

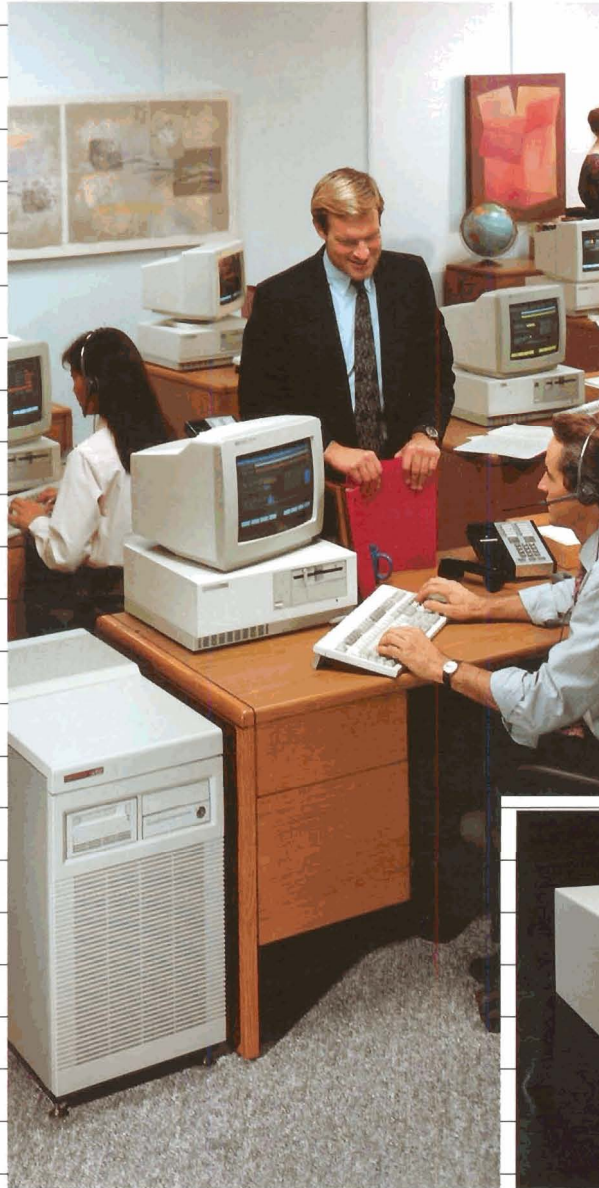
HP CHANNELS

Information For Hewlett-Packard's Value-Added Businesses

February 1990



HP MICRO 3000RX



HP 3000 Series 922LX/RX



HP 3000 Series 949



HP 3000 Series 980/100, 9801200



HP Series 6000



HP 3000 Series 922/932



HP Series 6400 Model 1300H/S

HP introduces new family of HP 3000 systems and servers
and supported peripherals

HP CHANNELS

Volume 9, No. 4

Editor
Tracy Wester

HP Channels is published monthly for Hewlett-Packard's value-added businesses to provide you with information about HP's products and services to help you be more successful.

For further information on any of the products and services discussed in *HP Channels*, please contact your HP sales rep.

See back cover for subscription information.

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On the cover



Ranging from multiuser systems to servers, 18 new HP 3000 products extend the high end, strengthen the midrange, and cut the entry price of the 900 Series dramatically with the HP 3000 Series 922LX. Combined with the new family of disk drives and DDS-format tape drives, these products provide users with a state-of-the-art solution. See articles beginning on pages 3 and 23.

HP CHANNELS
February 1990

Table of Contents

PARTNERS WITH HP

- 1 Upcoming seminars for HP VABs
Increasing sales with distributors

PRODUCT NEWS

Business Computers

- 2 **General**
HP ALLBASE/4GL now available on new MPE XL systems
HP commits to TRANSACT
- 3 **HP 3000**
HP introduces new HP 3000 product line
Introducing new HP 3000 Series 980
New promotion for HP 3000 Series 960
New HP 3000 Series 949
New HP 3000 Series 922 and Series 932 systems
New structured solution package for HP 3000 Series 922LX
New HP MICRO 3000RX now available
New family of HP 3000 servers delivers client/server OLTP
New midrange cabinet configurations
New backup device for HP 3000 systems
HP 3000 adds support for HP 700/41 ASCII terminal
New self-paced tutorials for MPE V/E users
Two new high-density memory cards for HP 3000 and 9000 product lines

Technical Computers

- 42 **General**
Display controller/display station
obsolescence
- 42 **HP 9000**
Powerful new systems added to HP 9000 Series 800 and Series 600 product lines
Introducing the HP 9000 Model 870S: high-end HP-PA performance with symmetrical multiprocessing
Introducing the new HP 9000 Models 845S and 845SE
New HP 9000 Model 832S — midrange performance in space-saving, integrated package
New HP 9000 Model 645SV server expands the Series 600 family
HP 9000 Models 835S and 835SE price changes
Comparing the new HP 9000 Model 375 to the Model 370

Distinguishing between the HP 9000 Models 340 and 345
Positioning the HP 9000 Models 345 and 375
HP 9000 Series 200 accessories obsolescence
HP 9000 Series 500 accessories obsolescence
Introducing DTC for HP 9000 Series 800 systems

Personal Computers

- 22 **General**
HP AXDS/PC now supports panning
- 23 **Desktop**
New high-capacity drives and controller for HP Vectra 486 PC

Peripherals

- 23 **Mass Storage**
HP DDS-format tape drives are here
New SCSI mass storage systems from HP
New mass storage systems offer higher capacity, lower price
New cabinets for HP Series 6000 disk drives
HP 35401A cartridge tape autochanger price increase
HP 7970E options and kits to be discontinued
HP 7937H/XP/FL disk drives to be removed from June 1990 HP Price List

Networks

Introducing HP OpenView Network Management Server — available on HP-UX
HP OpenView Program expands — now extended under UNIX system

Printers

HP introduces new Scalable Typeface Disk Collections for HP LaserJet printers

Terminals

HP 3081A and 9291XA price increase and discontinuance notifications

Supplies

- 31 **Supplies**
HP DIRECT order phone numbers

CROSS-LICENSING CLASSIFIEDS

- 32 Software Packages Available and Wanted

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

Upcoming seminars for HP VABs

Hewlett-Packard's Training Series features regular seminars for HP value-added businesses. A 1990 program guide and schedule was sent to VAB contacts in early January. If you have any questions or would like to receive a program guide, contact Chip Pettibone at Hewlett-Packard Company, Value-Added Channels Development, 19091

Pruneridge Avenue, Building 46UV, Cupertino, CA 95014, U.S.A., 408-447-4175.

A schedule of upcoming Executive Training Series classes will be a regular feature in **HP Channels**. Seminars to be held in February, March, and April are listed below:

The Executive Training Series

Date	Location	Fee*	Contact	Phone
Business Management				
March 27-28	Novi, Mich.	\$495	Annice Benedix	313-349-9200
Strategic Marketing Planning				
April 4-5	Paramus, N.J.	495	Bea Vena	201-599-5748
Marketing Communications				
March 20-21	Foster City, Calif.	275	Kitty Johnston	415-378-8525
April 17-18	Houston, Tex.	275	Sandra LaCorte	713-776-4423
Effective Sales Literature				
February 20	Fullerton, Calif.	75**	Geri Squires	714-472-3050
Sales Training				
<i>"Par" Sales Training</i>				
March 14-15	Paramus, N.J.	245	Bea Vena	201-599-5748
Strategic Selling				
April 10-11	Toronto, Canada	250	Eileen MacLean	416-670-9430
HP Computer Product Training				
<i>HP 3000 Product Training</i>				
February 13-14	Cupertino, Calif.	n/c	Kitty Johnston	415-378-8525
February 14-15	Irvine, Calif.	n/c	Geri Squires	714-472-3050
February 15-16	Denver, Colo.	n/c	Sharon Rhodes	303-649-5822
February 21-22	Atlanta, Ga.	n/c	Angela Lassiter	404-980-7308
<i>HP 9000 Product Training</i>				
February 27-28	Paramus, N.J.	n/c	Bea Vena	201-599-5748
Feb. 28-Mar. 1	Rockville, Md.	n/c	Donna Dillon	301-258-2190
March 1-2	Naperville, Ill.	n/c	Elaine Smith	708-505-8800
March 5-6	Cupertino, Calif.	n/c	Kitty Johnston	415-378-8525
March 6-7	Fullerton, Calif.	n/c	Geri Squires	714-472-3050

*U.S. list prices

**Reduced price for pilot class

Hewlett-Packard reserves the right to change prices, dates, and locations.

Increasing sales with distributors

In the United States, Hewlett-Packard has set up both factory and field organizations to support sales of workstations through industrial distributors. Distributors are focused on accounts that HP sales representatives are not actively pursuing. The distributor cost structure is set up to support competitively both small end user and reseller accounts. The two authorized workstation national distributors, listed below, have over 70 offices located nationwide.

- Hall-Mark Electronics Corp., headquartered in Dallas, Texas
- Lex Schweber Electronics Corp., headquartered in Westbury, New York

These distributors effectively add hundreds of additional sales reps on the street prospecting for sales opportunities for HP solutions. In addition to workstations, these distributors also carry other HP products including personal computers, peripherals, components, and HP support.

Listed below are some of the benefits distributors can offer:

- established relationships with large numbers of accounts
- substantial pricing flexibility
- in-stock inventory
- less-stringent financing and credit terms
- ability to integrate and assemble product solutions
- selling complementary product lines
- increased number of sales people selling HP solutions

These distributors can help HP value-added businesses increase sales. For more information, contact John Dibble at Hall-Mark Electronics Corp., 214-343-5034, or Ted Levine at Lex Schweber Electronics Corp., 516-876-4000.

Business Computers

General

HP ALLBASE/4GL now available on new MPE XL systems

We are pleased to announce that HP ALLBASE/4GL is available on the new range of MPE XL systems. Naturally, applications created in HP ALLBASE/4GL on computers in this new range (or any other HP computer) are fully portable between all other HP ALLBASE/4GL systems. For example, if you've already created applications on an HP 9000 Series computer, these applications can be easily loaded onto the new HP 3000 Series 922RX computer.

Price changes

The increased range of systems has brought in a seven-tier pricing structure for software on MPE XL systems. As a result, the pricing structure for HP ALLBASE/4GL for MPE XL has been slightly changed. Pricing for HP ALLBASE/4GL for HP-UX systems remain unchanged. The following U.S. list prices are now in effect.

Option	Description	Developer Pack PIN 30601A/R	Runtime Environment PIN 30602A/R
310	HP 3000 Series 922LX	\$ 9,600	\$ 1,430
315	HP 3000 Series 922RX	16,000	2,600
320	HP 3000 Series 922, 925LX/RX, 932	22,400	3,575
330	HP 3000 Series 935	32,000	6,500
335	HP 3000 Series 949	40,000	8,125
340	HP 3000 Series 950, 955,960	48,000	9,750
350	HP 3000 Series 9801100	68,800	13,975

Note: All prices above are U.S. list. For VABs outside of the U.S., contact your HP representative for the prices in your country

General

HP commits to TRANSACT

At the INTEREX conference in San Francisco, California, Hewlett-Packard announced its long-term commitment to the TRANSACT product and its users. In a presentation to SIGRAPID at the conference, HP formally announced its plans for the product. In a guest editorial in the November issue of the HP Chronicle, Ken Sletten, SIGRAPID chairman, was supportive of HP's announcements. He wrote, "...the user group would like to express appreciation for the significant efforts HP has made to support and enhance Transact." Listed below are commitments made by HP:

- Hewlett-Packard will ensure that TRANSACT/XL applications are supported into the twenty-first century.
- Support for TRANSACT/V will be ensured for as long as MPE V is supported.
- TRANSACT is the fully procedural, high-productivity language for use with TurboIMAGE, KSAM, and VPLUS.
- The TRANSACT/XL Symbolic Debugger and other enhancements will be delivered on MPE XL 2.1.
- Updated manuals will be available by April 1990.

Increased performance and significant discounts

Now you can confidently move your TRANSACT applications to MPE XL. As you know, such a move would bring immediate performance benefits without imposing heavy learning costs.

As a general guideline, you can expect your TRANSACT/XL programs to run 10 times faster than the same TRANSACTIV programs.

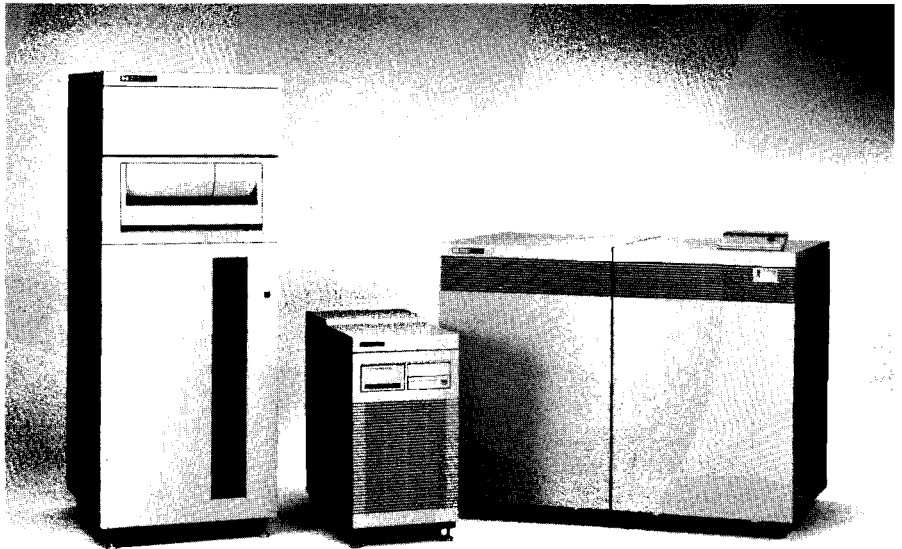
The move is made even more attractive by the significant upgrade credits available. Depending on their system, TRANSACT/V users will receive discounts of between \$1,700 and \$7,500 (U.S. list) from the purchase price of TRANSACT/XL.

Product No.	Description
30138A/R	HP TRANSACTIXL
Opt. 310	For use on HP 3000 Series 922LX
Opt. 315	For use on HP 3000 Series 922RX
Opt. 320	For use on HP 3000 Series 922, 925LX/RX, 932
Opt. 330	For use on HP 3000 Series 935
Opt. 335	For use on HP 3000 Series 949
Opt. 340	For use on HP 3000 Series 950, 955, 960
Opt. 350	For use on HP 3000 Series 9801100
<i>Upgrade options from TRANSACTIV to TRANSACT/XL</i>	
Opt. OGI	Upgrade credit for 32247A Option 310
Opt. OG2	Upgrade credit for 32247A Option 320
Opt. OG3	Upgrade credit for 32247A Option 330
<i>Upgrade options between TRANSACT/XL</i>	
Opt. OCD	Upgrade credit for Option 310
Opt. OGI	Upgrade credit for Option 315
Opt. OCE	Upgrade credit for Option 320
Opt. OCF	Upgrade credit for Option 330
Opt. OGL	Upgrade credit for Option 335
Opt. OGM	Upgrade credit for Option 340

Contact your HP representative for more information.

HP 3000

HP introduces new HP 3000 product line



HP is launching into the 1990s with eight new HP 3000 multiuser systems and an entire family of HP 3000 servers. These systems greatly expand the HP 3000 performance range and cut the entry price of the 900 Series in half. In addition, these systems provide easy field upgrades to current 900 Series systems.

New entry point to HP-PA

Four new HP Precision Architecture systems, the HP 3000 Series 922LX, 922RX, 922, and 932, combine high performance, low price, and an integrated solution in a surprisingly small package.

The HP 3000 Series 922 products are 1.2 times the performance of the Series 925 and provide three different configuration and price points. The new Series 922LX is half the price of the previous entry-level Series 925LX, and is comparably priced to the HP MICRO 3000XE. It supports up to 32 users, while the Series 922RX and 922 support up to 64 and 152 users, respectively.

When more performance is required, the HP 3000 Series 932 system is available to deliver a 60 percent perfor-

mance improvement over the Series 922 products and supports up to 240 users.

All models are field upgradable and feature the new Digital Data Storage (DSS) tape drive and new high-capacity disk drives in an attractive package the size of a two-drawer filing cabinet. The systems fit directly into an office environment, plugging into a standard power outlet. And when combined with a software solution, the Series 922 and 932 integrated systems provide a total system solution to automate critical business functions.

New developments in the HP MICRO 3000 platform

The new HP MICRO 3000RX replaces the MICRO 3000GX with 50 percent more terminal connectivity. At the same price and performance as the MICRO 3000GX, the MICRO 3000RX features increased configurability to 24 user connections.

In addition, current MICRO 3000GX users can easily move to the MICRO 3000RX with a simple field upgrade.

continued on next page

A new level of midrange performance

The new HP 3000 Series 949 delivers a new level of midrange performance in the same compact package as the Series 925 and 935.

The Series 949 has twice the performance of the Series 935 and four times the performance of the Series 925. It is available immediately as a new system and as a field upgrade to the Series 925 and 935 systems.

High-end systems with maintenance performance

With the new HP 3000 Series 9801100, HP is introducing the industry's first RISC-based system with mainframe-class power. Also a first for HP-PA is the new HP 3000 multiprocessor system, the Series 980/200.

Using advanced CMOS VLSI technology, the Series 980 systems triple the performance of the HP 3000 high-end platform. The Series 980/200 is a fully symmetric two-way multiprocessor implementation of the Series 9801100 processor.

These new high-powered computers are available as new systems and as field upgrades to the Series 950, 955, and 960.

A family of servers for the HP 3000

HP is introducing the HP 3000 server family, a full line of servers ranging from the Server 922LX to the Server 960.

Each server comes standard with client/server software. They include server networking software, VPLUS/Windows, and NewWave System Services such as Resource Sharing, PC Administration, and PC backup.

VPLUS/Windows is a new product that enables MS-DOS^B PC users to have HP 3000 VPLUS applications retain the same graphical user interface as other MS-Windows^A and NewWave programs, complete with PC icon access.

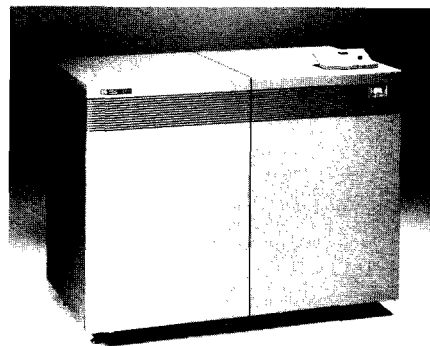
More flexibility and field upgradable growth

The new HP 3000 multiuser systems and servers broaden and strengthen the HP 3000 family, and offer users even more options to field upgrade to larger systems as their business grows. Combined with tailored software solutions, the HP 3000 family provides complete system solutions with cost-effective growth paths well into the future.

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HP 3000

Introducing new HP 3000 Series 980



The HP 3000 Series 9801100 (PIN A1134A) provides significant field upgrade performance increases for the Series 960, 955, and 950, upgrading HP 3000 uniprocessor performance for the high-end by 70 percent over the Series 960. The HP 3000 Series 9801200 (PIN A1149A) provides three times the performance of the Series 960 and greatly expands the high-end platform of the HP 3000, offering up to 6.5 times the performance of the Series 950. This is over 10 times the performance of the Series 70, our highest performing HP 3000 only three years ago.

Field upgrades are available from the HP 3000 Series 960, 955, and 950 to the Series 9801100, and then, if desired, to the Series 9801200 from the Series 9801100. First customer shipments of the Series 9801100 uniprocessor are planned for the fourth calendar quarter

of 1990. First customer shipments of the multiprocessor Series 9801200 are scheduled to begin by the end of 1990.

Features and benefits

■ **Performance** — The HP 3000 Series 9801100 is a high-capacity system supporting hundreds of users with very large databases, and providing mainframe-class performance for very large scale OLTP and batch applications. The Series 9801200 is a fully symmetric multiprocessor comprised of two Series 9801100 processors, providing a significant incremental performance increase over the Series 9801100. The Series 9801100 and 9801200 offer more than sufficient performance for high-end HP 3000 users, and enough performance for the data center and other applications previously considered too large.

■ **Leadership technology** — The HP 3000 Series 980 is implemented with an advanced design in CMOS VLSI and is the industry's fastest CMOS uniprocessor. The Series 9801100 provides greater than five times the performance of DEC's fastest CMOS uniprocessor, the VAX 6410. In fact, DEC's fastest CMOS multiprocessor, the six-way 6460, offers 30 to 40 percent less performance than one Series 980 SPU.

Like the Series 950, 955, and 960, the Series 9801100 is a single-board processor with a single-chip CPU. DEC uses several multichip units in elaborate packaging to achieve the same performance as the Series 980. IBM uses hundreds of chips and an expensive implementation that requires water cooling. Overall, HP's implementation of the Series 980 is simpler and less costly than systems from IBM or DEC that offer comparable performance.

■ **Up to 1 Gbyte main memory** — The HP 3000 Series 980 supports a new 64-Mbyte memory array card that is not supported on the Series 95X and 960 systems. This allows support of up to 1 Gbyte of memory on the Series 9801200, twice the current VAX memory maximum. Although

few users will need this much memory, this large expandability positions the Series 980 as a mainframe-class system.

- *Greatly extended storage* — The HP Series 6000 Model 1.34FL disk drive (PIN C2204A) provides 1.34 Gbytes of formatted storage and is an ideal product for high-end mass storage. With up to 64 of these disks on the Series 980, high-end mass storage capacity has increased by a factor of five, to 85 Gbytes of storage.

Fully symmetric multiprocessing

The Series 980 introduces fully symmetric multiprocessing on the HP 3000. MPE XL multiprocessing provides additional capacity for on-line, mixed on-line/batch, and multibatch application environments. (Multiprocessors do not provide additional performance for single-threaded batch jobs.)

The HP 3000 Series 9801200 consists of two Series 9801100 CPUs in the same cabinet. The two processors share memory and I/O and any process can run on either CPU. One CPU does not control the other. Rather, a single copy of MPE XL distributes the workload between the processors. Overall system throughput is increased by processing separate workloads in parallel. No software changes are necessary. A single system image is provided to applications, the DP staff, and end users.

HP 3000 Series 9801200 performance is expected to be consistent with performance claims reported by other vendors, such as DEC and IBM, that offer multiprocessing solutions.

Ordering Information

Product No.	Description
A1134A	HP 3000 Series 9801100 preconfigured SPU includes TurboIMAGE and 192 Mbytes memory
A1137A	Field upgrade to HP 3000 Series 9801100
Opt. 871	From Series 950, includes 128 Mbytes memory
Opt. 872	From Series 955, includes 96 Mbytes memory
Opt. 873	From Series 960, includes 64 Mbytes memory

Product No.	Description
A1149A	HP 3000 Series 9801200 preconfigured SPU includes TurboIMAGE and 256 Mbytes memory
A1138A	Field upgrade to HP 3000 Series 9801200
Opt. 874	From Series 9801100, includes 64 Mbytes memory

HP 3000

New promotion for HP 3000 Series 960

The availability of the HP 3000 Series 9801100 and Series 9801200 as significant performance upgrades for the Series 960 makes the Series 960 a more viable system for users desiring mainframe-class performance with an option for future growth.

With the HP 3000 Series 980 targeted for initial shipments in the fourth quarter of 1990, some users may not be able to receive a Series 980 by the end of the year. Therefore, a promotion has been created to help users take advantage of Series 960 performance today while waiting for shipments of Series 980s to begin.

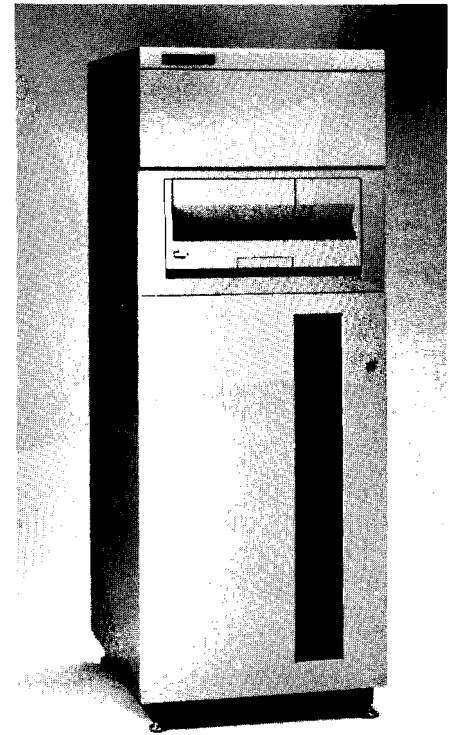
Details

- Users with Series 960s have an incentive to order Series 980 field upgrades before October 31, 1990, in order to get a \$60,000 (U.S. list) savings.
- Potential users for new Series 9801100 SPUs gain no advantage by waiting for the Series 980 versus taking the Series 960 now and ordering the Series 980 field upgrade for future delivery.
- Users with Series 950s and Series 955s have a financial incentive to order the Series 960 and field upgrade to the Series 9801100 versus upgrading to the Series 980 directly.

This promotion is effective through October 31, 1990, but may not be available in all countries. Contact your HP representative for more information.

HP 3000

New HP 3000 Series 949



The HP 3000 Series 949 is a new midrange member of the HP 3000 family, available as a new system or as a field upgrade to the Series 925LX, 925, and 935. The Series 949 offers twice the performance of the Series 935 and supports larger system configurations. Now Series 925 users have an even more attractive growth path in the same midrange platform.

Features and benefits

High uniprocessor performance —

The HP 3000 Series 949 uses the same CPU chips as the Series 955 to set a new level of high midrange performance. DEC, for instance, relies on three-way multiprocessing to obtain the same level of performance.

continued on next page

The uniprocessor Series 949, however, delivers more consistent performance across workloads such as large batch MRP jobs — giving the Series 949 a solid performance advantage.

Excellent price/performance — The Series 949 is an outstanding value delivering excellent price/performance. It will also appeal to Series 70 users who can upgrade to the Series 949 and get three times the performance of the Series 70 for roughly the same price as the Series 950.

- **Field upgradability** — The Series 949 offers four times the performance of the Series 925 — making the growth path in the HP 3000 midrange platform even more attractive. Series 925LX, 925, and 935 users can all field upgrade to the Series 949.

- **Convenient system packaging** — The Series 949 is supported in the same popular A1001A cabinet as the Series 925LX, 925, and 935. (See the article in this issue entitled, "New midrange cabinet configurations" for more information.)

New memory card

The Series 949 uses the new A1623A 32-Mbyte memory array with 4-Mbit DRAMS. This allows the slots in the system to be used most effectively and the configuration of up to 192 Mbytes of memory on the system.

Configurations

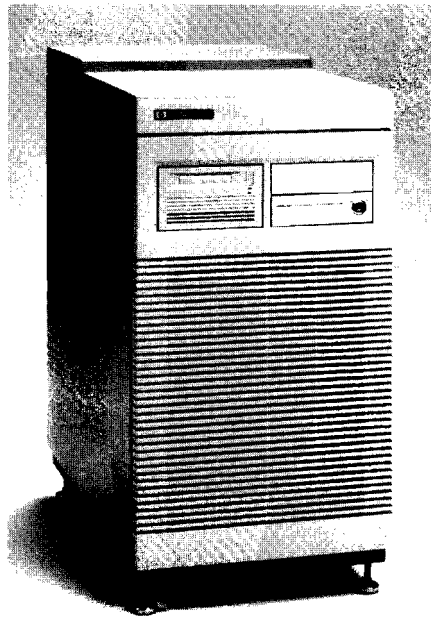
The Series 949 preconfigured system comes standard with 64 Mbytes of memory (two 32-Mbyte cards), ALLBASE/XL, TurboIMAGE, MPE XL FOS, two HP-IB cards, console connection, and one LANIC card. Like the Series 925 and 935, FOS media and cabinet products must be ordered separately. The Series 949 field upgrade includes two processor boards and 16 Mbytes of memory.

Ordering information

Product No.	Description
A1600A	HP 3000 Series 949 preconfigured
A1601A	HP 3000 Series 949 field upgrade

HP 3000

New HP 3000 Series 922 and Series 932 systems



Four new integrated HP Precision Architecture-based systems are now available in the low-end to midrange of the HP 3000 family of commercial processors — the Series 922LX (PIN A1027A), Series 922RX (PIN A1046A), Series 922 (PIN A1041A), and Series 932 (PIN A1033A).

The new entry-level Series 922LX is half the price of a Series 925LX. It supports up to 32 users and comes integrated with 24 Mbytes memory, a DDS tape drive, and 670-Mbyte disk drive. The Series 922RX supports up to 64 users and includes 32 Mbytes of memory and 1.3 Gbytes of disk storage. The Series 922 supports up to 152 users with the same configuration as the Series 922RX. All three versions of the Series 922 deliver 20 percent greater performance than a Series 925. The Series 932 is a performance upgrade delivering 60 percent greater performance than the Series 922 and supports 240 users.

Features and benefits

New low entry point into HP-PA — The new Series 922LX cuts the entry

point into HP-PA in half while offering pricing comparable to the HP MICRO 3000XE. This substantial price decrease means more users can now consider the advantages of having an MPE XL system.

- **State-of-the-art peripherals** — HP is the first major system vendor to integrate digital data storage (DDS) tape technology. DDS format tape provides three times the performance of an HP 9145 ¼-inch cartridge tape and is equivalent to a 1600 bpi ½-inch tape at half the price. The 1.3 Gbytes per tape cartridge delivers an unattended backup solution for many configurations.

The new highly reliable thin-film disk drive combines compact size (5¼-inch form factor) with high-density data storage to provide an ideal storage system. The system package can house four of the new 5¼-inch 670-Mbyte disk drives internally. Totalling 2.6 Gbytes, there's enough internal disk space for most configurations, and even more disks can be supported externally.

- **Easy field upgrades** — Users can begin with any of the Series 922 systems and easily field upgrade to a large configuration. When more performance and configurability are needed, yet another field upgrade is available to the Series 932.

- **Compact size** — The system cabinet is the size of a two-drawer filing cabinet, a huge savings in floorspace over the Series 52/58. In addition, these new systems require no special environmental preparations and plug into a standard wall outlet.

Configurations

The Series 922LX comes standard with 24 Mbytes of memory and one 670-Mbyte disk. The Series 922RX, 922, and 932 come with 32 Mbytes of memory and two 670-Mbyte disk drives. All preconfigured versions of

the Series 922 and Series 932 include an integrated DDS backup device, system consoles, ALLBASE/SQL, and MPE XL. Options unbundling ALLBASE/SQL and TurboIMAGE will be available on the February HP Price List for the Series 922 and 932.

Ordering information

Product No.	Description
A1027A	HP 3000 Series 922LX preconfigured
A1046A	HP 3000 Series 922RX preconfigured
A1033A	HP 3000 Series 922 preconfigured
A1041A	HP 3000 Series 932 preconfigured

HP 3000

New structured solution package for HP 3000 Series 922LX

What is an SSP?

A Structured Solution Package (SSP) is a marketing bundle that offers users lower-cost business solutions — solutions that meet individual needs at competitive prices. The HP 3000 Series 922LX basic Structure Solution Packages consist of the following:

- one integrated Series 922LX
- one Datacommunications and Terminal Controller (DTC)
- one to three port cards

Users can take advantage of two SSP bundles for the Series 922LX. The first SSP bundle offers a Series 922LX with up to 16 ports. At a minimum, users must order the Series 922LX and one DTC with Option 625 along with one other option (choose from Option 625, 803, and 805) to qualify for the 17 percent discount.

The second SSP bundle offers a Series 922LX with up to 24 ports. At a minimum, users must order the Series

922LX and one DTC with Option 625 along with two other options (choose from Option 625, 803, and 805) to qualify for the 17 percent discount.

When to use the SSP

Use the SSP to offer more competitive solutions for small configurations requiring up to and including 24 terminal ports.

How to order an SSP

Two SSP menus are shown below to help users define their system configuration.

Series 922LX Structured Solution Menu

System number: **A1178A**
 Description: **Series 922LX package**
 Revision date: **January 1, 1990**

Solution adjustment: **17%**

Required or optional choices	Product Group	#	Number of choices selected	Product No.
Required 1 Maximum 1	SPU	<input type="text" value="1"/>	Series 922LX	A1027A
Required 1 Maximum 1	Terminal 110	<input type="text" value="1"/>	DTC	2345A
Required 1 Maximum 1	Additional ports	<input type="text"/>	6 RS-232-C modems	Opt. 625
		<input type="text" value="1"/>	8 RS-232-C direct connect	Opt. 803
		<input type="text"/>	8 RS-422 direct connect	Opt. 805

Series 922LX Structured Solution Menu

System number: **A1180A**
 Description: **Series 922LX package**
 Revision date: **January 1, 1990**

Solution adjustment: **13%**

Required or optional choices	Product Group	#	Number of choices selected	Product No.
Required 1 Maximum 1	SPU	<input type="text" value="1"/>	Series 922LX	A1027A
Required 1 Maximum 1	Terminal I/O	<input type="text" value="1"/>	DTC	2345A
Required 2 Maximum 2	Additional ports	<input type="text"/>	6 RS-232-C modems	Opt. 625
		<input type="text" value="2"/>	8 RS-232-C direct connect	Opt. 803
		<input type="text"/>	8 RS-422 direct connect	Opt. 805

The menus below depict two users. The one ordering the A1178A SSP bundle wants eight RS-232-C direct connections (one terminal connect card) with the Series 922LX. With the SSP bundle, this user receives a 17% discount off the Series 922LX and the DTC with eight ports. The user ordering the A1180A SSP bundle wants 16 RS-232-C direct connections (two terminal connect cards) with the Series 922LX. This user receives a 13% discount.



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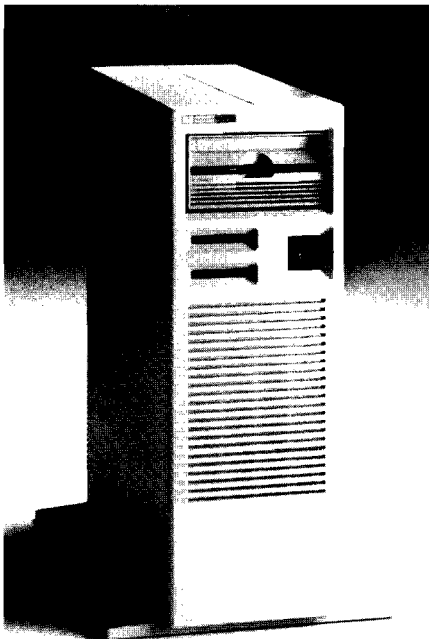
Ordering information

Please contact your HP representative for more details on the two SSP bundles.

Product No.	Description
A1178A	Structured Solution Package with HP 3000 Series 922LX
A1180A	Structured Solution Package with HP 3000 Series 922LX

HP 3000

New HP MICRO 3000RX now available



On January 11, Hewlett-Packard announced the HP MICRO 3000RX; a full replacement for the HP MICRO 3000GX with even greater configurability. The new HP MICRO 3000RX supports up to 24 ports, which means users now have the option of connecting more than 16 users. Where previously users could choose between a LAN and an INP for the fourth card slot, they now can choose among a LAN, an INP, or a third ATP.

The HP MICRO 3000RX comes standard with 16 ports (with options to either delete or add 8 ports). The result is that for the same price as a 16-port HP MICRO 3000GX, HP has bundled in added functionality on the MICRO 3000RX to allow users to connect more than 16 users.

The HP MICRO 3000RX will also be offered as a convenient field upgrade for installed HP MICRO 3000GX users. By swapping a single board, users can increase maximum terminal connectivity by 50 percent. The HP MICRO 3000RX field upgrade includes a CPU board with new firmware and 4 Mbytes of memory, as well as 16 additional ports. HP MICRO 3000LX users may upgrade to the HP MICRO 3000RX by doing a box swap upgrade and taking advantage of return credits.

Both the HP MICRO 3000RX system and field upgrade are available immediately.

Product No.	Description
32543A	HP MICRO 3000RX
30543A	HP MICRO 3000RX field upgrade
32543AH	HP MICRO 3000RX box swap upgrade

HP 3000

New family of HP 3000 servers delivers client/server OLTP

The HP 3000 server family is a full line of servers ranging from the Server 922LX to the Server 960. The server products provide an easy, new way to present the HP 3000 system's outstanding client/server products to users who are requesting that functionality. PC users can run all existing HP 3000 applications via terminal emulation plus client/server applications on the HP 3000 servers.

Client/server software services

The HP 3000 servers are based on the HP-PA platforms running the MPE XL operating system. User connections are via PCs on a local-area network (LAN); HP 3000 servers do not support direct terminal connections. The client/server software products included with each server are NewWave System Services (file and peripheral sharing, PC administration, PC Backup), server networking software, and server portion of VPLUS/Windows.

Robust server functionality included at no charge

Each HP 3000 server, including all server software, is priced to be equal to the price of the equivalent HP 3000 multiuser system. This means that users who do not need terminal connections and desire server functionality can receive a more cost-effective solution than was available in the past. Users can receive an effective discount ranging from 9 to 26 percent when purchasing the server solution.

Flexible upgrade paths allow for future growth

The main upgrade path for a server is to a higher performing server. Server-to-server upgrade options are listed under each HP 3000 field upgrade product.

Terminal support can be added later

If terminal support is later required on an HP 3000 server, the new Add-On Terminal Support for Servers is a simple field upgrade that gives users the flexibility to turn an HP 3000 server into the equivalent HP 3000 system with full terminal and PC support.

On multiuser systems, users can purchase all desired client/server applications and server software, thereby allowing a multiuser system to act as a

server for PC users — while still supporting terminal users. In fact, if a user is purchasing a mix of terminal connections and PCs, it is less expensive to purchase an HP 3000 multiuser system that supports terminal connections.

Ordering information

Product No.	Description
many	Server Version (Option 100) on HP 3000s
B1713A	NewWave System Services
36393A	VPLUS/Windows
A1153A	Add-On Terminal Support for Servers

HP 3000

New midrange cabinet configurations

The popular A1001A cabinet used by 900 Series HP 3000 users is now supported with new configurations that support larger disk capacity and new peripherals. It is also available for HP 9000 midrange users.

Support for C220XX disk drives

Larger system configurations can now be self contained in a compact cabinet. The A1001A cabinet now supports a maximum of six C220XX disk drives (four if an SPU is present). Combinations of HP 7936137 disk drives and C220XX disk drives are also supported. Users can now support up to 5.3 Gbytes of disk storage in their cabinet with an SPU.

Support for C1511A cartridge tape drive

The DDS cartridge tape drive, based on Digital Audio Tape (DAT) technology, is also supported in the A1001A system cabinet. Providing 1.3 Gbytes of storage

per cassette, the C1511A DDS cartridge tape drive will be popular with mid-range users as a low-end alternative to the HP 7979 1600 bpi magnetic tape drive.

Support for HP 9000 midrange users

The HP 9000 Models 825S, 835S, 835SE, 845S, and 845SE now are supported in the A1001A system cabinet. The HP 9000 Models 635SV and 645SV are also supported. Any of the above SPUs can be supported in the "SPU" section shown in the drawing below.

The C1511A DDS cartridge tape drive is currently supported only on the HP 9000 Model 832S. Support for other Series 800 products is planned in

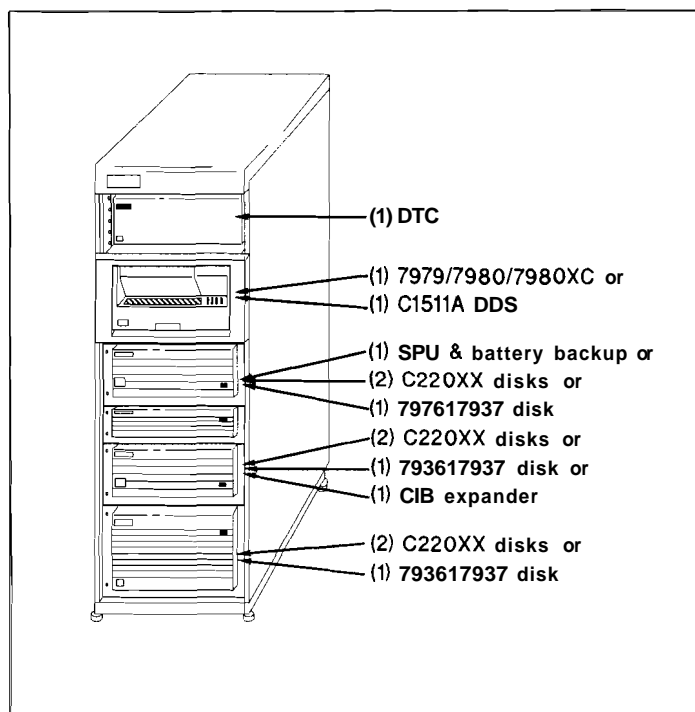
the near future. Until then, Series 800 SPUs cannot include the C1511A in their A1001A configurations.

A special MUX panel is available for HP 9000 users who use MUXes instead of DTCs. This panel, which attaches to the back of the cabinet, holds 12 MUX junction boxes and will be available on the March 1 HP Price List as option 1A7 off of the A1001A cabinet. Until then, it can be ordered from HP's Corporate Parts Center as P/N A1001-67912.

Configurations and racking rails

The diagram below shows all of the supported configurations. The following table describes how to obtain the correct racking rails for each component in the cabinet.

Supported configurations



continued on next page

Ordering information

Component	Order	Notes
DTC	A1001A Opt. 1A4	
CI511A DDS	19500B and A1001A Opt. 1A6	A1001A Opt. 1A6 includes front bezel to surround DDS mechanism
SPU and BBU	SPU P/N, Opt. 1A4	Includes the following kits: 97099A (for SPU), A1019A (for BBU), and A1051A (for Synapse Box, on 900 Series HP 3000 only)
C220XX disk	35199C	
7936/37/FL	7936/37/FL Opt. 1A4	Includes the 19512A racking kit
CIB expander	SPU PIN Opt. 004	Also available by ordering expander PIN Opt. 004. or racking kit 97099A

HP 3000

New backup device for HP 3000 systems

HP 3000 users will soon have three backup devices to choose from: ¼-inch cartridge tape, DDS, and ½-inch tape. The best solution for users will depend on their individual backup, data interchange, and selective file restore requirements.

Hewlett-Packard announces the Digital Data Storage (DDS) format tape drive, a recording format developed by Hewlett-Packard and Sony based on Digital Audio Tape (DDT) technology. It offers capacity of up to 1.3 Gbytes on a single piece of media and a transfer rate of 11 Mbytes per minute. That

means an unattended backup of 1.3 Gbytes of data in two hours.* It will be available as an embedded device in the HP 3000 Series 922 and 932, and as a stand-alone device for the entire MPE XL and MPE VIE product line.

Features and benefits

The table below compares DDS against today's ¼-inch and ½-inch tape products.

For details of the new HP 3000 Series 922 systems, see the appropriate articles in this issue of *HP Channels*.

Feature	9145	DDS	7980A	7980XC
Capacity (Mbytes)	133	1300	140	560
Transfer rate (Mbytes/min)	4	11	42	42
Media cost (\$/Mbyte)	\$.27	\$.01	\$.18	\$.03
Two-hour backup (Gbytes)	.50	1.3	2.3	3.9
Interchange standard	No	DDS format	1600 and 6250 bpi	No

*Please note that because 1.3 Gbytes are stored on one tape, a selective file restore could take up to two hours, depending on where the data resides on the tape.

HP 3000

HP 3000 adds support for HP 700/41 ASCII terminal

The 900 Series HP 3000 systems are adding support for the HP 700141 display terminal (PIN CI003G Opt. ABA). The HP 700141 display terminal, not previously supported on MPE XL systems, provides a lower-cost terminal alternative for 900 Series HP 3000 applications that do not require the sophisticated capabilities of the HP 700192 display terminal.

Functionally, the HP 700141 is similar to Wyse 30 terminals and does not support 900 Series HP 3000 VPLUS or block mode. The HP 700141 also differs from the 700192 in the handshaking sequences that cause the 700141 to transmit data to the host. These sequences are documented in Appendix B of the HP 700141 Display Terminal User's Guide (PIN 5959-5011) in the section entitled "Sending Data." Specifically, the HP 700141 does not use the DC1 handshake sequence used by the HP 700/92.

Applications that utilize these escape sequences should enable type-ahead capability to ensure that all data sent from the HP 700141 is properly received by the HP 3000. More information on the operation and functioning of the HP 700141 display terminal can be found in the HP 700141 Display Terminal Reference Manual (PIN 5959-5013). This support of the HP 700141 display terminal is effective with MPE XL Release 2.0.

Contact your HP representative for more information.

HP 3000

New self-paced tutorials for MPE V/E users

A new set of self-paced tutorials for MPE V/E users provides introductory training for the general user of MPE V machines. The Fundamental Skills course (PIN H2516A) will teach an end user how to log on and off, execute simple commands, how to create and modify simple text files, and the concepts of file manipulation. The Advanced Skills course (PIN H2515A) will provide the general user with the additional information needed to manage an account on the system, run jobs in batch, and create user-defined commands.

Before these tutorials, a general end user learned this material by reading manuals, through one-on-one training with an experienced user, or attending a multiple-day classroom course designed for programmers or system managers. Taking these tutorials will help the new user to become productive quicker without tying up staff time and provide a basis for learning the applications that will be used. Users can take the training when they need it at their own pace. The tutorials can also be used again to train other new staff.

Ordering information

Product No.	Description
H2516A	HP 3000 MPE V/E: Fundamental Skills
H2515A	HP 3000 MPE V/E: Advanced Skills

These products are available both through HP DIRECT in the U.S. and Canada only. Outside the U.S. and Canada, users should contact their HP representative.

HP 3000

Two new high-density memory cards for HP 3000 and 9000 product lines

The new 64-Mbyte ECC RAM card (PIN A1152A) is supported only on HP 3000 Series 9801100 and 9801200 and HP 9000 Models 870S/100 and 870S/200 systems.

The new 32-Mbyte ECC RAM card (PIN A1623A) is supported on HP 3000 Series 925LX, 925, 935, and the new Series 949. The new 32-Mbyte RAM card is also supported on the HP 9000 Models 825S, 835S, 835SE, and the new Models 845S and 845SE. The A1623A is also available as an option to these new SPUs at a reduced price at time of system purchase.

Using the new 32-Mbyte ECC RAM card, the new HP 3000 Series 949 will now support up to 192 Mbytes ECC RAM. The new HP 9000 Models 845S and 845SE as well as the existing Models 825S, 835S, and 835SE will now support up to 128 Mbytes of ECC RAM. Memory maximums on the HP 3000 Series 925LX, 925, and 935 have not changed.

Using the new 64-Mbyte ECC RAM card, the new HP 3000 Series 9801100 will support up to 512 Mbytes of system memory and the Series 9801200 will support up to 1 Gbyte of system memory. The HP 9000 Models 870S/100 and 870S/200 will support 768 Mbytes of internal system memory.

Features and benefits

Feature	Benefit
Both the 32-Mbyte and 64-Mbyte RAM cards utilize advanced 4-Mbit RAM technology.	Increased amounts of memory can be integrated onto a single memory card allowing users to configure higher amounts of system memory with fewer memory slots.

Ordering information

Product No.	Description
A1623A	32-Mbyte ECC RAM card
A1152A	64-Mbyte ECC RAM card

Also in this issue

<i>Introducing DTC for HP 9000 Series 800 systems</i>	21
<i>HP DDS-format tape drives are here</i>	23
<i>HP 7937H/XP/FL disk drives to be removed from June 1990 HP Price List</i>	27

Technical Computers

General

Display controller/ display station obsolescence

The following products will be removed from the July 1, 1990, HP Price List. If you have any questions, contact your HP representative.

Product No.	Description
98700A	Display controller
98700H	Display station (English)
98700HC	Display station (Canadian French)
98700HD	Display station (German)
98700HE	Display station (European Spanish)
98700HF	Display station (French)
98700HH	Display station (Dutch)
98700HJ	Display station (Katakana)
98700HK	Display station (International English)
98700HL	Display station (Canadian English)
98700HM	Display station (Latin Spanish)
98700HN	Display station (Norwegian)
98700HP	Display station (Swiss German)
98700HQ	Display station (Swiss French)
98700HS	Display station (Swedish)
98700HU	Display station (U.K. English)
98700HW	Display station (Belgian Dutch)
98700HX	Display station (Finnish)
98700HY	Display station (Danish)
98700HZ	Display station (Italian)
98700N	Return credit for 98700A
98701A	Four memory planes
98701N	Return credit for 98701A
98710A	Graphics accelerator
98710N	Return credit for 98710A

Discontinuance for these products will occur on this schedule:

Date	Activity
July 1, 1990	Removal from price list
July 31, 1990	Final U.S. orders accepted
September 30, 1990	Final international orders accepted
March 30, 1991	Final shipments

HP 9000

Powerful new systems added to HP 9000 Series 800 and Series 600 product lines

Hewlett-Packard has strengthened its product line in UNIX-based multiuser and server systems and symmetrical multiprocessing by introducing six new multiuser and server systems. This introduction gives HP the broadest family of object-code compatible UNIX-based systems in the industry. The HP 9000 family of servers and multiuser systems now range from 7 MIPS at the low end, up to 95 MIPS at the high end.

In the midrange of the HP 9000 Series 800 product line, HP introduces three new systems. First, the Model 832S (PIN A1044A) is a 15-MIPS system that includes SPU, 16 Mbytes ECC RAM, integrated disk, integrated digital audio tape of 1.2 Gbytes, and preinstalled HP-UX operating system, all integrated into one compact package. The Model 832S is an excellent choice for medium-sized work group environments.

Also in the midrange of the product family, the Models 845S (PIN A1608A) and 845SE (PIN A1609A) offer 23 MIPS of performance in a compact, modular package. The Model 845S offers SPU, 16 Mbytes ECC RAM, and 16-user HP-UX license. The Model 845SE offers SPU, 32 Mbytes ECC RAM, 64-user HP-UX license, additional channel adapter and eight-slot I/O expansion bay, and battery back-up system. The products are also field upgradeable from the existing Models 825S, 835S, and 835SE.

In the high end of the HP 9000 family, the Models 870S/100 and 870S/200 offer a field-installable growth path from the current Model 855S, giving users the opportunity to grow into a system with up to 95 MIPS performance. The Model 870S/100 (PIN A1135A) offers 50 MIPS performance and includes SPU, 96 Mbytes ECC RAM, and 64-user HP-UX license. The Model 8701200 (PIN A1146A) adds an additional processor providing symmetrical multiprocessing, giving the user up to 95 MIPS performance. The Model 870S/200 comes standard with SPU, 128 Mbytes ECC RAM, and 128-user HP-UX license. HP has also announced three-way and four-way symmetrical multi-processing with the same Model 870S, targeted for the second half of 1990, providing even more performance growth at the high end of the HP 9000 product line.

The Model 645SV (PIN 1607A) is the newest member of the HP 9000 Series 600 family of servers. The Model 645SV joins the current Model 635SV offering file, database, and compute services to a networked topology. The Model 645SV offers 23 MIPS performance, 32 Mbytes ECC RAM, 1.3-Gbyte disk, LAN software including

NFS, ARPA services, and X-Windows, and two-user HP-UX server license integrated into a .53-meter rack. All

HP 9000 Series 600 products are completely object-code compatible with HP 9000 Series 800 products.

Features and benefits

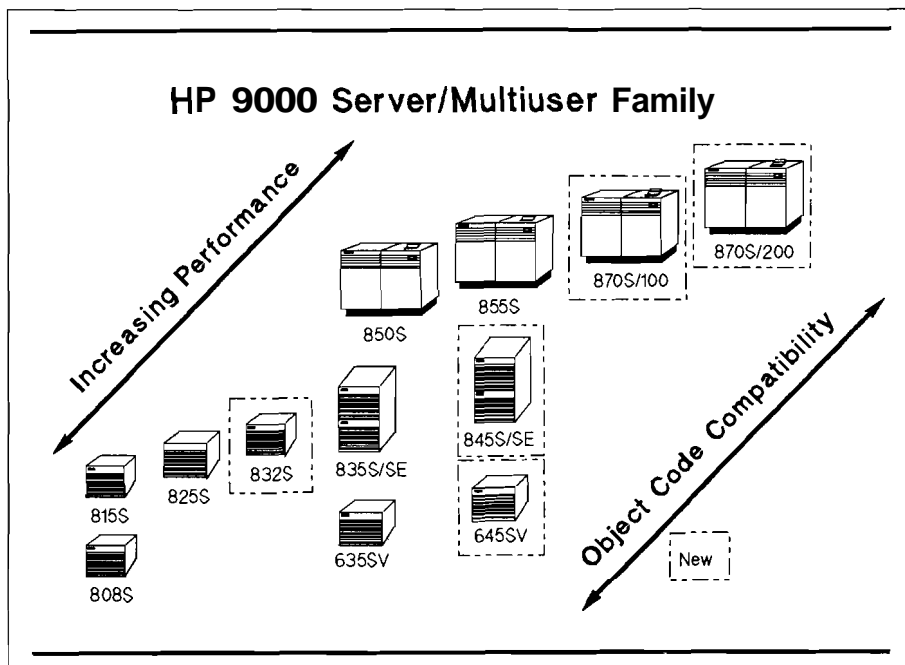
Feature	Benefit
Six new systems added to the HP 9000 Series 800 and Series 600 product line.	This gives HP the broadest range of object-code compatible UNIX systems in the industry.
Most of the new systems are CPU board upgrades to existing systems.	This provides existing users an easy, cost-effective upgrade path, and gives new users the assurance of a cost-effective growth path.
Symmetrical multiprocessing is at the high end of the HP 9000 Series 800 product line.	Users can be assured of continued performance growth at the high end of the product line via simple, cost-effective board upgrades.

The Models 845S and 845SE are performance upgrades to the current Models 835S, 835S, and 835SE. As field-installable board upgrades to these systems, the Models 845S and 845SE ensure the continued investment protection for midrange users as well as extending the performance of the current midrange packaging.

The Models 870S/100 and 870S/200 extend the high end of the product line to performance levels nearly five times the current Model 855S. The Models 870S/100 and the two-way symmetrical multiprocessing system, the Model 870S/200, are board upgrades to the existing Model 855S platform, guaranteeing users the continued performance growth at the high end of the product line.

The Model 645SV extends the Series 600 line by offering 23 MIPS performance to the server line and is also a board upgrade to the existing Model 635SV.

For further information, please contact your HP representative.



Product line positioning

The Model 832S, a completely integrated system offering 15 MIPS of performance, gives existing Models 808S, 815S, and 815S bundle users a growth path to a higher performance system.

Although the upgrade path is a box swap, the Model 832S utilizes the same memory and I/O cards as Models 808S and 815S (based on the HP Precision Bus technology), thus protecting the users' investment in these memory and I/O cards.

HP 9000

Introducing the HP 9000 Model 870S: high-end HP-PA performance with symmetrical multiprocessing

The HP 9000 Model 870S (PIN A1135A) is both a board upgrade to the Model 850S/855S and a stand-alone system that combines the benefits of powerful uniprocessors with symmetrical multiprocessing. The Model 870S/100 contains one CMOS HP-PA processor, 96 Mbytes of memory, and a 64-user HP-UX license. The Model 870S/200

(PIN A1146A) contains two CMOS HP-PA processors, 128 Mbytes of memory, and a 128-user HP-UX license.

The Model 870S is targeted for telecommunications, manufacturing, lodging, state and local government, and medical markets.

Features and benefits

Feature	Benefit
Broad performance range in the same system cabinet (from the Model 850S at 14 MIPS, to the Model 870S/200 at up to 95 MIPS)	Investment protection with convenient, economical field upgrades; system can be sized to today's needs with assurance that future needs will be met
Tightly coupled, symmetrical multiprocessing capabilities with a single copy of HP-UX 8.0, which transparently distributes workload among multiple Model 870S processors	Smooth, modular performance growth as additional processors are added
Powerful CMOS HP-PA technology with single-board processors	Cost effectiveness as a central computing resource with strong batch processing capability; high reliability leading to lower cost of ownership
System support for up to 768 Mbytes main memory and 85.76 Gbytes disk capacity	Flexible configuration for growing businesses and large departments with hundreds of users
Strong floating-point performance (10.5 DP MFLOPS per processor)	Cost effectiveness in compute-intensive applications

HP product line positioning

The Model 870S is HP's most powerful HP-UX multiuser system. It provides investment protection and a growth path for all Series 800 users. HP has announced up to four-way multiprocessing with the Model 870S processor, which means a tremendous performance range within the same system cabinet. The Model 870S requires an HP-UX 8.0.

Configuration information

The Model 870S uses the same system cabinet, memory, and I/O subsystems as the Model 850S/855S system. A new 64-Mbyte ECC memory board is available only with the Model 870S to expand maximum memory up to 768 Mbytes. Though only the Model 870S/100 and 870S/200 have been introduced, remember that the Model 870S will support up to four-way symmetrical multiprocessing with HP-UX 8.0. Only Model 870S processors (not Model 850S/855S processors) can be used in a multiprocessing configuration.

Ordering information

Product No.	Description
A1135A	Model 870S/100 multiuser computer system: SPU includes one HP-PA processor, 96 Mbytes ECC RAM, 64-user HP-UX license, and other items similar to the Model 850S/855S SPUs
A1146A	Model 870S/200 multiuser computer system: SPU includes two HP-PA processors, 128 Mbytes ECC RAM, 128-user HP-UX license, and other items similar to the Model 850S/855S SPUs
<i>New Model 870S accessories</i>	
A1152A	64-Mbyte ECC RAM board
<i>New system upgrades</i>	
A1141A Opt. 723	Model 850S to Model 870S/100 upgrade kit: includes 48 Mbytes ECC RAM and two memory controller cards
A1141A Opt. 724	Model 855S to Model 870S/100 upgrade kit: includes 48 Mbytes ECC RAM and two memory controller cards
A1142A	Model 870S/100 to 870S/200 upgrade kit: includes 32 Mbytes ECC memory

For more information

For more information or to receive a technical data sheet on the new Model 870S (PIN 5952-0965), contact your HP representative.

Introducing the new HP 9000 Models 845S and 845SE

The HP 9000 Models 845S (PIN A1608A) and 845SE (P/N A1609A) are new, high-performance entries to the midrange of the HP 9000 Series 800 product line. Both systems offer 23 MIPS integer performance in a small, modular design. The Model 845S comes standard with 16 Mbytes ECC RAM, one HP-IB interface, one six-channel multiplexer, and 16-user HP-UX license. The Model 845SE comes standard with 32 Mbytes ECC RAM, one HP-IB interface, one six-

channel MUX, additional channel adapter with eight-slot I/O expander, battery back-up unit, and 64-user HP-UX license. Both systems are also available as field upgrades to existing Models 8253, 8353, and 835SE.

These systems offer high-performance computing in a small, modular package for medium-sized work groups and departments ranging from approximately 16 to 100 users.

Features and benefits

Feature	Benefit
50 percent performance boost over existing Models 835S and 835SE systems	At 23 MIPS, this gives users the additional CPU performance for applications requiring increased amounts of compute power in a compact, modular, price-effective configuration
The Models 845S and 845SE offer 2.5 MFLOPS of floating-point performance	Good floating-point performance for users who want to combine multiuser with floating-point performance
Field upgradable from existing Models 825 and 835 systems via board swap	Easy, cost-effective upgrade for current users, as well as a cost-effective, performance growth path for new midrange users
Support for the new 32-Mbyte ECC RAM memory card	Allows users to configure higher amounts of system memory (up to 128 Mbytes) in 8-, 16-, or 32-Mbyte increments. Also preserves CTB slots if needed for current or future CTB cards

The HP 9000 Models 845S and Model 845SE add high-performance compute power to the midrange of the HP 9000 Series product line. The Models 845S and 845SE extend the midrange performance up to 23 MIPS, leveraging from the identical, modular midrange packaging. Additionally, the Models 845S and 845SE provide an upgrade path from the existing Models 8253, 835S, and 835SE via field-installable, board upgrades. See the following table for product numbers of the new upgrade paths.

Product NO.	Upgrade path
A1610A	Model 825S to 845S
A1611A	Model 825S to 845SE
A1612A	Model 835S to 845S
A1615A	Model 835S to 845SE
A1613A	Model 835SE to 845SE
A1614A	Model 845S to 845SE

Configuration information

The Models 845S and 845SE require one additional I/O and memory slot for cooling purposes. This means that the Model 845S provides six CIO slots and six CTB (memory) slots and the Model

845SE provides six CIO slots and six CTB slots in the SPU and an additional eight CIO slots in the I/O expander included with the Model 845SE.

Ordering information

Product No.	Description
A1608A	HP 9000 Model 845S multi-user computer system; SPU consists of system processor, floating-point coprocessor, 16 Mbytes ECC RAM (A1037A), six-channel multiplexer, HP-IB interface, 16-user HP-UX license (PIN 92452L), and general usage documentation (PIN 92536A) (operating system software and media must be ordered separately)
Opt. 501	Add 8 Mbytes RAM (P/N A1010A)
Opt. 516	Add 16 Mbytes RAM (PIN A1037A)
Opt. 532	Add 32 Mbytes RAM (PIN A1623A)
Opt. 533	Substitute A1623A 32-Mbyte ECC RAM board for PIN A1037A 16-Mbyte ECC RAM board. (total system memory = 32 Mbytes)
Opt. 0E1	Add powerfail battery back-up system
Opt. IA4	Racking hardware for PIN A1001A (1.6-meter) cabinet. (hardware for racking SPU and BBU)
A1609A	Model 845SE multiuser computer system; SPU consists of system processor, floating-point coprocessor, second integrated channel I/O adapter and eight-slot I/O expander, 32 Mbytes ECC RAM (PIN A1623A), six-channel multiplexer, HP-IB interface, powerfail battery back-up system, 64 user HP-UX license (PIN 92454L) and general usage documentation (PIN 92536A) (operating system software and media must be ordered separately)
Opt. 501	Add 8 Mbytes RAM (PIN A1010A)
Opt. 516	Add 16 Mbytes RAM (PIN A1037A)
Opt. 532	Add 32 Mbytes RAM (PIN A1623A)
Opt. IA4	Racking hardware for PIN A1001A (1.6-meter) cabinet. (hardware for racking SPU and BBU)
Opt. 004	Racking hardware for 110 expander for PIN A1001A cabinet

HP 9000

New HP 9000 Model 832S — midrange performance in space-saving, integrated package

The HP 9000 Model 832S (PIN A1044A) is the first midrange HP-PA HP 9000 system available in an integrated package. This desk-side system combines 90 percent of the Model 835S performance with HP's reliable, high-capacity, high-performance disk

and tape drives. Cost-effective, high-capacity backup comes standard with the integrated 1.3-Gbyte digital audio tape drive. The HP 9000 Model 832S is targeted for the manufacturing, lodging, state and local government, telecommunications, and medical markets.

Features and benefits

Feature	Benefit
New midrange integrated package combines powerful SPU with high-performance disk and tape drives	Space-saving footprint ideal for the office and laboratory environment — offers nearly unlimited location flexibility
Factory-installed HP-UX, I/O cards, disks, and tape drives	Fast, easy installation — system shipped as single, complete system ready to run application solution
Digital data storage tape backup	High-capacity, cost-effective tape device offers ease of use with unattended backup for up to 1.3-Gbytes
Powerful NMOS III HP-PA technology with single-board processor	High system performance with high reliability translating into a low cost of ownership for users
System support for up to 64 Mbytes main memory and 8-Gbyte disk capacity	Flexible configurations for medium-sized departments and businesses
Offers upgrade for Model 815S/808S	Protection of user's investment in hardware and software

Product-line positioning

By offering users an integrated package well suited for the emerging commercial UNIX system markets, the Model 832S strengthens the midrange of the HP 9000 Series 800 product line. With 90 percent of the Model 835S performance, the Model 832S has the capa-

bility to effectively meet the processing needs of 32 to 48 active users. The Model 832S also continues to extend the HP 9000 Series 800 integrated, easy-to-install product offering that was introduced with the Models 815S and 808S.

Configuration information

The base system comes with 16 Mbytes of error correcting memory, 304-Mbyte disk, 16 ports, 1.3-Gbyte digital audio tape drive, battery backup, as well as 16-user HP-UX loaded on the disk at the factory. Configuration flexibility is achieved with the expandability of up to 64 Mbytes of memory, up to 2.6 Gbytes of internal disk storage, and up to 64 ports, all of which can be installed and integrated into the package prior to shipment. The Model 832S features the HP Precision Bus (HP-PB) backplane that was introduced with the Model 815S and provides 10 available slots.

Ordering information

Product No.	Description
A1044A	Model 832S integrated multi-user computer system; base system includes system process, 16 Mbytes memory, 304 Mbyte disk drive, 1.3-Gbyte digital audio tape, 16-user HP-UX, 16 ports, and system console

HP 9000

New HP 9000 Model 645SV server expands the Series 600 family

The HP 9000 Model 645SV server (PIN 1607A) is the performance flagship of the Series 600 family. Rated at 23 MIPS, it features 32 Mbytes of system memory, 1.3 Gbytes of mass storage, and networking including ARPA and NFS services and X Window System. It offers object-code compatibility with the Model 635SV and the Series 800 family, and represents a growth path from the Model 635SV server. Price-sensitive users can take advantage of the Model 635SV's lower price point

and grow to the Model 645SV via a simple board upgrade.

Ordering information

Product No.	Description
A1607A	Model 645SV server
A1624A	Model 635SV to 645SV upgrade; consists of Model 645SV processor board, PDH board, and 8 Mbytes ECC RAM (P/N A1010A)
A1627A	Model 645SV multiuser upgrade

Features and benefits

Feature	Benefit
Bundled peripherals and networking hardware and software	Model 845S performance at a lower investment cost for server configuration
Network Computing System (NCS) option	Facilitates distributed applications development
HP NewWave Office support	Provides complete client/server solution supporting mail, database, networked PC management, and file/print capabilities
Server license	Provides unlimited programmatic access
Multiuser upgrade	Protection of customer's investment in hardware and software by allowing growth path to multiuser environment
Board upgrade from Model 635SV	Easy, cost-effective board upgrade

X Window System is a trademark of Massachusetts Institute of Technology

HP 9000

HP 9000 Models 835S and 835SE price changes

The following HP 9000 Models 835S and 835SE systems have been repriced effective January 1. Contact your HP representative for more information.

Product No.	Description
A1035A	Model 835S multiuser computer system
A1040A	Model 835SE multiuser computer system

HP 9000

Comparing the new HP 9000 Model 375 to the Model 370

Will the Model 375 replace the Model 370?

Yes. In both price and performance. The 50-MHz 68030 processor in the Model 375 is object-code compatible with the 25133-MHz 68030 in the Model 3601370.

Will the same RAM boards from the Model 370 (98258A/B/C and 98264A/B) work in the Model 375?

No. The Model 375 requires new RAM boards. The P/Ns are 98229A/B.

Will the addition of RAM to a Model 375 take DIO II slots?

No. The RAM boards connect directly to the CPU board and do not take any DIO II slots.

continued on next page

How many slots on the Model 375 CPU board are available for RAM?

Physically eight; however, each RAM board takes a pair of slots. Today, the Model 375 has a maximum RAM capacity of 32 Mbytes. More RAM capacity will be available with the introduction of 4-Mbit DRAM chips.

Will all the expanders that worked on the Model 370 work on the Model 375?

Yes. The Models 370 and 375 have the same chassis.

Will the floating-point-accelerator board (98248A/B) work in the Model 375?

No. Users who require a floating-point accelerator should buy a Model 375 and a board upgrade to the 68040 chip. The Motorola 68040 chip will have a built-in floating-point accelerator that will provide excellent floating-point performance. It will also be source-code compatible with Motorola's 68882 processor used in today's products.

Can the Model 370 be upgraded to the Model 375 via board swap?

Yes. The Model 370 CPU board, RAM board, and human interface boards will be replaced by one board taking two DIO II slots.

When upgrading a Model 370 to a Model 375, will you have any additional DIO II slots available?

Yes. A Model 375 SPU has two available DIO II slots and a Model 375 with a graphics top has one open DIO II slot.

HP 9000

Distinguishing between the HP 9000 Models 340 and 345

Will the newly introduced HP 9000 Model 345 replace the Model 340?

No. Both workstations meet difference price points.

Will the Models 340 and 345 both have an upgrade path to the next-generation products?

Yes. Both workstations will have an upgrade path via a box swap.

Can you get a three-button mouse on the Models 340 or 345?

Yes. Order Option 061 on any Model 340/345 bundled workstation.

Are the 4-Mbyte RAM cards for the Models 345 and 340 interchangeable?

No. The Model 345 uses ECC RAM (PIN 98229B) while the Model 340 uses parity RAM (PIN 98268A).

Will the Model 340 have an option for the internal 200-Mbyte SCSI disk like the Model 345?

Yes. The internal disk is optional at order time or field installed for existing Model 340 users. The Model 340 supports both the internal disk and DIO I slot, concurrently.

Will the Model 345 have an optional DIO I slot like the Model 340?

No. The DIO I slot upgrade for the Model 340 (PIN 98013A) is not supported on this Model 345.

Do the Models 340 and 345 have the same chassis?

Yes.

Will the Model 345 support the TurboSRX graphics?

Yes. The Model 340 will not support TurboSRX graphics.

Will the Model 345 support the CHX graphics?

No. The Model 345 does support the CH graphics but will not support the add-on accelerator (PIN 98556A). This is due to the extra power required by the 50-MHz 68030 chip in the Model 345. The Model 340 will support both CH and CHX graphics.

Will the Model 340 have a Centronics interface like the Model 345?

No.

Must special Centronics software be ordered to access the Centronics interface on the Model 345?

Yes. This can be ordered using Option 012 on any Model 345 bundled workstation.

Positioning the HP 9000 Models 345 and 375

Are both the Models 345 and 375 board upgradeable to the 68040 processor?

No. The Model 375 is board upgradeable to the Motorola 68040 processor. The Model 345 will be upgradeable to the 68040 via a box swap.

How many slots do the Models 345 and 375 have for RAM?

Both models physically have eight slots; however, each RAM board takes two slots. This means that each model has four slots available for RAM. RAM does *not* take any DIO I or II slots like some of the previous Series 300 models.

Will the 8-Mbyte RAM boards for the Model 375 (PIN 982298) work in the Model 345?

No. This is due to a physical size restraint. The 4-Mbyte RAM board (PIN 98229A) will work in the Model 375. The 4-Mbyte RAM board will take the same number of slots as the 8-Mbyte RAM board.

Will the 98577A, 98570A, and 98568A Opt. 132 expanders work on the Model 375?

Yes. The Model 375 has the same chassis as the Models 330135013601370. These expanders *will not* work on the Model 345.

What release of HP-UX will the Models 345/375 require?

HP-UX 7.0.

Will the Model 345 bundles have the preloaded HP-UX Options 404, 405, 408, 409, and 410 like the Model 375?

No. However the Model 345 does have options for a 200-Mbyte internal SCSI disk with preloaded HP-UX.

Will the Model 375 have a 200-Mbyte internal disk like the Model 345?

No.

Will the Models 345 and 375 have the three-button mouse?

Yes. The three-button mouse will come standard in all Model 375 bundles. Model 345 bundled workstations have an option for the three-button mouse.

Will a user need to specify ThickLAN or ThinLAN on the Models 345 and 375 workstations?

No. Both workstations have a LAN interface that is jumper selectable to ThinkLAN or ThinLAN. This does not need to be specified at order time and can be set at the user's site.

Will the Models 345 or 375 have options for ordering parity RAM?

No. Both systems will come standard with ECC RAM. ECC RAM will cut down on system crashes due to RAM errors.

Will both the Models 345 and 375 have Centronics interfaces?

Yes. Centronics comes standard on both systems. Order the software drivers to allow access to the Centronics port (Options 012 on all bundled systems).

Will the Model 375 support the CHX graphics?

Yes. The Model 375 has a larger power supply than the Model 345 and can meet the power requirements of the 50-MHz 68030 processor, CH graphics (PIN 98550A), and the accelerator (PIN 98556A), concurrently. The Model 345 will only support the CH graphics and not the CHX graphics.

What interfaces are on the CPU/IRAMI Human interface board of the Models 345 and 375?

RS-232-C, normal-speed HP-IB, HP-HIL, Centronics, LAN (Thick or Thin), and a disk interface. On the Model 375, SCSI is standard with high-speed HP-IB optional. On the Model 345, both SCSI and high-speed HP-IB are options. Both high-speed HP-IB and SCSI on the Models 345/375 take the same physical location; therefore, both cannot be ordered concurrently.

HP 9000

HP 9000 Series 200 accessories obsolescence

The following HP 9000 Series 200 products will be removed from the HP Price List on July 1, 1990. Contact your HP representative for more information.

Product No.	Description
98143A	CPU upgrade kit
98143P	9816 ID prom upgrade
98143U	MMU CPU upgrade
98201A	Keypad interface
98203A	Small keyboard
98203B	Large keyboard
98204A	Video card
98270F	Powerfail upgrade
98604A	ROM HPL 2.0
98614A	HPL 2.1 software
98614R	RTR HPL 2.1
98791B	Terminal emulator
9920U	Modular computer

Discontinuance for these products will occur on this schedule:

Date	Activity
July 1, 1990	Removal from price list
July 31, 1990	Final U.S. orders accepted
September 30, 1990	Final international orders accepted
March 30, 1991	Final shipments

HP 9000

HP 9000 Series 500 accessories obsolescence

The following HP 9000 Series 500 accessories will be removed from the HP Price List effective March 1, 1990. Contact your HP representative for more information.

Product No.	Description
9050AU	Computer shell
97041A	2nd 110 processor
97042A	3rd I/O processor
97043A	Additional CPU
97043B	Floating-point CPU
97043P	25 floating-point CPU
97046B	Two 1-Mbyte RAM boards
97046P	25 pairs 1-Mbyte RAM
97048A	2-Mbyte RAM board
97048P	25 2-Mbyte RAM boards
97049A	110 processor
97049P	25 I/O processor
97050B	BASIC 2.0
97050N	Return credit
97050R	RTR BASIC
97051C	64-user HP-UX
97052B	BASIC graphics
97052N	Return credit
97052R	RTR BASIC graphics
97053B	IMAGE DBM
97053R	RTR IMAGE DBM
97057N	Return credit
97060N	Return credit
97062A	Color interface
97068A	Tech. BASIC
97068R	RTR Tech. BASIC
97069A	HP Windows
97069N	Return credit
97070C	SU HP-UX
97071C	SU FORTRAN 77
97071R	RTR FORTRAN 77

Product No.	Description
97072C	SU PASCAL compiler
97072R	RTR Pascal
97073A	SU IMAGE DBM
97073R	RTR IMAGE DBM
97078C	32-user HP-UX
97079C	SU HP-UX
97079N	Return credit
97080C	16-user HP-UX
97081C	MU FORTRAN 77
97081R	RTR FORTRAN 77
97082C	MU Pascal compiler
97082R	RTR Pascal
97083A	IMAGE/QUERY DBM
97083R	RTR IMAGE/QUERY
97088C	32-user HP-UX
97089C	16-user HP-UX
97089N	Return credit
97090A	Thermal printer
97093A	20-Mbyte disk
97098A	I/O expander
97099A	EIA rack mount
98288A	Display buffer
98288N	Return credit
98673A	HP-GKS
98684X	DGL skelton device

Discontinuance for these products will occur on this schedule:

Date	Activity
March 1, 1990	Removal from price list
March 31, 1990	Final U.S. orders accepted
May 31, 1990	Final international orders accepted
November 30, 1990	Final shipments

HP 9000

Introducing DTC for HP 9000 Series 800 systems

The DTC Terminal Access19000 (PIN 2345A) provides HP-UX users the capability to connect a large number of users to HP 9000 Series 800 systems. HP-UX users have been constrained by the physical limitations of MUX ports available in the Series 800 systems. With the DTC/9000, users in LAN

environments will be able to achieve a large number of connections and have access to either single or multiple systems (host switching) on the LAN. The actual limitations on the number of "active" users supported will depend on the type of application that the customer is using.

Features and benefits

Feature	Benefit
Multiple system access to HP 9000 Series 800 systems	Cost effective — applications can be distributed across multiple systems for maximum CPU utilization
Support industry-standard protocols	Flexibility — provides basis for multivendor connectivity in the future; protects investments
Add terminal users without disrupting the HP 9000 Series 800 system; users can alternate systems if a given system fails	Increased network uptime—terminal users have greater system availability
Eliminates the need for virtual terminal (Telnet and rlogin) sessions between systems	Higher performance terminal connectivity — more CPU power available for application load.

HP-UX product-line positioning

Terminal connections to HP 9000 systems can be achieved in one of two ways — with system multiplexers or via DTC/9000. The decision on which of these methods best fits a user will depend on specific requirements in terms of functionality, performance, and pricing.

Currently, one DTC cannot access both HP 9000 and 3000 systems simultaneously. Until one DTC can support access to both systems, different terminology will be used to help clarify the differences in what functionality is supported by each system. It is important to understand that both DTCs share the same hardware platform but are configured with different downloads. These downloads determine the behavior and functionality of the DTCs. The following naming conventions will be used:

DTC/9000

- used to communicate with HP 9000 Series 800 systems
 - has high-port count
- based on standard Telnet TCP/IP protocols
- provides host switching
- does not provide printer/modem support at first release
- multivendor support planned for end of year 1990

DTC/3000

- used to communicate with HP 3000 systems
 - has high-port count
- provides terminal and X.25 access
- provides host switching

Refer to the product data sheets for more detailed information on these differences.

Both DTCs can be managed by the same OpenView DTC manager. This means that the same OpenView workstation and software package can download either DTC. These downloads determine the DTC's behavior and features. Now, the DTC management station cannot run both a DTC/9000 and a DTC/3000 at the same time. This will be a part of a future enhancement.

As the DTC platform continues to evolve, the user investment will be protected. HP will continue to build more functionality into the DTC without requiring hardware changes, and HP will be able to provide a flexible product that will meet the needs of a variety of user environments from a single hardware platform.

Ordering information/promotional bundles

The DTC/9000 may be ordered with the HP 9000 Series 800 system promotion or as a stand-alone product. The following is the information required to order the product in both ways. **Note:** When a user purchases the DTC/9000 as a part of the HP 9000 Series 800 system promotion, the product is offered at a special reduced price.

Ordering the DTC/9000 with a system promotional bundle

These promotions provide a DTC/9000 discount to users who order an HP 9000 Series 800 system at the same time as the DTC/9000 product. It includes the HP 9000 Series 800 as specified, the DTC/9000 (maximum quantities determined by the size of Series 800 system purchased), and the options for asynchronous connector cards. **Note:** The OpenView DTC manager (PIN 32054A) and the OpenView

Windows workstation (PIN 32054A) are required to run the DTC and must be ordered separately, but are not required to be eligible for the promotion.

Note: This promotion may not be available in all countries. Check with your HP representative for more information.

Ordering the DTC/9000 as a stand-alone product

All add-on DTC/9000s may be ordered by using the current stand-alone product numbers as listed.

Product No.	Description
2345A	DTC
Opt. 015	Set for 220V operation
Opt. 240	ThickLAN with MAU
Opt. 241	ThinLAN without MAU
Opt. 242	ThinLAN
Opt. 803	RS-232-C connector card
Opt. 805	RS-422 connector card
D2355A	OpenView DTC Manager software
32054A	OpenView Windows workstation
Opt. 004	DTC configuration (<i>must order</i>)

Note: Modem connections are *not* supported in this release of the DTC/9000, therefore, these cards should not be ordered for modem connections. For a complete explanation of the current stand-alone product structure, refer to the DTC Terminal Access19000 product data sheet.

Also in this issue

HP ALLBASE/4GL now available on new MPE XL systems 2

HP commits to TRANSACT 2

New midrange cabinet configurations 9

Two new high-density memory cards for HP 3000 and 9000 product lines 11

HP DDS-format tape drives are here 23

New SCSI mass storage systems from HP 24

HP 7937H/XP/FL disk drives to be removed from June 1990 HP Price List 27

Introducing HP OpenView Network Management Server — available on HP-UX 28

HP OpenView Program expands — now extended under UNIX system 28

Personal Computers

General

HP AXDS/PC now supports g

The HP accelerated X Window display server software for the PC (HP AXDSIPC, PIN D2300B) has been updated to support hardware panning. The panning feature allows the HP AXDSIPC user to view and display windows in an area of 1,024×1,024 pixels using a 640×480 VGA or 1,024~768 monitor.

By configuring the HP AXDSIPC software for a display area of 1,024×1,024 pixels, the user will see windows according to the monitor size, but the offscreen area can be viewed by moving the mouse cursor to the edge of the screen. Since panning is processed locally by the HP A1086A intelligent graphics controller 10 card, response time while panning is instantaneous, without any overhead on the application or PC.

Panning is useful for a variety of programs, such as FrameMaker, that require a 1,024×768 or 1,024×1,024 pixel area to fully display the application windows.

Contact your HP representative for more information.

Desktop

New high-capacity drives and controller for HP Vectra 486 PC

On February 1, 1990, Hewlett-Packard introduced a new high-performance ESDI controller and two high-capacity drives for its top-of-the-line HP Vectra 486 PC. The drives and controller boast state-of-the-art performance and industry-leading quality and reliability. The new products are particularly well suited for multiuser, server, computer-aided design, and other demanding applications.

The drives are available in 330-Mbyte (PIN D1660A) and 670-Mbyte (PIN D1661A) formatted capacities. With two drives, they provide the HP Vectra 486 PC with a maximum capacity of over 1.3 Gbytes. They have 1:1 interleave, average access times of less than 16 milliseconds, and transfer rates of 20 Mbits per second (33 percent faster than the highest-performance drives currently available). The drives offer the highest reliability in the industry today. Their rated mean time between failures (MTBF) is over 150,000 hours.

The controller (PIN D1664A) sets a new standard in performance while retaining register-level AT compatibility. It has been carefully tuned to the drives, optimizing overall system performance. It supports a 20-Mbits per second transfer rate, taking full advantage of the

maximum drive throughput. The controller also comes standard with 64 Kbytes of on-board hardware cache. The read-ahead cache allows the controller to anticipate future CPU read requests. Data in the cache can be accessed as fast as .5 milliseconds, vastly improving the speed of the overall mass storage subsystem. In addition to the new 330- and 670-Mbyte drives, the controller supports HP's existing 108- and 152-Mbyte ESDI drives.

For complete AT compatibility, the controller offers an innovative feature called drive splitting. It provides the capability to split physical drives larger than 528 Mbytes into two logical drives. This selected feature allows the subsystem to sidestep a capacity limit imposed by MS-DOS and the AT architecture. It ensures the correct operation of all DOS applications.

Contact your HP representative for more information.

MS-DOS is a U.S. registered trademark of Microsoft Corp.

Peripherals

Mass Storage

HP DDS-format tape drives are here

Hewlett-Packard announces the digital data storage (DDS) format tape drives. The HP Series 6400 Models 1300H (HP-IB, PIN C1511A) and Model 1300S (SCSI, PIN C1512A) tape drives are on the February 1 HP Price List.

The tape drives provide a low-cost, high-capacity, unattended backup solution for HP 3000 and HP 9000 systems. The DDS-format tape drives are based on digital audio tape (DAT) technology. DAT uses an advanced form of helical scan recording to store 1.3 Gbytes of data on a DDS cassette, approximately the size of a credit card.

The new DDS-format is one of the steps that takes DAT from a audio product to a data storage product. It was designed for the high reliability needs of a data storage device. HP coauthored the format and is leading the industry towards its adoption as the standard for computer data storage.

Features

- 1.3 Gbytes capacity and 11 Mbytes per minute transfer rate
low-cost media
- 8-second power-on cycle, 18-second load time
- DDS-format standard
- Fastsearch

Benefits

- **Unattended backup** — The HP Series 6400 Models 1300H and 1300S can store 1.3 Gbytes of data in under two hours. The high capacity and fast transfer rate reduces operator intervention making it a more cost-effective backup technology.

continued on next page

- **Fast and easy tape loading** — The DDS-format tape drives have a power-on cycle of 8 seconds and load time of 18 seconds. The tape is ready to start backup in under 30 seconds.
- **Low-cost media** — The small size, high-quality media provides users with a low-cost way to distribute software. At \$15 per cassette, you can significantly reduce your media costs because you can store the equivalent of 10 6250-bpi tapes or 10 5/8-inch cartridge tapes on a single DDS cassette.
- **Dependable data storage** — Data integrity is one of the most important features of your backup device. To ensure that data is safely stored, the DDS-format tape drives uses powerful error correction routines and read-after-write, which verifies the data after it has been written.
- **Data interchange between systems** — The DDS-format gives users the ability to interchange data between different manufacturers' systems. HP is the first computer manufacturer to market DDS-format tape drives with a complete systems solution. Other manufacturers will follow, so you will see a number of DDS format products on the market with similar functionality. Sixteen tape drive manufacturers support DDS as a standard and are developing DDS-format products of their own. The DDS manufacturers group is working toward making the DDS-format the future standard for data interchange, the same way 5/8-inch tape and floppy disk are today.
- **Fast file retrieval** — Fastsearch* is a facility unique to DAT, which makes file retrieval easier. It searches the tape at 200 times the normal read speed to find a file in an average of 20 seconds.
- **Host support** — The Model 1300H is a high-capacity, low-cost solution for backup, data interchange, or software distribution on HP 3000 systems. It is supported on MPE VIE from Vd8

patch and MPE XL allowing data interchange between HP 3000 systems and XL machines.

Both the Model 1300H and 1300S are suitable for backup of HP 9000 technical workstations, network servers, or multiuser systems. Both the Model 1300S and 1300H tape drives are supported on HP 9000 Series 300 at the 7.0 release of HP-UX. For HP 9000 Series 800 both, models will be supported at the 8.0 release of HP-UX.

Product line positioning

The DDS-format tape drives will coexist with the 5/8-inch and 1/2-inch tape drive product line.

Users should choose 5/8-inch cartridge tape drives as a low-cost, entry-level solution for backup of 67 to 536 Mbytes of disk capacity. They should continue to use 1/2-inch cartridge tape for HP 1/4-inch compatibility and to boot and install on the HP 9000 Series 300. Software for the HP 9000 and HP 3000 will continue to be distributed on 1/4-inch cartridge tape. Software for the HP 3000 will also be available on DDS cassettes.

The 1/2-inch tape products provide higher performance than DDS-format products for backup and restore. Although the Models 1300H and 1300S have a similar transfer rate as the HP 7979A, the HP 7980A has twice the performance.

DDS-format tape drives provide high-capacity unattended backup to 1.3 Gbytes with fast file retrieval. They are a lower-cost solution than 5/8-inch tape and provide higher performance than 1/2-inch cartridge tape drives.

Ordering information

Product No.	Description
C1511A	HP Series 6400 Model 1300H with HP-IB interface
C1512A	HP Series 6400 Model 1300S with SCSI interface

*Fastsearch will be available on selected systems by the end of 1990.

Mass Storage

New SCSI mass storage systems from HP

Hewlett-Packard has introduced a new family of mass storage systems aimed at high-performance HP workstations. Based on the Small Computer Systems Interface (SCSI), the HP Series 6000 Models 330S (PIN C2212A) and 660S (PIN C2213A) integrate HP's own high-capacity hard-disk mechanism with a choice of two additional drives: a digital-audio-tape (DAT) drive, a compact-disk read-only-memory (CD-ROM) device, a rewritable-optical disk drive, and/or additional hard-disk drives.

The new products offer HP workstation users flexibility never before available, with state-of-the-art peripherals that address a wide range of storage needs. Previously, if users wanted multiple mass-storage peripherals, they were forced to buy multiple standalone products. The new Models 330S and 660S allow users to configure drives that meet a variety of needs, in one compact package, at a list price lower than the standalone equivalents.

The new storage systems are designed with a base configuration of one 5 1/4-inch hard-disk drive, with two full-height 5 1/4-inch empty slots. The HP Series 6000 Model 660S features a 664-Mbyte (formatted) hard-disk mechanism; the HP Series 6000 Model 330S features a 332-Mbyte (formatted) hard-disk drive. The empty slots can be used for additional HP hard-disk drives, or users can choose any combination of the following HP devices to meet specific application needs:

- a DAT drive that implements the digital-data storage (DDS) recording format and that can back up 1.3 Gbytes of information in two hours

a CD-ROM drive that enables users to access data from 600-Mbyte disks containing information such as database libraries and audio/visual training programs

- a rewritable-optical disk drive that conforms to the ISO and ANSI definition for the continuous-composite format; the rewritable cartridges used with this drive stores 650 Mbytes of data (325 Mbytes per side) and can be written to and erased as many times as necessary with no data or media degradation.

Users can choose to have HP integrate the optional mechanisms at the factory or can use an upgrade kit to install the drives.

The high-performance SCSI disk-drive mechanisms offered with the HP Series 6000 Models 330S and 660S systems have a 16.5-ms seek time, an average access time of 25.1 ms, and a mean-time-between-failure (MTBF) rating of 150,000 hours.

The disk firmware has been designed to optimize available disk throughput on HP 9000 Series 300 workstations running HP-UX 7.0. With this level of throughput, users should experience twice the performance of HP disk-drive families such as the HP 795XS, HP 795XB, and HP 796XB.

Disk-only configurations are orderable immediately. DAT, CD-ROM, and rewritable-optical configurations will be available in the second calendar quarter of 1990. Upgrade kits are available and will make later installation of these mechanisms easy if a disk-only system is purchased today.

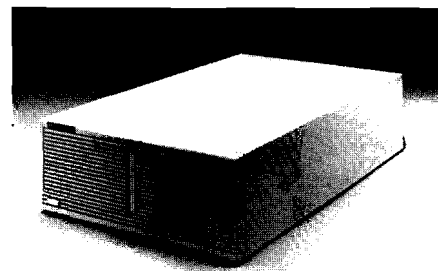
Ordering information

Product No.	Description
C2212A	HP Series 6000 Model 330S mass storage system consisting of a 332-Mbyte fixed disk drive in a compact package with upgrade capability
Opt. 001	Adds 332-Mbyte fixed disk to C2212A

Product No.	Description
Opt. 003	Adds 1.3-Gbyte digital audio tape drive to C2212A (includes a DAT cassette and head cleaning cassette)
Opt. 004	Adds CD-ROM drive to C2212A (includes a disk caddy)
Opt. 005	Adds rewritable optical drive to C2212A (includes an optical disk cartridge)
Opt. 024	Adds two CD-ROM drives to C2212A (includes two disk caddies)
Opt. W03	Converts 1-year return-to-HP warranty to 90-day on-site warranty
C2213A	HP Series 6000 Model 660S mass storage system consisting of a 664-Mbyte fixed disk drive in a compact package with upgrade capability
Opt. 001	Adds 332-Mbyte fixed disk to C2213A
Opt. 002	Adds 664-Mbyte fixed disk to C2213A
Opt. 003	Adds 1.3-Gbyte digital audio tape drive to C2213A (includes a DAT cassette and head cleaning cassette)
Opt. 004	Adds CD-ROM drive to C2213A (includes a disk caddy)
Opt. 005	Adds rewritable optical drive to C2213A (includes an optical disk cartridge)
Opt. 022	Adds two 664-Mbyte fixed disk drives to C2213A
Opt. 024	Adds two CD-ROM drives to C2213A (includes two disk caddies)
Opt. W03	Converts 1-year return-to-HP warranty to 90-day on-site warranty
<i>Model 330S/660S upgrade kits</i>	
C2290A	Upgrade kit to add 332-Mbyte fixed disk drive to Model 330S/660S
C2291A	Upgrade kit to add 664-Mbyte fixed disk drive to Model 330S/660S
C2292A	Upgrade kit to add 1.3-Gbyte digital audio tape drive to Model 330S/660S (includes DAT cassette and head cleaning cassette)
C2293A	Upgrade kit to add CD-ROM drive to Model 330S/660S (includes disk caddy)
C2294A	Upgrade kit to add rewritable optical drive to Model 330S/660S (includes an optical disk cartridge)

Mass Storage

New mass storage systems offer higher capacity, lower price



Hewlett-Packard has introduced a new family of high-performance 5 1/4-inch hard-disk drives for entry-level through high-end HP computer systems: the HP Series 6000 Models 335, 670, and 1.34. All models integrate HP's own high-performance, high-capacity 5 1/4-inch disk mechanisms. The result is more storage capacity, smaller packaging, and cost per megabyte savings of 50 percent or more.

The new products replace the HP 7936 and 7937 high-end storage systems, and the HP 7959B, 7962B, and 7963B midrange products. Like their predecessors, the Models 335, 670, and 1.34 will set new standards in disk storage system reliability, floor space utilization, and cost per megabyte pricing.

The family consists of the following capacities and interfaces:

- The HP Series 6000 Model 335H (PIN C2200A), which stores 335 Mbytes of data and is available with an HP-IB interface.
- The HP Series 6000 Models 670H (P/N C2203A), 670XP (PIN C2202A), and 670FL (PIN C2201A) with 670 Mbytes of data storage and HP-IB, HP-IB cache, and HP-FL fiber-optic interfaces, respectively.

continued on next page

- The HP Series 6000 Model 1.34FL (PIN C2204A) that stores 1.34 Gbytes of information and has an HP-FL interface.

The storage systems measure 132-mm high × 325-mm wide × 554-mm long. Four Model 1.34FL units store 5.4 Gbytes of data and can be housed in the same cabinet currently used to store 1.14 Gbytes of information with two HP 7937 storage systems.

With some models costing less than \$12/Mbyte, the new storage systems are priced as much as 55 percent lower than the products they replace. And mean-time-between-failure (MTBF) ratings are 35 to 50 percent higher. For example, the Model 670H has a specified 100,000-hour MTBF, compared to the HP 7937 that has a 72,000-hour rating. Performance is comparable to their predecessors, with improvements in seek time and average latency: 17 ms and 7.4 ms, respectively. Power requirements have been reduced by more than 50 percent.

All these improvements represent excellent cost-of-ownership value for users and will result in longer periods of uninterrupted system availability and maintenance savings of up to 50 percent.

The disk drives will be supported on the following systems

- HP 3000 systems with MPE V Delta 8.0 and MPE XL 2.0 operating systems
- HP 9000 systems with HP-UX 7.0 operating systems
- HP 1000 RTE-A and RTE-6 systems running 5.1 or later releases

Mass Storage

New cabinets for HP Series 6000 disk drives

The introduction of the new HP Series 6000 Models 335H, 670H/XP/FL, and 1.34FL disk storage systems is accompanied by the introduction of new cabinetry for these disk drives.

Provisions have been made to allow installation of the new drives in some of the older DSS cabinets as well.

New installations

- HP 92211Y — A 325-mm wide disk drive cabinet accommodating up to four HP Series 6000 disk drives.
 - comes completely assembled with a Design Plus cabinet, four rack mount kits, four internal power cords, and a power strip
 - maximum storage capacity is 5.36 Gbytes
- HP 46299A — A 19-inch wide EIA cabinet accommodating up to eight HP Series 6000 Models 335H, 670H/FL/XP, and 1.34FL disk drives.
 - comes completely assembled and includes a cabinet, eight-tray adapter kits, a PDU, eight internal power cords, and front and rear doors
 - maximum storage capacity is 10.72 Gbytes

Features and benefits

- cabinets come with tray and/or rails installed
- PAD discountable
- smaller footprints
- resemble old cabinets

Ordering information

The following products are orderable from HP DIRECT (see phone numbers listed in Supplies section).

Product No.*	Description
92211Y	Four-pack cabinet, up to four disk drives
46299A	19-inch EIA cabinet, up to eight disk drives

**The HP Series 6000 Models 335H, 670H/XP/FL, and 1.34FL are supported in both the HP 92211Y and the HP 46299A. Other cabinets may not have undergone the appropriate environmental testing.*

Existing installations

Some older cabinets will support the Series 6000 Models 335H, 670H/XP/FL, and 1.34FL:

- HP 19511A — One of the new disk drives will fit where one HP 7936137 was meant to go. The disk drives will fit the standard rails installed in this cabinet.
- HP 19514A — One of the new disk drives will fit where one HP 7936137 was meant to go, however, one HP 92211Q tray adapter kit is required. The adapter kit is available from HP DIRECT.

If you have any questions, or if you need spare parts for these standard cabinets, please contact your local Hewlett-Packard sales office.

Mass Storage

HP 35401A cartridge tape autochanger price increase

Effective January 1, 1990, the price of the HP 35401A ¼-inch cartridge tape autochanger was increased.

Contact your HP representative for more information.

Mass Storage

HP 7970E options and kits to be discontinued

Hewlett-Packard will be discontinuing the following HP 7970E OEM tape drive options on February 1, 1990:

Product No.	Description
7970E	OEM tape drive
Opt. 002	25.0 ips tape speed
Opt. 004	Three extender boards
Opt. 015	230-volt power option

The following HP 7970E tape drive kits will be discontinued on April 1, 1990:

Product No.	Description
13194A	Multiunit cable for HP 7970B/E
13196A	HP 7970E read test kit
26072A	HP 7970E HP-IB conversion kit

Note: All the products will be supported until December 31, 1998, except P/N 26072A, which will be supported until November 1, 1996.

Contact your HP representative for more information.

Mass Storage

HP 7937H/XP/FL disk drives to be removed from June 1990 HP Price List

Effective May 31, 1990, Hewlett-Packard will discontinue the HP 7937H/7937FL/7937XP 571-Mbyte disk drives. The HP 7937XX drives will be removed from the HP Price List on June 1, 1990, and will be supported for 10 years.

HP is discontinuing these drives because of the introduction of the C220XA family of disk drives. Most users will migrate to the new solutions as follows:

Product No.	Description	Replaced by
7937FL	571-Mbyte FL disk	C2201A/ C2204A
7937XP	571-Mbyte cache	C2202A
7937H	571-Mbyte HP-IB	C2203A



Those users running older versions of the HP operating systems will be required to do one of the following:

- move forward to the new releases
- purchase HP 7963B plus upgrade kits in place of HP 7937H drives where supported or new or used 7937H drives while available
- purchase HP 7937XP drives new or used while available

HP 7963B + 97963B support matrix

Computer system	Operating system
HP 3000 MPE V MPE XL	V-Delta-1
HP 9000 Series 800 HP-UX	2.0
HP 9000 Series 300 HP-UX	6.0

Note: The HP 7963B cannot be upgraded to an XP or FL controller.

Contact your HP representative for more information.

Networks

Introducing HP OpenView Network Management Server—available on HP-UX

The HP OpenView NM Server software, based on the HP 9000 Series 3001600 and 800 family, is a scalable object-oriented network management development environment. It provides network element suppliers or system integrators and their customers a flexible and open solution for integrating network management information.

Market research indicates that the demand for integrated network management is increasing faster than a vendor's ability to provide an off-the-shelf solution; thus, Fortune 1000 companies are approaching system/LAN integrators for cost-effective custom, turnkey solutions.

Developers using HP OpenView will realize a significant competitive edge for themselves — and their customers — with the HP OpenView NM Server. Its ease of use reduces end-user operating costs and provides a solution for tomorrow's integrated network management problems — today.

Features and benefits

The HP OpenView NM Server is a leading-edge product for developing integrated multivendor network management solutions. It joins the company's existing HP OpenView offerings, as well as a wide range of standards-based, network-management application software, test-and-measurement equipment, and network support services.

NM Server components

The NM Server consists of the following five key components:

- *HP OpenView Windows* — an advanced graphical user interface designed to integrate the presentation of all network management applications.

- *Communications Infrastructure API* — provides a common foundation for communication and integration between all the object-oriented services available to network management application developers.

- *Communications Protocols* — HP offers both Simple Network Management Protocol (SNMP) and CMIP over TCP/IP (CMOT).

- *Data Management Services* — provides a single logical store of information about the network elements.

- *Event Management Services* — provides the ability to collect and forward events to applications on such things as element failures or state changes.

Contact your HP representative for more information on the HP OpenView NM Server developers kit.

Ordering information

Product No.	Description
36985A	HP OpenView NM Server Developer license to use for Series 300
36986A	Media and documentation for 36985A
36987A	HP OpenView NM Server Developer license to use for Series 3001800
36988A	Media and documentation for 36987A
36989A	HP OpenView NM Server Developer Documentation set for Series 30016001800
36990A	HP OpenView NM Server end user license to use for Series 300
36991A	Media and documentation for 36990A
36992A	HP OpenView NM Server end user license to use for Series 6001800
36993A	Media and documentation for 36992A
36994A	HP OpenView NM Server end user documentation set for Series 30016001900

Networks

HP OpenView Program expands — now extended under UNIX system

On January 15, Hewlett-Packard completed a major expansion of its HP OpenView family of network management products. The expansion includes a number of element management applications for TCP/IP networks as well as the extension of HP's integrated network management platform under the UNIX system.

HP OpenView is the company's strategy for multivendor network and networked systems management. With this announcement, HP believes it is the first major computer vendor to offer an object-oriented, standards-based solution for integrated network and systems management.

The developers platform, which follows the client/server example, is called HP OpenView Network Management Server and joins the company's existing DOS/Windows-based platform family.

With the addition of NM Server, The HP OpenView family of products now includes:

- development environments — the HP OpenView NM Server on HP-UX and HP OpenView Windows/DOS on DOS.
 - element management applications — such as the HP OpenView DTC Manager and HP OpenView Bridge Manager
 - network measurement instrumentation — such as the Protocol Analyzers and LanProbe
- comprehensive multivendor network support and service program

This complete family of products will enable network and system managers within diverse parts of corporate organizations to reduce overall cost ownership for their networks. By integrating areas of their network such as fault, configuration, and performance through the use of HP OpenView, management users will ultimately have a distributed management solution and a foundation for cooperative computing.

Multivendor network support and services

The HP OpenView Support program has also been enhanced. HP's network management support services provide customized help in network planning and design, installation, operation, and maintenance in multivendor environments.

The HP OpenView solution is designed to provide the tools and services to meet the user's specific network-management needs. These tools and services include:

- multivendor network planning and design
- full scale project management
- network consulting
- multivendor remote diagnostics, fault isolation and problem resolution offered by 32 HP Response Centers worldwide
- full scale multivendor network operations through HP Customer Centers worldwide

In addition, HP also provides educational courses on HP OpenView and the UNIX system to help get users started.

Contact your HP representative for more information.

Printers

HP introduces new Scalable Typeface Disk Collections for HP LaserJet printers

On January 1, 1990, HP introduced five new Scalable Typeface Disk Collections. The new collections are:

- **Distinctive Documents I** (PIN C2050A #D80) — for correspondence, manuals, and reports
- **Compelling Publications I** (PIN C2050A #D81) — for brochures, fliers, charts, and tables
- **Decorative Words I** (PIN C2050A #D84) — provides pizzaz for signs, handbills, menus, or any document
- **Brilliant Presentations I** (PIN C2050A #D82) — for memos and letters to presentations and reports (available March 1, 1990)
- **Compelling Publications II** (PIN C2050A #D83) — for additional typefaces to add to your pub library for brochures, fliers, charts, and tables (available March 1, 1990)

The Premier Collection for 3%-inch disks (PIN C2052A) or 5%-inch disks (PIN C2054A) was introduced February 1989.

As an enhancement, each Scalable Typeface Disk Collection includes a new educational manual in five languages: English, French, German, Italian, and Spanish. The manual explains the history, how to use, how to mix, benefits, and moods of the typefaces. It also teaches basic concepts of typography, especially useful for word processing users.

The new Scalable Typeface Disk Collections are additions to the current product listing of 29 scalable typeface families in the HP MasterType Library. The prices of individual Scalable Typeface products have been reduced. Each product contains 5¼- and 3½-inch disks; and all individual scalable typeface products, except ITC Zapf Dingbats, contain four treatments or typefaces.

All scalable typeface products must be used with HP Type Director, a font management program, that allows users to scale from 4 to 200 points.

Ordering information

Product No.	Description
C2050A D01	CG Times
C2050A D02	Univers
C2050A D03	Decorative I (Brush, Dom Casual, Park Avenue, Uncial)
C2050A D04	CG Triumvirate
C2050A D05	ITC Zapf Dingbats
C2050A D06	CG Century Schoolbook
C2050A D07	ITC Lubalin Graph
C2050A D08	ITC Avant Garde Gothic
C2050A D09	Futura II
C2050A D10	ITC Souvenir
C2050A D11	Microstyle
C2050A D12	Univers Condensed
C2050A D13	ITC Benguiat
C2050A D14	Garamond Antiqua
C2050A D15	ITC Bookman
C2050A D16	CG Triumvirate Condensed
C2050A D17	CG Palacio
C2050A D20*	CG Omega
C2050A D21*	Decorative 2 (Cooper Black, Revue Shadow, Revue Light, University Roman)
C2050A D22*	Antique Olive
C2050A D23*	Stymie
C2051A ABA	Type Director
C2052A ABA	Premier Collection 3½-inch disk
C2054A ABA	Premier Collection 5'A-inch disk
C2050A D80*	Distinctive Documents I (3½- and 5¼-inch disks)
C2050A D81*	Compelling Publications I (3½- and 5¼-inch disks)
C2050A D84*	Decorative Words I (3%- and 5¼-inch disks)
C2050A D82*	Brilliant Presentations I (3½- and 5¼-inch disks)
C2050A D83*	Compelling Publications II (3½- and 5¼-inch disks)

*New

Contact your HP representative for more information.

Terminals

HP 3081A and 9291XA price increase and discontinuance

The HP 3081A was introduced in July 1984. The HP 92915A, introduced in July 1984, is a barcode reader accessory for the HP 2392A/2394A terminals and HP 150A/B PCs, which are obsolete products.

Price increase

Effective on the February 1, 1990, HP Price List, prices have increased for the HP 3081A, HP 9291XA, and related accessories.

Product No.	Description
3081A	Factory Data Collection Terminal
Opt. 030	Mounting bracket
Opt. 004	Alphanumeric keyboard
Opt. 065	General-purpose 7.5-mils wand
Opt. 066	Infrared light-slot reader
Opt. 067	Visible light-slot reader
92922A	4-channel adapter
92923A	Single-channel adapter
92915A	Barcode reader with wand
92916A	Barcode reader with wand
92917A	Barcode reader wand

Discontinued products

The following products and related accessories will be discontinued/obsoleted in 1990.

Product No.	Description
3081A	Factory Data Collection Terminal
Opt. 030	Mounting bracket
Opt. 004	Alphanumeric keyboard
Opt. 065	General-purpose 7.5-mils wand
Opt. 066	Infrared light-slot reader
Opt. 067	Visible light-slot reader
92922A	4-channel adapter
Opt. 015	220V-50Hz
92923A	Single-channel adapter
Opt. 015	220V-50Hz
92179H	3081A cable
92920A	Standard datacom cable
92921A	Special datacom cable
92915A	Barcode reader with wand
Opt. 030	Delete wand
92916A	Barcode reader with wand
Opt. 030	Delete wand
92917A	Barcode reader wand
Opt. 030	Delete wand

Also in this issue

<i>New midrange cabinet configurations</i>	9
<i>New backup device for HP 3000 systems</i>	10
<i>HP 3000 adds support for HP 700/41 ASCII terminal</i>	10
<i>Introducing DTC for HP 9000 Series 800 systems</i>	21
<i>New high-capacity drives and controller for HP Vectra 486PC</i>	23

Supplies

Supplies

HP DIRECT order phone numbers

HP DIRECT Fast Phones—the easy, direct way for users to order supplies, accessories, media, furniture, and software from HP DIRECT.

Location	Telephone Number
Australia	(03) 895-2645 (03) 895-2615 (03) 895-2815 (03) 895-2861 (03) 895-2619 (800) 339-861 (toll-free)
Austria	(0222) 2500-61416151616
Belgium/Luxembourg	(02) 761 31 11
Canada	800-387-3154
Toronto Local	416-671-8383
Denmark	80 30 16 40
Finland	(90) 887 2361
France	(1) 69 86 17 25
Greece	(01) 672 6090
Italy	(02) 9210 3301
Japan	
Sagamihara	0120 091321 (toll-free)
Middle East/Africa,	
Geneva	(022) 831212
Norway	(02) 24 60 90
South Africa	
Johannesburg	(011) 802 5111
Cape Town	(021) 537 954
Spain	(91) 637 4013 (91) 637 0011
Sweden	(08) 750 2400
Switzerland	(057) 31 24 90
Taiwan	
Taipei	080-211228 (toll-free) (02) 717-9608
The Netherlands	06-0501
United Kingdom	(0734) 44 12 12
United States	800-538-8787
West Germany	(0130) 3322

Software Packages Available and Wanted

If you are an HP VAB with a current HP contract and have a software package available for cross-licensing, or are looking for a package to cross license, this section will help you. Your entry will appear for two months; the most recent additions are shaded. To list your company in the Cross-Licensing Classifieds (at no charge), see the address at the end of this section.

Software Packages Available

Industry: *Cartographers, communal governing, highway departments, management of public facilities*

Abstract: STAR CARTOGRAPHY CX offers tools for tackling the main problems involved in creating graphic and technical databases, consulting maps, producing traditional documents and thematic charts, and managing alphanumeric databases in relation to graphic elements.

Many administration and engineering departments will find STAR CARTOGRAPHY CX a useful tool for managing property development and for planning the building and maintenance of facilities.

Many database management tools are currently available and operate under the UNIX operating system.

STAR CARTOGRAPHY CX uses a fourth-generation language called UNIFACE, which makes it possible to build rapidly a relational database, to define screen masks, to produce forms, and to control several database management systems such as ORACLE.

This is the only method that enables a user to define, in a few hours, a totally specific application for exploiting the alphanumeric and graphic possibilities of STAR CARTOGRAPHY CX.

Advantages of this fourth-generation language are many. It provides excellent means for consulting the database and for selecting graphic objectives according to criteria.

Features

- ultramodern look
- interactivity is based on X-Windows, panels, and pop-up menus
- ideal use of windows
- unlimited cartographic database
- ideal connection between the graphic and alphanumeric aspects
- connection with the existing alphanumeric DBMS
- image processing superimposed of vectors

Company Name: STAR INFORMATICA SA

Address: Parc Industriel de Recherche du Sart-Tilman
Avenue du Pre Aily, 24
B-4900 ANGLEUR-LIEGE
BELGIQUE

Phone: 32-41-67.53.13

Contact Person: Christian Strimelle

Type of Distributor Wanted: A well established HP 9000 Series 300 HP VAR with existing exposure to local governments and big companies.

Geographical Coverage: Worldwide

Industry: *Manufacturing—scheduling software*

Abstract: The MOOPI software calculates the schedule on a production floor for actual resources within actual calendar, both for short- and long-term planning. The major innovation of the system is a combination of real-time simulation technologies, expert systems, and algorithmic techniques. On the basis of user-defined parameters and built-in scheduling rules, the software automatically makes sequencing decisions directly from the order entry. These user-defined criteria can describe, for example, the fabrication model, the preferred and alternate work centers for each production operation, the rates, and the work shifts.

The packaged rules set priorities to be assigned to each operation based on the required production deadline for the lot, and then calculates the schedule. When delivery dates are respected, MOOPI software minimizes downtime on workcenters and stock in process. It automatically selects resources from a group of employees or machinery qualified for each operation and assesses intermediate lots that could be transferred on to successive production stages. Adaptable at any time to actual floor conditions or manual sequencing decisions, the package logs the production as it is realized and automatically generates historical data for analysis.

The software has been reviewed by HP's Industrial Applications Center (IAC) in July 1989 and found to be very powerful, technically very strong, and easy to use.

A new real-time materials management module was released in Fall 1989. It is perfectly integrated with the scheduler and handles both raw material supply and inventory, and finished products inventory.

Features

- C language, ANSI standard
- UNIX operating system
- network-type database can process an unlimited problem size (e.g., a plant that has a year and half backlog representing 800 orders with an average of 40 operations per product)
- all calculations performed in RAM by dynamic memory allocation that is extremely powerful—schedules over 400 work orders per minute on an HP 9000 Model 835S

Additional features

- user friendly with on-line assisted help by pop-up window on each field
- several languages on-line, may be translated into any language; all text located in an external ASCII file and read runtime
- free demo brochure available in French and English

Requirements: HP 8000 and HP-UX operating system

Company Name: Berclair Inc.

Address: Place d'Iberville II, 1175 Lavigerie St., Suite 440
Ste-foy, Quebec, Canada, G1V 4P1

Phone: 418-554-1454

Fax: 418-654-0645

Contact: Louis Tetu, Vice-President Marketing

Type of Distributor Wanted: Open

Geographical Coverage: Worldwide

Industry: *Apartment management*

Abstract: AM/3000-II is an apartment management system for developers and property managers. Operating on the HP 3000 family, it is a full-function lease processing and general accounting system that combines ease of processing with a rich array of management and financial reports.

Tenant processing is completely integrated with general ledger. Amounts due from tenants are automatically calculated, including special charges and prior balances. Application of advance rent is automatically performed in the month due. Move ins, move outs, and transfers are supported, based upon scheduled dates.

AM/3000-II provides a complete balance sheet and income statement, by project or consolidated by owner. Fiscal year is determined by the user, with automatic rolling of current year earnings to date into retained earnings at year end. One month's accounting may be started before the prior month has been closed, eliminating end-of-month scheduling problems. Adjustments to prior year are allowed, with automatic rolling of ETD to retained earnings.

Features

- On-line, menu driven, multiuser
- Multicompany
- Multiowner
- Multiproject
- User-defined chart of accounts
- User-formatted financial statements
 - Multilevel functional security
 - Batch and overnight optional processing of updates and reports
- Complete budgeting facilities
 - Complete audit trails with internal and external accounting controls
 - Default values for common entries, with override capabilities
 - Extensive edits prevent most input errors
 - Optional, fully integrated accounts-payable module is available

Company Name: Orion Systems Technology, Inc.

Address: 325 S. El Dorado
Suite 102
Mesa, AZ 85202
U.S.A.

Phone: 602-894-6983

Contact Person: Patrick Lockwood

Type of Distributor Wanted: Open

Geographical Coverage: United States

Industry: *Wholesale distribution/industrial hardgoods*

Abstract: The BCS Distribution Plus Software system is a comprehensive and powerful distribution package that integrates the following modules: inventory control, order entry, purchasing management, accounts receivable, accounts payable, and general ledger.

The system is designed to accommodate multicompany, multibranch distribution entities and runs under the HP-UX environment. Each module is written with ease of use for the end user in mind and is fully menu driven. All modules are integrated, but can run stand alone. Standard features include alpha cross-referencing (which eliminates remembering numbers), audit trails and accounting controls, and system documentation and user manuals.

The software has been developed utilizing input from a host of experienced distribution consultants and has been proven in some of the most sophisticated distribution environments. To date, our marketing efforts have concentrated on the Midwest marketplace. BCS is looking to further penetrate the national marketplace via cross licensing. We have excellent user references to assist during the sales cycle.

Features

- 20-character item or part number
 - Alpha lookup feature for Inventory items, vendors, and customers.

2,500 additional characters of description.
Unlimited cross referencing of item numbers
Multiple locations, branches, and divisions
Suggested purchase order quantities

- Optional and substitute item numbers
 - Multiple units of measure per item number
 - Multiple costing methods
 - Automatic backorder tracking and matching
- Complete physical inventory handling
- Kit processing/single-level bill of materials
- Audit trails of inventory movement
 - Inquiry display screens showing current on-hand, committed, and on-order quantities per branch
- Comprehensive sales analysis reporting with flexibility via Report Generator.

Requirements: HP 9000 Series 300/800 – HP-UX
HP Vectra PC or SCO UNIX/Xenix

Company Name: Business Computer Software, Inc.

Address: 1825 S. Woodward
Bloomfield Hills, MI 48013
U.S.A.

Phone: 313-338-6880

Fax: 313-338-9817

Contact Person: Paul E. Hodges, III

Type of Distributor Wanted: Open

Geographical Coverage: Select North America markets outside of the Midwest.

If you are an HP VAB with a current contract, you can list your company in the **Cross-Licensing Classifieds** (either Software Packages Available or Software Packages Wanted) by sending the information in the format used here to:

Hewlett-Packard Company
Value-Added Channels Development
Attn: Marcia Nowicky
19091 Pruneridge Ave.
Building 46UV
Cupertino, CA 95014
U.S.A.

Entries will run for two months. The most recent additions are shaded. Be sure to send the information in at least one month before you wish it to appear.

How to get your name added to the distribution for *HP Channels*

If you work for a company that is a value-added business for Hewlett-Packard and want to receive a courtesy subscription to *HP Channels*, call Hewlett-Packard and have your sales rep add your name to the distribution list.

HP sales reps only: To add new U.S. or Canadian accounts to the distribution for *HP Channels*, please fill out a copy of "The Data Kit for Value-Added Businesses," P/N 5954-9091D, and return it to the appropriate contact listed on the cover page of the data kit. To add additional contact names to existing accounts, use your VALID edit sheets.

For accounts outside of the U.S. and Canada: contact Tracy Wester for the name of the person responsible for the distribution of *HP Channels* in your country.

Please address editorial correspondence to Tracy Wester at address listed below.

HP CHANNELS

Hewlett-Packard Company

Tracy Wester, Editor

Corporate Marketing Communications

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