern Hemisphere monitor only

Step 3 — Then, specify the media you need for your host system server software. All software comes with an unlimited site license. You can order the X server software on a ROM card, instead of the host resident X server software. You can boot multiple HP ENVIZEX stations from one unit that has a ROM-based X server.

X-Server Software

Description	Product/Option Number					Price
	HP 9000 S300/S400	HP 9000 S700/S800	Sun O/S & Solaris	IBM (AIX)	SCO ODT	
1/4-inch cartridge tape	B3652BA Opt. AAD	-	-	-	-	\$695
QDS (4mm QAT) cartridge	B3652BA Opt. AAK	B3653BA	-	-	-	695
Multi-host CD-ROM	B3651BA	B3651BA	B3651BA	B3651BA	B3651BA	695
8mm tape	-	-	-	B3654BA	-	695
4-MB flash ROM card (1)	B3659BA	-	-	-	-	595

(1) Requires the SCSI/PCMCIA adapter card (see step 4). ROM cards include local clients such as mwm, hpterm, and xterm, plus downloadable extensions, X server software and fonts.

Step 2 — Order one keyboard kit with the specified localization option for each station ordered.

Keyboard Kit*

Layout	Product Number	Option Number	Price
PC 101/102	C2737A	ABA	N/C
HP-UX	C2738A	ABA	N/C
Sum Type 4	C2739A	ABA	N/C

* English language, with N. American power cord.



Step 4 — You may add memory and other options.

ENVIZEX Options

Option	Product Number	Price
User Installable Memory		
2 MB SIMM	C2321A	\$195
4 MB SIMM	C2322A	295
8 MB SIMM	C2323A	495
16 MB SIMM	C2747A	1,600
32 MB SIMM	C2748A	3,200
Accessories		
Audio kit (1)	C3220A	\$195
Stereo headset (2)	B1196-60001	179
Floppy kit (3)	C3221A	195
SCSI/PCMCIA adapter card (4)	C3222A	250

(1) Includes audio card and microphone

(2) With built-in microphone

(3) 3.5-inch, 1.44-MB DOS format floppy drive

(4) One SCSI interface, two PCMCIA slots

800.637.7740 EASY TOLL-FREE ORDERING

The next step for text terminal users



Legacy systems access

If you need legacy system access but want the flexibility of open systems, HP ENTRIA is your first step to an easy migration. ENTRIA offers seamless access to UNIX-based applications as well as legacy applications. ENTRIA replaces your text-based terminal with a multi-session graphical desktop that displays both your old and new applications simultaneously.

Graphical desktop

You'll enjoy increased user productivity when you migrate from a text-based environment to ENTRIA's graphical user interface (GUI). Along with opening multiple sessions at the same time, users can also "cut and paste" between applications, even if they reside on different hosts.

You can manage multiple "work-spaces" with the HP Visual User Environment (HP VUE). It's like having several X terminals on your desk at once.

Simple to manage

ENTRIA X terminals operate with HP ENWARE X Station software. ENWARE's X Terminal Manager makes it easy for administrators to configure terminals and install new application updates remotely. See more on HP ENWARE on page 42.



Move your organization to open systems and X-based client/server architecture with a friendly graphical desktop that replaces your current text terminal. It's easy with the HP ENTRIA family of low-cost X terminals, with prices starting from \$995.

HP ENTRIA X Terminal Models

Model	17C	15C	14C	19M	14M
Monitor	17-inch color	15-inch color	14-inch color	19-inch monochrome	14-inch monochrome
Resolution	1024 x 768			1280 x 1024	1024 x 768
Refresh Rate	75 Hz	70 Hz	75 Hz	72 Hz	70 Hz

HP ENTRIA Ordering Information

Description	Product/Option Number	Price
X Terminal		
HP ENTRIA Model 14M with 4 MB RAM	C3233A	\$ 995
HP ENTRIA Hi-res monochrome base unit with 4 MB RAM	C3231A	
Select one option below		
No monitor	001	1,350
Model 19M	190	2,150
HP ENTRIA Color base unit with 4 MB RAM	C3230A	
Select one option below		
No monitor	001	1,374
Model 14C color	140	1,899
Model 15C color	150	1,998
Model 17C color	170	2,895
HP ENTRIA Color base unit with 8 MB RAM	C3235A	
Select one option below		
No monitor	001	1,669
Model 14C	140	2,194
Model 15C	150	2,293
Model 17C	170	3,190
Localized Keyboard		
PC-101 North American	ABA	N/C
3270 North American	321	125
Accessories		
Audio kit, CD-quality with microphone	C3220A	195
ENTRIA PCMCIA adapter card	C3240A	120
ENTRIA side stand	C3242A	59

See the HP ENVIZEX ordering information on page 40 for a selection of SIMMs to increase the RAM in your HP ENTRIA X terminal.



HP ENWARE, Innovative X station software

Hewlett-Packard's new HP ENWARE software leads the industry for fast X terminal performance. Its innovative functionality works in conjunction with HP's family of X stations. And, not only does ENWARE give you leadership performance and functionality, it's also designed to handle the enterprise-wide administration of X terminals with ease. You are insulated from the complexity of UNIX, so you can take advantage of networked X terminals with confidence.

Leadership software

HP ENWARE gives you a highly responsive X terminal display. In fact, you'll enjoy the fastest X terminal performance in the industry. HP ENWARE also includes robust local functionality including Motif Window Manager and HP VUE as well as terminal emulation such as IBM 3270, DEC VT320 and hpterm.

HP X terminals can simultaneously access any application on HP hosts or any other hosts that comply with the X Window System. You also have the flexibility of booting directly from HP, Sun, IBM, and SCO hosts. And now all you need is a single CD to set them all up. Coupled with the fact that you need purchase only one license for your entire 'site,' it's easy to see how the savings add up.

As your organization migrates from a legacy system to open systems, you now have a cost-effective method of leveraging your existing investment. HP ENWARE 3270 allows HP X terminal users to access their legacy mainframe systems, with the 3270 terminal emulation running locally on their X terminal. New applications can run simultaneously with the 3270 sessions. You can even cut and paste between multiple sessions with a mouse, and switch rapidly from one active session to another.

HP ENWARE X Station Software Family

HP ENWARE X Station Software 5.1

This is the X server software required for HP ENTRIA and HP ENVIZEX. It also supports HP 700/RX stations. To reduce network traffic and save host computer cycles, it includes a wide range of local terminal emulators, including DEC VT320, IBM 3270 (optional), xterm, and hpterm. The convenient site license is a one-time charge and there are no per-seat charges. This software is available on a multi-host CD with customized installation scripts for HP, Sun, IBM, and SCO host platforms.

HP ENWARE X Terminal Manager 1.0

The manager makes easy work of system administration X terminals easy. A Motif-based graphical utility, it provides the simplicity of "cut and paste" ease of use. Administrators can configure and maintain multiple X terminals remotely. Its trouble-shooting and help desk features are available from remote branch locations.

HP ENWARE Ordering Information

Description	Product Number	Price
HP ENWARE X Station Software (1 copy per site or 1 ROM card per unit)		
Multi-host software for HP, Sun, IBM, and SCO systems on CD-ROM	B3651BA	\$695
Software for HP 9000 Series 300/400 on 1/4-inch cartridge	B3652BA-AAO	695
Software for HP 9000 Series 300/400 on DDS/DAT	B3652BA-AAH	695
Software for HP 9000 Series 700/800 on DDS/DAT	B3653BA	695
Software for IBM RS/6000 AIX on 8 mm cartridge	B3654BA	695
Software for multi-host systems on HP ENTRIA 4 MB Flash ROM Card (requires C3240A)	B3667BA	595
HP ENWARE X Terminal Manager		
X terminal software for centralized administration		495
For HP 9000 Series 300/400 on DDS/DAT	B3669AA	
For HP 9000 Series 700/800 on DDS/DAT	B3670AA	
For IBM RS/6000 AIX on 8mm Cartridge	B3671AA	
Multi-host software for HP, Sun, IBM on CD-ROM	B3672AA	

HP ENWARE 3270 1.0

This is a Motif-based emulator with mouse and windowing support for your X station. Multiple sessions and multiple screen sizes are supported.



Interested in this product?

Call **HPDIRECT** for consultation with a technical engineer.

N HP headsets are the sound choice



Experience state-of-the-art sound and unmatched comfort with HP's new professional headsets. These headsets are designed especially for use with the audio-enabled HP 9000 Series 700 workstations, for telephone communications as well as for monitoring and playing back digital sound. As today's workspace evolves into the enterprise desktop, remarkable capabilities, such as telephony, are at your fingertips. Choose an HP headset for greater comfort and reliability, no matter what your project.

HP Supra stereo headset



Enjoy CD-quality sound and anti-static noise reduction

with the Supra stereo headset. It's so comfortable, you'll forget you're wearing a headset. The transparent voice tube allows for complete 360-degree rotation, telescoping, and angle adjustments.

HP Supra monaural headsets



Both the Supra monaural headset and the Supra monaural

noise-cancelling headset feature Acoustic Limiting Protection to reduce noise. In extra noisy environments, the Supra monaural noise-cancelling headset, with its special microphone, can cut the transmission of background ambient sound by 75%.

HP Supra binaural headsets



The Supra binaural headsets' patented anti-static design and Acoustic

Limiting Protection greatly reduces distracting noises. The Supra binaural noise-cancelling headset features a special microphone to further cut noise.

The durable cord has a Quick Disconnect feature.

Why HP Headsets are Better

- **Great sound**—patented noise-cancelling features and reliable acoustics provide clear and consistent sound
- **Comfortable**—lightweight design allows enjoyable all-day wear
- **Hands-free use**—all models come with a generous 12 feet (3.6 meters) of durable, flexible cord
- **More desktop space**—no desktop speakers to clutter your workspace
- **Built-in durability**—constructed with high quality materials to provide reliability and longevity

HP Mirage headset



HP's smallest and lightest headset offers comfort and crystal-clear sound, thanks to the anti-static

and Acoustic Limiting Protection features. With no eartip or headband, this headset fits and rotates perfectly on the outside of either ear. A special eyeglasses clip accessory is available for added flexibility of use.

HP Headset Ordering Information		
Description	Product Number	Price
HP Supra headsets		
Supra stereo headset	A4370A	\$215
Supra monaural headset	A4371A	165
Supra monaural noise-cancelling headset	A4372A	195
Supra binaural headset	A4373A	195
Supra binaural noise-cancelling headset	A4374A	225
Supra headset clothing clip	5181-8764	8.75
Monaural headband (T-bar style)	A4371-80001	23.50
Binaural headband	A4373-80001	29
HP Mirage headsets		
Mirage headset	A4375A	180
Mirage headset eye glass clip	A4375-80001	5.75
Mirage headset clothing clip	A4375-80002	8.75
HP Accessories		
Training Y-connector (for dual on-line operation)	5181-8767	77.50
3 meter extension cord for quick disconnect cords	5181-8768	43



Graphics tablets for your 2D CAD projects

HP combines comfort and accuracy in two new graphics tablets for your HP 9000 Series 700 workstations. These serial interface devices provide high performance digitizing for CAD (computer aided design) applications. For drawing, tracing, drafting, mapping, desktop publishing, and presentation graphics projects, these tablets lead the field.

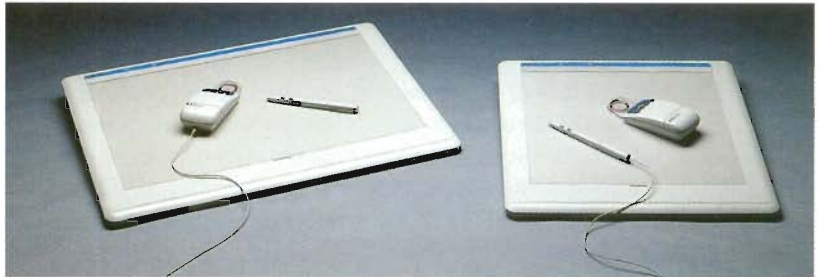
Smooth and precise

These tablets have a resolution of 2,540 lines per inch (100 lines per millimeter) and an accuracy of ± 0.005 inches (± 0.127 millimeters). The flush surface allows smooth cursor and pen control across the entire working area.



Spaceball 2003 for smoother, more intuitive control

Advanced, yet easy to use, HP Spaceball is created specifically for your 3D CAD projects. Its unique design puts complete intuitive spatial control in your hand. Total control is yours as you slide and rotate images in x, y, and z axes. You can use it with most 3D applications, such as HP SolidDesigner, Unigraphics by EDS, Pro/ENGINEER and more. And, with no awkward commands or interruptive steps to slow you down, you can increase productivity by 25% or more when working in 3D CAD.



Customized performance

Choose the size that fits your needs: 12-inch by 12-inch or 12-inch by 18-inch. Both are available with a 4-button cursor or a pen with two buttons located comfortably on the side, and in cordless or corded configurations. An internal speaker and "soft touch" buttons provide audible and tactile feedback.

Fast to the draw

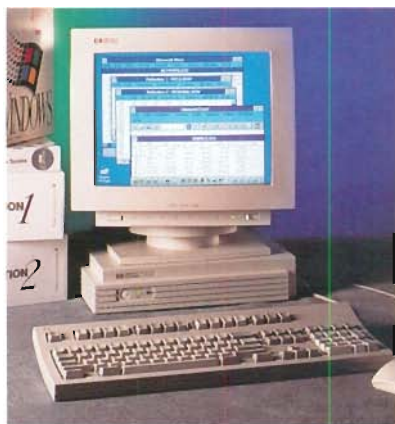
Installation is fast and easy. Simply connect the tablet to your workstation, and use HP's Update utility (part of HP-UX) to install the software. The software enables the pointing devices to be used as the primary or secondary pointer in the X window environment, and fully supports HP's ME 10 and ME 30 CAD graphics packages, version 6.0 and higher, and AutoCAD™ release 12 from Autodesk, Inc. The software is supported on HP-UX 9.0 and higher, and is provided on a DAT tape.

Input Device Ordering Information

Description	Product Number	Price
Mouses		
HP-HIL 3-button mouse	A2838A	\$ 150
Mini-DIN 3-button mouse (700RX only)	A2839A	125
HP-HIL ID Module	46084A	250
Control dial module (9 user definable RPG knobs)	46085A	1,525
HP-HIL button box (32 keys)	46086A	1,015
HP Spaceball	A4360A	1,595
Graphics Tablets for Seires 700 Workstations		
12-inch x 12-inch graphics tablet	A4364A	495
12-inch x 18-inch graphics tablet	A4365A	695
Cordless pen	A4366A	125
Cordless cursor	A4367A	125
Corded pen	A4368A	125
Corded cursor	A4369A	125
Digitizer Tablets		
HP-HIL Digitizer Tablet (A4 size, includes tip switch stylus)	46087C	920
HP-HIL Digitizer Tablet (A3 size, includes tip switch stylus)	46088C	1,475
HP-HIL Digitizer Tablet (A4 size, includes 4-button cursor)	46090C	920
HP-HIL 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 Windows Client adds performance and improved UNIX connectivity



The new UNIX connectivity makes the HP Windows Client the perfect client choice for HP 9000 NFS and LM/U environments where both PC applications and system management are required.

The new Model 433SX joins the Model 425SX to broaden the HP Windows Client family. Performance enhancements include a faster 33 MHz CPU, 1 MB video RAM, and full graphics acceleration that delivers up to 300% improvement in graphics performance. Both HP Windows Client models merge 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 (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

The 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.

Designed to perform

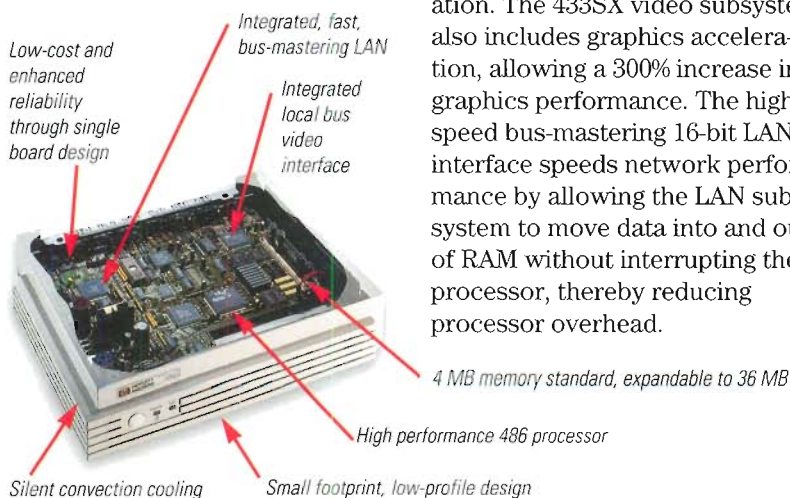
With a fast 486 processor and up to 36 MB of memory, the Windows Client has the power to run demanding applications. The local bus video subsystem has been optimized for Windows and provides fast on-screen response. The video subsystem also supports very high resolutions up to 1024 x 768, with refresh rates up to 70/72 Hz. The video subsystem of both the Model 425SX and the Model 433SX include text acceleration. The 433SX video subsystem also includes graphics acceleration, allowing a 300% increase in graphics performance. The high speed bus-mastering 16-bit LAN interface speeds network performance by allowing the LAN subsystem to move data into and out of RAM without interrupting the processor, thereby 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.



HP Windows Client Standard Features
PC functionality

<i>CPU</i>	25 MHz or 33 MHz, 32-bit Intel 486SX microprocessor
<i>Cache</i>	8K internal cache memory
<i>Integrated I/O</i>	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
<i>Clock/Calendar</i>	With battery backup

Network features

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

Network requirements

<i>LAN</i>	Ethernet/IEEE 802.3
<i>Server</i>	HP 9000 Series 800 with Portable NetWare 3.11 or later PC server with NetWare 3.11 or later
<i>Servers supported</i>	HP LAN Manager/X for HP 9000 1.4, HP LAN Manager 2.2 for HP 9000 S/700/800, HP Network File System Services/9000 3.2, Microsoft LAN Manager 2.2 for PC servers

Included software

<i>Microsoft OS and GUI</i>	MS-DOS 6.0 and Microsoft Windows 3.1
<i>WRQ Terminal Emulation</i>	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
<i>WRQ Networking Software</i>	Reflection Network Series TCP/IP, NS/VT, Telnet, LAT, SPX/IPX, NDIS, ODI, and FTP support

Internal memory

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

Video subsystem

<i>Ultra VGA</i>	Integrated local-bus Ultra VGA with hardware cursor and color expansion. 512 KB or 1 MB of video RAM
<i>Video Drivers</i>	Enhanced-mode drivers for Windows 3.1

Monitor choices

Monitor	Display Resolution	Colors	
		425SX	433SX
14-inch Monochrome VGA	640 x 480	—	—
14-inch Color VGA	640 x 480	256	16.7 M
14-inch Super VGA	800 x 600	256	64 K
	640 x 480	256	16.7 M
14-inch Ergonomic Ultra VGA	1024 x 768	16	256
	800 x 600	256	64 K
	640 x 480	256	16.7 M
15-inch Ergonomic Ultra VGA	1024 x 768	16	256
	800 x 600	256	64 K
	640 x 480	256	16.7 M
17-inch Ergonomic Ultra VGA	1024 x 768	16	256
	800 x 600	256	64 K
	640 x 480	256	16.7 M

Keyboard and mouse

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

Energy efficiency

<i>SPU Power consumption</i>	25 W maximum (EPA energy star)
------------------------------	--------------------------------

Acoustics LpA<25dB, no fan installed

HP Windows Client Server Kit* Features

The server kit provides everything needed to set up a server for the Windows Client environment, including:

- HP, Microsoft, and WRQ software on 3.5-inch floppy disks
- Installation and reference documentation
- HP Assist Installation Utility which includes preconfigured boot images
- License to install client software on one or more network servers for use with an unlimited number of licensed HP Windows Clients
- License-to-use WRQ software on a system administrator's PC
- Telephone support for the system administrator

Software is installed onto the server through a networked PC with a floppy drive

* Server kit must be purchased separately. See Step 3 under ordering instructions on page 45.

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 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 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.

Model 425SX Ordering Information

Description	Product Number	Price
With no monitor	C3401A	\$ 895
14-inch Monochrome VGA	C3402A	1,095
14-inch Color VGA	C3403A	1,225
14-inch Super VGA	C3404A	1,375
14-inch Ergonomic Ultra VGA	C3405A	1,475
15-inch Ergonomic Ultra VGA	C3406A	1,675
17-inch Ergonomic Ultra VGA	C3407A	2,375

* No monitor included, 425SX SPU must be returned to HP.

Model 433SX Ordering Information

Description	Product Number	Price
425SX to 433SX SPU upgrade*	C3410A	\$ 595
With no monitor	C3411A	1,045
14-inch Monochrome VGA	C3412A	1,245
14-inch Color VGA	C3413A	1,375
14-inch Super VGA	C3414A	1,525
14-inch Ergonomic Ultra VGA	C3415A	1,625
15-inch Ergonomic Ultra VGA	C3416A	1,825
17-inch Ergonomic Ultra VGA	C3417A	2,525

Step 2 — You may add memory above the base 4 MB of RAM (integrated on board). Two SIMM sockets are available for expansion to a maximum of 36 MB. One or two memory modules may be ordered. Memory can also be added later by ordering separate memory product numbers.

Memory Expansion Kits

Description	Option Number*	Product Number**	Price
2 MB SIMM	001	C3490A	\$ 180
4 MB SIMM	002	C3491A	245
8 MB SIMM	003	C3492A	495
16 MB SIMM	004	C3493A	1,295

* For ordering additional memory with the Windows Client.

** For adding memory later.

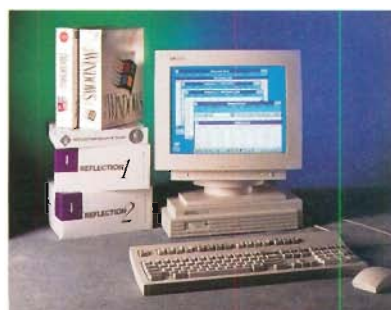
Step 3 — Choose a localized server kit and a localization option, for your keyboard, power cord, and documentation.

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.



INTEGRATED SUPPORT
PUTTING IT ALL TOGETHER

Now you can order support along with your product. See page 101.

“Many people interested in the Windows Client call to see if it's a good fit for their system. Together, we determine the best possible solution. At HP DIRECT, we want to make sure it's right for each particular situation.”

Jeff Byrnes - HP DIRECT Customer Representative



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.

Look at the compatibility

The HP 700/60 features the highest combined level of Wyse and DEC compatibility available today. Our HP 700/60ES meets 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.

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.

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.

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.



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).

Network Solutions

“People want recommendations about creating local area networks. This is a concern of all businesses, no matter what their field. I'd like people to think of **HP DIRECT** as a service that's very responsive to your needs.”

Sue

Sue Mills - **HP DIRECT** Sales
Support Engineer

Choose HP hardware for reliable network solutions.

Hardware

Datacommunications & Terminal Controllers	50
Modem	51
Multiplexers	52
Packet Assemblers/Disassemblers	53
ISDN	54
Domain Quick Connect (DQC) System	55
Domain Accessories	56
Domain Cables & Connectors	57

Software

Performance & Resource Management	58
Performance Management	59
System & Network Management	60
Storage & Print Management	61
Server-to-server & Mainframe Communications	62
WAN Connectivity	63
LAN Connectivity	63
Desktop Integration	65

HP networking software ensures optimal performance.



HP Service and Support

HP Support options can now be ordered with every product101



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.**

HP's versatile DTC family

Hewlett-Packard provides Datacommunications and Terminal Controller (DTC) products that deliver today's exciting new Terminal Server technologies at competitive 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.



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 9000/800 or HP 3000/900 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 9000 and HP 3000/900 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
- Managed from host-based or PC-based platforms and supports an SNMP agent

DTC 72MX Ordering Information

Description	Product/Option Number	Price
DTC 72MX Communications Server	J2070A(Z)	\$2,800
24 RS-232 direct ports	Opt 001	3,400
48 RS-232 direct ports	Opt 002	6,800
72 RS-232 direct ports	Opt 003	10,200
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 1 100 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 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 rack-ing 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

DTC 16MX

The DTC 16MX is a high performance 16-port terminal server for both the HP 3000/900 and HP 9000 systems. As a 16-port alternative to the DTC 72MX, it provides up to 16 asynchronous ports (RS-232 direct, RS-232 modem, or RS-423 direct) with RJ-45 or DB-25 connectors. Like the DTC 16iX and the DTC 16TN, it has the same package as the HP Ethertwist hubs, bridges and routers. The direct ports are provided on two 8-port breakout boxes that attach directly to the back of the DTC box, like the DTC 16TN and the DTC 16iX, providing easy and streamlined tabletop configuration.

Modem ports are provided on modem distribution panels (MDPs). The DTC 16MX is 19 inches wide and 1 EIA unit in height, making it perfect for the desktop or easy racking into a standard HP cabinet. It has a fully integrated auto-sensing LAN

attachment, and auto-ranging power supply. The DTC 16MX does not have X.25 or Telnet Access on MPE. The DTC 16MX may be managed from a host-based or PC-based platform, and supports an SNMP agent.

DTC 16MX Ordering Information

Description	Product/Option Number	Price
DTC 16MX communications server	J2063A(Z)	\$2,900
Replace 8 RJ-45 direct ports with 8 DB-45 modem ports (may order one or two)	Opt UG5	300
Replace 16 RS-232 direct ports with 16 RS-423 direct ports (may order one)	Opt UG4	600
Racking kit for 1100 mm and 1600 mm computer racks	Opt IAC	N/C
Modem racking kit for up to 5 MDPs, rear mounting	C2792A(Z)	N/C
Modem racking kit for up to 10 MDPs, front mounting	J2084A(Z)	300

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 (DATA-PHONE Digital Service) facilities from central sites to remote sites.

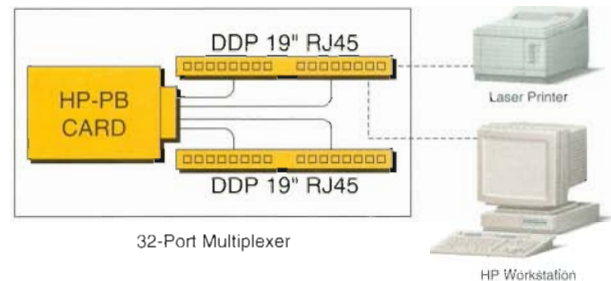
CODX-3500.....\$750

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

Avoid traffic jams 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

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

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

* For HP 9000 Models 825S, 835S, 845S, 850S, 855S, 860S, 865S, and 870/x00S Servers.

“Everybody now wants to

economize without sacrificing. HP DIRECT can help you do just that! If you need products, services, technical assistance, or just some initial information, call us.

Jim
 Jim Lorts - HP DIRECT Customer Representative



Save with the right connections

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

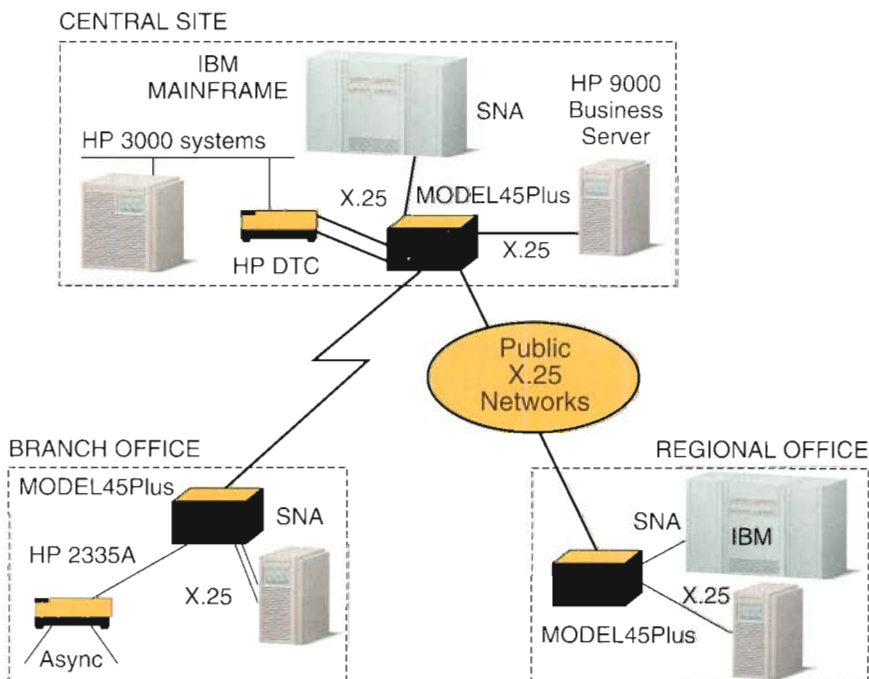
X.25 PAD Ordering Information

Description	Product/Option Number	Price
X.25 PAD and statistical multiplexer	2335A	\$1,765
4 modem connect ports (must be ordered)	Opt. 123	945
Cable for 2335A & ATP/DTC printer ports	40220A	76
Cable for 2335A & ATP/DTC terminal ports	40221A	76

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.



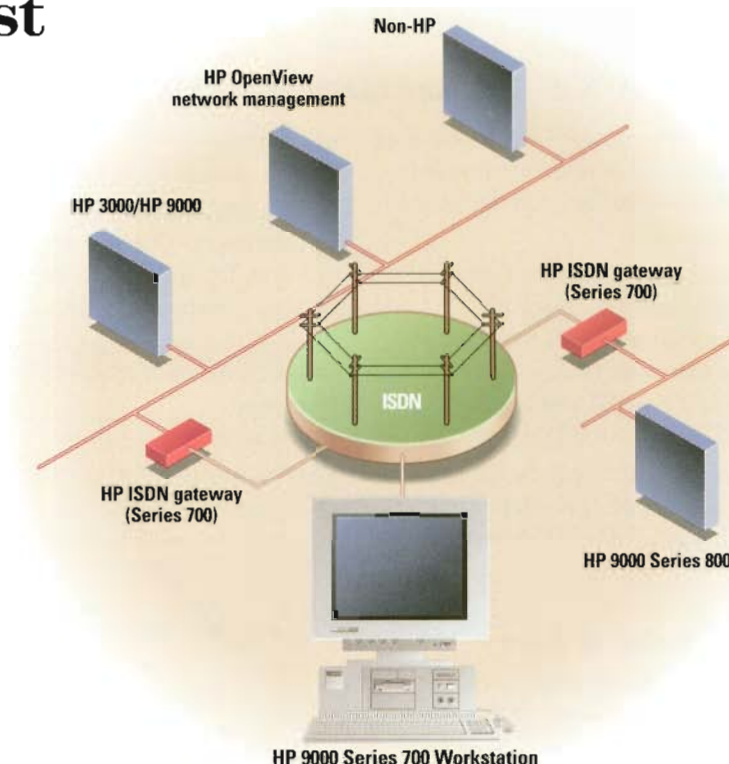
Ordering Information

Description	Product Number	Price
6 port HP Model 45 (18 port maximum)	J2000D	\$5,990
6 port HP Model 45 (30 port maximum)	J2001C	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

Up to 384 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 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

“With the constant changes in technology, there are more and more options for every business project. I'm here to help you choose the right options.”

Melissa

Melissa Dare - HP DIRECT Customer Representative

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



Network integrity with plug-in convenience

DQC Systems

With the DQC 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 Domain/OS workstations and servers to your Domain/OS System token ring. To obtain a complete DQC system, please order the DQC Outlet and one of four DQC cables.

DQC cables are available in either 10- or 25-foot lengths, terminated with either D-Subminiature connectors or BNC connectors to match your particular workstation requirements.

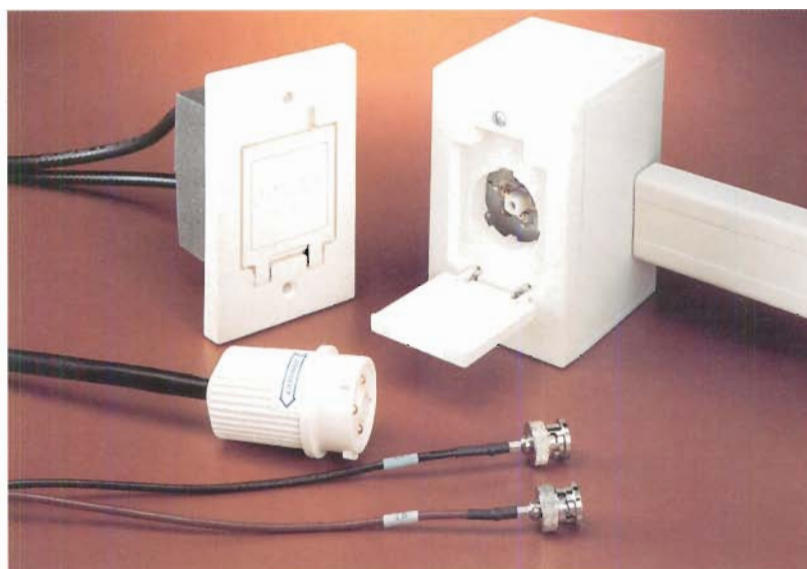
DQC Outlet

The DQC outlet installs in minutes to HP 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

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



DQC Outlet

DQC Cable 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

DQC Systems Ordering Information

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

for workstations and 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.

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 Manuals

Make the most of your system with comprehensive documentation from HP.

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 Manuals

Description	Product Number
Administering the Domain/OS Registry	D-15363-B
Configuring and Managing TCP/IP	D-8543-E
Managing Application Software with NLS	D-11272-B
Managing Domain/OS and Domain Routing in an Internet	D-5694-B
Managing NCS Software	D-11895-E
Planning Domain Networks and Internets	D-9916-B
Using NFS on the Domain Network	D-10414-B
Using TCP/IP Network Applications	D-8667-E

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

**“When you need answers fast,
we're at your service!”**

Kelly

Kelly Yee **HP DIRECT** Sales
Support Engineer



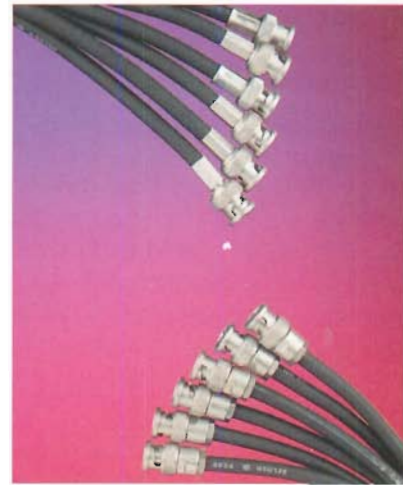
Make the right connections with HP

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
Crimp connector, Teflon jacket	K1504	14
Crimp connector, PVC jacket	K1506	14
Wrench connector, Teflon jacket	K1505	19
Wrench connector, PVC jacket	K1507	18
BNC crimp connector, -universal	K1508	12
Universal connector, crimp tool	K1518	75



BNC Connectors and Adapters

Single Coaxial Cable with Teflon Jacket

Teflon eliminates the need for conduit and cuts installation costs. Meets HP 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
500 (ft)	K1513	490
250 (ft)	K1512	255

Single Coaxial Cable with PVC Jacket

Combine high performance and low cost with our PVC-jacketed cable. Meets HP 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
500 (ft)	K1515	85
250 (ft)	K1514	55

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
IBM RS/6000	AIX	H5964A

HP PerfView Full Agent Software

Available on Systems:	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	H5292A
HP 9000/700 & 800	HP-UX	H5292A
Sun SPARC	SunOS	H5293A
IBM RS/6000	AIX	H5963A

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. 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
UX Analysis Software	B1766B

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 other systems.

Available on Systems:	Op Sys	Base Product Number
HP 9000/700 & 800 license	HP-UX	B3467AA

HP RXForecast

Integrate capacity analysis and forecasting capabilities into the HP LaserRX software user interface. HP RXForecast software is a PC-based tool that 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 9000	HP-UX	B1764B

HP Performance Collection Software

The HP Performance Collection Software uses a patented technology to collect and classify performance data on your 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
SunSPARC	SunOS	B3515AA

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.



 HP GlancePlus has added a new Motif-based interface for HP 9000 Series 700 and Series 800 and SunSPARC systems. This interface provides new features such as:

- Rules-based adviser/diagnostics to more quickly pinpoint bottlenecks
- On-screen alarms to notify users when system performance thresholds are exceeded
- Application-level metrics to allow grouping of related processes into applications

HP GlancePlus also provides a character mode interface for HP 9000 systems only.

Available on Systems:	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B2661A
HP 9000/700	HP-UX	B3690AA
HP 9000/800	HP-UX	B3692AA
Sun SPARC	SunOS	B2804A
Sun SPARC	Solaris	B3694AA

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 9000/300 & 400	HP-UX	B3170A
HP 9000/700	HP-UX	B3698AA
HP 9000/800	HP-UX	B3700AA



Ensure the uninterrupted flow of critical information



HP OpenView is a cohesive family of products and services enabling integrated management of multivendor computing environments.

HP OPENVIEW

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.

Those who know best, know who's best. Below are some of the awards HP OpenView has won from the industry.



Datasheets on these products faxed to you

CALL

800.333.1917



Interested in these products?

Call **HP DIRECT** for consultation with a technical engineer.

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.

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.

HP OpenView Node Manager for NetWare

HP OpenView Node Manager for NetWare lets you manage and control Novell NetWare servers and clients from Hewlett-Packard's award-winning OpenView platform. Since Node Manager for NetWare runs on standards-based, open platforms, it helps lower your network management costs. You can decrease PC downtime and keep end users productive.

HP OpenView Software Distributor

This is a full set of sophisticated tools that perform distributed management of software across the network. It provides a central management organization, an industry-standard capability for single-point software distribution and management that reduces costs, improves service levels, and remains flexible enough to support unique software management policies.

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.

HP delivers reliable management solutions

HP OmniBack

HP OmniBack automates the backup process for all computers in a distributed HP-UX, Domain, and SunOS (backup clients) environment. Comprehensive functionality is provided through data compression, advanced scheduling and journaling facilities. HP OmniBack/Turbo combines the capabilities of HP OmniBack with high speed (up to 40 GB per hour) local backup functionality, resulting in less downtime for your system.

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 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 40 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 9000/700/800	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 9000/700/800	HP-UX	B1926AA

HP SharedPrint/UX

HP SharedPrint/UX is the spooler independent printing software product that enhances the basic printing capabilities of HP 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.

Available on Systems:	Op Sys	Product Number
HP 9000/700/800	HP-UX	B3240AA

HP OpenSpool

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.

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 9000/700/800	HP-UX	B1912AA

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 OmniStorage

HP OmniStorage provides automated and transparent storage management using both optical storage and magnetic disk storage. This product is HP's hierarchical storage management solution that cost-efficiently provides the required online storage capacity for large amounts of data. In addition, it provides unattended and automated operations. HP OmniStorage, HP OmniBack and HP OmniBack/Turbo work well together to provide a complete backup and storage management solution.

Available on Systems:	Op Sys
HP 9000/700/800	HP-UX

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.

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 X.25/9000, LAN/9000, 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.

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.

SNAplus3179G

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

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.

HP-UX SNAplusLink

Provides 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. The SNAplusLink driver can also direct SNA traffic over X.25/9000 Link or Token Ring/9000 Link.

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.



Interested in these products?

Call **HP DIRECT** for consultation with a technical engineer.

"In looking for a strategic open systems vendor to form the broadest business relationship we have ever entered, HP was the natural choice. HP is a proven market leader in delivering commercial open systems based on a UNIX system."

Charles B. Wang - Chairman
Computer Associates



Datasheets on these products faxed to you

CALL
800.333.1917

"We have the latest information. If you have technical questions, we can give you answers fast. When a new product is a good fit, we can help you with quick ordering."

Veronica

Veronica Kunis - HP DIRECT Order Management Representative



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	\$3,500
Delete software	1AW	(400)
Series 700: HP X.25/9000	J2159A	2,400
Cable Option (order only one)		
RS-232-C cable	1AT	N/C
V.35 cable	1AU	N/C
Delete software	1AW	(500)

Series 800 Ordering Information

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

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

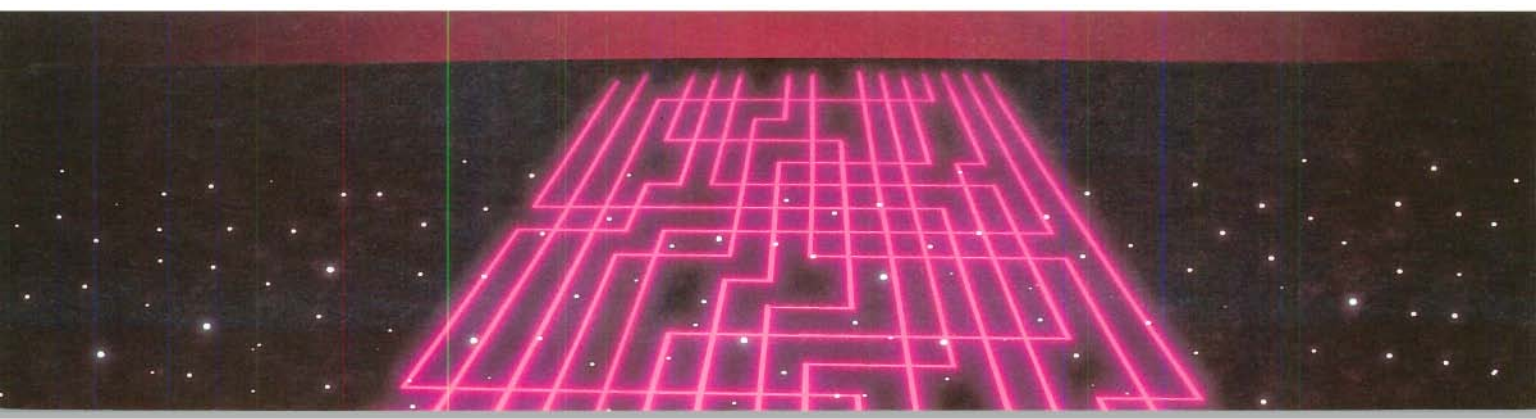
higher level networking software applications provided by Hewlett-Packard.

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



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

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

2 km between stations, up to 500 stations per ring and a 100 km maximum ring circumference.

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

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 multi-vendor 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)

Depend on HP Mass Storage

“We can answer questions like ‘Will a new disk drive work with my existing system?’ But, before we make any recommendations, we’ll ask questions to get a clear picture of where you are and where you want to go.”

Cheryl
Cheryl Weiden **HP DIRECT** Sales
Support Engineer



The new 4000DC offers the highest performance available in a DDS DAT drive!

Store up to 187 GB of data with HP optical drive technology!

It's easy to expand your HP disk arrays with array disk modules!

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HP Service and Support

HP Support options can now be ordered with every product 101



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.**

Meet the fastest DDS DAT drive available

Introducing HP's newest DDS DAT drive—the Model 4000 DC – the fastest DDS DAT drive in the industry. 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. All products incorporate the latest 3 1/2-inch form factor technology with a SCSI-2 interface.

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.

Model 2000DC

The Model 2000DC uses data compression to provide additional performance and capacity. It delivers typically 4GB of unattended backup (up to 8GB) using a single 90m DDS cartridge and the industry standard method of data compression (DCLZ). The transfer rate of the Model 2000DC is typically around 1.5GB/hour with data compression, although effective transfer rates of up to 2.5/3GB/hour can be achieved (backup performance and capacity are dependent on the host system and the type of data being backed up).




Models 2000DC, 4000DC, and 2000

Model 4000DC

The new Model 4000DC is the highest performance DDS DAT drive in the industry. It uses the new industry standard DDS-2 format and 120m DDS-2 cartridges to double the native capacity of the Model 2000DC. With data compression, the

Model 4000DC typically stores 8 GB (up to 16 GB) of data on a single 120m DDS-2 cartridge. Its transfer rate is almost three times faster than the Model 2000DC—around 4 GB/hour with data compression.

DAT Drives Ordering Information [1]

Description/ Model Number	Formatted Capacity	Interface	Series 800 Servers				Workstations				Product Number	Price
			E-Class HP-UX	F,G,H,I- Class HP-UX	S/890/T500 HP-UX	Other [3] HP-UX	S/300 HP-UX	S/400 Domain [2]	S/400 HP-UX	S/700 HP-UX		
2000	2.0 GB	SCSI-2	9.04	8.02	9.0	8.02	8.0	10.3	8.0	8.07	C1520B	\$2,495
2000DC	4/8 GB	SCSI-2	9.04	9.0	9.0	9.0	9.0	N/A	9.0	8.07	C1521B	2,950
 4000DC	8/16 GB	SCSI-2	Planned	9.04	Planned	9.04	N/A	N/A	N/A	9.01	C1530B	3,650

[1] Cables (K2296) included


[2] 400T and 400S SR10.3.0.2
425T and 425S SR10.3.4
425E SR10.3.5
433S Planned

[3] Models 8x0, 8x2, 8x5, 808

HP's DDS cartridges have always provided better protection for data than DAT tapes because DDS cartridges were specifically designed for computer-generated data. This standard has recently been extended with the introduction of the DDS Media Recognition System. All HP cartridges are Media Recognition System cartridges.



DDS Media Ordering Information

Description	Product Number	Price
HP 4mm DDS cartridges		
60imeter, 1.3 GB capacity DDS cartridge (box of 5)	92283A	\$75
90imeter, 2 GB capacity DDS cartridge (box of 5)	92283B	85
 120imeter, 4 GB capacity DDS-2 cartridge (box of 5)*	92300A	115
DDS cleaning cartridges (box of 2)	92283K	26

* 120m DDS-2 cartridges are not supported on the Model 2000 and Model 2000DC

More than 20% faster average access times

HP SCSI disk drives

The 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 rackmountable enclosure. 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
- 2 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 in the rear of chassis or three full-height devices in the front.

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.

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.







“HP DIRECT is your personalized gateway to all of Hewlett-Packard. We're a part of your sales team. Anytime you need accurate information right away, count on us.”

Dan Burke - HP DIRECT Call Center Support Manager



SCSI Disk Drives Ordering Information†

Description	Interface	Series 800 Servers [1]	Workstations [2]	Product Number	Price
		S/8x7 & S/89x HP-UX	S/700 HP-UX		
Disk & DAT					
1 GB disk & 2 GB DAT	SCSI	N/A	9.01	C3020T or C3020R	\$ 6,595
1 GB disk & 8 GB DAT	SCSI	N/A	9.01	C3021T or C3021R	8,750
Disk Drives					
1 GB disk	SCSI	9.0	9.01	C3022T or C3022R	3,945
2 GB disk	SCSI	9.0	9.01	C3023T or C3023R	6,250
2 x 2 GB disk	SCSI	9.0	9.01	C3024T or C3024R	10,650
 1 x 2 GB disk	SCSI	9.04	N/A	C3040T or C3040R	5,450
 2 x 2 GB disk	SCSI	9.04	N/A	C3041T or C3041R	9,050
Fast Wide Mass Storage Systems [3]					
1 GB disk	SCSI F/W	9.04	N/A	C3032R	4,250
1 GB disk	SCSI F/W	9.04	9.01	C3032T	4,250
2 GB disk	SCSI F/W	9.04	9.01	C3033T or C3033R	6,700
2 x 2 GB disk	SCSI F/W	9.04	9.01	C3034T or C3034R	11,550
4 x 1 GB disk	SCSI F/W	9.04	9.01	C3035T or C3035R	11,450
7 x 1 GB disk	SCSI F/W	9.04	9.01	C3036T	18,650
 1 x 2 GB disk	SCSI F/W	9.04	N/A	C3050T or C3050R	6,000
 2 x 2 GB disk	SCSI F/W	9.04	N/A	C3051T or C3051R	10,150

[1] Models 8x0 & 8x2 (CIO) not supported

[2] S/300 & S/400 not supported

[3] Option 001 specifies workstation firmware on fast wide drives and must be ordered on all fast wide products.

† Suffixes: T= minitower, R= rackmount

Digital Data Storage Cartridges

HP's DDS cartridges have always provided better protection for data than DAT tapes because DDS cartridges were specifically designed for computer-generated data. This standard has recently been extended with the introduction of the DDS Media Recognition System. All HP cartridges are Media Recognition System cartridges.



† Suffixes: T= minitower, R= rackmount, U= upgrade kit.

* C229x for Series 700/C247x for Series 8x2, 8x7, 890.

[4] All capacities are increased with data compression

SCSI Disk Drive Accessories Ordering Information†

Expansion Kits			
Disk	1 GB disk	C3027U	\$2,200
	2 GB disk	C3028U	4,400
DAT*	2 GB DAT	C2297U/2477U	2,650
	8 GB DAT	C2298U/2478U	2,500
CD-ROM	600 MB CD-ROM	C3560U	1,150
Fast Wide Disk	1 GB expansion kit	C3037U	2,400
	2 GB expansion kit	C3038U	4,850
HP-PB Interfaces			
Peripheral Interfaces	Single-Ended SCSI-2	28656A	1,095
	Fast/Wide Differential SCSI-2	28696A	1,295
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
Media			
HP 4mm DDS Cartridges [4]	60 meter, 1.3 GB capacity DDS cartridge (box of 5)	92283A	75
	90 meter, 2.0 GB capacity DDS cartridge (box of 5)	92283B	85
	120 meter, 4mm, 4.0 GB capacity DDS-2 cartridge (box of 5)	92300A	115
	DDS cleaning cartridges (box of 2)	92283K	26

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



From left to right:
Model 120T/200T,
1300T, 40T, 20LT with
media



Stand-alone Drive

The Model 1300T is HP's high-performing, reliable stand-alone drive. Ideal for desktop publishing and CAD systems, it offers 1.3 GB of affordable, removable storage and operates just like a hard disk.

Jukeboxes

From the Model 20LT to the Model 200T, HP's jukeboxes deliver incredible storage capacities as well as flexibility. You'll enjoy less waiting, faster access to your data, and easy upgradability as your needs change.

Optical Drives Ordering Information

			Series 800 Servers		Workstations					
Description/ Model Number	Storage Capacity	Interface	S/800 HP-UX	S/8x7 HP-UX	S/300 HP-UX	S/400 Domain	S/400 HP-UX	S/700 HP-UX	Product Number	Price
High Performance Optical Drive [1] [4] [5]										
1300T	1.3 GB	SCSI	9.0	9.0	8.0	N/A	8.0+*	8.07*	C2550B	\$ 4,995
Optical Drive T Products [3] [5]										
20LT	20 GB	SCSI	9.0	9.0	N/A	N/A	N/A	9.0	C1708T	10,800
40T	40 GB	SCSI	9.0	9.0	N/A	N/A	N/A	9.0	C1700T	23,200
120T	114 GB	SCSI	9.0	9.0	N/A	N/A	N/A	9.0	C1704T	55,000
200T	187 GB	SCSI	9.0	9.0	N/A	N/A	N/A	9.0	C1705T	70,700
Optical Library with High Performance Optical Drive [2]										
10 LC [3]	10.4 GB	SCSI	9.0	9.0	N/A	N/A	N/A	9.0	C1708C	10,095
20 C [4]	20.8 GB	SCSI	9.0	9.0	N/A	N/A	N/A	9.0	C1700C	28,400
60 C [4]	57.2 GB	SCSI	9.0	9.0	N/A	N/A	N/A	9.0	C1704C	67,800
100 C [4]	93.6 GB	SCSI	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 35 ms average seek time, 0.8 MB/sec. write transfer, and 1.6 MB/sec. read transfer (max. sustained).

[2] HP's high performance multifunction drive that delivers 35 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

[4] Media included

[5] DOS and Macintosh drives included

+ Earliest and follow-on releases

* Check for models supported

Get a world of benefits with HP CD-ROM drives

HP CD-ROM drives deliver one benefit after another to give you immediate access to the latest software, save you up to 40% of the cost for paper and magnetic tape documentation, and let you play audio compact discs.

Plus, they are your low-cost solution for speedier software and documentation distribution, and

for placing large databases at your fingertips.

The industry-standard SCSI interface allows HP CD-ROM drives to be easily and quickly connected to all HP Series 800 systems, Series 700 and Series 400 workstations (except the Model 400dl), all Series 300 workstations with a SCSI interface, and all DN-Series



workstations with the multifunction Winchester/floppy/tape peripheral controller.

CD-ROM Drive Ordering Information

Description/ Model Number	Storage Capacity	Interface	Series 800 Servers		Workstations				Product Number	Price
			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	8.0	8.02	7.0+	N/A	7.0+	8.0+	A1999A	\$1,095

“Customers want the latest and greatest things, and now everyone's realizing that client/server technology provides so many options. We can help. Call us!”

Carmen

Carmen Rouhi - HP DIRECT Order Management Representative

HP optical storage helps you preserve your disk space

Whether you're using networked PCs, stand-alone PCs, or workstations, you don't want to worry about running out of disk space. With HP optical storage products, you can easily add 1.3 to 187 GB of data for a fraction of the cost of a hard disk.



HP Optical Disks go beyond compatibility

HP Optical Disk Ordering Information			
Description	Capacity	Product Number	Price
For drives and libraries (512 bytes/sector)			
Rewritable disk	600 MB	92279A	\$125
Write-once disk	600 MB	92289A	125
Rewritable disk	650 MB	92280A	125
Write-once disk	650 MB	92290A	125
For drives only (1024 bytes/sector)			
Rewritable disk	1.2 GB	92279T	140
Write-once disk	1.2 GB	92289T	140
Rewritable disk	1.3 GB	92280T	140
Write-once disk	1.3 GB	92290T	140



Data protection, increased capacity, and RAID mode performance

Disk arrays offer a high capacity storage solution 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 offering an alternate solution for high availability, disk arrays also offer a variety of RAID mode configurations which will allow you to choose the RAID mode which will best meet the application and performance needs of the system.

To learn more about these mass storage devices, ask for the HP Disk Arrays Primer, part number 5091-1396E.



HP Disk
Arrays

Array Disk Modules

Array capacity is easily expandable through the purchase of additional disk modules.

C2251A Disk Drive Module

This product provides a 1.3 GB disk module designed with a built-in handle to "hot plug" the drive, even while the system is running. For use in the C2252B/HA, C2252BZ/HZ, or C2254B/BZ disk arrays. Allows existing C2252B, C2252BZ, C2254B, or C2254BZ arrays to add the data protection feature. Also allows the C2252B/BZ arrays or the C2252HA/HZ arrays to increase capacity by buying two modules.

C2257A Disk Drive Module

This product provides a 2.0 GB disk module. This module is to be used when upgrading the C2258B, C2258HA, or the C2259B HP-FL disk arrays for MPE/iX systems.

C2438A Disk Drive Module

This product provides a 2.0 GB disk module designed for use with the C2440HA, C2440HZ, C2439HA, and C2439HZ SCSI-2 Fast/Wide Disk Arrays.

Note: Modules must be used in odd numbered configurations.

C2435A Disk Drive Module

This product is a 1.0 GB disk drive module, designed for use with the C2436HA, C2436HZ, C2437HA, and C2437HZ SCSI-2 Fast/Wide Disk Arrays.

Note: Modules must be used in odd numbered configurations.

Disk Array Module Ordering Information

Description	Array Model Number	Product Number	Price
1 x 1.3-GB disk	C2252xx C2254xx	C2251A	\$6,305
1 x 2.0 GB disk	C2258xx C2259xx	C2257A	7,702
1 x 1.0 GB disk	C2436xx C2437xx	C2435A	3,657
1 x 2.0 GB disk	C2439xx C2440xx	C2438A	5,730

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.



HP Magnetic Tape Drive



Now you can order support along with your product. See page 101.

1/2-inch Magnetic Tape Drive Ordering Information

Description/ Model Number	Storage Capacity	Interface	Series 800 Servers		Workstations				Product Number	Price
			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	Pre-7.0	8.02	6.2+	No	7.0+*	No	7979A	\$13,400
HP 7979S	1600-bpi	SCSI	No	8.02	No	10.3**	No	8.07+	7979S	11,200
HP7980A	1600/6250-bpi	HP-IB	Pre-7.0	8.02	6.2+	No	7.0+**	8.07+	7980A	22,200
HP7980S	1600/6250-bpi	SCSI	8.0	8.02	No	10.3**	No	8.07+	7980S	18,500
HP7980SX	1600/6250-bpi ¹	SCSI	8.0	8.02	No	10.3+**	No	8.07+	7980SX	21,000
HP7980XC	1600/6250-bpi ¹	HP-IB	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

¹ With data compression

HP High-Density Cartridges

Tapes are pre-certified for use with HP 7908/11/12/14, 9144A, 7942A, 7946A, and 35401A tape drives.

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.

Ordering Information		
Description	Product Number	Price
HP High-Density Cartridges		
Each box contains 5 tape cartridges		
67 MB 600 ft tape cartridge	88140LC	\$219/box
16 MB 150 ft tape cartridge	88140SC	169/box
HP Data Cartridges for HP 9145A Drives		
133 MB tape cartridge*	92245L	\$239/box
32 MB tape cartridge*	92245S	189/box
HP Cleaning Cartridge Kit for HP 9144, 9145, 9142A, and 35401A 1/4-inch tape drives		
Replenish kit	92281D	13
HP Brand Magnetic Tape		
Each box contains ten reels with seals		
600 ft/reel	92150D	\$135/box
1200 ft/reel	92150E	175/box
2400 ft/reel	92150F	229/box

* Each box contains 5 pre-certified and formatted cartridges

Protect your equipment and your data!

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 2-year unit repair/replacement warranty and technical support are provided by American Power Conversion at 800.800.4APC in the U.S. and 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.



APC Smart-UPS 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:	2 NEMA 5-15R 2 NEMA 5-20R 1 NEMA L5-20R or L6-20R 1 NEMA L14-30R
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

Complete your system with HP printers and scanners

“People ask me, ‘What’s the latest?’ They want up-to-date information. Most of the time, they need it fast. And they need to know if something’s changed, because technology changes so fast!”


Tim Ruiz - **HP DIRECT** Customer Representative



Cut your scanning time in half with the new ScanJet IIcx!

The new HP 5000 printers offer speedy 30 ppm performance and laser quality at outstanding low prices!

Let your network take advantage of HP peripherals with these interfaces

Scanners

ScanJet IIcx.....76

Printers

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HP Service and Support

HP Support options can now be ordered with every product101



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.



Get twice the speed for less with the new ScanJet IIcx!

If anyone could improve the ScanJet IIc, it had to be HP! The HP ScanJet IIcx scanner is our lowest-priced, highest-performance color and grayscale flatbed scanner. It's a great value that has HP quality and reliability built right in.

The ScanJet IIcx offers 1,600 dots-per-inch enhanced resolution and 400 dots-per-inch optical resolution for both image and text scanning. Need speed? This lightning fast scanner cuts the ScanJet IIc's 15-second grayscale scanning time down to just 8 seconds!

A new optional transparency adapter accepts slides, transparencies and paper ranging in size from 35 mm to 8.5 inches by 11.7 inches.

Specifications

- **System Hardware**
HP 9000 Series 700 workstations
- **Operating System**
HP-UX 9.0 or later

MPower V2.0

See pages 86 and 87 for information on MPower V2.0, HP's collaborative multimedia offering. HP's MPower Client V2.0 is delivered as part of the MPower ScanJet IIcx.



MPower ScanJet IIcx

The ScanJet IIcx is the scanning solution for your HP Series 700 workstation. This product contains the ScanJet IIcx and the MPower ScanJet IIcx Interface Kit which includes HP MPower Client V2.0 license-to-use, documentation, media, SCSI cable, and SCSI terminator. HP-UX 9.0 or later is required.

MPower ScanJet IIcx Interface Kit

This kit includes the MPower Client V2.0 license-to-use, HP MPower and ScanJet documentation, SCSI cable, SCSI terminator, and media. A separate MPower Client V2.0 license-to-use is not needed since it is included with this package.

ScanJet IIcx Ordering Information

Description	Product / Option Number	Price
MPower ScanJet IIcx for Series 700 workstations	C1788BA	\$1,650
Software on DDS (4 mm) DAT tape	#AAH	N/C
CD-ROM Certificate only	#AAU	N/C
N. American Power Cord	#ABA	N/C
MPower ScanJet IIcx for Series 700 Interface Kit	A2229BA	400
Software on DDS (4 mm) DAT tape	#AAH	N/C
CD-ROM Certificate only	#AAU	N/C
N. American Power Cord	#ABA	N/C
ScanJet IIcx Automatic Document Feeder	C1751A	559



Now you can order support along with your product. See page 101.

Put laser quality and speed in your computer room



Get crisp laser quality output at a fast 30 page-per-minute rate! The HP 5000 C30 and C30D printers offer your computer room environment an outstanding new level of performance at unbeatable low prices!

Two models

These HP 5000 cut sheet printers are available in simplex and duplex models. The HP 5000 C30 is a 30 page-per-minute simplex cut sheet printer. The HP 5000 C30D adds duplex printing capability for 30 page sides per minute.

Sharp resolution

These HP 5000 printers utilize an LED Imaging Array for generating the print image. The LED Imaging Array involves no moving components such as mirrors and eliminates loss of focus when printing near page edges. The result? A sharp, consistent image over the entire printed area.

PCL Level 5 compatibility

HP 5000 cut sheet printers support PCL Level 5, the language of HP LaserJet printers, thus allowing desktop to data center print language standardization. System printing can then be "right-sized" to any HP printer on the network, saving software acquisition, development, and support costs.

Electronic forms

With the printers' electronic forms capability, you can design your own forms and then print them on demand. You'll eliminate the lead-time, cost, stocking, and inventory management required with preprinted forms. And there is no need to change printer paper when changing forms.

Designed for years of work

Rugged construction allows the C30 and C30D to be operated continuously without damage to the print engine. This is a characteristic especially important for peak printing periods, such as month-end processing. These printers also feature a straight paper path for virtually no paper curl and reliable operation.

User maintainable

HP 5000 cut sheet printers achieve low maintenance costs by being largely user maintainable. Output jogging (not supported by HP 3000 spooler) eases job separation.

Floppies for internal storage

Two 3.5-inch disk drives are included for microcode and font storage. A wheeled printer stand is included.



C30/C30D Specifications

Print speed	30 pages per minute (letter size, simplex)
Max. print line	8.5 inches (215.9 mm)
Resolution	300 dpi (dots per inch)
Max. monthly duty cycle	200,000 pages simplex, 100,000 pages duplex
Max. input capacity	3,050 sheets
Max. output capacity	1,400 sheets
Supported interfaces	Integrated parallel and serial, LAN via HP JetDirect EX (purchased separately)
Printer language	PCL Level 5
Supported paper sizes	Letter, legal, A4, executive sizes

HP 5000 Cut Sheet Printer Ordering Information

Description	Product Number	Price
HP 5000 cut sheet printers [1]		
Model C30 (100-127V, 60 Hz)	C4000A	\$15,950
Model C30 (200-240V, 50 Hz)	C4001A	15,950
Model C30D (100-127V, 60 Hz)	C4002A	21,340
Model C30D (200-240V, 50 Hz)	C4003A	21,340
Accessories		
2,500 sheet high capacity input	C4004A	2,095
1,200 sheet high capacity input	C4016A	1,395
1,400 sheet high capacity output	C4005A	1,395

[1] For the HP JetDirect EX product, which allows LAN networking, see page 80.

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 graphics (raster, QMS® Magnum® Code V Version II, and the HP Label Card II) available 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 powered paper stacker that stacks a full box of paper with minimal operator intervention, fulfilling the need for high-volume, unattended printing applications.

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 most commonly used standards. 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.

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.



HP2566/67C



C2354A/56A

HP C2354A

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 C2354A 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.

HP C2356A

This product responds to your needs in terms of printing performance, up to 1,120 lines per minute, draft; heavy duty, up to 280,000 pages per month; and the lowest cost of ownership in the market in its segment. It comes fully loaded with most commonly used character sets for the U.S. and European requirements. It combines the benefits of high speed with silent operation. The improved multilanguage control panel allows fast and easy set-up and configuration.

HP Label Card II (Graphics Card)

The HP Label Card II is a new generation controller option that provides powerful labeling, barcoding, electronic forms creation using QMS® 4256 Code V version II graphics capabilities.

LAN Connectivity

With this new product, all HP Line Impact Printers now share an easy way to connect to HP 9000 and HP 3000 systems via TCP/IP Ethernet LAN (Thin Coaxial or Twisted Pair).

The network interface delivers speed, improved performance, location flexibility, and share ability your LAN environment offers. Server loading is minimized by transferring data in large blocks.



Print Samples

Line Impact Dot Matrix Printers Ordering Information

Description	Draft Speed	Normal Speed	Throughput	Bar Codes	Us Postnet	Product Number	Price
Industrial line impact printer	420 lpm	300 lpm	25,000 ppm	std	#048 N/C	2562C	\$ 5,777
48dbA line impact printer	420 lpm	300 lpm	63,000 ppm	#008	#048 N/C	2563C	8,717
54dbA line impact printer	840 lpm	600 lpm	230,000 ppm	std	std [3]	C2354A	12,340
55dbA line impact printer	1120 lpm	800 lpm	280,000 ppm	std	std [3]	C2356A	15,695
Line impact printer	1200 lpm	900 lpm	530,000 ppm	#008	#048	2566C	27,554
Line impact printer	1600 lpm	1200 lpm	650,000 ppm	#008	#048	2567C	34,835

ppm = pages per month, lpm = lines per minute

I/O Interfaces Ordering Information

Description	Option Number	Price
(one I/O must be specified)		
Multiple I/O - RS-232 and Centronics	1AX	☎
Multiple I/O - RS-422 and Centronics	ALZ	☎
TCP/IP LAN JetDirect EX Interface Access	UGN [1]	☎
HP-IB Interface subsystem for C235xA	1A8	☎
HP-IB Interface subsystem for 256XC	D46	☎

Add-on Features Ordering Information

Description	Option Number	Price
US Postnet Bar Code	048	☎
HP Label Card II (Graphics Card)	400	\$2,595
Other character sets (fonts and languages)	—	☎

Upgrade Kits Ordering Information

Description	Product Number	Option Number	Price
HP Label Card II upgrade kit	C2345A	—	\$2,966
Interface upgrade kit for the HP 256XC and C235XC printers			
RS-232 and Centronics interface	C2342A [2]	1AX	655
RS-422 and Centronics interface	C2342A [2]	ALZ	690
TCP/IP LAN JetDirect EX Interface Access	C2342A [2]	UGN [1]	60
I/O upgrade for discontinued printers (256XA, 256XB, and 2564C)	C2343A	—	1,249
Character sets (a number of character sets are available for all line impact printers)	26761B	—	☎

Notes:

[1] HP JetDirect EX Interface P/N J2382B must be ordered. For HP 9000, order P/N J2374A. For HP 3000 systems order NBSPool Software from QUEST Software. See list of third party vendors to the right.

[2] Only one C2342A may be ordered per printer. It is not available for 2563A/B, 2564B/C, 2566A/B, or 2567B. Always order option number 256 (\$197) if C2342A #1AX or #ALZ is for 256xC printers.

[3] 4 cpi Standard; For 11.3 cpi order #048

☎ Price may vary according to printer model. Please call **HP DIRECT** for details.

Power configuration (50/60 Hz)

For 256xC printers, standard configuration: 120VAC.

Order Option #015=220 VAC, Option #016=100 VAC, or Option #017=240 VAC.

For C235xA printers: four switchable positions: 100, 120, 220-230, and 240.

List of third-party vendors

HP 3000 systems require NBSPool Software from QUEST Software (714.720.1434) to work with TCP/IP LAN for #UGN. For IBM Connectivity, please call Creative Controllers, Inc. (CCI) 800.950.6224.

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, 4M, IIISi, 4Si, and 4SiMX 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, Santa Cruz Operation



HP JetDirect EX connects any parallel-based printer to the LAN



(SCO) UNIX, and IBM AIX operating systems using the TCP/IP Ethernet protocol. HP JetDirect interfaces are compatible with standard UNIX-system-based diagnostics and spooler systems as well.

With HP JetDirect interfaces, 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 is no additional client workstation software to interfere with your applications, and no restrictions on where you can connect your peripheral.

HP JetDirect Ordering Information

HP Peripherals Served	Network Operating Systems (Protocols) Supported						Network Type Cabling Information	Product Number	Price
	Novell NetWare (IPX/SPX)	Microsoft LAN Manager (DLC/LLC)	Windows for Workgroups Windows NT (DLC/LLC)	IBM LAN Server (DLC/LLC)	HP-UX, SunOS, SCO UNIX, Solaris, IBM AIX (TCP/IP)	Apple EtherTalk			
HP JetDirect Cards HP LaserJet 4Si MX*, 4Si*, 4, 4M, IIISi Printers, HP DeskJet 1200C and 1200C/PS printers, HP PaintJet XL300 color printer, HP DesignJet, DesignJet 600 and DesignJet 650C plotters	✓	✓	✓	✓	✓	✓	Ethernet/802.3 RJ-45 for 10Base-T	J2371A [1]	\$449
	✓	✓	✓	✓	✓	✓	Ethernet/802.3 BNC for 10Base2 Thin coaxial cable RJ-45 for 10Base-T	J2372A [1]	499
HP LaserJet III, IIID, II, IID printers	---	---	---	---	✓	---	TCP/IP Ethernet RJ-45 for 10Base-T	C2071S [1]	449
	---	---	---	---	✓	---	TCP/IP Ethernet BNC for 10Base2 Thin coaxial cable	C2071T [1]	449
HP JetDirect EX Interface HP LaserJet 4P, 4MP, IIP, IIP plus, IIP, 4L, 4ML printers, HP DraftPro plus, DesignJet 200, and DeskJet family of printers	✓	✓	✓	✓	✓	✓	Ethernet/802.3 BNC for 10Base2 Thin coaxial cable RJ-45 for 10Base-T	J2382B [1]	499
HP JetDirect Software kits									
JetDirect software for HP-UX systems								J2374A	\$199
JetDirect software for SunOS/Solaris systems								J2375A	199

[1] For UNIX environment, you must buy one copy of the HP JetDirect software kit. One software kit can be purchased for loading onto multiple host systems and will support multiple HP JetDirect cards.

* Concurrent automatic network switching available on HP LaserJet 4SiMX and 4Si only. Other peripherals are supported with any one of the noted network operating systems active at a time (single selectable protocol).

** Apple EtherTalk is supported only with Bi-Tronics-based peripherals with PostScript Level 2.

Software

“New callers are the most exciting, because I get to tell them all the things we can do for them. Then, they're eager to tell others about HP DIRECT!”

Shannon

Shannon Boulé - **HP DIRECT** Order Management Representative

HP DIRECT makes ordering software easy with a quick overview of considerations

Discover the multimedia environment that's the heart of the Enterprise Desktop!

Put a telephone, a fax machine, and a modem in your Model 712 workstation with TeleShare!

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HP Service and Support

HP Support options can now be ordered with every product 101



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.**

Unbeatable value based on standards

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.

When ordering any Series 700 workstation, HP-UX 9.03 can be preloaded via Instant Ignition. (See page 25.)

HP-UX Release 8.07/9.03 Run-time Environment Key Standard Features:

- HP VUE 2.01
- ARPA Berkeley services
- Network File System (NFS)
- HP Diskless
- LAN Link software
- Native Language Support (NLS)
- System Administration Manager (SAM)
- Run-time C compiler
- Disk quotas
- Keyshell - the new, easy-to-use, menu-driven shell
- Diagnostics
- Compliance with XPG, POSIX, FIPS, SVID
- Run-time support for:
 - Network License Server (NetLS)
 - Network Computing System (NCS)
 - Applications using Starbase Graphics Library, Starbase Display List, and shared libraries
 - Applications built on OSF Motif and X Window

S300/400/700 Ordering Information

Description	Product/Option Number		Product/Option Number	
	HP-UX S300/S400	Price	HP-UX S700	Price
HP-UX Run-Time Environment, 2-user	B1861A	\$840	B2352A	N/C
8.0 1/4-inch cartridge tape	APB, AA0	475	—	—
8.07 DDS/DAT cartridge tape, 8-user	—	—	APF, AAH	\$ 415
9.03 1/4-inch cartridge tape	APH, AA0	475	—	—
9.03 DDS/DAT cartridge tape, 8-user	—	—	APH, AAH	415
8.0/9.03 Revision upgrade license*	—	—	OCC	730
HP-UX Run-Time Environment, 8-user	—	—	B2353A	1,250
8.07 DDS/DAT cartridge tape	—	—	APF, AAH	415
9.03 DDS/DAT cartridge tape, 32-user	—	—	APH, AAH	415
HP-UX CD-ROM Media				
8.0 kit	B2378A	N/C	—	—
8.07 kit	—	—	B2826A	N/C
9.03 kit	B2378B	N/C	B2826B	N/C
CD media kit [1]	AAB	720	AAB	625
CD-ROM disk set [2]	AAF	600	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.

HP-UX Operating System Documentation

Description	Product / Option Number		Product / Option Number	
	HP-UX S300/400	Price	HP-UX S700	Price
HP-UX 8.0	B1864A	N/C	—	—
HP-UX 8.05/8.07 (options include material for both versions)	—	—	B2355A	N/C
HP-UX 9.03	B1864B	N/C	B2355B	N/C
Documentation on CD-ROM; includes 1-user License	#0BC	\$ 960	#0BC	\$ 835
CD Complementary Documentation; provides hardcopy documentation currently not available on CD-ROM.	#0BJ	180	#0BJ	158
Adds up to 4 users for CD-ROM documentation.	#UA2	475	#UA2	415
General Usage hardcopy, user's guides for HP-UX, HP VUE, and X Windows (set is shipped w/each Workstation).	#0BD	160	#0BD	137
HP-UX System Administration and Installation hardcopy manuals for HP-UX, networking, and HP VUE.	#0BE	790	#0BE	685
HP-UX User's Guides; includes manuals for UUCCP, mail, text formatting and processing, shells, and editors.	#0BG	210	#0BG	184
General Programming hardcopy manuals for assembler, device I/O, native language support, and general HP-UX programming techniques.	#0BF	390	#0BF	340
User Environment hardcopy programming manuals for X Toolkit, Intrinsics, Xlib, HP VUE and OSF/Motif.	#0BL	840	#0BL	730
Starbase hardcopy programming manuals for Starbase, Starbase Display List, and Radiosity and Ray Tracing.	#0BM	1,180	#0BM	1,025
C/ANSI C, and symbolic debugger hardcopy manual.	#0BT	235	#0BT	205

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 application development.

Features		
<ul style="list-style-type: none"> • 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 • Support for Fastwide SCSI interface 	<ul style="list-style-type: none"> • Instant Ignition pre-loaded software • 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) 	<ul style="list-style-type: none"> • Support for UPS • Run-time support for X-Window System Version 11 Release 5, Motif Version 1.2, and Visual User Environment <p>HP-UX 9.04 conforms to major existing standards such as:</p> <ul style="list-style-type: none"> • 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) • Support for 3480 and 8mm backup devices

Use this chart if you own HP-UX 9.04 and want to add additional users to your current license

Series 800 HP-UX Ordering Information

Description	Product/Option Number	Price
HP-UX 9.04 User license, user level specification (must order one)		
HP-UX 9.04 User license/(user level specification)	B3108L	N/C
Instant Ignition (with new server orders only)	OD1	N/C
2-user license	UA1	\$ 995
8-user license	UA3	2,245
16-user license, 16-user software	UA5/AGM	3,495
32-user license, 32-user software	UA7/AGN	6,295
64-user license, 64-user software	UA9/AGP	10,495
Unlimited-user license, Unlimited-user software	UAT/AGS	12,995
HP-UX User upgrade credit (may order one)		
Credit for 9.0 2-user license when upgrading to higher user level	UB1	(945)
Credit for 9.0 8-user license when upgrading to higher user level	UB3	(2,245)
Credit for 9.0 16-user license when upgrading to higher user level	UB5	(3,495)
Credit for 9.0 32-user license when upgrading to higher user level	UB7	(6,295)
Credit for 9.0 64-user license when upgrading to higher user level	UB9	(10,495)
Credit for 9.0 128-user license when upgrading to higher user level	UBA	(12,000)
Credit for 9.0 256-user license when upgrading to higher user level	UBV	(12,000)
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

Use this chart if you want to buy HP-UX 9.04*

HP-UX 9.04 Ordering Information*

Description	Product/Option Number	Price
HP-UX 9.04 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

Series 800 HP-UX Version 9.04 Documentation

Description	Product/Option Number	Price
Series 800 Documentation Sets	B3108M	N/C
General Usage Documentation Set	Opt 0BD	\$ 58
Users Guides Documentation Set	Opt 0BG	163
System Administration Documentation Set	Opt 0BE	500
Programming Documentation Set	Opt 0BF	570
Documentation on CD-ROM; includes one user license	Opt 0BC	840
Add 4 users for CD-ROM documentation	Opt UA2	420

New update available

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 3.01.

Domain 680X0 Ordering Information

Description	Product Number	Price
Domain/OS 10.4: includes media, documentation, 1/4-inch cartridge tape.	LE450BAD	\$ 2,650
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	1,135
C/ANSI C-Compiler, SR 10: includes media, documentation, 1/4-inch cartridge tape	LA070BAD	1,220
FORTTRAN: includes media, documentation, 1/4-inch cartridge tape	LA210BAD	1,220
Pascal: includes media, documentation, 1/4-inch cartridge tape	LA460BAD	1,220
C++ Compiler:	LA130BAD	1,950
Translator	LA120BAD	1,280
Development Kit, SR 10.2	LAB20BAD	2,415

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.

A word about ordering software

As you read through this software section, you'll notice we offer the most advanced software products available today. You'll also notice that we haven't included any prices.

Why? Because HP provides one of the largest selections of UNIX software solutions and we want to make sure you get exactly what you need.

Get the right software at the right price

When you talk to one of our technical experts at **HP DIRECT**, we can help you get the right product. We want you to get your jobs done right and we don't want you to pay one penny more than you have to.

A few questions is all it takes

Our support engineers will ask you questions about your particular hardware and software configuration, such as your equipment's model numbers, the version of your operating system, and the amount of users. We'll also ask you about which media you would prefer and your documentation needs.

So, call **HP DIRECT** and speak with one of our support engineers. It's your first step in getting exactly what you need.

“We're perfect at providing pre-sales information beyond the basic questions. We get to know your needs and then we can help you find the right solution right away.”

Bob

Bob Pierson - **HP DIRECT** Customer Representative Manager





Find information about these training course on pages 102 to 104:

- ANSI C Programming
- C++/Object-Oriented Programming
- Fundamentals of the UNIX System
- Theory of Operation for PA-RISC HP 9000 Systems
- HP-UX System Administration Basics
- HP-UX Workstation Administration for HP 9000 300/400/700
- HP-UX Systems Administration for the HP 9000 Series 800
- UNIX System Basics I & II
- Fundamentals of X Windows and HP VUE
- UNIX System: (CBT)
 - Introduction for New Users
 - Managing Users and Their Environment
 - Transferring Files and Directories



Datasheets on these products faxed to you
CALL 800.333.1917



Try SoftBench 3.2, C++ SoftBench, and UIM/X for 30 days! See page 96 for details.

N This screen is being shared and miles apart.

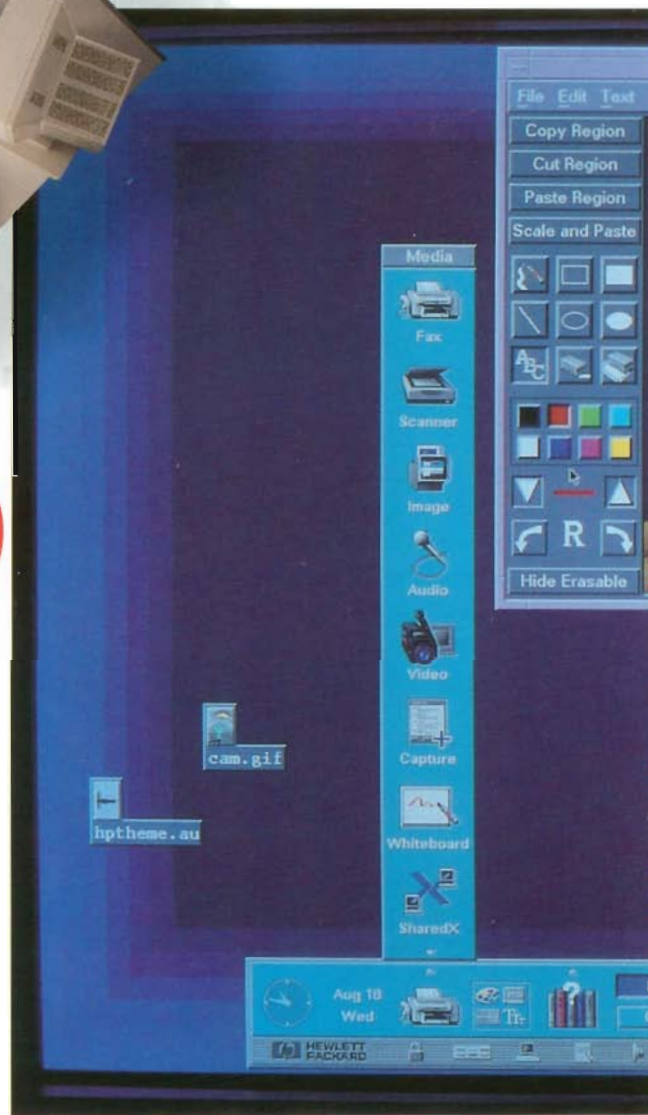
- Together they're finalizing their presentation on-screen, in real time.
- They're solving a problem in minutes that traditionally would have taken 48 hours and more than \$1,700 in travel expenses.
- They're about to update their team by E-mail, complete with video images and voice annotations.
- Then they'll fax the customer. Without leaving their seats, and without printing a sheet of paper.

10:29:57
am

Vancouver,
British
Columbia

How do they do it?

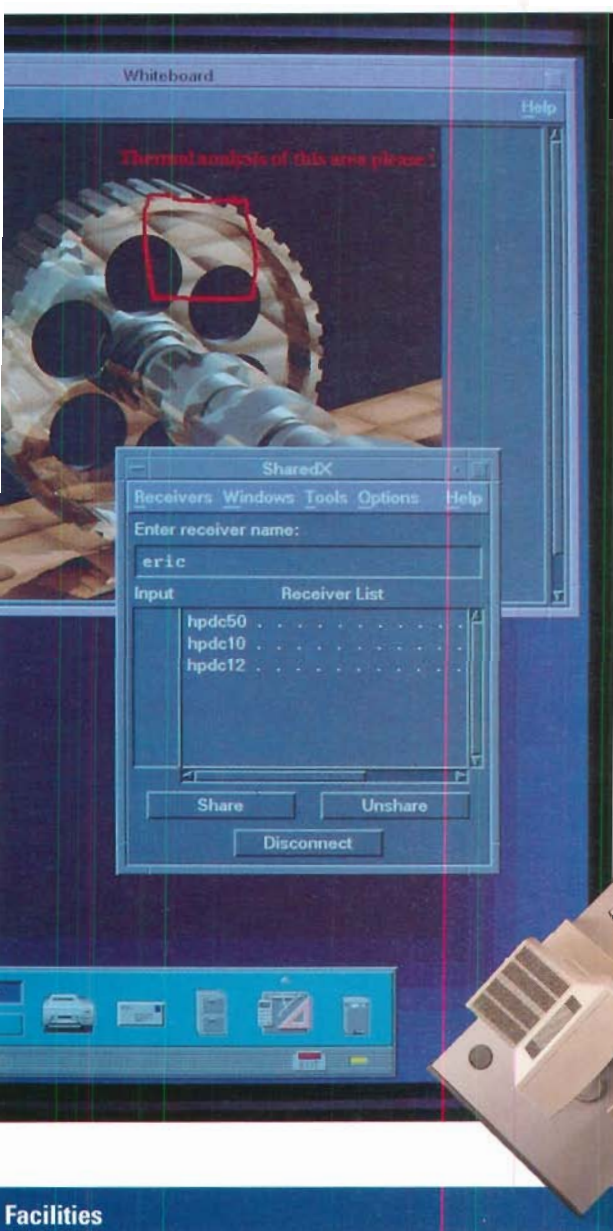
They've been MPowered.



MPower

- HP VUE 3.0 graphical user environment
- VideoLive software to control the optional VideoLive card
- FAX software
- Digital video player for playback of MPEG compressed digital video clip
- DeskScan/UX software to control the optional ScanJet IIcx color scanner (see page 76)
- Image viewer
- Audio editor with optional stereo headset and stereo microphone (see page 43)

edited by two people 1,078



Right now, you can maximize your client/server system with HP MPower. A media-enriched communications environment, MPower integrates collaborative multimedia with HP VUE 3.0. The result? Your widespread users can work together like one team, no matter how remote their sites and resources. MPower's easy to use media panel offers them instant access to the most advanced multimedia capabilities. And MPower uses HP VUE to provide quick and easy access via a mouse-driven, icon-based, drag-and-drop model of interaction.

**10:29:57
am
Los Angeles,
California**


HP MPower is sold as two products: client software and server software. Typically 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 one fax modem line and one non-PostScript printer.

MPower Ordering Information

Description	Product Number	Price
MPower Client V2.0		
License-to-use	B3387BB	\$ 195
Media	B1194BA	205
Documentation	OBL	50
MPower Server V2.0		
License-to-use	B3388BB	1,295
Media	B1195BA	205
Documentation	OBL	200

Note: To fully utilize the MPower environment, additional products are necessary to support some of the functions integrated into MPower. These products include a fax modem to support all clients connected to the server, the MPower ScanJet IIcx scanner, a VideoLive Card in the EISA slot of the client system to add video, HP TeleShare on the Model 712 workstation and a headset to support audio input and output.

Facilities

- Whiteboard for creating simple drawings or sketching on existing images
- Electronic mail of messages with embedded multimedia components
- HP SharedPrint (see page 61) for processing print jobs and spooling print jobs to the printer
- HP SharedX (see page 89) for real-time collaboration on a network
-  HP TeleShare (see page 88) for incorporating phone, fax service and data modem into the Model 712 workstation



HP TeleShare puts a telephone, a FAX machine, and a modem in your Model 712 workstation

You can incorporate the most useful telecommunication capabilities into your Model 712/60 and 712/80i workstations with HP TeleShare. Imagine looking up a phone number, dialing, and redialing—all from your workstation. Record and replay messages. You can send faxes and transmit data. HP TeleShare makes it easy and convenient.

This 3-in-1 tool contains two dual-line phone ports for analog phone line (POTS) access. The Motif-based TeleShare software provides a point-and-click style graphical interface for great ease-of-use. You can order HP TeleShare as a factory-installed option when you order a Model 712 workstation or you can order it later as a stand-alone product and install it yourself.

HP TeleShare Ordering Information

Description	Product Number	Price
HP TeleShare	A4012AA	\$795
CD-ROM certificate only	AAU	N/C
Preloaded and preconfigured software with Instant Ignition	OD1	N/C
HP-UX 9.03 version	APH	N/C

Features

Benefits

3-in-1 telecommunication tool including telephone, FAX, and data modem

- Eliminate separate telecommunications peripherals; the workstation becomes the one telecommunications tool with a single interface

Two dual-line analog phone ports

- FAX without delay from your workstation, while you talk, using HP TeleShare's dual-phone line design

Volume and ring control

- Set the sound level most convenient for you and your work context

Mute, hold, conference, and transfer buttons

- Access standard telephone services with less effort, using the mouse and graphical user interface

Record incoming or outgoing audio from phone lines

- Record calls for later reference using HP TeleShare's integration of telephony and audio services

Play back audio information into phone line

- Get immediate feedback on audio information from your caller by playing back the audio snippet directly into the phone line for your caller to hear

Double-click to dial address book

- Speed phone number lookup and dialing with HP TeleShare's electronic phonebook

Last number redial and programmable speed-dialing key

- Avoid phone number lookup altogether

Complete your telecommunications center with headsets

You can customize your workspace with a headset. For a wide selection of stereo, monaural, and binaural headsets with various features, see page 43.



A revolutionary 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 facsimile 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 a 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

“Networking is becoming a bigger issue. People are looking ahead, far before they purchase a workstation. HP DIRECT is a good place for questions. We'll answer them and steer you in the right direction.”

Scott

Scott Schneider - HP DIRECT Sales Support Engineer



Information Access

With HP Information Access non-technical users can graphically pull information from a vast range of external data sources into formatted desktop reports and other applications. Data sources include DB2, Informix, Oracle, ALL-BASE/SQL, Sybase, and many more, while desktop applications include Lotus 1-2-3, MS Excel, and word processors.

HP Information Access makes database information retrieval

easy, using an intuitive, mouse-driven point-and-click MS Windows-based interface. Queries are formed via drag-and-drop, so no knowledge of programming, networking, or database syntax is required.

Available on: Systems	Op Sys	Base Product Number
HP 9000/300, 400, 700, 800	HP-UX	B3116A
PCs/Client software	MS-Windows	B3538AA

SharedX support on MPower

SharedX and many other advanced facilities are integrated into MPower, offering you a world of multimedia capabilities. MPower is HP's media-enriched communications environment. It also integrates HP VUE, FAX software, scanner software, HP SharedPrint, and much more. You can find MPower on page 86.

It's picture-perfect

HP Graphics and Forms Terminal Emulator for X11 (GFoX)

GFoX is designed for everyone who needs to interact with their graphics and forms applications from within an X11 environment. Created for HP 1000 AGP/DGL and FORMS applications, GFoX interprets many of the HP 2397A Color Graphics Terminal escape sequences and has many of its features. GFoX offers the kind of functionality you need.

GFoX License to Use

Available on: Systems	Op Sys	Base Product Number
HP 9000/300, 400 700, 800	HP-UX	B2695A

Media and manuals

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B2696A
HP 9000/700	HP-UX	B2697A
HP 9000/800	HP-UX	B2698A

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 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	B2156C



HP-PHIGS: Full performance through standards

“ A lot of you want to know more about the advantages of HP products and we take the time to help. We listen to you to make sure you get what you need. ”

Barbara

Barbara Johnston - HP DIRECT Customer Representative

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 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



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 4,000 application solutions available through our VARs and third-party software vendors. See page 91 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.

HP DCE/9000

HP Distributed Computing Environment (DCE) products provide the industry's most comprehensive and standards based platform for developing and running DCE-based distributed applications. DCE/9000 provides secure communication through the distributed environment as

well as transparent file access. A DCE bundle provides a complete DCE environment running on 5 systems with DCE development tools for 5 developers. All media, documentation, and licenses for 5 clients, 1 CDS server, 1 security server, and 1 DFS server are included.

Call **HP DIRECT** for more information about this bundle.

Available on: Systems	Op Sys	Base Product Number
HP 9000/700	HP-UX	B2903A
HP 9000/800	HP-UX	B3125A

Micro Focus COBOL

HP Micro Focus COBOL/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.

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

HP Micro Focus COBOL/UX Developer's Package

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

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

HP Micro Focus COBOL/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

HP Micro Focus COBOL/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/ANSI C Compiler

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.

C++ supports object-oriented programming.

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	B2404A

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, 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

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.

This 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.

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

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

HP Apollo Pascal Compiler on S700

HP has created the HP Apollo Pascal compiler to help Domain Apollo Pascal owners migrate to the HP S7000 PA-RISC platform. The HP Apollo Pascal compiler on HP-UX supports the majority of functionality that the Domain/OS Pascal compiler does. It includes the Apollo Pascal compiler, the Apollo Pascal run-time library, the

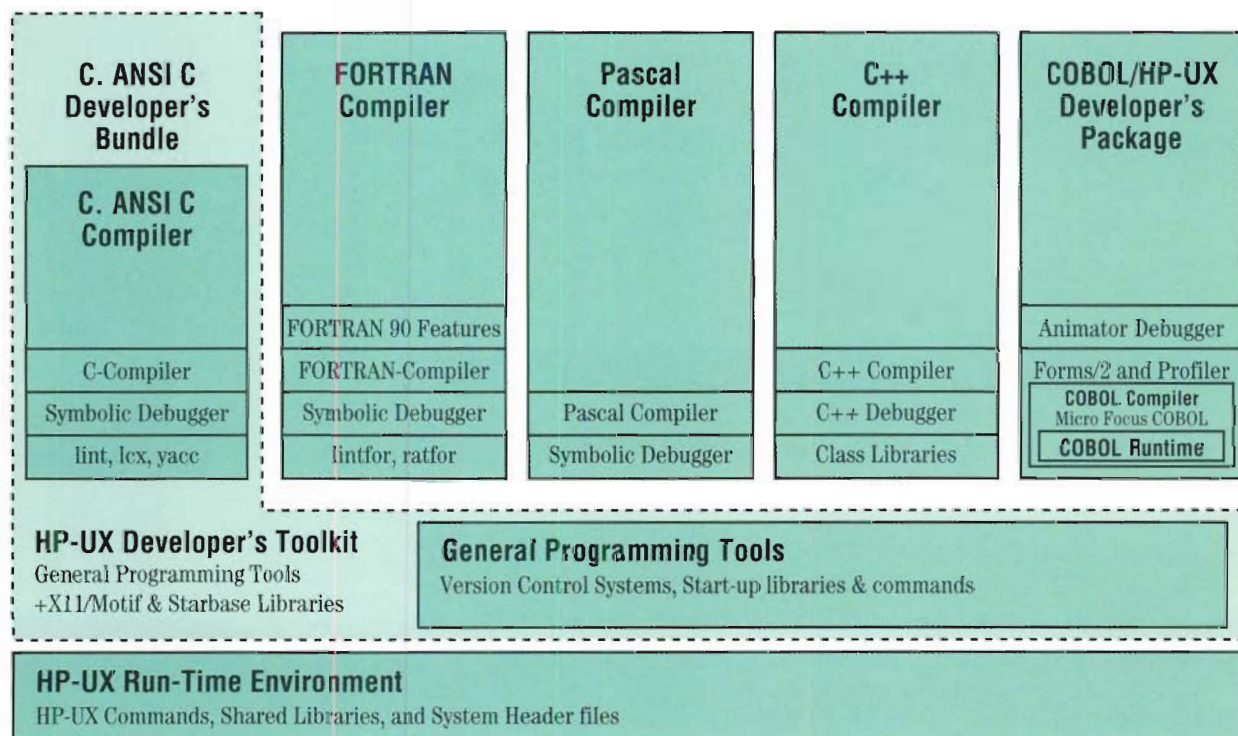
Apollo Pascal Language Reference, the Apollo Pascal compiler man page, and the DDE (Distributed Debugging Environment) Debugger.

The HP ADVISE porting tool lets you port your Domain Pascal applications to HP-UX quickly and with a minimum of effort.

Ordering Information

Description	Product Number	Option Number	Price
License to use	B3514AB		\$1,100
Manuals	B3513AA	OBJ	195
DAT Tape	B3513AA	AAH	195
CD-ROM	B3513AA	AAU	N/C
HP-UX 9.0 version	B3513AA	APH	N/C

Development Tools Product Structure



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

The HP AdvanceLink family of terminal emulation and file transfer solutions provides full integration of customer's personal computers into their workgroups. The HP AdvanceLink family supports connections from HP 3000 or HP 9000 to MS-DOS, MS-Windows, or HP NewWave environments. Also included is an extensive scripting language for task automation.

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

Upgrade from AdvanceLink for DOS to AdvanceLink for Windows

Requires prior purchase of D2102B.

D2108C.....\$99

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

“We qualify your needs to get a handle on your current set-up. The latest products may not be the most appropriate for you. We take the initiative to ensure you have all the information you need.”



Don Savage - HP DIRECT Customer Representative



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.

Breakthrough technology from HP

HP PE/ME10

HP PE/ME 10 is a highly advanced 2D design and drafting solution that combines power and ease-of-use to assure highest efficiency and professionalism. An extraordinary breadth of features reflects years of refinement. The latest revision provides Design Advisor Capabilities for intelligent interaction between the user and the design system. Available on HP 9000 Series 300/400/700, Sun SPARCstations and MS Windows or MS DOS.

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

HP PE/ME30

HP PE/ME30 is an integrated solids modeling, design, and drafting system. It extends the 2D world to 3D and provides an excellent pathway to introduce solids modeling. Its user interface is identically structured to HP PE/ME 10 and hence supports a smooth migration from 2D to 3D. HP PE/ME 30's scope of features is as comprehensive as it is easy to adapt to. A great way to extend a 2D system to a third dimension. Available on HP 9000 Series 300/400/700 workstations.

Base Product Number **B1330F**



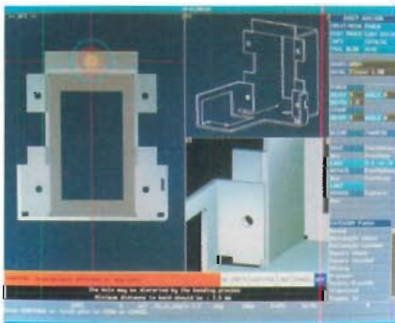
"I have nothing but good things to say about our products and services. Call and find out how easy HP DIRECT can make your job!"

Alex Jones

HP DIRECT Customer Representative

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



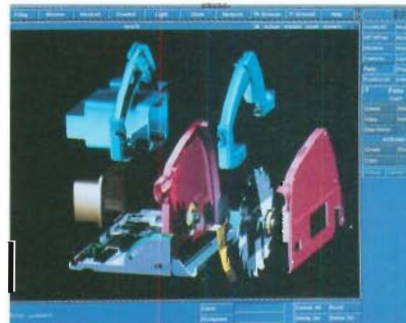
solids clarity and automatic generation of the flat contour, all contribute towards successful sheet metal design work the first time.

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/SolidDesigner

HP PE/SolidDesigner is a new generation, high-performance solids modeling system that offers powerful new design technology featuring the ease of design previously experienced only in 2D systems.



It is so advanced that design changes can be easily specified at any time, overcoming the drawbacks of history-based

systems. Supported on HP 9000 Series 700 with CRX, CRX-24, CRX-24Z, and CRX-48Z.

Base Product Number **B3000A**

Advance to distributed development...with SoftBench

C++ SoftBench 3.2 and SoftBench 3.2

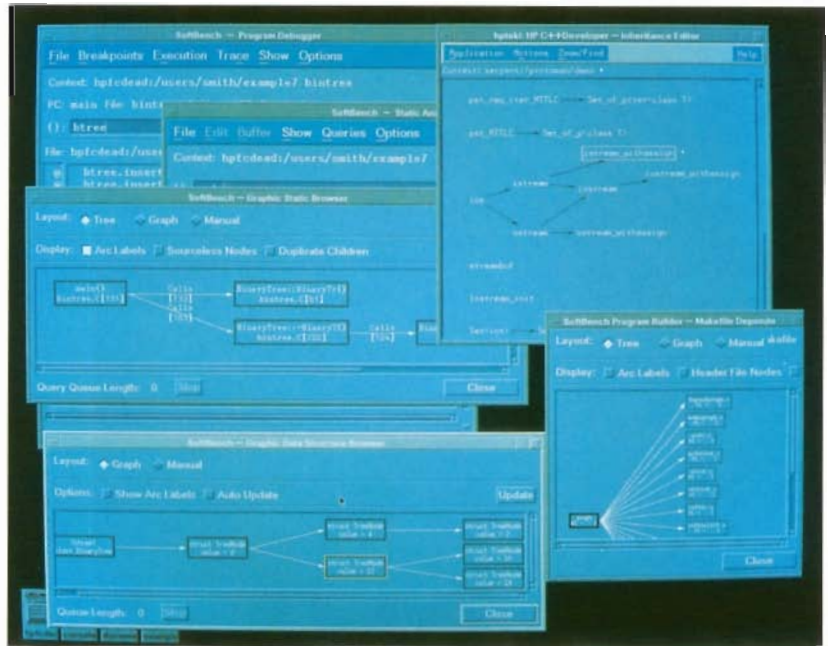
SoftBench Family of Software Development Environments Get HP's full scale C, C++, COBOL, and FORTRAN development environment. **SoftBench** includes a comprehensive set of integrated program construction tools that can help you develop, port and maintain new and existing applications more powerfully than ever before.

C SoftBench supports a choice of editors and debuggers so you can customize your work environment. It also offers clear visualization of both new and existing code and facilities for distributed computing and distributed file access.

C++ SoftBench adds C++ language support to C SoftBench, including C++ source level debugging and graphical class browsing and editing facilities.

SynerVision and ChangeVision for Softbench

The SynerVision process engine helps teams build computer-based process environments. ChangeVision, built on the SynerVision, is a powerful environment for managing the software change process.



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/C++SoftBench 3.2 and UIM/X Evaluation Kit

Try before you buy! Call 800-845-0070 to qualify for a FREE Evaluation Kit. You will be able to use fully functional SoftBench 3.2, C++ SoftBench and UIM/X software for 30 days with no obligation whatsoever. Evaluation Kits are currently available for HP Series 700 systems running HP-UX and for Sun SPARCstations running Solaris 1.0 and 2.x.

CALL 800.845.0070
to find out how you can get your
FREE SOFTBENCH EVALUATION KIT!

COBOL SoftBench and COBOL/C SoftBench

Your business application teams can easily migrate COBOL-based mainframe applications to UNIX systems and take advantage of significant savings in development time and cost. COBOL SoftBench and COBOL/C SoftBench let COBOL programmers transition to HP-UX with confidence.

COBOL SoftBench is a full scale COBOL programming environment comprised of a complete set of integrated, easy-to-use application development tools. It eases the transition to HP-UX by:

- Eliminating the need to learn a new language. You can leverage your COBOL expertise, and at the same time, protect your

company's investment in existing COBOL applications.

- Minimizing the HP-UX learning curve. Using a clear graphical interface, you have instant access to common HP-UX commands to accelerate application development.
- Providing a fully integrated, best-in-class toolset. You can easily access all tools, including third-party tools, via HP's innovative messaging technology.

COBOL SoftBench and COBOL/C SoftBench can help you become HP-UX productive in days, not months. And productivity continues to increase throughout the entire development cycle.

COBOL SoftBench

Available on: Systems	Op Sys	Base Product Number
HP 9000/700/800 (without compiler)	HP-UX 9.x	B4015BB
HP 9000/700/800 (includes HP/MF COBOL Developer's Package)	HP-UX 9.x	B4018BB

COBOL/C SoftBench

Available on: Systems	Op Sys	Base Product Number
HP 9000/700/800 (without compilers)	HP-UX 9.x	B4021BB
HP 9000/700/800 (includes HP/MF COBOL Developer's Package and HP C/ANSI C Developer's Bundle)	HP-UX 9.x	B4024BB

UIM/X 2.5

UIM/X is the UNIX industry's leading X-Window Graphical User Interface (GUI) development tool for several excellent reasons. The 2.5 version supports 100% of the Motif 1.2 toolset, does automatic C and C++ code generation (in addition to UIL code), has reusable GUI object class components for OO development, and supports standardized "style guides" within an organization. UIM/X is a full function user interface manage-

ment system enabling developers to lay out interfaces, define behavior, as well as test and modify the interface design. While other GUI builders can also rapidly create a user interface screen, UIM/X can define and test the behavior of this design before generating code.

UIM/X 2.5 is available for HP-UX systems as well as for the Sun 4.1.3 and Solaris 2.2 operating systems (note: Sun systems need a Motif 1.2 toolkit to use this product).

UIM/X 2.5 also comes with a powerful integration into the SoftBench environment for sophisticated developers. See the previous page for details on how to obtain a free evaluation copy of

Available on: Systems	Op Sys	Base Product Number
HP 9000/300 & 400	HP-UX	B1183B
HP 9000/700 & 800	HP-UX	B1183B
SunSPARC	Solaris 1.0	B1183B
SunSPARC	Solaris 2.2	B1183B

HP Distributed Smalltalk

HP Distributed Smalltalk is an advanced distributed object development environment based on the CORBA specifica-

tion for distributed object management. HP DST extends the ParcPlace Systems VisualWorks Smalltalk portable development

tools with class libraries that support distributed application development and deployment.

SoftBench Link/1000

SoftBench Link/1000 transparently integrates the HP 1000 into the SoftBench environment for HP-UX. It allows developers who must maintain existing

RTE-A applications to leverage the power of the SoftBench environment for the software engineering processes.



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

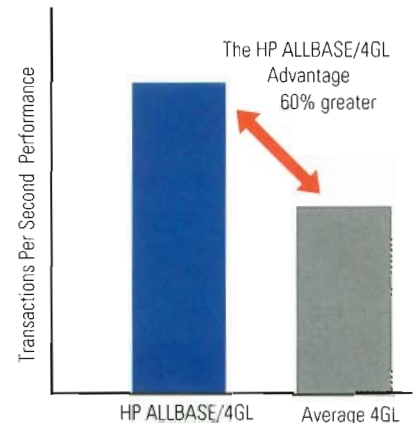
screen menus—without needing to know the database structure. Additional capabilities are provided to directly enter HP ALLBASE/QUERY and HP SQL commands. All reports, queries, and sequences of commands can be saved as scripts for future use.

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	B3237A
HP 9000/800	HP-UX	B3148A
HP 9000/700 bundle	HP-UX	B3491AA
HP 9000/800 bundle	HP-UX	B3492AA

“We're here to help you make the right choice. We look at all avenues between upgrades, growth paths, and new products before we recommend a solution.”

Bob
 Bob Lulich - **HP DIRECT** Sales
 Support Engineer



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

Enterprise Desktop

HP WorkManager



HP WorkManager, an enterprise product data and workflow management system, coordinates the entire product design and manufacture life cycle. WorkManager allows users to manage the contents and flow of product development data. Because it is so easily customized, the user can control how data is tracked, retrieved, and organized. Users define all aspects from distributing data to obtaining approvals. Because WorkManager facilitates the sharing of data, teams can work in parallel for true concurrent engineering.

WorkManager is an enabling technology that allows companies to respond instantly to change; an open, progressive solution that works with existing platforms; effective, enterprise-wide, in diverse departments such as engi-

“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 - **HP DIRECT** Order Management Representative



neering, manufacturing, personnel, and order processing; and it delivers immediate benefits company-wide.

HP WorkManager is the first data and workflow management product to exploit the Open Systems approach to Product Data Management (PDM) applications.

Hardware/platform support: HP 9000, IBM RS/6000, SUN Solaris and Sparc, Microsoft Windows/DOS, X11 Motif Client.

Database support: Oracle, Allbase, Sybase, Informix, Ingres.

Description	Product Number
Vault & Process Server	B2979A
Document Module	B2991AB
Packet Module	B2992AB
Configuration Module	B2993AB
History Module	B2994AB
Classification Module	B2995AB

Create a rich Enterprise Desktop environment

Want to run the most popular PC applications on your workstation, right off the shelf? With HP Wabi 1.1, you can run the most widely used software unaltered on your HP-UX 9.0 based Series 700 workstations and X terminals. The Ready-to-Wear Desktop Builder Kit provides tools to create Enterprise Desktop systems that are easy to use and to deploy. You'll find both HP Wabi and the RTW Desktop Builder Kit on page 22.

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HP Classes102

Self-paced training104

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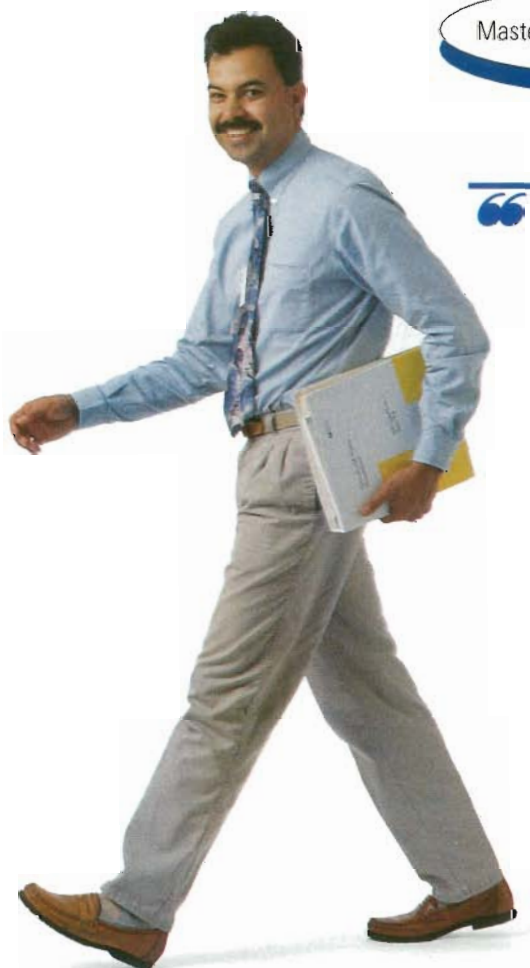


We've got a really great catalog. It gives you a great overview of all the latest products. And, beyond that, you've got us with one phone call! We can explain things in as much detail or as simply as you'd like.



Benny

Benny Rodriguez - **HP DIRECT** Customer Representative





We're right behind you



HP System Support Options provide a simple and complete support solution

that you purchase with your HP products. These options improve your product's warranty, and provide support for your operating system and applications software. With HP's System Support Options, it's also easier than ever to order and budget for support for the HP products you buy. When you purchase support options, your HP products receive a full year of quality HP support at a price that's right. And you choose the level of support that best meets your needs. HP support enhances system performance and uptime from day one. By increasing the availability of systems and applications, it also improves the productivity of users, system managers, and operators.

Right coverage, right price

Complete support for the first year. HP System Support Options provide comprehensive hardware and software support during the product warranty period.

Warranty upgrade

With support options, you can choose the appropriate warranty response time for your HP products. HP System Support Options allow you to select next-day, 4-hour or 24-hour, 7-day response.

Software support that fits

You get the right level of support for your system software and applications, whether you're purchasing your first HP system or adding systems to an existing environment.

SOLUTIONS

- **HP hardware repair service** ensures system uptime. HP System Support Options upgrade your warranty response time to a level which best meets your needs. You choose between 24 x 7, 4-hour, or next-day coverage.
- **HP telephone support** delivers fast, accurate answers. With HP telephone support, a toll-free telephone call gives you access to experienced support professionals throughout HP's worldwide HP Response Center network. HP telephone support provides telephone assistance for questions about software usage and clarification about software.
- **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.
- **License to use software updates** make it easy to share materials. The HP license to use software updates provides you with software licenses for new update releases and patches to HP software products.
- **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.

HP: Your total IT education solution provider

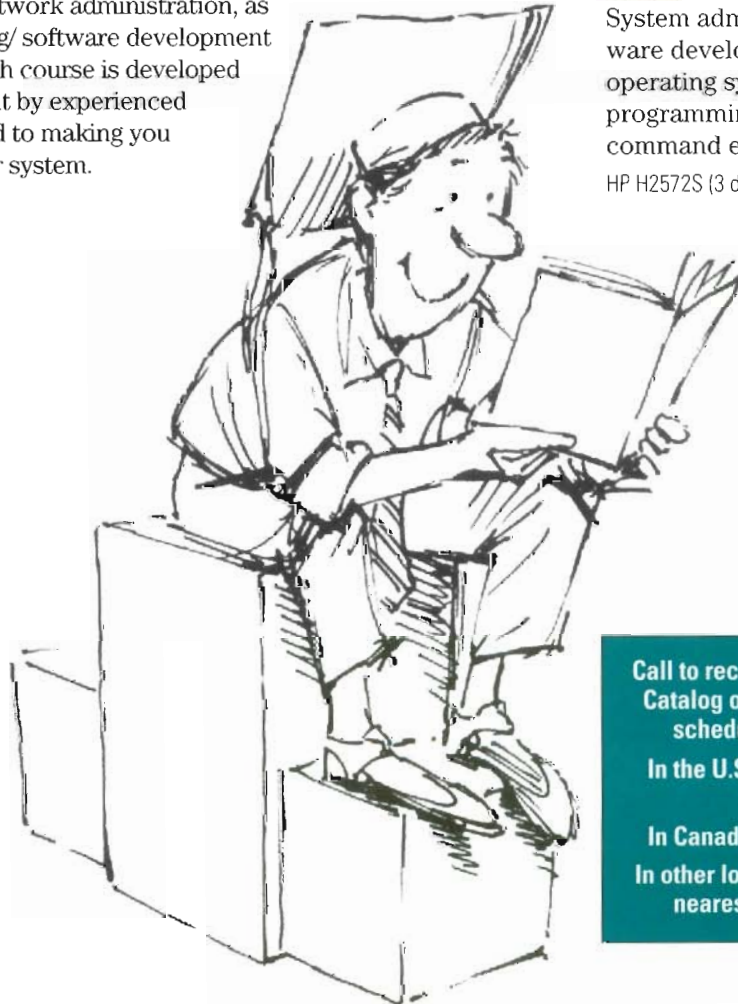


You and your company have made a strategic investment in Hewlett-Packard computer systems. The HP Educational Services program helps you get the most out of your investment by teaching you the skills you need to fully utilize your system capabilities.

Increased productivity from lab, lecture, and coursework prepares you for success with your system applications. The courses save countless hours when compared to learning from reference manuals. Moreover, they keep you up-to-date on new products and emerging technologies.

More than 200 introductory and advanced courses are available. Many of these are offered at multiple times throughout the year. Hands-on lecture/lab courses are taught worldwide in well-equipped HP education centers. They can also be delivered to a dedicated group onsite within your own company, thus making it possible to train your staff onsite, or at an HP sales office. HP's professional staff can tailor training to meet your special needs.

HP offers courses that cover a wide range of products and levels of skill. Listed below are a sample of the most frequently attended courses, in UNIX system and network administration, as well as, programming/ software development and networking. Each course is developed by experts and taught by experienced instructors dedicated to making you productive with your system.



UNIX System Fundamentals

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.

HP 51434S (5 days)\$1,550

UNIX System Basics I

Application users or system administrators will learn basic UNIX system concepts required for day-to-day operation in a run-time only environment.

HP 51489S (2 days)\$680

UNIX System Basics II

System administrators and software developers will learn UNIX operating system shell and shell programming, and process and command execution.

HP H2572S (3 days)\$970

Call to receive an HP Education Catalog or to obtain complete scheduling information.

In the U.S., call 800-472-5277, ext. 66100.

In Canada, call 800-563-5089.

In other locations, contact your nearest HP sales office.

HP-UX System/Network Administration

HP-UX System Administration Basics

Users, operators, and administrators will learn to perform the system administration tasks necessary to maintain their HP-UX system.

HP 50722S (3 days).....\$970

HP-UX Workstation Administration for the HP 9000 Series 300/400/700

System administrators will learn to configure, set up, and manage an HP-UX system overall.

HP 51436S (5 days).....\$1,845

HP-UX System 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.

HP 51482S (5 days).....\$1,845

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.

HP B3304S (4 days).....\$1,645

HP-UX Network Administration with HP-UX Clusters

HP-UX and diskless-cluster system administrators will learn to administer systems and networks in an HP-UX environment.

HP H2550S (5 days).....\$1,845

HP-UX Network Administration

For network administrators who are in a multi-user (Series 800) environment. This is a 4-day option to H2550S, that begins at the same time and runs concurrently.

HP H2564S (4 days).....\$1,495

NetWare for the HP 9000: Fundamentals for Network Administrators

Network administrators and technical support personnel will learn how to install, configure, and manage NetWare software on HP 9000 Series 800s and 700s.

HP B3312S (3 days).....\$1,375

HP-UX Series 800 Performance and Tuning

Experienced system administrators will learn system performance management, monitoring tools, and analysis lab.

HP H5278S (3 days).....\$1,145

Call to receive an HP Education Catalog or to obtain complete scheduling information.

In the U.S., call 800-472-5277, ext. 66100.

In Canada, call 800-563-5089.

In other locations, contact your nearest HP sales office.

Programming/Software Development

ANSI C Programming

Software development professionals will learn ANSI C programming syntax, control flow, functions, pointers, and the HP-UX operating system interface.

HP 35130S (5 days).....\$1,550

C++/Object-Oriented Programming

This course emphasizes object-oriented programming techniques. Programmers will learn and apply object-oriented concepts in the C++ programming environment.

HP B1810S (5 days).....\$1,550

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.

HP H5366S (3 days).....\$970

Programming with Motif

Programmers will learn how to develop graphical user interfaces using Motif, the best GUI toolkit available today.

HP 50767S (5 days).....\$1,695

Theory of Operation for PA-RISC HP 9000 Systems

Application programmers and system administrators will get a review of PA-RISC architecture, and learn process and memory management, and the HP-UX file system.

HP H5081S (5 days).....\$1,845

Learn UNIX and HP-UX at your own pace

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 (3-4 hours)\$500

UNIX System: Managing Users and Their Environment

System administrators learn to:

- Add and remove user accounts to and from the system
- Interpret logon scripts
- Set terminal characteristics
- Set default file permissions

HP B1800A (3-4 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
- Runs on both DOS based personal computers (PCs) and HP-UX workstations.

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 (3-4 hours)\$500

Save \$550 on our Starter Kit Each course above costs \$500 if purchased individually. But you can save \$550 when you purchase our starter kit, UNIX: CBT Starter Kit (product number HP H5105A). For only \$950, you'll get one copy each of courses HP B1799A, HP B1800A, and HP B1801A!

Shell Fundamentals

Users, administrators, and programmers learn to:

- Create shell scripts that use conditional statements, arithmetic evaluation, and arrays
- Create shell scripts that read and write data from terminals and files
- Recall, edit, and re-issue previously entered commands

HP B2955A (3-4 hours)\$500

UNIX System: Managing the File System

System administrators learn to:

- Manage file systems on a UNIX system
- Understand file system structure
- Manage swap space
- Maintain file system integrity

HP B2809A (3-4 hours)\$500

UNIX System: Backup and Recovery

System administrators learn to:

- Perform a system backup and recovery on an HP-UX System
- Perform full and incremental backups and use SAM for backup and recovery

HP B3684A (3-4 hours)\$500

UNIX System: Managing Printers and Plotters

System administrators learn to:

- Connect and test printers and plotters
- Configure printers and plotters into the line printer spooler system
- Manage data flow
- Troubleshoot basic printer problems

HP B2967A (3-4 hours)\$500

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HP-UX is based on and is compatible with the UNIX operating system and complies with X/Open's XPG3, POSIX 1003.01, and SVID2 interface specifications.

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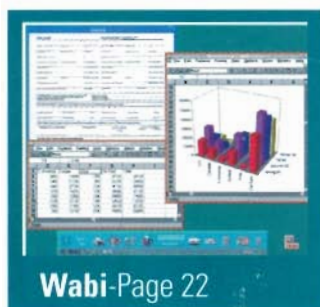


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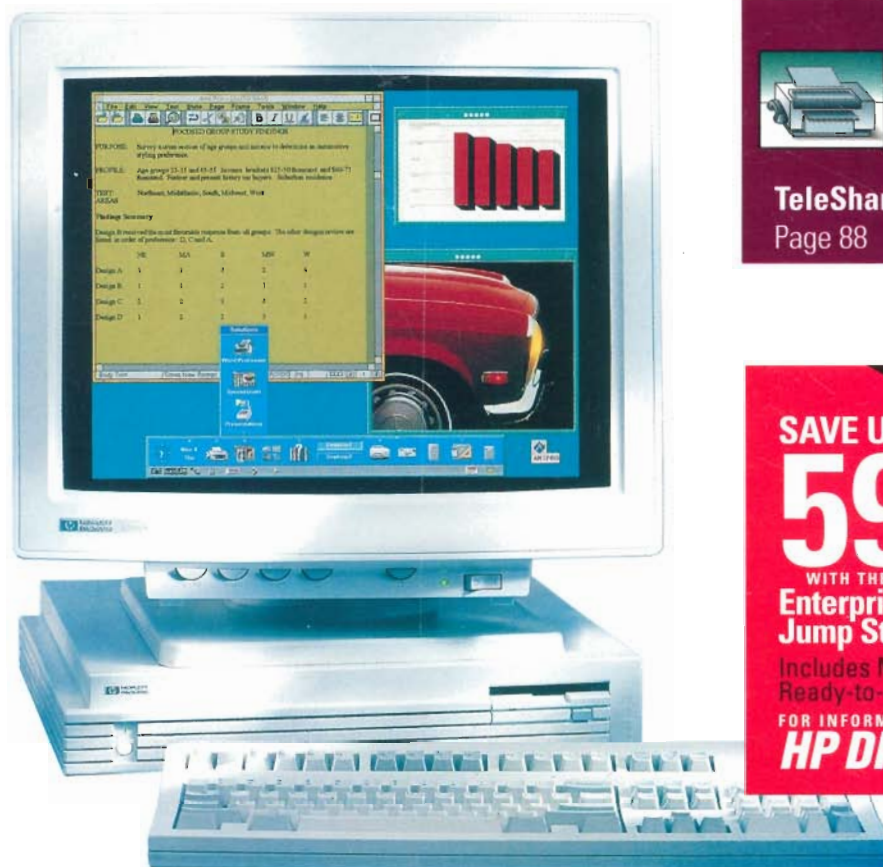
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