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Spring 1994

HP 3000 – right for today, ready for tomorrow!

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COMMUNICATION**
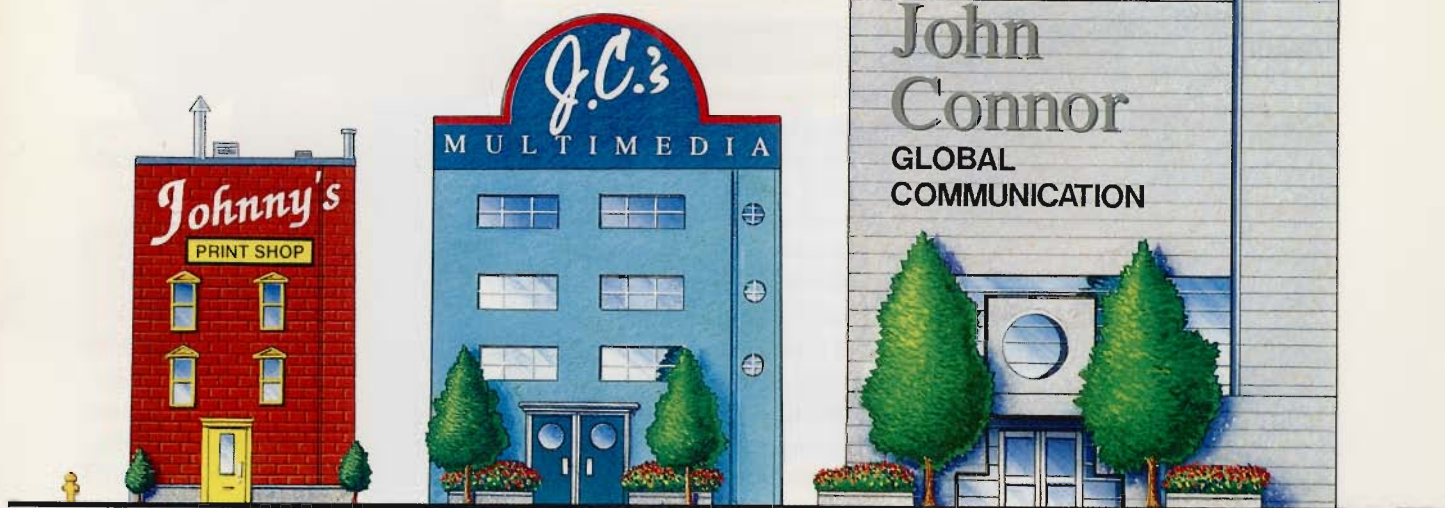
Make the right call today. **800.637.7740**
PRE-SALES TECHNICAL SUPPORT
EASY TOLL-FREE ORDERING

Welcome to the new HP 3000 catalog

This catalog is dedicated to the HP 3000 family of multi-user computer systems. New HP 3000 systems are built around the powerful, reliable Precision Architecture-Reduced Instruction Set Computing (PA-RISC) technology for worry-free business computing.

Demand MPE/iX for your client/server systems

As more businesses evolve toward client/server computing, they are discovering that MPE/iX-based servers can integrate with any client without sacrificing on line transaction processing (OLTP) performance.

Power for commercial computing

The HP 3000 is built for the rigors of commercial computing. Its broad range of high-performance systems can handle all types of commercial workloads—transaction processing, batch processing, reporting, and programming—concurrently. The MPE/iX operating system complements the hardware to exploit the performance potential of RISC for business computing.

High availability

Your business depends on its information systems, and accurate, available data is absolutely critical. The HP 3000's high availability begins with PA-RISC. The simplified PA-RISC design improves system reliability and increases mean time between failures to two and a half years.

HP 3000 hardware incorporates high-availability features such as error-correcting circuitry. On-line hardware diagnostics detect and report hardware and system faults during system operations—before they result in failure. The result? Nearly 100 percent uptime.

MPE/iX is an essential component of system reliability. MPE/iX resiliency features anticipate failures and act to prevent them before they happen. And if a software failure does occur, MPE/iX isolates it to minimize its effect on users and applications.

Easy to use

The HP 3000 operating system's user interface consists of simple, English-like commands, and the system offers extensive on-line help for quick reference to operating instructions. With the menu-driven interface available on low-end systems, non-technical staff often manage HP 3000 systems in remote offices. With its self-managing design, the HP 3000 takes over tasks typically performed by data processing staff in on-line transaction processing environments, reducing workloads as well as staffing requirements.

What comes to my mind about **HP DIRECT** *is the understanding of Hewlett-Packard products, the technical expertise, our people have. You shouldn't be leery about calling, because we're really concerned about getting you the right solutions.*

Dale Burkhart – **HP DIRECT**
Sales Support Engineer

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

Interoperable and open

The HP 3000 makes it easy to acquire and share information. Making connections among disparate systems, PCs, workstations, peripherals, and applications is fast and trouble-free. And for better integrated information, the HP 3000 provides access to a wide range of desktop tools to improve productivity.

HP's extensive multivendor experience and advanced networking products let you easily connect HP 3000 systems with IBM's or other vendors' environments—whether PC, midrange, or mainframe. This increases your ability to meet changing business demands and reduces your overall computing costs. The HP 3000's compatibility with the clients you work with preserves your investment and lets you offload processing to the desktop. And its support for graphical user interfaces ensures consistent access across systems and applications to improve productivity and cut training costs.

Solid business solutions

Thousands of application packages, including many for client/server computing environments, are available, thanks to HP's strategic alliances with the world's leading software makers. The HP 3000 supports applications of seven of the top eight worldwide multi-user software vendors, as rated by *Software Magazine*. These premier solutions allow you to run your business more efficiently and effectively.

Savings now ...

HP 3000 offers you lower overall cost of ownership than any competitive system on the market. Fewer components and higher reliability result in lower support costs. And since HP 3000 systems are smaller than competitive systems, they take up less floor space, consume less power, and require less cooling.

The savings associated with owning HP 3000 systems are repeatedly demonstrated by industry-standard TPC benchmarks. The HP 3000 won a special merit award from Datapro for its superior price-performance ratio.

...and down the road

To protect your investment, we've maintained full object code compatibility across all models during the entire history of our HP 3000 product line—even when we completely redesigned the hardware and operating system for PA-RISC. This commitment to complete compatibility assures you that applications created for HP 3000 systems today will run on future systems, for a cost-effective growth path you won't find with competitive systems.

> **The HP 3000 with MPE/iX offers open systems functionality competitive with the best of open systems from other vendors.**
>
> *Peter S. Schay – Vice President, The Gartner Group*

Most efficient I/O performance
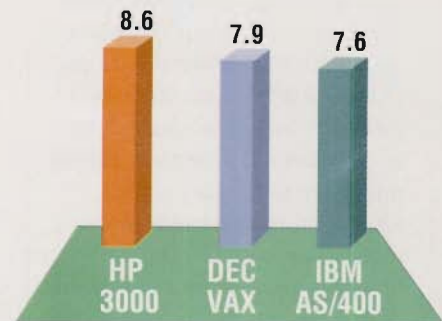
With performance greater than 90 percent of installed mainframes, the HP 3000 offers the power of MPE/iX combined with PA-RISC. Industry-standard TPC-A benchmark testing (a measure of interactive commercial throughput) shows that the HP 3000 outperforms IBM and DEC systems.
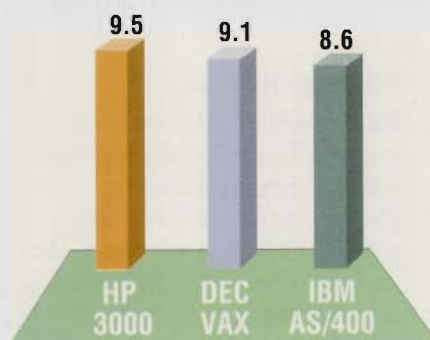
*-Buyer's Scorecard User Survey
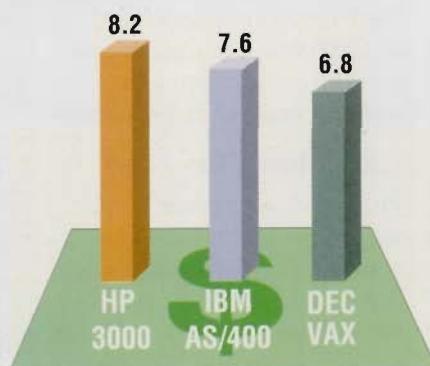Computerworld*

HP is your partner for success

Choose the full range of HP 3000 database, networking, systems management, training, and hardware products, and you've got a worry-free way to get your systems up and running quickly. You can count on HP when you implement a multivendor computing environment. Our strategic partnerships with key distributors, dealers, value-added businesses, systems integrators, and consultants ensure optimal system integration and investment protection.

You've come to know the value of our commitment to delivering only the highest quality, most reliable products and services— and to assuring your complete satisfaction with our solutions. Our high level of business integrity, technical innovation, and rock-solid financial stability, puts us in a unique position among computer companies. It means you won't find a long-term business partner more devoted to your success—or more capable of ensuring it.

Best system availability

9.5   9.1   8.6

HP 3000   DEC VAX   IBM AS/400

Best overall cost of ownership

8.2   7.6   6.8

HP 3000   IBM AS/400   DEC VAX

-Buyer's Scorecard User Survey
Computerworld

> *The money that it cost to go to the iX machines was worth everything we put into it, and more. The return is remarkable...the migration from the MPE V to MPE iX was relatively simple. To the users it was invisible.*
>
> Dale Reeder – Programmer/ Analyst, DYNO NOBEL Inc.

> *While many calls are inquiries about specific products, we offer fast access to technical answers. And, once things are sorted out, we make ordering very easy.*
>
> Sue Mills – **HP DIRECT** Sales Support Engineer

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.

800-637-7740

Corporate Discount

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

WE HONOR YOUR Corporate Discounts

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.

60 DAY Money-back Guarantee

N Products that have been introduced since our last catalog

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

HP FIRST Get product datasheets sent directly to your fax machine.

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 Wong—HP DIRECT General Manager

HP DIRECT
SMART PEOPLE
SMART PRODUCTS
SMART CALL

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.

800-637-7740
TECHNICAL SUPPORT
BEFORE YOU BUY

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.

WE HONOR YOUR Corporate Discounts

Same HP product warranties

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

Money-back guarantee

60 DAY Money-back Guarantee

We guarantee your complete satisfaction. Products returned within 60 days get a full refund. See page 55 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.*

(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!

HP FIRST 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.
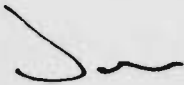
Call forwarding

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

> 66 *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.* 99

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

System Hardware

❝ *We're here to get you into the future. From your initial questions, to the final details, we take care of everything.* ❞

Don Gerber-**HP DIRECT**
Customer Representative

Big performance for small business—The new Series 9x8 servers harness the power of the HP PA-RISC 7100LC processor for small and medium-sized organizations.

Make the move to higher performance—Migrating to the 900 Series PA-RISC systems offers a variety of benefits, including up to 35 times the performance of the Series 70.

Upgrade for the power you need—When your work demands grow, your MPE/iX system can keep up every step of the way.

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HP FIRST
Datasheets on these products faxed to you
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Index #39994

HP Service and Support

HP Support options can now be ordered with every product 47

INTEGRATED SUPPORT
PUTTING IT ALL TOGETHER

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.

Worry-free business computing

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

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

	927LX	937LX 937RX 937SX	947LX 947RX 947SX	957RX 957SX	967RX 967SX	987RX 987SX	987/150RX 987/150SX	987/200 RX 987/200 SX	991 995/100	995/200 995/300 995/400 995/500 995/600 995/700 995/800
Typical Users	1-20	24-64	48-80 64-100	64-100 64-160	64-160 128-250	100-160 164-350	100-160 164-350	170-650	200-580	325-1300
Maximum Memory (MB)	192	192 384	192 384	192 384	192 512	768	768	768	2048	2048
Maximum Disk (GB)	40 98	40 68 98	40 68 98	68 98	68 98	68 98	120 250	120 250	2040	2040

Board/Package Upgrades ➡   Board Upgrades ➡

| **Relative Performance** | 1.0 | 1.0 | 1.0 | 1.6 | 2.0 | 3.2 | 4.5 | 6.0 | 2.8-4.2 | 6-20 |

⊞ Series 9x8 servers deliver big performance for small business

HP's new Series 9x8 servers provide ease of operation, a high degree of integration, and superior data availability—all at a competitive price.

These systems use the HP PA-RISC 7100LC processor and take advantage of new memory, disk, tape, and power protection technologies. The Series 9x8 also features a standard on-chip floating point coprocessor to handle applications that are computation-intensive.

Standard MPE/iX capabilities include an integrated transaction manager, print spooler, job scheduler, and other system management capabilities. Unlike UNIX and PC servers, these and other standard features are available with MPE/iX at no additional cost. An added bonus is the ease-of-use, which means you won't have to hire additional staff.
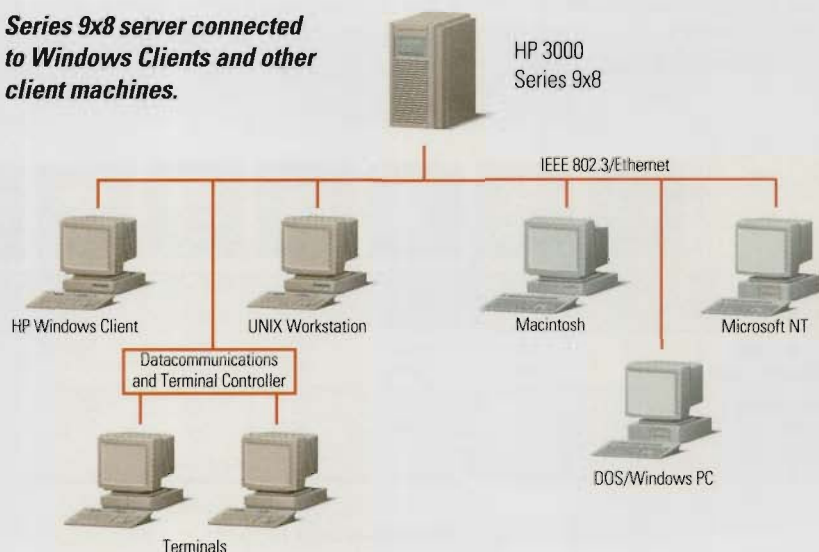
Ideal for client/server

In addition to superior on-line transaction processing capabilities, the HP 3000 Series 9x8 servers are ideal business servers. Need it up and running right away? The MPE/iX operating system as well as Novell NetWare, 802.3/Ethernet, and the IMAGE/SQL and ALLBASE/SQL database management software can be pre-loaded on the integrated disk. Factory integration offers you the fastest access to system applications once your system arrives onsite.

With Series 9x8, you've got plenty of clients that are supported. You can select from a wide range of clients, including DOS/Windows PCs, UNIX workstations, terminals, Microsoft NT, and more.

Here's a hot tip: The new HP Windows Clients are low-cost diskless 486 PCs that provide high data security and simple administration with centralized management of the client operating system, applications, and data. See page 17 for more information.

Series 9x8 server connected to Windows Clients and other client machines.

HP 3000
Series 9x8

IEEE 802.3/Ethernet

HP Windows Client   UNIX Workstation   Macintosh   Microsoft NT

Datacommunications
and Terminal Controller

DOS/Windows PC

Terminals

Ready to grow

If you're looking to migrate from your MPE V system to MPE/iX, the Series 9x8 servers offer a cost-effective opportunity. You can run existing applications on a new Series 9x8 servers and maintain your application expertise. Plus, you'll have access to all the new and modern capabilities available with the MPE/iX operating system. Since all HP 3000 900 Series systems are 100 percent object-code compatible, you'll never need to change applications or retrain staff.

Uninterruptible power supply is included

The Series 9x8 servers come standard with a 600 VA HP PowerTrust Uninterruptible Power Supply (UPS). It provides superior powerfail protection for the entire System Processing Unit (SPU) which includes the CPU board, main memory, the multi-function I/O card, all integrated internal peripherals, and the system console. If a power failure does occur, the system is designed to operate for up to 15 minutes without data loss.

Configuration information

The HP 3000 Series 9x8 LX/RX servers include main memory, an integrated disk drive, an integrated tape drive, a system console, an integrated SCSI/LAN/Console interface card, and an HP PowerTrust UPS. The HP 3000 MPE/iX operating system and any HP networking or database management software ordered with the SPU can be pre-loaded on the integrated disk prior to shipment. The LX models have 2 slots and the RX models have 4 slots.
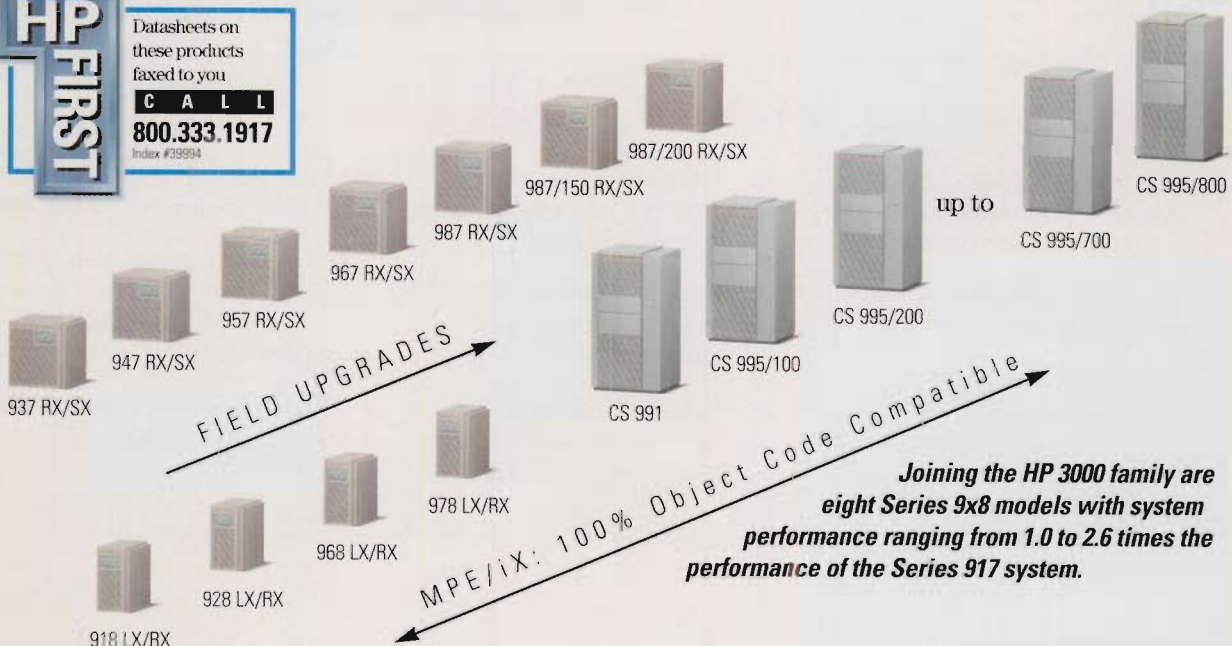
Seamless, modular upgrades allow you to increase memory, system performance, I/O expandability, and software user license levels with ease while protecting your initial investment.

Series 9x8 Ordering Information

Model	Product Number
918 LX/RX	A3096AW
928 LX/RX	A2934AW
968 LX/RX	A2933AW
978 LX/RX	A3129AW

> " 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 Coyle -
HP DIRECT Customer Representative

Datasheets on these products faxed to you
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Index #39994

937 RX/SX
947 RX/SX
957 RX/SX
967 RX/SX
987 RX/SX
987/150 RX/SX
987/200 RX/SX
CS 991
CS 995/100
CS 995/200
CS 995/700
CS 995/800
up to

918 LX/RX
928 LX/RX
968 LX/RX
978 LX/RX

FIELD UPGRADES

MPE/iX: 100% Object Code Compatible

Joining the HP 3000 family are eight Series 9x8 models with system performance ranging from 1.0 to 2.6 times the performance of the Series 917 system.

800.637.7740

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

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

Simple migration means no interruption to your business

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

True investment protection

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

Our Migration Toolset helps get rid of the guesswork

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

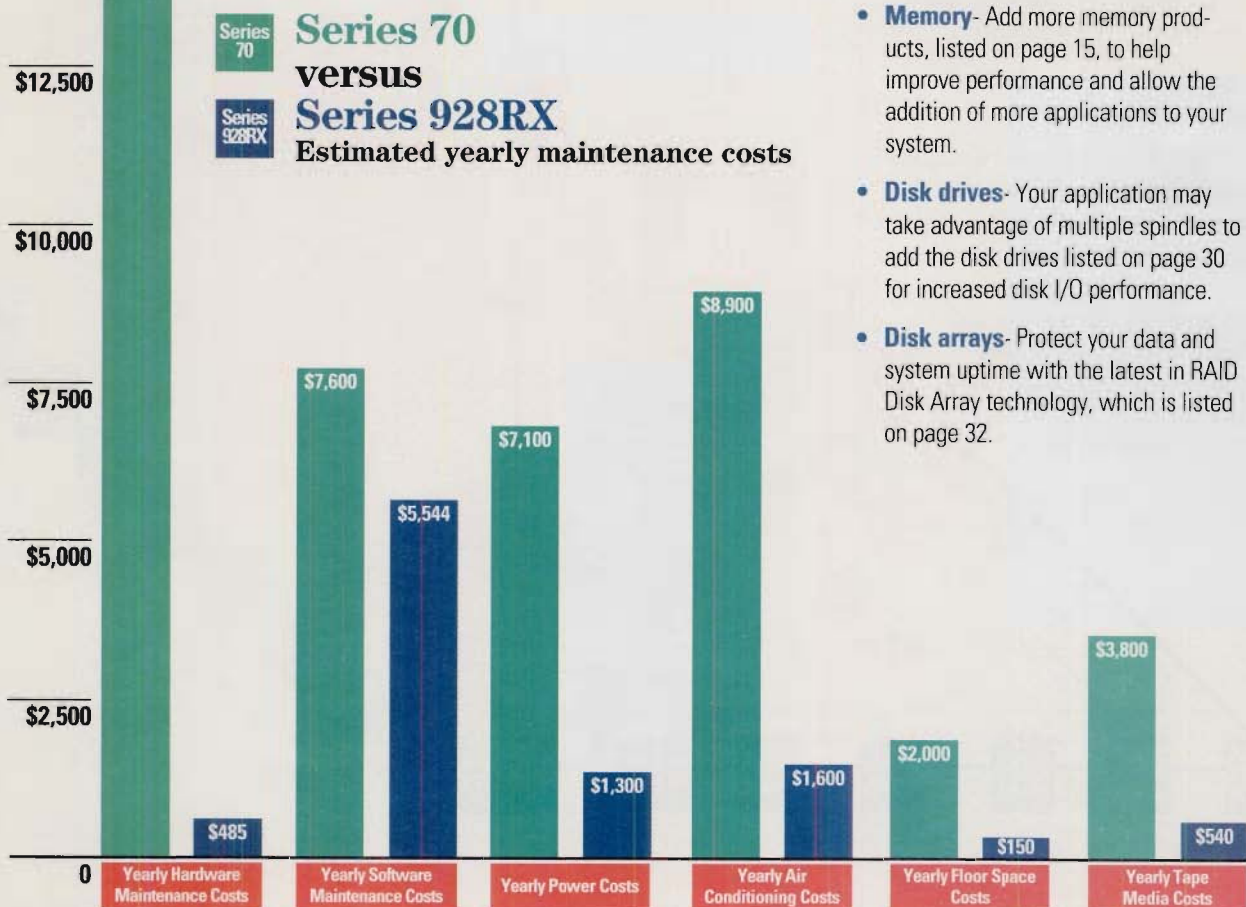32428A **$100**

Nine reasons why you should upgrade today

1. Savings of up to 80% in annual operation and maintenance costs.

2. Up to ten times increased performance.

3. More cost-effective, reliable, and advanced peripherals supported.

4. More attractive, cost-effective future board and chassis upgrades.

5. Increased connectivity of terminals, disks, and printers.

6. Increased system uptime with high availability options offering up to 99.5% uptime.

7. Access to POSIX compliant software.

8. Better programmer support tools included in databases such as ALLBASE/SQL and IMAGE/SQL.

9. Relational technology with IMAGE/SQL.

Migrate now and save more than $40,000 a year

HP's 900 Series offers more than great performance. Migrating to the 900 Series also makes good economic sense. This chart shows how quickly your savings could add up when you migrate from a Series 70 system to a Series 928RX server. You could save over $200,000 over five years. That's an average yearly savings of over $40,000.

Estimated savings with the Series 928RX over 5 years

Hardware Maintenance	$87,575
Software Maintenance	$24,672
Power	$29,000
Air Conditioning	$36,200
Floor Space	$9,040
Tape Media	$16,100
Total	**$202,587**

Series 70
versus
Series 928RX
Estimated yearly maintenance costs

Bar chart comparing Series 70 versus Series 928RX estimated yearly maintenance costs:
- Yearly Hardware Maintenance Costs: $18,000 vs $485
- Yearly Software Maintenance Costs: $7,600 vs $5,544
- Yearly Power Costs: $7,100 vs $1,300
- Yearly Air Conditioning Costs: $8,900 vs $1,600
- Yearly Floor Space Costs: $2,000 vs $150
- Yearly Tape Media Costs: $3,800 vs $540

Series 70 to Series 928RX Benefits

A cost savings of more than $200,000 over five years is just the beginning of your benefits when you upgrade from a Series 70 to a Series 928RX. With your savings, you'll have room in your budget to add additional products, many of which are not available on HP's classic systems. Here are just a few of these products:

- **Back-up devices**- Save on back-up time and resources by using HP's TurboStore products, which are listed on page 40, and additional devices such as the DAT drives on page 33 and the 1/2-inch tape drives on page 34.

- **Networking software**- Netware/iX software, listed on page 26, helps integrate and manage PC LANs and resources.

- **Memory**- Add more memory products, listed on page 15, to help improve performance and allow the addition of more applications to your system.

- **Disk drives**- Your application may take advantage of multiple spindles to add the disk drives listed on page 30 for increased disk I/O performance.

- **Disk arrays**- Protect your data and system uptime with the latest in RAID Disk Array technology, which is listed on page 32.

HP 3000 900 Series upgrades for the power your work demands

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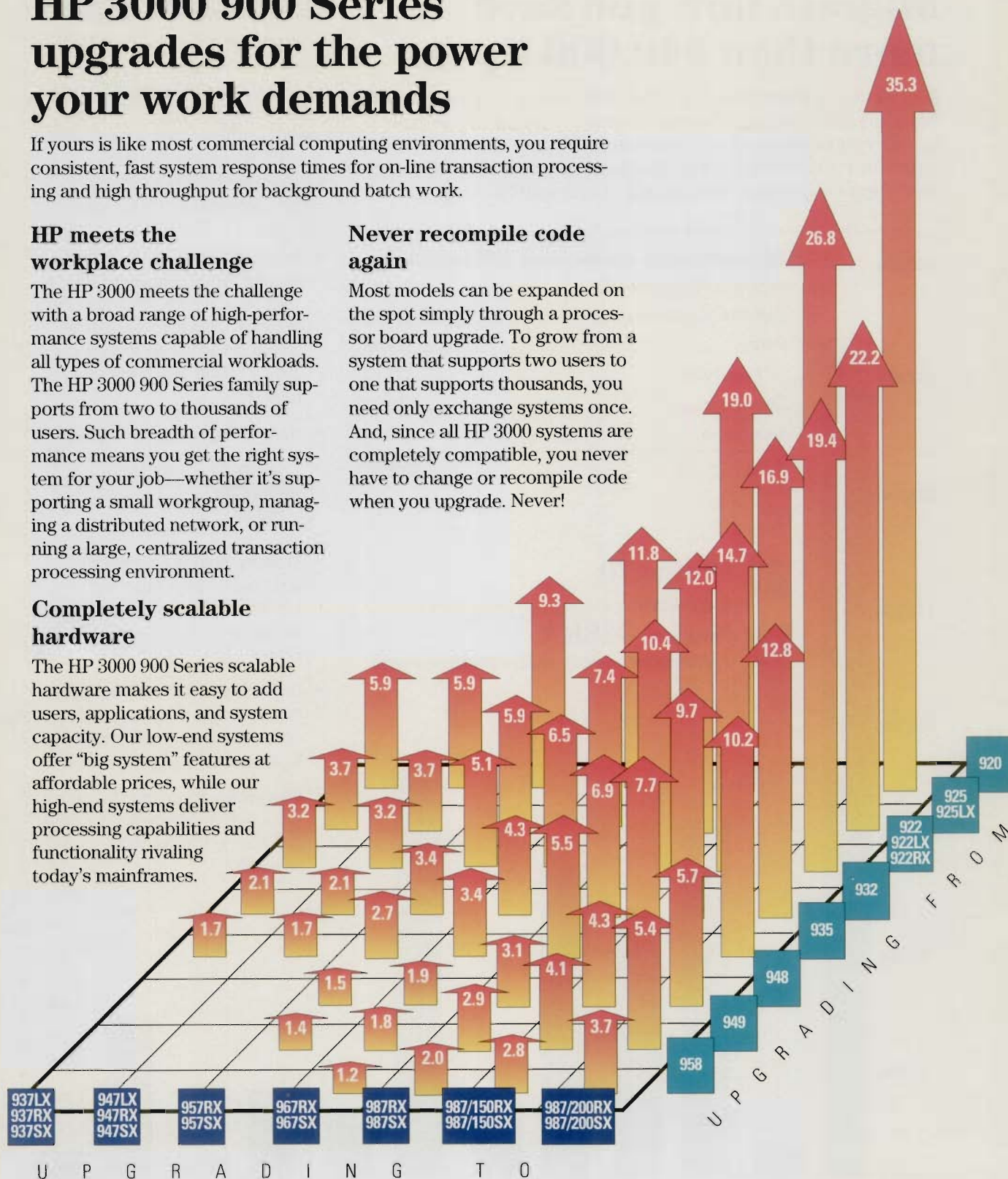
HP meets the workplace challenge

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

Completely scalable hardware

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

Never recompile code again

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

Upgrading from (columns): 920, 925/925LX, 922/922LX/922RX, 932, 935, 948, 949, 958

Upgrading to (rows): 937LX/937RX/937SX, 947LX/947RX/947SX, 957RX/957SX, 967RX/967SX, 987RX/987SX, 987/150RX/987/150SX, 987/200RX/987/200SX

Performance increase values: 35.3, 26.8, 22.2, 19.0, 19.4, 16.9, 11.8, 14.7, 12.0, 9.3, 10.4, 12.8, 5.9, 5.9, 5.9, 7.4, 9.7, 10.2, 6.5, 5.7, 3.7, 3.7, 5.1, 6.9, 7.7, 3.2, 3.2, 4.3, 5.5, 5.4, 4.3, 2.1, 2.1, 3.4, 3.4, 3.1, 4.1, 1.7, 1.7, 2.7, 2.9, 3.7, 1.5, 1.9, 2.8, 1.4, 1.8, 2.0, 1.2

Performance increase when upgrading to the latest 900 Series

You've got three ways to upgrade

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SUPPORT

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

1. **Processor board upgrades** increase system performance. Your current processor board must be returned to HP.

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

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

WE HONOR YOUR
$ Corporate Discounts

Or upgrade all three ways

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

Upgrading is as easy as "store and restore"

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

- **Faster processing and response**
  With a significant increase in performance, your system will provide faster processing and faster response times.

- **No downtime**
  Complete application compatibility means no downtime is required for upgrades.

- **Save money on peripherals**
  And support for industry-standard SCSI peripherals allows you to take advantage of faster, less expensive peripherals.
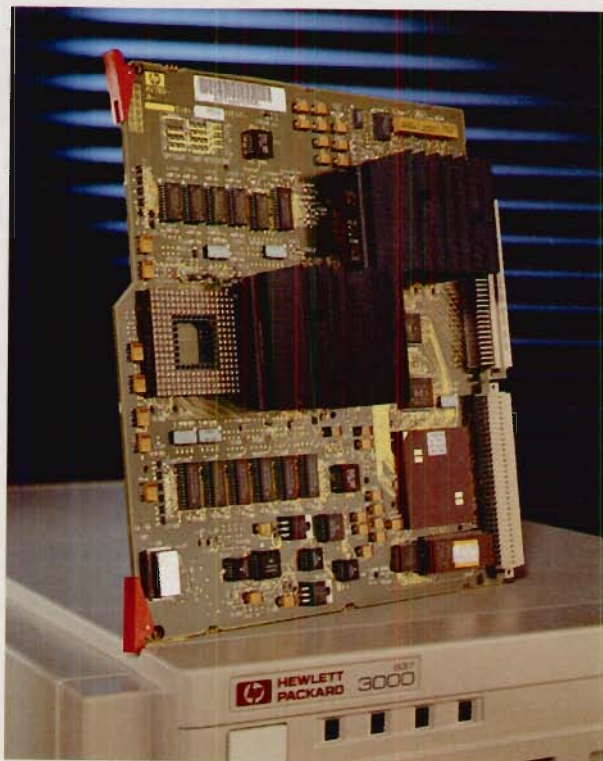
HP 3000 processor board

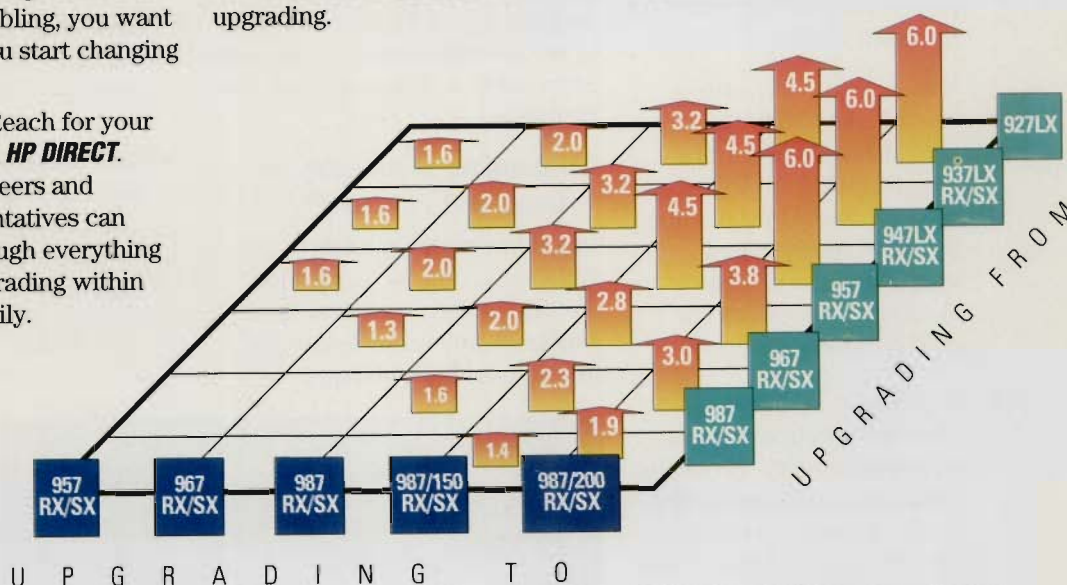# *HP DIRECT* has the answers when it comes to upgrades

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

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

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

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

TECHNICAL
BEFORE YOU BUY
800-637-7740
SUPPORT

Performance increase when upgrading within HP 3000 Series 9x7s

UPGRADING TO: 957 RX/SX, 967 RX/SX, 987 RX/SX, 987/150 RX/SX, 987/200 RX/SX

UPGRADING FROM: 987 RX/SX, 967 RX/SX, 957 RX/SX, 947LX RX/SX, 937LX RX/SX, 927LX

Performance increase values: 1.6, 2.0, 3.2, 4.5, 6.0, etc.

Answers to Common Upgrade Questions

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

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

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

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

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

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

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

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

Realize your system's potential by adding memory

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

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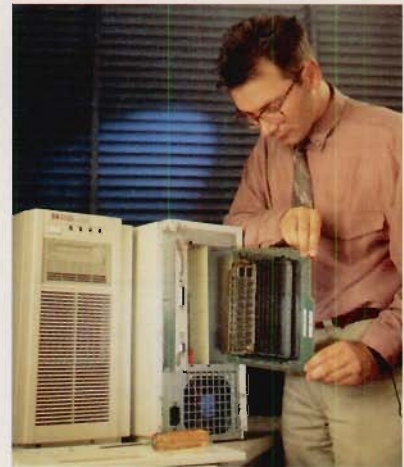
HP memory delivers performance on demand.

> *I'm here to help you understand what's available and what's best for you. At HP DIRECT, our goal is to develop the system that will best meet your business needs.*

Melissa Dare-
HP DIRECT
Customer Representative

Series 9x7LX and 9x7

Description	Product Number	Price
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

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

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

Series 925LX, 925, 935, 949

8 MB ECC memory board (remanufactured)	A1010AR	$4,000
16 MB ECC memory board (remanufactured)	A1037AR	1,200
32 MB ECC memory board (remanufactured)	A1623AR	5,800

Series 95X, 960

Memory Controller	A1103A	$12,600

Series 95X, 960, 980

16 MB ECC memory board	A1104A	$15,000

Series 980

64 MB ECC memory board	A1152A	$57,100

User Input Devices

> *We offer a more personalized service. Call us and find out how easy HP DIRECT can make your job.*

*Veronica Kunis-**HP DIRECT***
Order Management
Representative

Get more graphic performance–The new HP Windows Client Model 433SX contains a video subsystem that offers you 300% more graphics performance.

Client Products and Terminals

800-637-7740

Money-back Guarantee

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HP Service and Support

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When ordering HP Support:

1. **Choose the hardware support you want**
   - Same-day response, *7 days a week*
   - Four-hour response, *Monday through Friday*
   - Next-day response, *Monday through Friday*

2. **Choose the software support you want**
   - License-to-use updates
   - Telephone support

3. Call **HP DIRECT** and we'll make sure your support matches your requirements.

HP Windows Client offers even more graphic performance

The new Model 433SX combines the power of a 486 PC and the system control of a terminal and adds a video subsystem that delivers a 300% increase in graphics performance!

The Model 433SX joins the Model 425SX to broaden the HP Windows Client family. These low-cost LAN-attached, intelligent desktops provide high performance client solutions that are perfect alternatives to text terminals. The Windows Client merges a powerful 486 network-ready computer with MS-DOS 6.0, MS Windows 3.1, and Reflection for Windows terminal emulation and networking software from Walker, Richer & Quinn (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.

60 DAY Money-back Guarantee

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.

Low-cost and enhanced reliability through single board design

Integrated, fast, bus-mastering LAN

Integrated local bus video interface

4 MB memory standard, expandable to 36 MB

High performance 486 processor

Silent convection cooling

Small footprint, low-profile design
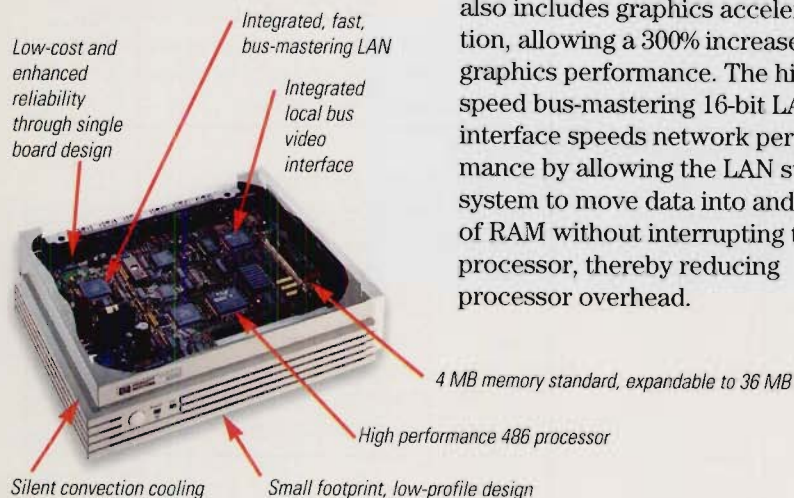
HP Windows Client Standard Features

PC functionality

CPU	25 MHz or 33 MHz, 32-bit Intel 486SX microprocessor
Cache	8K internal cache memory
Integrated I/O	Parallel port: Centronics (25-pin) for external printer, plotter, or floppy disk
	Serial port: RS-232C (9-pin) for modem and printer connection (Serial/parallel ports can be disabled)
	Mini-DIN keyboard & mouse ports
	15-pin VGA connector
Clock/ Calendar	With battery backup

Network features

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

Network requirements

LAN	Ethernet/IEEE 802.3
Server	HP 9000 Series 800 with Portable NetWare 3.11 or later
	PC server with NetWare 3.11 or later
Servers supported	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

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

Internal memory

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

Video subsystem

Ultra VGA	Integrated local-bus Ultra VGA with hardware cursor and color expansion. 512 KB or 1 MB of video RAM
Video Drivers	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	800 x 600	256	64 K
	640 x 480	256	16.7 M
	1024 x 768	16	256
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

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

Energy efficiency

SPU Power consumption	25 W maximum (EPA energy star)

Acoustics LpA<25dB, no fan installed

HP Windows Client Server Kit* Features

The server kit provides 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

Features	Benefits

Simplified system management

PC software is installed on the server	• 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	• 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	• Fast, easily automated, reliable back-up
	• Allows high availability approaches to data storage
System Administrator can require password prior to application or data access	• System administrator controls access to files
System Administrator loads software on server	• Reduced risk of virus introduction
	• Sensitive data can not be taken from the system by downloading to floppy disks
	• Fewer configuration and support problems

This simple three-step process makes ordering easy.

Step 1 — Choose the product number for the base configuration and monitor choice you want. The base configuration includes 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 Color VGA	C3403A	1,225
14-inch Super VGA	C3404A	1,325
14-inch Ergonomic Ultra VGA	C3405A	1,445
15-inch Ergonomic Ultra VGA	C3406A	1,625
17-inch Ergonomic Ultra VGA	C3407A	2,125

Model 433SX Ordering Information

Description	Product Number	Price
425SX to 433SX SPU upgrade*	C3410A	$ 595
With no monitor	C3411A	1,045
14-inch Color VGA	C3413A	1,375
14-inch Super VGA	C3414A	1,475
14-inch Ergonomic Ultra VGA	C3415A	1,595
15-inch Ergonomic Ultra VGA	C3416A	1,775
17-inch Ergonomic Ultra VGA	C3417A	2,275

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

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.

Additional Memory

Description	Option Number*	Product Number**	Price
4 MB SIMM	002	C3491A	$ 225
8 MB SIMM	003	C3492A	470
16 MB SIMM	004	C3493A	1,095

* 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.

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INTEGRATED SUPPORT
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Now you can order support along with your product. See page 47.

The clear advantage

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

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

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

Data Communication Specifications

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

Physical Characteristics

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

Terminals Ordering Information

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

Networking Solutions

Rely on HP's standards-based networking products. You'll enjoy transparent access to enterprise-wide information, investment protection, and greater ease-of-use. Using HP's networking solutions will help you streamline your organization's operations.
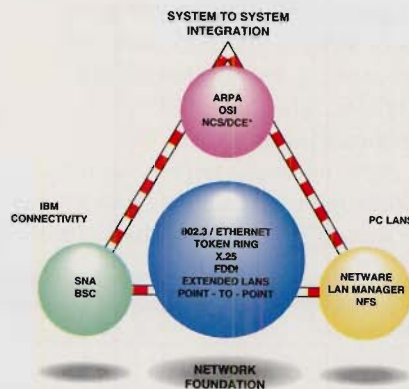
SYSTEM TO SYSTEM
INTEGRATION

ARPA
OSI
NCS/DCE*

IBM
CONNECTIVITY

PC LANS

802.3 / ETHERNET
TOKEN RING
X.25
FDDI
EXTENDED LANS
POINT - TO - POINT

SNA
BSC

NETWARE
LAN MANAGER
NFS

NETWORK
FOUNDATION

Networking Hardware

Networking Software

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Datasheets on these products faxed to you
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Index #39992

Helpful Hints

When you order networking products:

- Briefly review your networking needs so we can make certain you are ordering only what you need. Let us know what you expect from this solution.

- Let us know your current configuration—your computer systems, their operating system versions and peripherals, such as printers.

HP's DTC family

Hewlett-Packard presents a versatile family of Datacommunications and Terminal Controller (DTC) products that deliver today's exciting new Terminal Server technologies at competitively low prices. Our DTCs are based upon a hardware architecture that yields the industry's best terminal server performance.

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

DTC 16MX

The DTC 16MX is a high performance 16-port terminal server for HP 3000 900 Series servers. 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, 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 1AC	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

DTC 16iX

The DTC 16iX is a LAN-attached asynchronous multiplexer for a single HP 3000 900 Series system which requires low port count or distributed connectivity. It is designed for ease of use, and simple system and network integration. The DTC 16iX features 16 RS-232 direct or modem ports, or RS-423 ports, and has the same package as the HP Ethertwist hubs, bridges, and routers. It delivers high performance in a compact, flexible package, using a standard 19-inch chassis. It comes with two 8-port compact RJ-45 breakout boxes for use with a simple and low-cost cabling. The DTC 16iX is designed to be a "plug & play" product, including a very easy installation process, auto-sensing of LAN attachment, and complete self tests. The DTC 16iX may be managed from a host-based or PC-based platform and supported on an SNMP agent.

DTC 16iX Ordering Information

Description	Product/Option Number	Price
DTC 16iX async multiplexer with 16 RS-232 or RS-423 ports	J2062A	$2,160
Replace 8 RJ-45 direct port with 8 DB-25 modem ports (you may order one or two)	Opt UG5	300
Replaces 16 RS-232-C ports with 16 RS-423 ports (you may order only one)	Opt UG4	600
Racking kit for 1100 mm and 1600 mm computer racks	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

DTC 72MX

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

Features

- LAN-based communication server supporting the standard Telnet-TCP/IP protocols plus HP optimized high performance protocols for demanding OLTP applications in HP 3000 900 Series 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 Series 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 supported on 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	10,300
Replace 8 RJ-45 direct ports with 8 DB-25 modem ports	Opt UG5	300
Replace 24 RJ-45 direct ports with 24 DB-25 modem ports	Opt UG6	900
Configure with 24 RS-423 direct connect ports with RJ-45 connectors	Opt UG4	4,300
Racking kit for 1100 mm and 1600 mm computer rack	Opt 1AC	N/C
Modem racking kit for up to 5 MDPs, rear mounting	C2792A(Z)	N/C
Modem racking kit for up to 5 MDPs, front mounting	J2084A(Z)	300
Modem racking kit for up to 10 MDPs, rear/front mounting	J2087A(Z)	450

60 DAY Money-back Guarantee

" *People need answers fast. We're at your service. When your sales rep's not around, we're here.* "

Kelly

Kelly Yee-
HP DIRECT
Sales Support
Engineer

Modem

Codex 3500 Standalone DSU/CSU

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

CODX-3500..$750

Features

- Supports wide range of digital transmission speeds: 2.4, 4.8, 9.6, 19.2 and 56 Kbps

- Unique rate adaptation function allows use of lower priced digital services

- Enables diagnostic testing of local and remote units in both point-to-point and multipoint configurations

- Integral timing buffer reduces data errors caused by timing variations between different digital services

- Supports asynchronous to synchronous conversion up to 19.2 Kbps

HP delivers industry standards networking links

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

FOR CURRENT PRICING OF **SOFTWARE** CALL **HP DIRECT**

" Any time you need accurate information in a speedy manner, count on us. We also provide an easy way to place your order."

Dan Burke–
HP DIRECT
Call Support Center Manager

LAN

ThinLAN 3000/iX Network Link

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

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

Token Ring 3000/iX Network Link

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

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

WAN

X.25/iX System Access

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

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

HP FIRST
Datasheets on these products faxed to you
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Index #39992

+ + + + +
Now you can order support along with your product. See page 47.

INTEGRATED SUPPORT
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Access the world with HP communication products

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

FOR CURRENT PRICING OF SOFTWARE CALL **HP DIRECT**

Telnet Access iX Card

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

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

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

HP ARPA File Transfer Protocol/iX

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

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

Other HP 3000 Server-to-server Products:

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

IBM Communication

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

- HP 3000 SNA IMF, which provides 3270 emulation for interactive communication with IBM Systems

- HP 3000 SNA DHCF (Distributed Host Command Facility), which gives IBM users interactive access to HP 3000 systems

- HP 3000 SNA/NRJE and BSC RJE, which provide batch access to IBM systems

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

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

☎ **Interested in these products?**
Call **HP DIRECT** for consultation with a technical engineer.

Protect your investment: integrate into your existing PC network

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

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

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

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

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

J2246A **$395**

NetWare iX

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

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

NetWare iX Trial Copy

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

Available on: Systems	Op Sys	Base Product Number	Price
HP 3000 900 Series	MPE/iX	J2253A	**FREE**

Resource Sharing/iX

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

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

LAN Manager/iX

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

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

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.

This product uses HP PerfView Analysis software (available only on HP 9000 systems) and HP PerfView Agent software.

HP PerfView Agent Software

Available on Systems:	Op Sys	Base Product Number
HP 3000 900 Series	MPE/iX	H5291A

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.

Available on Systems:	Op Sys	Base Product Number
HP 3000 900 Series	MPE/iX	50700B

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 3000 900 Series	MPE V/iX	B1764B

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

HP GlancePlus is available for all HP systems and Sun SPARC systems.
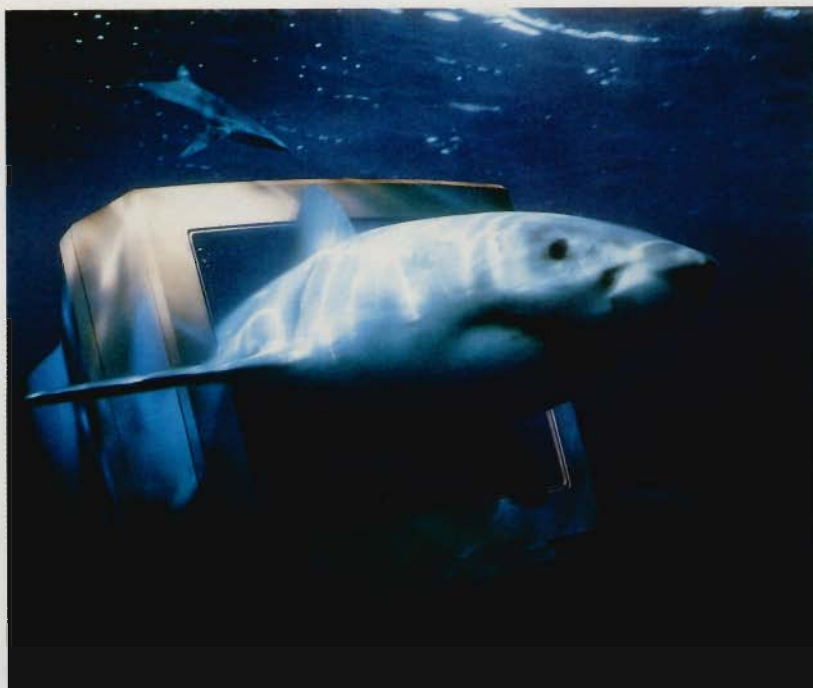
Available on Systems:	Op Sys	Base Product Number
HP 3000	MPE V	50733B
HP 3000 900 Series	MPE/iX	B1787B

HP GlancePlus Pak

This performance tool offering includes HP GlancePlus software and the patented HP Performance Collection Software. So, in one convenient product, you'll enjoy both online diagnostic and long-term performance data collection capabilities.

Available on Systems:	Op Sys	Base Product Number
HP 3000	MPE V	B2954A
HP 3000 900 Series	MPE/iX	B2953A

FOR CURRENT PRICING OF SOFTWARE CALL HP DIRECT

Mass Storage & Printers

Get more storage now–Call **HP DIRECT** to order upgrade kits that can increase the storage capacity of your disk arrays.

Laser quality **and** speed–HP's new 5000 printers put speed in your computer room at a very low price.

" When new technologies are introduced, it's fun. It's exciting for me, because I get to tell people all about it. The people here are eager, understanding, patient, and very friendly! "

Benny

Benny Rodriquez - **HP DIRECT** Customer Representative

Computer Museum

HP Service and Support

INTEGRATED SUPPORT
PUTTING IT ALL TOGETHER

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.

TECHNICAL
BEFORE YOU BUY
SUPPORT
800-637-7740

60 DAY
Money-back Guarantee

WE HONOR YOUR
$ **Corporate Discounts**

More than 20% faster average access times

HP SCSI disk drives
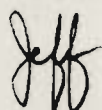
The HP Series 6000 Mass Storage systems offer increased capacity, performance, and reliability for HP systems. This new generation of disk drives has twice the reliability of previous products. Enclosure options provide either a compact minitower that is suitable for desktop use, or a 325-mm wide enclosure that allows easy rackmounting in HP Design Plus or 19-inch EIA cabinets. Either enclosure integrates the following high-performance SCSI devices:

- 2 GB 5.25-inch full-height SCSI-2 disk drive
- 1 GB 3.5-inch half-height SCSI-2 disk drive
- Up-to-8GB half-height DDS-format DAT drive with data compression
- 2 GB half-height DDS-format DAT drive
- 600 MB half-height CD-ROM drive

The minitower system has seven half-height slots that can be configured with a combination of devices.

The rackmount version can have up to four half-height devices, plus one half-height disk, or three full-height devices.

Support for HP 3000 900 Series	
System	**Support**
900 Series	MPE/iX 4.0*

* Software patch required for diagnostic and predictive support

> **Everybody's got different needs. We take the time to sort them out and solve each problem.**

Jeff

Jeff Byrnes-
HP DIRECT
Customer
Representative

Fast Wide Drives

Designed and manufactured by HP, these SCSI-2 disk drives offer 10.5- and 11.5-ms average seek and up to 20 MB/s channel transfer rate. This rate is four times as fast as single-ended drives and twice as fast as the earlier fast narrow drives. Fifteen disks per SCSI bus are supported, compared with seven for earlier products.

Features

- Up to 7 GB of disk storage: an increase from the 4.6-GB maximum of previous storage systems.
- Easy-to-order, preconfigured storage systems: preconfigured with four or two 2 GB disks.
- Same minitower enclosures: floor-standing minitower enclosures house up to seven half-height enclosures.
- Fast wide support on 900 Series planned with MPE/iX 5.0.

> " 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 Rouhi - **HP DIRECT** Order Management Representative*

SCSI Disk Drives Ordering Information†

Description		Product Number	Price
Disk Drives 900 Series Servers S/9x7 & S/99x			
4.0	1 GB disk	C3022R or C3022T	$ 3,945
4.0	2 GB disk	C3023R or C3023T	6,250
4.0	2 x 2 GB disk	C3024R or C3024T	10,650
4.0	1 x 2 GB disk	C3040R or C3040T	5,450
4.0	2 x 2 GB disk	C3041R or C3041T	9,050
Fast Wide Mass Storage Systems [1]			
Planned	2 GB disk	C3033T	6,700
Planned	2 x 2 GB disk	C3034T	11,550
Expansion Kits			
Disk	1 GB disk	C3027U	2,200
	2 GB disk	C3028U	4,400
DAT	2 GB DAT	C2477U	2,650
	8 GB DAT	C2478U	2,500
CD-ROM	600 MB CD-ROM	C3560U	1,250
Fast Wide Disk	2 GB expansion kit	C3038U	4,850
HP-PB Interfaces			
Peripheral Interfaces	Single-Ended SCSI-2	28642A	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, single-ended	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 [2]	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

† *Suffixes: T= minitower, R= rackmount, U= upgrade kit.*
[1] *Option 001 specifies workstation firmware and must be ordered on most products.*
[2] *All capacities are increased with data compression.*

Digital Data Storage Cartridges

HP DDS cartridges are enhanced for the Media Recognition System, offering an extra measure of security by enabling your new HP DDS drive to differentiate between DDS and DAT. This means you are protected from inadvertently writing valuable data to inferior DAT media.

100% GUARANTEED HP COMPATIBLE

Data protection, increased capacity, and RAID mode protection

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.

Interested in these products?

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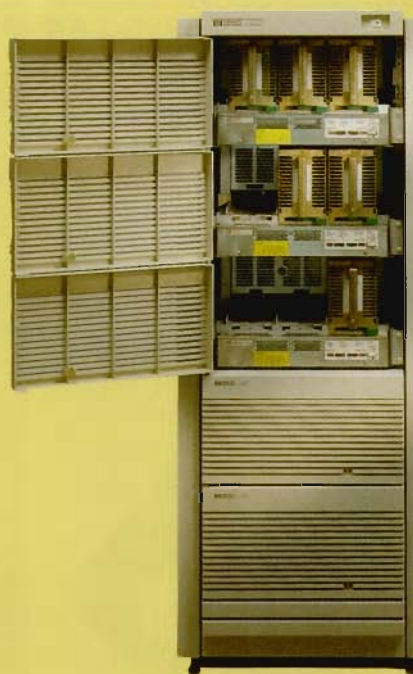
HP Disk Arrays

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 5.25-inch 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 with the purchase of 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 the MPE/iX systems.

Disk Array Upgrade Kit Ordering Information			
Description	Base Model Number	Product Number	Price
1 x 1.3-GB disk	C2252xx C2254xx	C2251A	$6,305
1 x 2 GB disk	C2258xx C2259xx	C2257A	7,702

Gigabytes of unattended backup

These 4mm Digital Audio Tape (DAT) drives provide you with the high capacities to meet the increasing demands of Hewlett-Packard high performance workstations, network servers, and multi-user systems. 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 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 will store typically 8 GB (up to 16 GB) of data on a single 120m DDS-2 cartridge. The transfer rate of the Model 4000DC is almost three times faster than the Model 2000DC providing an effective transfer rate of around 4 GB/hour with data compression.

Model 2000 DC

The Model 2000 DC uses data compression to provide additional performance and capacity. Typically it delivers 4 GB of unattended backup (up to 8 GB) using a single 90m DDS cartridge and the industry standard method of data compression (DCLZ) GB/hour.

The transfer rate of the Model 2000DC is typically around 1.5 GB/hour with data compression, although effective transfer rates of up to 2.5/3 GB/hour can be achieved. (Backup performance and capacity are dependent on the host system and the type of data being backed up.)

DAT Drives Ordering Information

Description/ Model Number	Formatted Capacity	Interface	HP 3000 Systems S/900 MPE/iX	HP 3000 Systems S/9x8 MPE/iX	Product Number	Price
2000	2.0 GB	SCSI-2	4.0	4.5	C1520B	$2,495
2000DC	up to 8.0 GB	SCSI-2	4.0 [2]	4.5	C1521B	2,950
🔶 4000DC	8/16 GB	SCSI-2	planned	planned	C1530B	3,650

[1] Cables included (K2296)

[2] Supported on HP 3000 NIO systems, to read/write up to 8 GB order option number AG9. CIO systems supported: 920, 922, 932, 948, 958, 925, 935, 949, 950, 955, 980, 9X7S, 990 and 992.

DDS 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.

DDS Media Ordering Information

Description	Product Number	Price
DDS cartridges		
60 meter, 4mm, 1.3 GB capacity DDS cartridge (box of 5)	92283A	$75
90 meter, 4mm, 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 for all DDS drives (box of 2)	92283K	26

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

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

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PUTTING IT ALL TOGETHER

Now you can order support along with your product. See page 47.

1/2-inch Magnetic Tape Drive Ordering Information

HP 3000 Systems

Description/ Model Number	Storage Capacity	Interface	Classic MPE V	S/900 MPE/iX	S/9x7 MPE/iX	Product Number	Price
HP 7979A	1600-bpi	HP-IB	UB-Delta3 V-MIT	Yes	3.1	7979A	$13,400
HP 7980A	1600/6250-bpi	HP-IB	UB-Delta3 V-MIT	Yes	3.1	7980A	22,200
HP 7980S	1600/6250-bpi	SCSI	No	No	4.0 {2}	7980S	18,500
HP 7980SX	1600/6250-bpi [1]	SCSI	No	No	4.0 [2]	7980SX	21,000
HP 7980XC	1600/6250-bpi [1]	HP-IB	UB-Delta3 V-MIT	Yes	3.1	7980XC	24,700

[1] With data compression.
[2] Available on 4.0 plus patches

Ordering Information

Description	Product Number	Price
HP High-Density Cartridges [1]		
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 [2]	92245L	$239/box
32 MB tape cartridge [2]	92245S	189/box
HP cleaning cartridge kit for HP 9144, 9145, 9142A, and 35401A 1/4-inch tape drives	92281C	45
Replenish kit	92281D	13
HP Brand Magnetic Tape [3]		
600 ft/reel	92150D	$135/box
1200 ft/reel	92150E	175/box
2400 ft/reel	92150F	229/box

HP Media

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.

100%
GUARANTEED
HP COMPATIBLE

[1] Each box contains 5 tape cartridges. Tapes are pre-certified for use with HP 7908/11/12/14, 9144A, 7942A, 7946A, and 35401A tape drives.

[2] Each box contains 5 pre-certified and formatted cartridges.

[3] Each box contains ten reels with seals.

Ⓝ 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

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, call **HP Direct**.

HP knows how to make an impact

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.

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 printer responds to your actual 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 the 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.

HP2566/67C

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.

N 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 for 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

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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

lpm = lines per minute   PPM=pages per month

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	☎
N 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)	—	☎

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.

Upgrade Kits Ordering Information

Description	Product Number	Option Number	Price [3]
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	60
I/O upgrade for discontinued printers	C2343A	—	1,249
Character sets (a number of character sets are available for all line impact printers)	26761B	—	☎

Notes:

[1] HP JetDirect EX Interface J2382B must be ordered. For HP 9000, order J2374A. For HP 3000 systems, order NBSPOOL software from QUEST Soft. See list of third-party vendors on this page.

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

[3] 4 cpi standard, for 11.3 cpi, order #048.
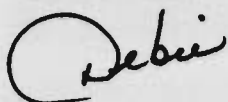
List of third-party vendors
HP 3000 systems require NBSPOOL Software from QUEST Software 714-720-1434 to work with TCP/IP LAN for #UGN. For IBM Connectivity, please call Creative Controllers, Inc. (CCI) 800-950-6224.

Software

Ordering software—
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Test-drive TurboSTORE/iX II—Call **HP DIRECT** to order your free trial copy of TurboSTORE/iX II.

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HP offers a variety of native mode compilers for your development needs.

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HP Support options can now be ordered with every product 47

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When ordering HP Support:

1. **Choose the hardware support you want**
   - Same-day response, *7 days a week*
   - Four-hour response, *Monday through Friday*
   - Next-day response, *Monday through Friday*

2. **Choose the software support you want**
   - License-to-use updates
   - Telephone support

3. Call **HP DIRECT** and we'll make sure your support matches your requirements.

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 the largest selection of MPE/iX 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.

HP
TRAINING
Find information about HP training course on pages 48 to 50.

MPE/iX System Operations/System Management
- MPE/iX System Operations Skills
- MPE/iX System Administration for Application Users
- MPE/iX System Management Skills I & II
- MPE/iX Programming Skills I & II

MPE/iX Database Management
- HP TurboIMAGE DBMS/3000

MPE V
- MPE V System Operation
- MPE V System Management
- MPE V Programming Fundamentals

Moving from MPE V to MPE/iX:
- System Operations
- System Management
- Application Programming

FREE TRIAL

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

HP FIRST
Datasheets on these products faxed to you
C A L L
800.333.1917
Index #39994

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

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

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

FREE TRIAL

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

HP TurboSTORE/iX II

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

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

HP TurboSTORE/iX II with On-Line Backup

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

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

HP TurboSTORE/iX II with Support for Rewritable Optical Disks

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

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

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

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

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

HP AutoRestart/iX

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

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

Helpful Hints for Ordering

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

- Let us know the model number of your HP 3000, your MPE license type, and your current version of MPE, such as 4.0 or A.00.00.

- Specify the media type you'll need, such as 1/2-inch tape, DDS, or CD-ROM.

Tune up your database with HP Application Development Software

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

HP ALLBASE/4GL

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

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

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

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

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Features

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

FOR CURRENT PRICING OF **SOFTWARE** *HP DIRECT*

" 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 us! "

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

Screen Painter	Module Builder	Logic Development Facility	Report Facility	Testing and Administration Tools
		Dictionary		
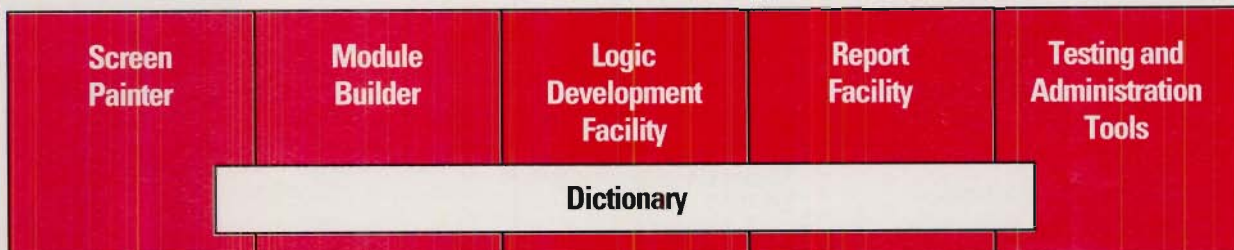
HP ALLBASE/4GL Developer Version
All the elements needed to design, test, maintain, and execute business-critical applications.

HP ALLBASE/SQL

This product is HP's relational database management system (RDBMS) optimized for HP's PA-RISC architecture. Costing anywhere from 50% to 80% less than available alternatives, this feature-rich database offers mainframe-class capabilities such as: on-line back-up, 24-hour unattended operation, and disaster recovery. ALLBASE/SQL is able to handle thousands of users and large databases (>50 GB). It also offers an optional replicate product for high availability, global decision making, and data warehousing. ALLBASE/SQL also comes bundled with ALLBASE /NET for remote database access.

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

HP ALLBASE/QUERY

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

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

HP ALLBASE/Replicate

HP ALLBASE/Replicate is HP's database replication product supporting HP ALLBASE/SQL relational database management system (RDBMS). Replication or shadowing is often used when 24-hour availability, disaster recovery, global decision making, and remote automated back-up are required. ALLBASE/Replicate allows all or part of an ALLBASE/SQL database to be replicated to other locations over the network, on the same or different systems. It allows 24-hour access to your primary database while back-ups occur on the secondary database. Back-ups may also be done at a central site and you can shadow multiple databases located worldwide to a central site for faster global decision making.

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

HP IMAGE/SQL

HP IMAGE/SQL is a high performance database management system for on-line transaction processing applications and batch jobs on HP 3000 900 Series servers. It offers a full read/write SQL interface for client/server decision support, executive information systems, and graphical user interface (GUI) application development.

IMAGE data can be accessed using standard SQL protocols without data conversions. IMAGE/SQL supports a wide selection of client/server tools for decision support, executive information systems, and application development.

IMAGE/SQL includes:
* IMAGE intrinsics and database engine
* ALLBASE/NET
* ALLBASE/SQL PC API
* IMAGE/SQL administration utilities
* Interactive Structured Query Language (ISQL)
* SQL preprocessors for COBOL, C, FORTRAN, and Pascal

Available on: Systems	Op Sys	Base Product Number
HP 3000 900 Series	MPE/iX	32653B

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

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

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

HP Toolset Program

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

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

Software Performance Tuner/iX Collector

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

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

HP TRANSACT Application Development

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

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

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

HP EDIT

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

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

HP Symbolic Debugger/iX

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

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

Software PerformanceTuner/iX Analyzer

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

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

HP Easy Search

HP Easy Search is a powerful new interface for the HP Manufacturing Management II (HP MM II) products. It will increase user productivity and help to locate essential information quickly. HP Easy Search includes a run-time version of OMNIDEX and OmniWindow products from DISC®.

HP Easy Search provides:

- Pop-up windows and picklists on PCs or terminals
- Fast wildcard search and retrieval capabilities
- Quick access to HP MM II data
- End-users direct access to data
- Predefined search procedures that are ready to use

Available on: Systems	Op Sys	Base Product Number
HP 3000 900 Series	MPE/iX	B2134A

Take the advantage with MPE Native Mode Compilers

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

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HP COBOL II

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

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

HP RPG

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

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

HP Pascal

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

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

HP Business BASIC

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

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

HP FORTRAN 77

HP FORTRAN 77 is a superset of the ANSI X3.9-1978 FORTRAN standard. It conforms to MIL-STD-1753 and POSIX (P1003.2 Draft 9). The key DEC™ and VMS™ FORTRAN extensions are included.

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

HP C/iX

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

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

MPE V Languages

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

Helpful Hints for Ordering

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

- Do you need an MPE/iX or MPE V compiler?

- What's the current version of your MPE operating system?

- What is the model number of your HP 3000 that will run the compiler?

- What type of compiler media do you need?

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 the HP 3000 to MS-DOS, MS-Windows, or HP NewWave environments. Also included is an extensive scripting language for task automation.

WE HONOR YOUR **Corporate Discounts**

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**

HP Information Access

HP Information Access is a business intelligence tool that integrates data residing on desktop computers, mid-range servers, or mainframes with desktop applications. It allows you to pull information from more than 50 databases into your favorite PC application, or use the report writer to generate sophisticated reports. HP Information Access offers an intuitive, mouse-driven, point-and-click interface that allows direct access by end-users to database information.

Available on: Systems	Op Sys	Base Product Number
HP 3000	MPE V	B3161A
HP 3000 900 Series	MPE/iX	B3160A
HP 3000 900 Series	MPE/iX/SQL	B3162A
PC	MS-Windows	B3538AA

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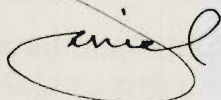
When you call to order software, please briefly review your needs with us. We want to make certain that you order only what you need. Let us know what you expect from the product.

- 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.

Professional Services

66 *Not only do we take your orders, we manage them and follow through. It's important to keep in touch like that. With HP DIRECT, you have easy access to services and information.* 99

*Daniel Orozco-**HP DIRECT***
Customer Representative

Get the right support–
No matter what your system or your demands, you can order the right support from **HP DIRECT**.

HP training in MPE and more–Choose from a wide range of HP training classes and self-paced training products too.

Professional Services	

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, 7day 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.

Hewlett-Packard has your total IT education solution

HP

TRAINING

You and your company have made a strategic invest-ment in Hewlett-Packard computer systems. The HP Education 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 course work prepares you for success with your system applications. The courses save countless hours when compared to learning from reference manu-als. Moreover, they keep you up-to-date on new products and emerging technologies.

More than 100 introductory and advanced courses are available. Many of those are offered at mul-tiple 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 on-site within your own company thus making it possible to train your staff on-site, or at an HP sales office. HP's pro-fessional 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 for MPE V and MPE/iX. Each course is devel-oped and taught by experienced instructors dedi-cated to making you productive with your system.

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

In the U.S., call 800.472.5277, ext. 66100, 6 a.m. to 5 p.m. PST.

In Canada, call 800.563.5089.

In other locations, contact your nearest HP sales office.
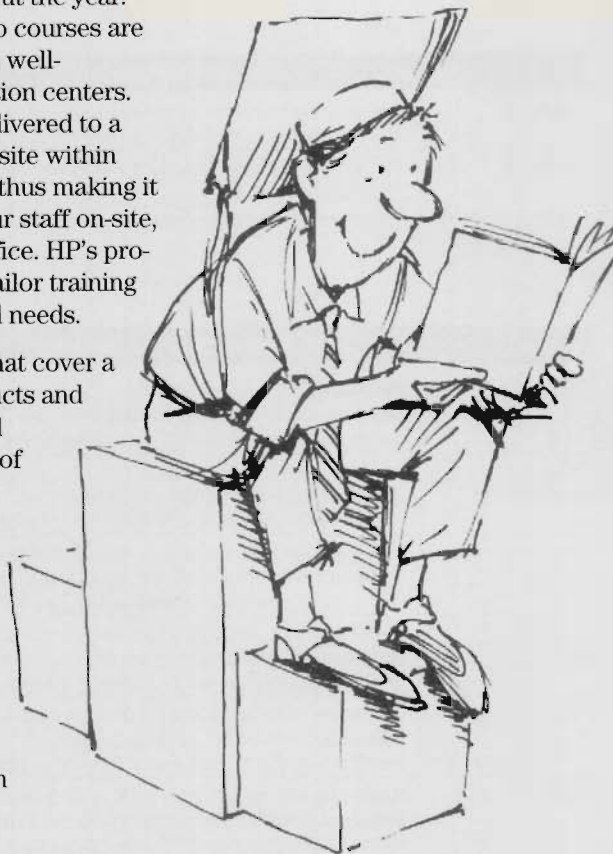
MPE/iX System Operations/System Management

MPE/iX System Operation Skills

System operators will learn basic MPE/iX operating system com-munication skills and concepts, and will gain practical informa-tion about how to perform daily operation tasks.

HP B2801S (4 days) **$1,380**

MPE/iX System Administration for Application Users

System administrators and opera-tors will learn basic system administration and operation functions in an application run-only environment for the HP 3000 900 Series computer system.

HP B2802S (5 days) **$1,695**

MPE/iX System Management Skills

New system managers will under-stand the functions of MPE/iX. They will learn procedures and guidelines for the effective man-agement and scheduling of sys-tem resources, security guide-lines, and user command and command files.

HP 31119S (5 days) **$1,695**

MPE/iX System Management Skills II

Experienced MPE/iX system managers will obtain a thorough understanding of internal system activities and tools for better ana-lyzing and managing the HP 3000 900 Series server.

HP B1772S (5 days) **$1,845**

MPE/iX System Operations/System Management (cont.)

MPE/iX Programming Skills

Programmers/analysts will learn the fundamental concepts of the MPE/iX operating system and the HP 3000 900 Series programming environment.

HP 31118S (5 days).....................**$1,695**

MPE/iX Programming Skills II

Advanced programmers/analysts will learn how to expand features and special capabilities of the MPE/iX system.

HP B2653S (4 days) **$1,495**

MPE/iX Database Management

HP TurboIMAGE DBMS/3000

Programmers and analysts will learn administration and programming concepts of the HP TurboIMAGE database management system.

HP 35053S (5 days)........................**$1,695**

MPE V

MPE V System Operation

System operators will improve their skills by learning to manage devices and files on the HP 3000 MPE V computer system.

HP 22807S (4 days).......................**$1,495**

MPE V System Management

System managers and lead operators will learn how to allocate and control HP 3000 computer system resources, define system configurations, and use the console for daily system management.

HP 22802S (5 days).......................**$1,845**

MPE V Programming Fundamentals

Programmers and analysts will learn the basic components of programming in interactive and batch environments by using the standard capabilities of the HP 3000 MPE V computer system.

HP 22801S (5 days).......................**$1,845**

Moving from MPE V to MPE/iX

Moving from MPE V to MPE/iX: System Operations

Experienced HP 3000 MPE V system operators will learn the difference between operating an MPE V and an MPE/iX system. They will understand new options and utilities of the MPE/iX system.

HP 31117S (2 days)..........................**$740**

Moving from MPE V to MPE/iX: System Management

MPE V system managers moving to an MPE/iX system will review administrative functions and learn the difference between the MPE V and MPE/iX systems.

HP 31110S (4 days).......................**$1,380**

Moving from MPE V to MPE/iX: Application Programming

MPE V application programmers moving to an MPE/iX computer will learn about the differences in the operating system.

HP 31114S (4 days).......................**$1,380**

Count on quality service, expert knowledge, and dedicated people when you call HP DIRECT. We want to make sure you're well informed.

Don Savage-**HP DIRECT**
Customer Representative

Learn MPE 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.

MPE/iX

MPE/iX Account Management
Users learn to:

- Create and delete groups in an account
- Display and alter program and group capabilities
- Display the used and available file space for groups and files
- Set and display account-level UDCs

HP B1769A (1-2 hours) **$500**

MPE/iX Storing and Restoring Files, System Backup
Users learn to:

- Store and restore single or multiple files
- Store files using wild-card characters and character sets
- Check the progress of files being stored
- Perform and verify a full or partial MPE/iX system backup

HP B1770A (2-3 hours) **$500**

MPE/iX System Startup, Shutdown, and Recovery
Users learn to:

- Perform the steps needed to start up and shut down the MPE/iX system
- Recover the MPE/iX system after a system failure
- Perform an MPE/iX system memory dump
- Perform an emergency shut down

HP B1771A (2-3 hours) **$500**

MPE/iX: Managing Disk Space
Users learn to:

- Manage disk usage, including controlling space used by sytem logging and user files
- Control disk space used by permanent and transient storage
- Free disk space, including finding and removing old and unnecessary files
- Migrate disk management techniques from an MPE V system to an MPE/iX system

HP B1809A (2-3 hours) **$500**

MPE/iX: Creating Command Files and UDCs
Users learn to:

- Identify differences between command files and UDCs
- Create command files and UDCs
- Convert command files to UDCs
- Test and debug command files and UDCs

HP B2803A (2-3 hours) **$500**

MPE/iX: Working with Files
Users learn to:

- Create, alter, delete, copy, and list MPE files
- Use file equations to redirect files list and alter MPE file security
- Use the POSIX heirarchical file system

HP B2808A (2-3 hours) **$500**

Index by title

Index by product number

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Other trademarked names referenced in this catalog are the trademarks or registered trademarks of their respective owners.

Terms and conditions

Pricing

Prices in this document are for reference only and are subject to change without notice. The pricing list is in U.S. dollars and represents Continental U.S. pricing.

Freight

Prices include standard ground transportation. Special shipping is billed at the customer's expense.

Discounts

All products in this catalog are eligible for the same standard volume discount schedules used through your HP sales representative. Additionally, standard HP terms and conditions of sale and service apply. For copies of the standard terms and conditions of sale and service, call 800-637-7740.

Delivery

Orders will be scheduled at standard manufacturing lead times.

Purchase Orders

For orders greater than $10,000, a hard copy purchase order is required. For software orders, customers with signed current HP volume purchase agreements may order software licenses directly. Customers not having an HP purchase agreement must submit a hard copy of a purchase order, sign the software license terms and conditions, and submit it with the order. Confirming purchase orders for other phone orders are requested.

Returns

HP is committed to your satisfaction. If you are not satisfied for any reason, return your purchase in original condition within 60 days for a full refund or credit. Call 800-637-7740 for return instructions. Our HP DIRECT sales consultants will make sure your problem is resolved promptly. If you ordered through your local HP sales office, please contact that office. Customer installable software may only be returned under warranty or if it is still sealed and unused. Operations manuals and other documentation may not be returned for credit.

Billing Questions

If you ordered through HP DIRECT and have a question regarding your invoice, please call 800-637-7740, and an HP sales consultant will assist you. If you ordered through your local HP sales office, please contact that office.

Shipping Damages

If items are damaged in transit, simply follow the instructions below:

- If a shipment is visibly damaged on arrival, do not accept it until the person making the delivery has endorsed the bill of lading with a statement for the extent of damage.
- If any damage is found after unpacking, retain all cartons and inner packaging at the shipment location and immediately request that the carrier arrange for an inspection.
- Notify HP DIRECT immediately of the damaged shipment in order for us to make the proper sales adjustment and/or provide you with return instructions. Please provide us with the sales order number, product number, and quantity damaged.
- If instructed to return the damaged products to HP, please include copies of the bill of lading (with the carrier's statement of damage), return authorization number on packing material, and the inspection report.

Catalog Errors

HP reserves the right to correct printing errors and change prices. Only HP corporate price list prices, as listed at the time your credit-approved order is placed, are applicable.

Warranty

As an expression of our confidence that our products will continue to meet the high standards of reliability and performance that our customers expect, Hewlett-Packard products carry the following warranty:

HP software and firmware products which are designed by HP for use with a hardware product, when properly installed on that hardware product, are warranted not to fail to execute their programming instructions due to defects in materials and workmanship. If HP receives notice of such defects during the warranty period, HP shall repair or replace software media and firmware which do not execute their programming instructions due to such defects. HP does not warrant that the operation of the software, firmware, or hardware shall be uninterrupted or error free.

HP hardware products listed in this catalog are warranted against defects in materials and workmanship. If HP receives notice of such defects during the warranty period, HP shall, at its option, either repair or replace hardware products which prove to be defective.

If HP is unable, within a reasonable time, to repair or replace any product to a condition as warranted, Buyer shall be entitled to a refund of the purchase price upon return of the product to HP.

Duration and Commencement of Warranty Period:
The warranty period for each product begins on the date of shipment or, where the purchase price includes installation by HP, on the date of installation. If Buyer schedules or delays installation more than thirty (30) days after delivery, the warranty period begins on the thirty-first (31st) day from the date of shipment.

Place of Performance: Within HP service travel areas, warranty and installation services for products installed by HP and certain other products designated by HP will be performed at Buyer's facility at no charge. Outside HP's service travel areas, warranty and installation services will be performed at Buyer's facility only upon HP's prior agreement and Buyer shall pay HP's round trip travel expenses and applicable additional expenses for such services.

Onsite warranty services are provided only at the initial installation point. If product eligible for onsite warranty and installation services are moved from the installation point, the warranty will remain in effect only if Buyer purchases additional inspection or installation services at the new site.

For product warranties requiring return to HP, products must be returned to a service facility designated by HP. Buyer shall prepay shipping charges (and shall pay all duties and taxes) for products returned to HP for warranty service. Except for products returned to Buyer from another country, HP shall pay for return of products to Buyer.

Limitation of Warranty: The foregoing warranty shall not apply to defects resulting from:

1. Improper or inadequate maintenance by Buyer;
2. Buyer-supplied software or interfacing;
3. Unauthorized modification or misuse;
4. Operation outside of the environmental specifications of the product; or
5. Improper site preparation or maintenance.

The warranty set forth above is exclusive and no other warranty, whether written or oral, is expressed or implied. HP specifically disclaims the implied warranties of merchantability and fitness for a particular purpose.

Exclusive Remedies: The remedies provided herein are Buyer's sole and exclusive remedies. In no event shall HP be liable for direct, indirect, special, incidental, or consequential damages (including loss of profits) whether based on contract, tort, or any other legal theory.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state, province to province, or country to country.

1994 Upcoming Events

Customer Connection Events offer you information, training, and a unique opportunity to talk directly with HP. Learn the latest strategies and the inside tips on getting the most from your HP 3000. To find out more, call the HP 3000 Customer Connection Hotline, at 800.224.HP3K. There is no charge for these programs.

Check out your local independent Hewlett-Packard Regional User Groups (RUGs). They're a great way to meet other HP 3000 users and meetings often feature presentations by industry experts. Here are some of the meetings being held during the next six months. Find out more! Call the HP 3000 Customer Connection Hotline, at 800.224.HP3K.

April
7 BWRUG conference and vendor show. Info, 410.242.6777; fax, 410.788.4476.

7 NOWRUG meeting. Info, John Kelly, 206.489.0600.

14 INRUG conference and vendor show. Info, Chad Gilles, 317.263.1423.

20 IPROF Interex Programmers' Forum Conference. Info, Ken Sletton, 206.396.2525.

21 MARUG (VA) conference and vendor show. Info, Dan Kessler, 919.847.7772; fax, 919.676.1662.

May
3 SCRUG 17th annual conference and vendor show. Info, 310.419.6344, x-6695; fax, 310.419.6344, x-2.

10 SACRUG meeting. Info, Glen Gollnick, 916.325.0326; fax, 916.325.0325.

12 BARUG annual conference and vendor show, dual tracks for MPE and HP-UX.

May (continued)
19 LMRUG meeting. Info, Joe Campbell, 616.786.6016; fax, 616.786.6085.

20 SPORUG meeting. Info, John Maus, 509.921.4126.

20 WRUG spring conference and vendor show. Info, Kraig Kasten, 414.387.4500.

31 NECRUG 15th annual conference and vendor show. Info, Robert Meissner, 215.643.6900, x-0130; fax, 215.643.6960.

June
1 MINNRUG conference and vendor show. Info, Linda Roatch, 612.455.3972.

6 NOWRUG conference and vendor show. Info, John Kelly, 206.489.0600.

9 AZRUG conference and vendor show. Info, Isaac Blake, 602.350.8218, fax, 602.350.8366.

24 ORERUG conference and vendor show. Info, Jeff Coffman, 503.234.9202.

July
15 KYTENNRUG conference and vendor show. Info, Bill Osborne, 502.625.6092; Robert Layman, 615.298.8315.

21 MARUG (NC & SC) conference and vendor show. Info, Dan Kessler, 919.847.7772; fax, 919.676.1662.

21 SERUG conference and vendor show. Info, Diane Amos, 919.222.0231.

September
18 INTEREX '94. 20th Annual HP User Conference and Expo. Info, 408.747.0227; fax, 408.747.0947.

October
25 KYTTEN conference and vendor show. Info, Robert Layman, 615.298.8315.

November
3 NEVCAL. Info, Glen Gollnick, 916.325.0326; fax, 916.325.0325.

What's New!

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

System Hardware

Series 9x8 systems
Now, any business can wield the power of MPE and HP 3000. The new Series 9x8 systems offer ease of operation, a high degree of integration, and superior data integration—all at a competitive price.

User Input Devices

HP Windows Client Model 433SX
With the release of the new Model 433SX, HP's Windows Client family now adds even higher graphic performance to its long list of features.
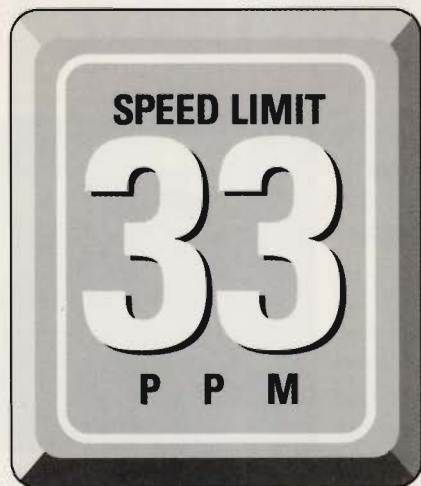
Printers

Networking Solutions

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!

DTC 16MX and DTC 16iX
Two new additions to HP's Datacommunications & Terminal Controllers line-up offer you even more choices for your networking needs. Find out how the new DTC 16MX and DTC 16iX can simplify your networking solutions.