

# HP Computer Update

A Publication of Hewlett-Packard

December 1992

## New high-performance HP Apollo 9000 Series 700 workstations



The HP 3000 Series 9X7RX products augment the broadest computing lineup in the HP 3000's history.  
*see page 8*

New HP Series 6000 SCSI mass storage systems provide performance improvements.  
*see page 27*

The new HP LaserJet 4 and M printers are direct replacements for the HP LaserJet III and HP LaserJet III PostScript printers.  
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# HP Computer Update

Vol. 2, No. 11 December 1992

*HP Computer Update* is a monthly publication of Hewlett-Packard Company that provides information on new Hewlett-Packard computer software and hardware products, events, and promotions.

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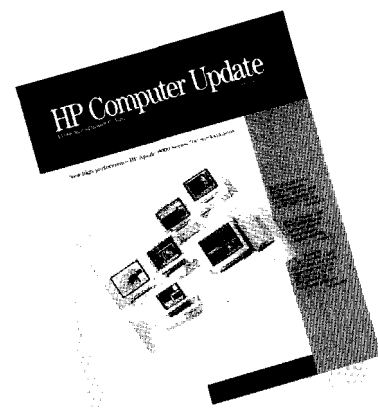
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To receive literature or technical information on HP computer systems and workstations, and to order workstations and select computer products, call HP DIRECT at 800-637-7740 (U.S. only).

To receive technical information about any HP product, call the Customer Information Center: 800-752-0900 in the U.S., or 800-387-3867 in Canada.

## On the cover . . .

HP has introduced five new HP Apollo 9000 Series 700 workstations. The high-performance workstations offer desktop and desktside solutions for Series 700 users. A new multimedia communication tool, HP MPower, and CRX-48Z graphics are also being introduced. Series 700 upgrades to the new models are available. See page 16.



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HP News and Reviews

## New VRU for HP parts ordering

*For the U.S. only*

HP's Support Materials Organization introduces a new voice response unit (VRU) that offers flexibility in choosing customer support. The VRU gives users a simple menu of choices that allows them to select needed support information without having to wait on hold for personal assistance. Users can check part numbers, current prices, availability, and order status; match part descriptions; and obtain accurate service

and support telephone numbers. The VRU supplies actual or anticipated ship dates for backordered parts, allows direct access to specific telemarketers or telephone extensions, automatically transfers calls to **user-selected** call path areas, provides service parts **identification** for commonly ordered parts, and promptly routes calls by product type to HP technical advisers.



The promotions listed in *HP Computer Update* contain brief information about HP promotions currently in effect—including new promotions, promotions **with changes (underlined)**, and promotions **that** are ending.

For more details on any of the following promotions, contact your HP representative.

Special considerations may apply to some of these promotions, and discount percentages **can** vary by country. Note: promotional programs listed with a "Worldwide" scope may not be available in all countries. Check **with** your HP representative for local availability.

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**HP 3000**

**HP Transact V to iX** *new*

If you upgrade from HP Transact V to iX, you **will** receive a 25% discount on the net price of the upgrade.

- **Scope:** North America
- **Eligible products:** P/N 30138A, Opts. 310, 315, 320, 330, 335, 340, 350
- **Start date:** December 1, 1992
- **End date:** May 31, 1993
- **Promotion number:** 2.699

**1993 HP 3000 HP Channel Partners Installed Base Upgrade**

*new*

To encourage HP Channel Partners and systems integrators to upgrade their installed base to MPE/iX, HP will be offering **qualified** HP Channel Partners and **systems integrators an incremental 15% discount** on Series 927LX-937SC systems, 5% on Series 947LX and above NOVA systems, and 10% on Corporate Business Systems. To qualify for **this** promotion, HP Channel Partners and systems integrators must submit to HP a forecast **with** a minimal intent of **upgrading** 15% of their **installed** base, a communication plan, and an **attractive** offer on their software. Contact your HP representative for more **information**.

- **Scope:** Worldwide (*check with your HP representative for local availability*)
- **Eligible products:** Check with your HP representative
- **Start date:** December 1, 1992
- **End date:** October 31, 1993
- **Promotion number:** 2.703

**Series 9X7 Reseller Incentives**

*new*

All resellers (HP Channel Partners, OEMs, and systems integrators) who have an active purchase agreement with HP **will** receive five percentage points of incremental discount over the normal purchase agreement discount on purchases of HP 3000 Series 947/57/67/87 systems.

All authorized distributors who have an active purchase agreement discount with HP will receive three percentage points of incremental discount over the normal purchase agreement discount on purchases of Series 947/57/67/87 systems.

- **Scope:** North America
- **Eligible products:** Check with your HP representative
- **Start date:** December 1, 1992
- **End date:** May 31, 1993
- **Promotion number:** 2.704

**Workstations**

**HP GlancePlus UX Trial Software Kit Discount** *end*

If you purchase an HP GlancePlus UX license **within** 90 days of purchasing an HP GlancePlus UX trial software **kit**, you can receive a promotional discount off the price of the **software** license.

- **Scope:** For North America only
- **Eligible products:** P/Ns B1790A, B2660A, B1791A, B2661A, B1807A, B2804A
- **Start date:** April 1, 1992
- **End date:** December 31, 1992
- **Promotion number:** 2.626

**3D Aggressor —  
Model 720CRX**

*end*

You can purchase the HP Apollo 9000 Model 720CRX-24Z (P/N A2264A0) for the promotional price of approximately \$25,390 (U.S. list)/\$25,135 (reference price). Also, you can purchase the Model 720CRX-24 (P/N A223A) at the promotional price of approximately \$23,390 (U.S. list)/\$23,650 (reference price).

- **Scope:** Worldwide (*check with your HP representative for local availability*)
- **Eligible products:** P/Ns A2263A/64A
- **Start date:** September 1, 1992
- **End date:** December 31, 1992
- **Promotion number:** 2.670

**Domain "Welcome Back to Support"**

If you are currently unsupported, and sign up for a minimum of one year of ApolloLine Support or one year of Domain/OS Software Only Support, you can receive a 50% promotional discount on any Basic Software Update required to bring your system up to date.

- **Scope:** Worldwide (*check with your HP representative for local availability*)
- **Eligible products:** Check with your HP representative
- **Start date:** September 1, 1992
- **End date:** February 28, 1993
- **Promotion number:** 2.672

**HP-UX CD-ROM Drive Offer**

If you purchase a CD-ROM starter kit (P/N B2950A) and HP-UX CD-ROM material update service (P/N H2069A or H2077A+S00 or comprehensive maintenance), you can receive an SCSI CD-ROM drive at no additional charge.

- **Scope:** Worldwide (except Europe) (*check with your HP representative for local availability*)
- **Eligible products:** P/N B2950A and HP-UX CD-ROM material update service (either P/N H2069A+S00 or H2077A+S00 or comprehensive maintenance) and P/N A1999A
- **Start date:** October 1, 1992
- **End date:** March 31, 1992
- **Promotion number:** 2.686

**Power to Empower Coupon**

*new*

You will receive an after-sale coupon that may be redeemed for credit toward the purchase of HP Channel Partner/ISV software licenses or add-on PL5X products sold through HP's Direct Marketing Organization.

- **Scope:** North America
- **Eligible products:** HP Apollo 9000 Series 700 workstation systems, Model 715133: P/Ns A2610A/11A/12A/13A/14A/16A/17A/18A/19A/20A/21A; Model 715/50: P/Ns A2625A/27A/29A/30A/31A/32A/33A/34A/35A; Model 725/50: P/Ns A2685A/89A/91A/92A/934 Model 735: P/Ns A2600A/01A/02A/03A/07A/08A/09A/59A; Model 755: P/Ns A2551A/52A/53A, A2650A/52A
- **Start date:** November 1, 1992
- **End date:** April 30, 1993
- **Promotion number:** 2.696

**Networks**

**Enhanced Competitiveness —  
DTC16 Solution**

*end*

If you purchase an HP 9000 Series 800 or 900 Series HP 3000 system with one or several HP DTC16s (data communications and terminal controller), you are eligible for a promotional discount on the DTCs. The DTCs must be fully loaded (two asynchronous options providing 12, 14, or 16 ports per DTC16, depending on the option combination).

- **Scope:** Worldwide (*check with your HP representative for local availability*)
- **Eligible products:** Check with your HP representative
- **Start date:** July 1, 1992
- **End date:** December 31, 1992
- **Promotion number:** 2.655

### HP EtherTwist Buy Three, Manage Free

With this promotion, you **will** receive a free copy of HP OpenView Interconnect manager/DOS network management software (P/N 27256D) when you buy any three manageable HP EtherTwist hubs, bridges, and/or routers — a **savings** of \$4,000. You can participate in the promotion by mailing a special claim card (received from direct mail, HP FIRST, or your authorized HP dealer), the bar code labels **from** the product packages, and a copy of your invoice to HP. HP **will fulfill** claims for the free software by mail.

- **Scope:** Worldwide (*check with your HP representative for local availability*)
- **Eligible products:** Manageable HP EtherTwist hubs, bridges, and routers: 26873A/74B/82A/85A/88A/88B/92A/99A
- **Start date:** September 1, 1992
- **End date:** January 31, 1993
- **Promotion number:** 2.669

### National User Group Discount Coupon

Each person attending the National User Group Meeting **will** receive a \$500 promotional discount coupon that *can* be used against the purchase of PL 1L products (**excluding** consulting and all training classes less than \$2,000). More than one coupon *can* be used on any single order as long as the total discount percentage does not exceed 49%.

- **Scope:** North America
- **Eligible products:** PL 1L products **excluding** consulting and all training classes less than \$2,000. Check with your HP representative.
- **Start date:** October 1, 1992
- **End date:** March 31, 1992
- **Promotion number:** 2.685

### DTC 16 and DTC 48

**new**

If you purchase an HP 3000 9X7 system at the regular price, you are **eligible** to purchase up to two DTCs at a 32.5% discount. The M05 discount is placed against the base product and appropriate options. All additional DTCs and **asynchronous** cards ordered above the maximum quantity are not eligible for a discount.

- **Scope:** Worldwide (*check with your HP representative for local availability*)
- **Eligible products:** Check with your HP representative.
- **Start date:** December 1, 1992
- **End date:** May 31, 1993
- **Promotion number:** 2.698

### Peripherals

#### Optical Library Trade-in

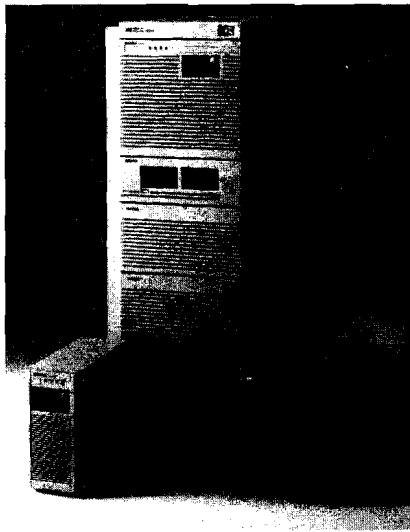
If you are a current Optical Library user, you can trade in your used unit and purchase a new **high-performance drive library** (Models 20C, 60C, or 100C), of equivalent or greater capacity, and receive trade-in credit. Exception: Model 10 can only be traded in for a Model 20C or higher.

- **Scope:** Worldwide (*check with your HP representative for local availability*)
- **Eligible products:** P/Ns C1700C/04C/10C/14C/15C
- **Start date:** September 1, 1992
- **End date:** June 30, 1993
- **Promotion number:** 2.671



## New HP 3000 Series 9X7RX systems

The new HP 3000 Series 9X7RX systems provide four VO slots as an intermediate configuration point between the Series 9X7LX 2-slot and newly renamed Series 9X7SX 12-slot systems.



### Features and benefits

The Series 9X7RX products augment the broadest computing lineup in the HP 3000's history. The greater granularity these products add to the Series 9X7 family will benefit price-sensitive users who need more functionality than that offered by the Series 9X7LX.

Due to the increased VO requirements demanded by users at this point in the product family, Series 957RX and 967RX systems replace the Series 957LX (P/N A1707A) and 967LX (P/N A1757A).

### Ordering information

Product No.	Description
A17728	Series 937RX
A1708C	Series 947RX
A17098	Series 957RX
A17108	Series 967RX

## HP 3000 Series 9X7 platform enhancements

Enhancements have been made to the HP 3000 Series 9X7 platform. A new, easier, menu-driven ordering approach took effect December 1, 1992. Series 9X7 products are presented in a menu format. Users check boxes for options they want included with the system and order processing will do the rest. The menus provide choices for SPU, memory, integrated peripherals, FOS, databases, selected VO products, and terminals.

### Features and benefits

- Memory, disk, and VO cards can be ordered in all supported configurations.
- New products like the new SCSI disk drives are made available sooner.
- Specially tailored menus targeted for specific market niches can be created and implemented quickly.
- Each menu enables a user to order a given number of terminals at a discounted price.
- The number of products is reduced from 12 to 8 menus based on Series 917-987 performance levels. The menus provide up to three chassis implementation options: Series 9X7LX (2 I/O slots), 9X7RX (4 slots), and 9X7SX (12 slots).
- The standard memory on Series 917LX and 927LX systems is increased to match the 32 MB offered on the Series 937. Standard memory for the Series 947LX on up is now 64 MB.

- Installation is included with Series 917LX-937LX systems, so there is no additional charge for installation of any Series 9X7 system.
- Series 9X7SX products support up to four PB-FL device adapter cards (P/N 28616A).
- Two new 1- and 2GB SCSI integrated disk drives are available with Series 9X7 systems. The new disks enable maximum internal storage to increase from 1.3 to 2 GB in the LX package and from 4 to 6 GB in the SX package. The new RX package can hold up to 6 GB internally, as well. The 1-GB disk is standard on Series 9X7 systems. The 1-GB disk provides a 46% price/MB reduction; the 2GB drive, a 33% price/MB reduction, as compared to the 670-MB and 1.3-GB drives they respectively replace.

### Return credits

The former Series 9X7 product structure credited users for returns of older HP 3000 systems through return credit options. With the new menus users must order separate return credit product numbers similar to those used with HP 9000 systems.

## HP IMAGE/SQL unlocks IMAGE databases

The HP TurboIMAGE enhancement with next-generation relational technology, the industry-standard SQL interface, has been renamed HP IMAGE/SQL. The IMAGWSQL was designed for middle managers in finance/accounting and marketing.

SQL makes HP IMAGE/SQL compatible with client/server tools for windows-based decision support, reporting, and applications. HP IMAGE/SQL will ship standard in all new HP 3000 systems ordered after December 1, 1992.

### Features and benefits

With HP IMAGE/SQL, end users can develop their own reports and ad hoc queries with windows-based reporting tools. PCs can do the first-level analysis of HP IMAGE/SQL data with color-coded alarms and the ability to drill down through information.

HP IMAGWSQL offers new functionality with 100% investment protection. MIS/IT can leverage HP TurboIMAGE databases and staff expertise. HP IMAGWSQL is 100% compatible — no code changes, no database administration changes, no retraining. HP IMAGE/SQL performs at 70–90% of the native IMAGE intrinsic interface.

The HP 3000 preconfigured system, which includes both HP IMAGWSQL and ALLBASWSQL, offers one of the highest levels of system value. HP ALLBASWSQL provides long-term insurance to cover relational DBMS needs at low premiums. HP ALLBASWSQL supports mainframe alternative requirements: single-vendor support and key high-availability features for fully distributed data and large databases.



## New user-based software tiers

In response to industry demand, HP has converted to user-based pricing that more logically scales the price of the software with the value received. These products will only be sold with new options that specify a price based upon the number of users in the HP MPE/iX license. These are known as dependent licenses and typically apply to systems software. Seventeen software products are moving to user-based tiers, and others will follow next year.

Application software from HP and HP Channel Partners is moving to an independent user-based pricing method that allows for the purchase of a license for the number of application users regardless of what HP MPE/iX license a user may have. Application software from HP, such as MM, and Channel Partners will adopt this kind of structure in the next few months. The steps toward user-based pricing will use NetLS on the HP 3000 in 1993. NetLS is a software license management and enforcement technology owned by HP and accepted into Open Software Foundation's™ DME standards. More information on NetLS and its role on the HP 3000 will be available later this year.

*continued on next page*

Tiers 310 through 350 are discontinued on the products that use the user-based pricing method. Users should order the user-based software tier that corresponds with their HP MPE/iX user license. The different user license levels offered in HP MPE/iX, including the new 128, 256, and 384-user levels, map into six software tiers. Users who order software with the new tiers can receive the same return credit for a previous purchase by ordering the same return credit they would have ordered before. If the return credit amount exceeds the cost of the user-based tier, the difference will be zeroed out in the ordering process the same way it is for downtiering.

The following is an example of a user who purchased a Series 957 with a 100-user HP MPE/iX license and TurboSTORE/iX II (P/N 36388A). The user wants to upgrade through the field upgrade product to an unlimited-user license on a Series 967. The example shows how the TurboSTORE/iX license rolls to the new user-based tiers.

Product No.	Description
36388A	TurboSTORE/iX II, one right-to-use license (user license option must align with HP MPE/iX license)
Opt UAT	Unlimited user license
Opt. OCF	Upgrade credit for previous purchase of Opt 330

Users who made the transition to user-based software tiers should use the user-based return credits in subsequent upgrades. The following is an example of how a user with a 100-user Series 947LX and TurboSTORE/iX II who is increasing to 160 users on the Series 947LX MPE/iX license would increase the TurboSTORE/iX II license.

Product No.	Description
36388A	TurboSTORViX II, one right-to-use license (user license option must align with MPE/iX license)
Opt UCN	160-user license
Opt. LID9	Credit for previous purchase of 100-user license

**Ordering information**

Product No.	Description
36920A	NS
36923A	ThinLAN
J2167A	Token Ring
36939A	X.25 System Access
36957A	FTP
32007A	BSC Link
30294A	LU6.2
30291A	SNA Link
30292A	SNA NRJE
30293A	SNA IMF
30368B	ALLBASE/SQL
32653B	IMAGE/SQL
30319A	TurboSTORViX
36387A	TurboSTORViX II
36388A	TurboSTORE/iX II
36397A	TurboSTORViX II
36398A	TurboSTORViX II
New options	
OAF	20-user license
UCY	40-user license
UA9	64-user license
UBD	100-user license
UCN	160-user license
UAT	Unlimited-user license
UD8	Credit for 20-user license
UCZ	Credit for 40-user license
UB9	Credit for 64-user license
UD9	Credit for 100-user license
UDV	Credit for 160-user license
UBP	Credit for unlimited-user license

Users can roll to the new method immediately, or wait until current support contracts expire.

Open Software Foundation is a trademark of the Open Software Foundation in the U.S. and other countries.

**New HP 3000 user-based pricing**

Effective December 1, 1992, in response to user requests, HP 3000 systems were restructured and repriced to implement user-based license options for HP MPE/iX and database software.

User-based pricing makes entry-level HP 3000 Series 9X7 configurations more competitive. The number of user licenses has increased for Series 947-987 systems with the availability of 100-, 160-, 256, and unlimited-user licenses. Series 957 continues to offer an entry 64-user license.

HP 3000 Corporate Business Systems uniprocessors come standard with 128-user licenses, and multiprocessors come standard with 160-user licenses. User licenses have been added for 256 and 384 users, in addition to the unlimited-user license.

## POSIX shipping on HP MPE/iX Release 4.5

Unrestricted shipments of run-time support for POSIX on HP 3000 systems are available with the HP MPE/iX 4.5 operating system release. Users who upgrade to the new release will receive, at no additional charge, run-time support for POSM 1003.1 system calls, POSM 1003.2 commands and utilities, and Curses screen interface. POSIX on HP MPE/iX makes the HP 3000 an effective platform in situations where users require standards-based, open systems.

### POSIX 1003.1

POSM 1003.1 is a set of operating system interfaces that have been endorsed by the ANSI and ISO committees as the foundation for open systems. POSIX 1003.1 has been adopted by leading systems vendors in the U.S. and Europe. Applications developed to POSIX 1003.1 are inherently portable and can be moved across different systems that support the POSIX 1003.1 standard. POSIX 1003.1 is closely aligned with the UNIX®-based operating system interfaces and facilitates the porting of UNIX-based applications.

With POSIX 1003.1, HP MPE/iX 4.5 supports the hierarchical file system in addition to the current HP 3000 file system. The new file system coexists with the traditional HP MPE/iX file system and allows files to be shared across the file systems.

### POSIX 1003.2

POSM 1003.2, like POSIX 1003.1, is a set of ANSI and ISO standard commands and utilities that have been adopted by leading systems vendors as the basis for providing open systems. POSIX 1003.2 commands and utilities are closely aligned with the Bourne and Korn shells available on UNIX-based systems and, like the POSM 1003.1 standard, facilitate application porting across systems that support this standard and applications developed for UNIX-based systems.

### Curses

Curses is a user interface standard for terminals that gives developers the capability to display forms on, and retrieve data from, a broad set of commonly installed terminals. Curses is commonly used by UNIX-based system applications and is a component of open systems. By supporting Curses on the HP 3000, open applications that use Curses to manipulate screens can be ported to run on the HP 3000 systems on a wide variety of HP and non-HP terminals.

HP 3000 end users should upgrade to HP MPE/iX 4.5 in order to install the new applications and tools that have been ported to the HP 3000 with POSIX. New applications and tools include ADABAS and Network from Software AG, NFS from Quest Software, and VESoft tools. HP ALLBASE/SQL has been modified to work with the new POSM hierarchical file system on HP MPE/iX.

HP 3000 developers who want to develop to POSM in the future and evaluate POSM on the HP 3000 today should upgrade to HP MPE/iX 4.5.

HP 3000 developers who need to develop new POSIX-based applications or port POSE-based applications to the HP 3000 should upgrade to HP MPE/iX 4.5 and purchase HP MPE/iX Developers' Kit (P/N 36430A). To ensure successful POSM development on HP 3000 systems, users who order the Developers' Kit must order and take one of the following sets of user training courses. Users who have HP MPE/iX backgrounds must take *Programming with UNIX System Calls* (P/N 50710S); *Working with Files* (P/N B2808A); and *Shell Fundamentals* (P/N B2955A). Users with UNIX system backgrounds must take *HP 3000 Fundamentals* (P/N 3112A+001); *HP 3000 Advanced Skills* (P/N 31126A+002,003); *HP MPE/iX Programmer Skills* (P/N 31118S); and *HP 3000 Systems Administration* (P/N B2802S).

*UNIX is a registered trademark of UNIX System Laboratories Inc. in the U.S.A. and other countries.*



## New HP MPE V operating system release

HP MPE V Release 2P (P/N 51450A option 365) is the first platform release since Release 1P; it includes all previous release fixes and product enhancements.

### Enhancements and benefits

Release 2P focuses system management ease, operation simplification, and HP MPE/iX compatibility. Migration to HP MPE/iX is an easy system upgrade. Starting with this release, support life is 48 months.

The release will be distributed to users on support. When users update HP MPE V software to 2P, they benefit from functionality and extended support life. For HP MPE V users who are off support and want to take advantage of the latest MPE V operating system, we recommend the MPE V Software and Hardware Support Welcome Back Program.

## Reduced memory trade-in credits

Trade-in return credits for 16-MB and 64-MB memory cards on HP 3000 Series 955/960/980 and HP 9000 Models 85X/86X/870 were reduced on the December HP Price List and will be effective January 1, 1993. The trade-in credits are available with the purchase of memory cards for the HP Corporate Business System.

Product No.	Description
A1104AN	Return credit for 16-MB memory card
A1152AN	Return credit for 64-MB memory card

## New solution adjustments for structured solution bundles

The structured solution bundles (SSP) for HP 3000 Corporate Business Systems have been adjusted from 15% to 10% or 12%. The new discounts were on the December HP Price List and take effect January 1, 1993.

Product No.	Description
A1855A	128-user system bundle
A1857A	200-user system bundle
A1860A	300-user system bundle

## SSP bundle discontinuance

As of December 1, 1992, seven structured solution bundles were removed from the HP Price List. The product bundles will be superseded by the new Series 9X7 menus.

Product No.	Description
A1779A	4-8 user system
A1780A	8-20 user system
A1781A	20-32 user system
A1782A	32-64 user system
A1783A	64-128 user system
A1784A	128-192 user system
A1785A	192-550 user system

## HP MICRO 3000/ATP/M discontinuance

The HP MICRO 3000/ATP/M (P/Ns 40290A and 24450A) has been discontinued. Stock is available from HP's Finance and Remarketing Division to meet user demand.

## New HP 9000 Series 800 upgrades

Similar to the HP 9000 Model 8X7S line, the **F/G/H/I-class** systems are all board and/or chassis upgradeable to provide the highest level of investment protection. Current Model 8X7S systems are also board and/or chassis upgradeable to the new **F/G/H/I-class** systems. Upgrades will be available on the January HP Price List.

Model 8X7S systems are highly compatible with the new HP 9000 offering. **F/G/H/I-class** systems offer installed Model 8X7S users 100% investment protection for all internal components such as disk, memory, and YO cards; and compared to the current Model 8X7S upgrade product offering, users may receive significant cost savings when upgrading to **F/G/H/I-class** systems.

In addition to upgrade pricing, a wide selection of board upgrade choices are available for **F/G/H/I-class** and 8X7S servers. With the new offering, users have the flexibility to skip performance levels in a single upgrade step when upgrading within the same expansion package. For example, a user with a Model H20 can either upgrade to the next processor level, Model H30, or to the highest processor level, Model H50, with a single upgrade product. This makes it easier for users to make large performance leaps when required.

## HP 9000 Series 800 menu ordering process

New HP 9000 Series 800 **F/G/H/I-class** business servers are orderable using a menu-like process. Four menus are offered, one for each server class. Each menu is constructed with a structured solution product (SSP) bundle as the main high-level product item. **Integrated** systems components are included with each bundle as subitems and have separate product numbers. The new menus offer increased configuration flexibility by providing more system component choices. Each system component selected from the product menu is factory integrated into the base system.

Board upgrades for the new **F/G/H/I-class** business servers are also constructed as SSPs. As with the server products, four menus are offered, one for each server configuration. Each upgrade product menu includes all possible processor upgrades within a particular server configuration and from other server packages. Users can choose only one upgrade option among the selections provided in each menu.

Other system components, such as memory and disk drives, correspond to the upgrade SSPs to facilitate coordinated shipment of these products along with user upgrade selections.

## HP 9000 Series 800 internal disk drives upgrade

With the recent HP 9000 introductions, HP is announcing new, faster, higher-capacity internal disk drive mechanisms. The drives are available in 566-MB, 1-GB, and 2GB capacities. The 566-MB and 1-GB drives come in half-height form factors. The 2-GB drive is a full-height device. The 1- and 2GB drives will also be available in standalone and rackmountable configurations in early 1993.

The devices give the new HP 9000 **F-class** machines up to 2 GB of internal storage; **G/H/I-class** machines, up to 6 GB.

## New HP 9000 Series 800 HP-UX two-user license

HP 9000 Series 800 **F/G/H/I** systems are bundled with a new two-user HP-UX license to better establish Series 800 systems as servers in the marketplace and improve competitive positioning. New options for the two-user level and an upgrade credit for Series 800 **HP-UX** license products are on the December HP Price List. The two-user level provides a consistent **HP-UX** level across the HP 9000 family; HP Apollo 9000 Series 700 systems are bundled with a two-user license.

Current Model 8X7 and 890 systems will continue to be bundled with an eight-user license, so orders will not be impacted.

## Andersen Consulting develops client/server I-CASE solution to HP-UX

Andersen Consulting's Foundation Software Group and HP recently announced a marketing and development agreement to port FOUNDATION for Cooperative Processing (FCP) to the HP 9000 platform. FCP is an industry-leading integrated CASE product for development and deployment of commercial client/server applications.

The three phases include the Foundation HP-UX server option that allows applications developed with FCP to run on HP 9000 Series 800 business servers, the FCP development repository to run on HP 9000 Series 800 business servers available in early 1993, and a client product to run on HP Apollo 9000 Series 700 workstations scheduled for later in the year.

FCP on HP-UX can accelerate mainframe offloading for mission-critical applications. Andersen Consulting is a leading provider of business integration services with the expertise to assist large users in successful transition to a client/server environment. FCP is a tool for developing production applications. FCP applications are used to run critical business functions, such as customer service for the utilities and insurance industries and event tracking for the 1992 Winter Olympics. Andersen Consulting offers the FOUNDATION Starter Kit Plus that includes software and education services to build prototype applications and provides early tangible success with client/server applications. Contact your HP representative for more information.

## New HP LaserROM/UX Japanese Retrieval Software

The new HP LaserROM/UX Japanese Retrieval Software (P/N B3141A option UAO) provides a fully localized user interface that can browse and search Japanese and English HP-UX manuals and documents on CD-ROM. This new software was designed for system administrators and managers, and software developers on HP 9000/HP Apollo 9000 systems that support the X Window system in OSF/Motif™ or HP WE environments.

### Features and benefits

This HP LaserROM/UX version incorporates the features added in June 1992, including flexible keyword search with relevance ranking; navigational tools like index, table of contents, and hyperlinks; user-defined bookshelves, notes, and bookmarks; and expanded print menu.

HP LaserROM/UX Japanese Retrieval Software adds the following features: Japanese translation of all HP LaserROM/UX screens, help text, error and warning messages, and user documentation, so users don't have to read English; printing to Canon LaserShot and other printers; keyword search on Japanese Kanji and Kana characters; and keyword search on

English words. Manuals not translated to Japanese are provided in English, so users receive complete documentation; and because nearly all HP-UX manuals are on one CD instead of bookshelves, users realize reduced floor-space cost.

### System requirements

The software is supported on HP 9000/HP Apollo 9000 8.0 or greater systems that use the X Window System (Version 11, Release 4 or later). OSF/Motif or HP VUE window manager is also required, and the system must support a CD-ROM drive.

### Migration and product delivery

Japanese users who currently subscribe to materials updates on CD-ROM will receive a no-cost upgrade to the new Japanese software version when converting their contracts to Japanese operating system support.

Current HP-UX users who change from paper to CD-ROM materials support can order the new Japanese software version or take part in the Driving Force special promotion. New workstation and multiuser system users can select CD-ROM as the materials medium when choosing documentation products and are eligible to participate in the Driving Force promotion.

**Driving Force promotion**

To encourage users to use CD-ROM instead of paper and magnetic tape, a special promotion **will** be in effect January-December 1993. HP 9000/HP Apollo 9000 users who purchase a starter **kit** (P/N B3309A), and a minimum of one year's support can add a CD-ROM drive (P/N A1999A) with SCSI interface, to the order and save **57%**. The starter **kit** will be on the January HP Price List and available in February.

**Ordering information**

Product No.	Description
B3141A	
Opt UAO	HP LaserROM/UX Japanese Retrieval Software; includes HP 9000/HP Apollo 9000 documentation and one user license
Opt UA2	Four additional user licenses
Opt DB1	Additional user guide

*OSF/Motif* is a registered trademark of the Open Software Foundation in the U.S. and other countries.

**HP 9000 I/O price reductions**

Effective December 1, 1992, prices on HP 9000 terminal I/O products were reduced. Models **8X7**, **FXX**, **GXX**, **HXX**, and **LXX** offer two end-user connectivity solutions: multiplexers and **terminal** servers. The **16-channel** multiplexer price is reduced by 15% to make the systems more competitive, particularly with the **IBM** multiplexer.

Prices on **datacommunications** and **terminal** controller (**DTC**) solutions **will** also be reduced for competitive reasons. The **16-port** DTC price is reduced by 40%; the **48-port**, by 35%.

**HP 9000 server memory price reductions**

Effective December 1, 1992, memory supported on **HP 9000** Models **8X7**, **FXX**, **GXX**, **HXX**, and **LXX** will be reduced by 50%. The benefits of this price reduction on the HP 9000 platform include:

- HP uses 80ns ECC SIMMs, currently the fastest and most reliable commercial memory available.
- HP memory prices are competitive.
- HP memory prices are tiered, based on memory capacity, and most attractive on **higher-capacity** boards.
- Option and standalone memory boards are now priced the same. Premium pricing on field upgrade memory is eliminated.





## New HP Apollo 9000 Model 715 workstations

The HP Apollo 9000 Models 715/33 and 715150 workstations are high-performance, 33- and 50-MHz, entry-level priced desktop workstations. They are designed for ECAD, MCAD, CASE, desktop publishing, desktop productivity, customer services, and financial services.

Since the Series 700 introduction, the Models 720, 730, and 750 have formed a high-performing workstation family.

### Features and benefits

- Model 715s takes the high performance of HP PA-RISC 7100-based workstations to price points comparable to PCs. The systems deliver high performance at low system costs.
- The Models 715/33 and 715150 offer RAM capacities of 8-192 MB and 16-256 MB, respectively. Disk capacities can range up to 2 GB internal and 68.6 GB total. Users can configure systems to meet HP Channel Partner application needs.
- The models 715/33 and 715150 are self-service workstations that allow easy installation, upgradability, expansion, and serviceability.
- Each system has built-in local area networking, an external SCSI-II port, bidirectional Centronics interface, two RS-232 serial ports, CD-quality audio connection, and HP-HIL.
- The Series 700 supports more than 3,000 applications from over 1,600 software suppliers in technical and commercial markets.

### Specifications

- Model 715/33 delivers 46 SPECmarks, 41 MIPS, 8.6 MFLOPS (dp), 24 SPECint92, 45 SPECfp92.
- Model 715150 delivers 69 SPECmarks, 62 MIPS, 13 MFLOPS (dp), 36 SPECint92, 72 SPECfp92.
- Model 715/33 delivers 570,000 X11 vectors/s, 610,000 2D/3D vectors/s, and X11perf rating of 7,633 with the Bbit CRX and GRX; 610,000 2D/3D vectors/s and X11perf rating of 7,424 with the CRX-24 and CRX-24Z; and 100,000 triangles/sec and 45,000 quads/sec with the CRX-24Z.
- Model 715/50 delivers 860,000 X11 vectors/s, 920,000 2D/3D vectors/s, and X11perf rating of 11,187 with the Bbit CRX and GRX; 680,000 2D/3D vectors/sec and X11perf rating of 10,646 with the CRX-24 and CRX-24Z; and 140,000 triangles/sec and 65,000 quads/sec with the CRX-24Z; and 600,000 triangles/sec and 80,000 quads/sec with the CRX-48Z.
- Model 715/33 offers 15- and 17-inch color monitors. Both models offer a 19-inch grayscale and color monitor.

- The systems are configurable with two 3½-inch hard disks and one 3%-or 5%-inch removable media device. Hard disks can be 525 MB or 1 GB each. Removable media can be DAT drive, 1.44-MB 3½-inch floppy, or 600-MB 5%-inch CD-ROM.
- Model 715150 includes one EISA bus slot; Model 715/33 offers an optional EISA expansion slot to add boards like Fast Differential SCSI-II, HP-IB, IEEE 802.3, FDDI, X.25, IEEE 802.5, HP Apollo Token Ring, ISDN, or SNA.

### Ordering information

Product No.	Description
<b>Model 715/33 products</b>	
A2614A	Grayscale quick-ship bundle
A2616A-A2619A	Color quick-ship bundles
A2610A	Grayscale workstation
A2611A-A2613A	Color workstations
A2620A	CRX-24 color 2D/3D workstation
A2621A	CRX-24Z color 2D/3D workstation
<b>Model 715/50 products</b>	
A2629A-A2632A	Color quick-ship bundles
A2625A	Grayscale workstation
A2627A	Color workstation
A2633A	CRX-24 color 2D/3D workstation
A2634A	CRX-24Z color 2D/3D workstation
A2635A	CRX 48Z color 2D/3D workstation



## Call for exhibitors at April INTEREX Computing Management Symposium

*For U.S. and Canada only*

The sixth annual INTEREX Computing Management Symposium (ICMS) will be held in Seattle, Washington, at the Washington State Convention and Trade Center April 67, 1993. INTEREX (the HP user group) is now accepting registration from HP Channel Partners wishing to exhibit their application products during the symposium.

The exhibit show will take place April 5-6. To give you every opportunity to meet the attendees, the exhibit show will be open during several prime conference hours without any competing sessions.

At ICMS, you will find more than 500 high-level managers of HP systems. More than 75% of last year's ICMS attendees were MIS directors and other senior executives who have on-the-spot buying authority. And 40% of the attendees are from organizations that spend more than \$500,000 annually on hardware and software. ICMS is the only symposium to focus on the needs of systems managers who operate in an HP computing environment.

Exhibit space is limited and will be allocated on a first-come, first-served basis. Exhibit space rental is \$1,100 for a 10- x 10-foot space.

Telephone 1-800-INTEREX (1-800-468-3739) and reserve your space now.

## Available literature

The following new literature is available through your local HP sales office. The literature is separated by product line and in order of publication number. Contact your HP representative for more information.

### HP 3000 Systems

#### HP 3000 Buyer's Guide

- **Audience:** IT purchase decision makers and technical influencers (MIS directors, MIS VPs, CIOs, COOs)
- **Format:** 48 pages, 3½ x 11, full-color
- **Description:** Guide outlines HP 3000 strengths and presents the HP 3000 as a system solution for companies that need high performance, business functionality, flexibility, and management ease. Technical sections covering topics like data integrity and interoperability are combined with worldwide customer testimonials that substantiate technical differentiators.



### HP 9000 Systems

#### HP 9000 Series 800 Business Servers sales tools

- **Title:** HP 9000 Series 800 Business Servers brochure
- **Audience:** Technical evaluators, decision makers
- **Format:** 6 pages, multicolored
- **P/N:** 5091-5746E
- **Description:** Brochure positions HP 9000 business servers as open for business. Piece highlights HP 9000 commercial capabilities and open systems advantages. It describes customer benefits and includes Series 800 and HP Apollo 9000 Series 700 family matrices.
- **Title:** HP 9000 Series 800 Integrated Business Server Family data sheet
- **Audience:** Technical evaluators, decision makers
- **Format:** 8 pages, black-and-white
- **P/N:** 5091-5744E
- **Description:** Data sheet contains information on Series 800 Business Server Models F10, F20, F30, G30, G40, G50, H20, H30, H40, H50, I30, I40, and I50 — the former Model 8X7 business servers. Customer benefits and new product features are highlighted.

*continued on next page*

## Workstations

**Workstation Customer Migration sales tools***For U.S. and Canada only*

- **Description:** The following literature represents the most recent information and tools available to support the HP Apollo Workstation Migration Program.
- **Title:** *Open Migration Program* brochure
- **Audience:** workstation users
- **P/N:** 5091-4247E
- **Title:** *Open Systems for Domain Customers* white paper
- **Audience:** workstation users
- **P/N:** 5091-4311E
- **Title:** *Trade Up* data sheet
- **Audience:** workstation users
- **P/N:** 5091-4285EUS

**HP DCE Developers' Environment data sheet**

- **Audience:** DCE software developers, HP Channel Partners
- **P/N:** 5091-5841E
- **Description:** Data sheet describes HP's first distributed computed environment (DCE) product, which provides a fully functional, standards-based framework to develop, administer, and use distributed and client/server applications. DCE provides an implementation of Open Software Foundation (OSF) developers' services and contains additional tools to facilitate the development of DCE-based applications.

## Networks

**HP OmniBack and HP OmniBack/Turbo data sheet**

- **Audience:** MIS managers, system administrators
- **Format:** 6 pages, two-color
- **P/N:** 5091-4235E
- **Description:** Revised data sheet provides information on key benefits and features of the HP backup management solution family for HP-UX, Domain, and Sun Microsystems systems. It includes system requirements and ordering instructions.

## Peripherals

**HP Series 6000 SCSI Mass Storage for Business Servers and Systems product brief**

- **Format:** 6 pages, 8½ x 11, five-color
- **P/N:** 5091-6079E
- **Description:** Brief contains product descriptions, specifications, photos, and ordering information for HP single-ended SCSI mass storage systems designed for HP business systems and servers.

**HP internal sales and training tools for HP Channel Partners***For U.S. only*

The following sales tools are for HP **internal** use only but are available to HP Channel Partners. Contact your HP representative to receive copies of this literature.

**The HP 3000 . . . for worry-free, business-critical computing sales guide**

- **Audience:** HP Channel Partners
- **Format:** 62 pages, 8½ x 11
- **P/N:** 5091-59223
- **Description:** Guide contains product announcement data, ordering information, competitive comparisons, and position information.

### **HP 9000 Series 800 Business Servers sales guide**

- **Audience:** HP Channel Partners
- **Format:** 103 pages, black-and-white, color cover
- **P/N:** 5091-5687E
- **Description:** Guide provides information on the new Series 800 product family and structure. It describes new networking products, enhancements to HP's commercial offering, and details on new solution providers.

### **HP 9000 Series 800 Business Servers and Series 1200 Systems price guide**

- **Audience:** HP Channel Partners
- **Format:** 170 pages, black-and-white
- **P/N:** 5091-5686E
- **Description:** Guide provides pricing information for the new Series 800 product family offering — the F, G, H, and I class — and new networking and software products. It introduces the one-year hardware warranty and contains information on the System Support Options Program.

### **UN\*X Systems — Performance Quick Reference Card — Series 7W**

- **Audience:** HP Channel Partners
- **Format:** 1 page, black-and-white
- **P/N:** 5091-6140E
- **Description:** Quick reference card is designed for fingertip access to performance figures for Series 800 and 700 systems. Card provides key competitive systems information and will be updated quarterly.

### **HP 9000 Series 800 Business Servers configuration guide**

- **Audience:** HP Channel Partners
- **Format:** 200 pages, black-and-white
- **P/N:** 5091-5739E
- **Description:** Guide provides configuration details for Series 800 business server solutions. New F/G/H/I-class servers and updated Corporate Business System 890 information is included. Each section provides specifics on a major component of the overall Series 800 solution for accurate and complete configurations.

### **HP Series 6000 SCSI-2 Mass Storage Systems for HP 3000/9000 Users sales guide**

- **Audience:** HP Channel Partners
- **Format:** 38 pages, 8% x 11, two-color
- **P/N:** 5091-6078E
- **Description:** Guide contains product descriptions, new product structures, competitive information, and solution guides for HP single-ended and fast/wide SCSI-2 mass storage systems, the newest mass storage systems for HP business systems and servers (HP 3000/9000) and workstations.



## Additions to HP FIRST

*For U.S. only*

You can receive copies of Hewlett-Packard sales literature via your fax machine. HP FIRST (Facsimile Information Retrieval System Technology) includes literature such as product briefs, data sheets, price guides, and so forth.

HP FIRST can be accessed from any Group 3 touch-tone fax machine. Dial 208-344-4809, and you will be connected to a voice-operated menu that walks you through the literature selection process.

A special section has been added to HP FIRST. "HP sales/training tools for Channel Partners" (index number 2295) lists HP sales and training tools that Channel Partners (in the U.S. only) can order directly through an 800 telephone number. The section will be updated monthly.

The computer systems items listed here have been added to the HP FIRST system.

Title/Description	fix ID number
Cheerio to Unix, cereal giant says, case study, 1 page	2201
HP 9000 Series 800 High Availability Computing Products, technical data, 8 pages	2114
HP 9000 Series Integrated Business Sewer Family HP 9000 Models 807S, 817S, 827S, 837S, 847S, 857S, 867S, 877S, 887S, and 897S. brochure. 8 pages	2111
HP 9000 Series 800 Business Sewers and Series 1200 Systems (HP 9000 Series 800 Business Sewers), price guide, 20 pages	2300
HP 9000 Series 800 Business Sewers and Series 1200 Systems (Memory Return Credits), price guide, 9 pages	2301

HP 9000 Series 800 Business Sewers and Series 1200 Systems (Peripherals, Media, and Accessories) price guide, 22 pages	2302	HP 9000 Series 800 Business Sewers and Series 1200 Systems (HP 9000 Model 8X7S Business Sewers Quick Reference), price guide, 6 pages	2317
HP 9000 Series 800 Business Sewers and Series 1200 Systems (Networking Products), price guide, 23 pages	2303	HP 9000 Series 800 Business Sewers and Series 1200 Systems (Series 800 Board Upgrades), price guide, 16 pages	2318
HP 9000 Series 800 Business Sewers and Series 1200 Systems (HP-UX 8.0/8.0X Operating System), price guide, 5 pages	2304	HP Z1100A RasterOps VideoLive Card, technical data, 6 pages	2275
HP 9000 Series 800 Business Sewers and Series 1200 Systems (Series 800 HP-UX Version 8.0/8.0X Documentation), price guide, 4 pages	2305	HP Internal Sales Tools Catalog, 3 pages	2294
HP 9000 Series 800 Business Sewers and Series 1200 Systems (HP-UX 8W8.02 Localized Operating System Products), price guide, 6 pages	2306		
HP 9000 Series 800 Business Sewers and Series 1200 Systems (Programming Languages), price guide, 8 pages	2307		
HP 9000 Series 800 Business Sewers and Series 1200 Systems (Software), price guide, 16 pages	2308		
HP 9000 Series 800 Business Sewers and Series 1200 Systems (Performance Tools and System Management), price guide, 14 pages	2309		
HP 9000 Series 800 Business Sewers and Series 1200 Systems (Software Support), price guide, 9 pages	2310		
HP 9000 Series 800 Business Sewers and Series 1200 Systems (Customer Services), price guide, 8 pages	2311		
HP 9000 Series 800 Business Sewers and Series 1200 Systems (HP 9000 Series 1200 Systems), price guide, 19 pages	2312		
HP 9000 Series 800 Business Sewers and Series 1200 Systems (Index), price guide, 19 pages	2313		
HP 9000 Series 800 Business Sewers and Series 1200 Systems (Hardware Support) price guide, 4 pages	2314		
HP 9000 Series 800 Business Sewers and Series 1200 Systems (HP-UX 9.0 Operating System), price guide, 5 pages	2315		
HP 9000 Series 800 Business Sewers and Series 1200 Systems (Series 800 HP-UX Version 9.0 Documentation), price guide, 5 pages	2316		

\*Numbers listed are localized.

## New HP Apollo 9000 Model 725/50 workstations

The HP Apollo 9000 Model 725/50 workstations are high-performance, entry-level-priced desktop workstations. They are designed for ECAD, MCAD, CASE, desktop publishing, desktop productivity, customer services, and financial services.

### Features and benefits

- Takes the high performance of the HP PA-RISC 7100-based desktop workstations to price points comparable to PCs. The 50-MHz system delivers high performance at low system costs.
- Offers RAM capacities of 32–256 MB. Disk capacities can range up to 2 GB internal and 68.6 GB total. Users can configure systems to meet HP Channel Partner application needs.
- The self-service workstations allow easy installation, upgradability, expansion, and serviceability.
- The system has built-in local area networking, an external SCSI-II port, bidirectional Centronics interface, two RS-232 serial ports, CD-quality audio connection, and HP-HIL.
- The Series 700 supports more than 3,000 applications from over 1,600 software suppliers in technical and commercial markets.

### Specifications

- Model 725/50 delivers 69 SPECmarks, 62 MIPS, 13 MFLOPS (dp), 36 SPECint92, 72 SPECfp92.

- Model 725/50 delivers 860,000 X11 vectors/s, 920,000 2D/3D vectors/s, and X11perf rating of 11,187 with the 8-bit CRX and GRX; 680,000 2D/3D vectors/s and X11perf rating of 10,646 with the CRX-24 and CRX-24Z; and 140,000 triangles/s and 65,000 quads/s with the CRX-24Z; and 600,000 triangles/s and 80,000 quads/s with the CRX-48Z.
- Model 725/50 offers 19-inch grayscale and color monitors. The system is configurable with two 3½-inch hard disks and one 3%-or 5%-inch removable media device. Hard disks may be 525 MB or 1 GB each. Removable media may be DAT drive, 1.44-MB 3½-inch floppy, or 600-MB 5¼-inch CD-ROM.
- Model 725/50 includes four EISA bus slots to add boards like Fast Differential SCSI-II, HP-IB, IEEE 802.3, FDDI, X.25, IEEE 802.5, HP Apollo Token Ring, ISDN, or SNA.

### Ordering information

Product No.	Description
A2689A	Model 725/50 color workstation
A2691A	Model 725/50 CRX-24 color 2D/3D workstation
A2692A	Model 725/50 CRX-24Z color 20130 workstation
A2693A	Model 725/50 CRX 482 color 2D/3D workstation

## New HP Apollo 9000 Model 735 workstations

The HP Apollo 9000 Model 735 workstation is a single-processor, high-performance desktop workstation with large memory and disk capacity. It was designed for high-end, traditional workstation markets such as ECAD, MCAD, and scientific computation.

### Features and benefits

- The Model 735's 99-MHz PA-RISC 7100 chip delivers twice the SPECmark performance of any competing desktop single-processor system in the model's price band.
- The large RAM capacities of 32- to 400-MB and internal disk capacities from 525 MB to 2 GB make the Model 735 a solution for compute-intensive, demanding graphics applications.
- The I/O subsystem supports all connections of the older Model 730 I/O subsystem and adds support for the new fast-wide SCSI-2 bus that delivers four times the burst transfer rate of single ended SCSI-2. CD-quality audio and optional FDDI interface provides more than twice the performance of HP's EISA-based FDDI interface.
- The Model 735 delivers almost two-and-a-half times the performance of the nearest competitor in 2D X11 performance, so users have near-instantaneous user input response.
- The Series 700 supports more than 3,000 applications from over 1,600 software suppliers in technical and commercial markets.

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**Specifications**

- Model 736 delivers 147 **SPECmarks**, 124 MIPS, 40 MFLOPS (dp), 80 SPECint92, 150 SPECfp92.
- Model 735 delivers 971,000 X11 vectors/s, 1.16 million 2D/3D vectors/s, and X11perf rating of 19,115 with the 8-bit CRX; 652,000 X11 vectors/s and 680,000 2D/3D vectors/s with the CRX-24 and CRX-24Z; and 175K triangles/s and 95,000 quads/s with the CRX-24Z; and 600,000 triangles/s and 150,000 quads/s with the CRX-48Z.
- The system is **configurable** with up to two **single-ended** SCSI-2 or fast-wide SCSI-2 devices. **Single-ended** SCSI-2 devices are a 525-MB or 1-GB hard drive or a 3½-inch 1.4-MB floppy drive. The fast-wide SCSI-2 device is a 1.0-GB hard drive.
- Model 735 provides two **asynchronous RS-232C** ports, one Centronics parallel, **single-ended** SCSI-2 port with support for up to seven devices, including the **internal** devices, **CD-quality** audio I/O, **HP-HIL**, IEEE 802.3 Ethernet — thick or **thin**.
- Model 735 includes one EISA bus slot to add boards such as Fast Differential SCSI-2, HP-IB, IEEE 802.3, FDDI, X.25, IEEE 802.5, HP Apollo Token Ring, ISDN, or SNA.

**Ordering information**

Product No.	Description
A2600A/A2659A	Model 735 GRX grayscale workstation
A2601A/A2608A	Model 735 CRX color 2D/3D workstation
A2602A	Model 735 CRX-24 color 2D/3D workstation
A2603A	Model 735 CRX-24Z color 2D/3D workstation
A2609A	Model 735 CRX 482 color 2D/3D workstation
A2607A	Model 735 multiple-monitor workstation

**New HP Apollo 9000 Model 755 workstations**

The HP Apollo 9000 Model 755 workstations are one of the industry's highest-performing single-processor workstations. They are designed for high-end traditional workstation markets such as ECAD, MCAD, and scientific computation.

**Features and benefits**

- When compared with industry-standard benchmarks, the Model 755's expandable **desktop** package offers twice the performance of previous desktops.
- Model 765 offers leading **price/performance** when compared with **high-end, single-processor**, desktop workstations. It is one of the most **cost-effective** solutions in its class.
- Model 755 is highly expandable with up to 768 MB RAM, 240.8-GB total disk capacity, and four EISA expansion slots. Expandability allows efficient execution of large computation-intensive tasks and storage of large amounts of **data**.
- An advanced I/O subsystem design matches the high performance of the CPU and provides high throughput to disks and networks. The new fast-wide SCSI-2 disks and tightly **integrated** Ethernet and optional FDDI are provided.
- Model 755 delivers almost two-and-a-half times the performance of the nearest competitor in 2D X11 performance, so most graphics displays and user responses are near instantaneous.
- The Series 700 supports more than 3,000 applications from over 1,600 software suppliers in technical and commercial markets.

**Specifications**

- Model 755 delivers 147 **SPECmarks**, 124 MIPS, 40 MFLOPS (dp), 80 SPECint92, 150 SPECfp92.
- Model 755 delivers 971,000 X11 vectors/s, 1.16 million 2D/3D vectors/s, and X11perf rating of 19,115 with the 8-bit CRX; 652,000 X11 vectors/s and 680,000 2D/3D vectors/s with the CRX-24 and CRX-24Z; and 175K triangles/s and 95,000 quads/s with the CRX-24Z; and 600,000 triangles/s and 150,000 quads/s with the CRX-48Z.
- The system is **configurable** with one or two 2.0 GB internal SCSI-2 disks and one or two internal SCSI-2 removable media such as CD-ROM, 4mm DAT, or 3½-inch 1.4-MB floppy.
- Model 755 provides two **asynchronous RS-232C** ports, one Centronics parallel, **single-ended** SCSI-2 port with support for up to seven devices including the **internal** devices, **CD-quality** audio I/O, **HP-HIL**, IEEE 802.3 Ethernet—thick or **thin**.
- Model 755 includes one EISA bus slot to add boards such as Fast Differential SCSI-2, HP-IB, IEEE 802.3, FDDI, X.25, IEEE 802.5, HP Apollo Token Ring, ISDN, or SNA.

**Ordering information**

Product No.	Description
A2551A	GRX color 2D/3D workstation
A2552A	CRX-24 color 2D/3D workstation
A2553A	CRX-24Z color 2D/3D workstation
A2650A	CRX 482 color 2D/3D workstation
A2652A	Model 755 multiple-monitor workstation

## New HP Apollo 9000 Series 700 upgrades

The HP Apollo 9000 Series 700 protect current Series 700

user investments and provide incentives for new users. The upgrades are designed for Series 700 installed-base users and new users.

### Models 735 and 755 CPU board upgrades

- **No-penalty** CPU upgrades are 100% compatible with current user systems. Users can retain the use of **graphics (including TVRX and PVRX)**, memory, monitor, disk drives; **peripherals**, and removeable media devices.
- There is no price penalty to upgrading users; current generation system price plus upgrade price equals new generation system price.
- Users can order Model 720/730/750 and an upgrade, receive immediate delivery on the model, and advance to the new technology at their convenience.
- Upgrades to the new generation products require HP-UX 9.0.
- Board upgrade price includes HP field **installation**.

### Models 710 and 730 CPU upgrade

- CPU upgrades are 100% compatible with current user systems. Users can retain the use of **graphics (including TVRX and PVR)**, memory, monitor, disk drives, peripherals, and removable media devices.
- Upgrades are user **installable**. Price includes CPU board and HP-UX 9.0 license.

### Model 715/50 CPU board upgrade

- Model 715 comes with **built-in** investment protection. The model will be **upgradable** from the low end of the line to the top. Users can buy low-cost systems today and add performance boosts as required.
- The Model 715/33 to 715/50 upgrade is user **installable**. Price includes CPU board and HP-UX 9.0 license.

### Model 715/50 system upgrades

- Upgrade products consist of a box swap to the Model 715/50 with the user retaining investment in **420-MB** disk, memory, monitor, removable media, and localization kit.
- The upgrades are alternatives to new system purchases for users with installed Model 705s or 710s who need Model 715/50 functionality but do not need additional **workstations**.
- Upgrades require HP-UX 9.0.

### Ordering information

Product No.	Description.
A2647A	Model 705 to 710 CPU upgrade
A2805A	Model 715/33 to 715/50 CPU upgrade
A1957A	Model 720 to 730 CPU upgrade
A2605A	Model 720 to 735 CPU upgrade
A2606A	Model 730 to 735 CPU upgrade
A2248A	Model 750 to 755 CPU upgrade
A2835A	Model 705 to 715/50 system upgrade
A2836A	Model 710 to 715/50 system upgrade

## New HP Apollo 9000 Series 700 workstations markets

HP has over 1,500 HP Channel Partners committed to the HP Apollo 9000 Series 700 with more than 3,100 applications. With an additional 2,000 applications available on the HP 9000 Series 800 and binary compatibility with the Series 700, over 5,000 applications run on the Series 700.

Channel Partners have started **qualifying** on the following new Series 700 products

- The Model 715's **price/performance** makes it a solution for mechanical **drafting**, **low-end** architectural design and facilities management in AEC, low-end **GIS**, entry-level EDA, **scientific** computation and visualization, database as clients, traders in **financial** services, and retail markets. The Model 715 is designed for desktop productivity, document image management, **all** phases of **software** development in CASE, and for displaying **text**, images, and **structured** complex documents in electronic publishing.
- The Model 725 with its additional EISA slots is a solution for **scientific** computation and retail markets.

*continued on next page*



- The Model 735's compute power and CPU performance make it a solution for concept visualization and **high-end architectural** design in AEC, EDA power users involved in integrated circuit design and circuit synthesis, scientific computation and **visualization**, and mechanical 3D design.
- The expandable Model 755 workstation with its CPU performance is used for **computationally** intensive applications like EDA circuit board **simulation**, routing, **verification**, reservoir **simulation** in the oil and gas market, financial services, high-performance **analysis** in the mechanical market, scientific computation, and **visualization**.

## CRX-48Z: advanced graphics system for design and visualization

The HP Apollo 9000 Models 715150, 725/50, 735, 755 CRX-48Z (P/Ns A2635A/93A/09A/50A) are 3D graphics systems with 24 image planes, 16.7 million colors, eight overlay planes, **24-bit** hardware **Z-buffer**, antialiasing, **PowerShade software** with the Personal Visualizer. The CRX-48Z was designed for mechanical design and scientific **visualization**.

### Features and benefits

- Draws antialiased **vectors** 6.5 **times** faster than the CRX-24Z for **wireframe** work.
  - Provides double-buffered **24-plane** color graphics for smooth and realistic solid model movement.
- Offers fast screen clear and redraw.
  - Provides a solution for orthodox mechanical design, advanced design analysis, and fast sketch-book-type conceptual design **modeling**.
  - Provides applications like computational fluid dynamics, **meteorological modeling**, and biomedical **services** are provided.
  - "Plug and go" applications.
  - Many of the applications **run** on **mainframes**, super-computers, or dedicated high-cost graphics workstations, but are now migrating to **lower-cost**, desktop systems like the Series 700.

### Specifications

- CRX-48Z provides leadership desktop graphics **price/performance** with performance levels of up to two million **2D vectors/s**, 1.9 million **3D vectors/s**, 1.2 million antialiased **3D vectors/s**, **600,000 triangles/s**, and **160,000 lighted, shaded quadrilaterals/s**.
- The entire new Series 700 provides **high-performing** systems for running X Windows at all price points. The CRX-48Z is available on the 50-MHz Models 715 and 725 and Models 735 and 755. Series 700 workstations support advanced 3D graphics, using the CRX-24Z, from entry-level desktop to **high-end** systems.

## HP introduces the power that empowers

Workstations that reach new performance and functionality levels can turn average workgroups into empowered **workforces**. The new PA-RISC **7100-based** HP Apollo 9000 Series 700 products and HP **Mpower**, the new multimedia communication tool, bring new graphics technology that provides **price/performance** with a visual environment for all user levels. HP offers current Series 700 users no penalty upgrade paths to many of the new systems **including** Models 715 and 725.

### Series 700 product introductions

Systems	Model <b>715/33</b> — lowest-cost, high-performing desktop, single slot
	Model <b>715150</b> — low-cost, high-performing desktop, single slot
	Model <b>725150</b> — high-performing desktop, multislot
	Model <b>735</b> — highest-performing desktop, single-slot
Upgrades	Model <b>705/710</b> to Model <b>715150</b>
	Model <b>720/730</b> to Model <b>735</b>
	Model <b>750</b> to Model <b>755</b>
	Model <b>715/33</b> to Model <b>715150</b>
Graphics	CRX-48Z
Software	Mpower; HP-UX 9.0

## Introducing HP MPower

HP MPower is a communications product integrating HP multimedia and graphical user environment technologies; an integral part of HP's Collaborative Multimedia Program that enhances communication between people by providing a suite of multimedia communication tools for HP workstation, business server, and X-terminal users.

PCs are standalone systems that employ multimedia technologies to promote person-to-computer communications. By leveraging the power, networking, multimedia, and multitasking capabilities of the workstation, HP MPower extends PC capabilities and gives users the power of people-to-people communications. Individual and workgroup productivity is enhanced and decision-making time is reduced through the sharing of ideas and information.

### Features and benefits

HP MPower is a complete, integrated, preinstalled single-vendor solution. It includes a full range of multimedia types such as audio, image, graphics, video, and text. It also provides five ways of sharing information: mail, fax, scan, SharedX, and print. HP MPower makes communication and collaboration between people natural and more effective. It enables people in dispersed locations, communicating in different information formats, to share information and make decisions. HP MPower brings the

power of the HP Apollo 9000 Series 700 workstations, the UNIX-based operating system, and networking to users' desktops. It integrates the capabilities of the HP Visual User Environment and builds on HP SharedX and other multimedia technologies to give users an integrated tool set.

### Ordering information

Product No.	Description
B1194A	HP MPower client
B1195A	HP MPower server
<i>P/N B1194A/B1195A options</i>	
Opt APH	HP-UX 9.0
Opt 001	Factory integrated
Opt AAU	CD-ROM certificate
Opt AAH	OAT media

## HP-RT Developer's Kit option

A five-user option has been added to HP-RT Developer's Kit license to use (P/N B3138A) to meet the needs of medium-size development teams. The option allows up to five concurrent users working from one HP-UX server to develop and debug high-performance real-time applications.

Product No.	Description
B3138A	HP-RT Developer's Kit
Opt. UAO	Single-user license
Opt 0AD	Five-user license
Opt 0A9	Ten-user license

## Refurbished Model 720CRX/GRX workstations discounted

*For U.S. and Canada only*

Remanufactured HP Apollo 9000 Model 720CRX and GRX workstations are discounted up to 50% off U.S. local currency price and are available from Hewlett-Packard in the United States and Canada.

More than 100 workstations are available and can be shipped within two weeks. The workstations are compatible with future upgrades of HP Series 7100 PA-RISC workstations.

CRX and GRX versions have preloaded instant ignition. Memory and disk drives can be ordered on a standalone basis, no other options are available with the workstations.

Product No.	Description
A1933AR	Model 720 CRX workstation, includes 50-MHz PA-RISC CPU, 19-inch color monitor, 16-ME RAM, and one 420-MB SCSI disk drive
A1929AR	Model 720 GRX workstation, includes 50-MHz PA-RISC CPU, 19-inch monochrome monitor, 8-plane grayscale graphics, 16-ME RAM, and one 420-MB SCSI disk drive
A1983AR	420-MB second internal SCSI disk drive
A1979AR	16-MB RAM

*Products require localization kit (P/N A1099B) which must be ordered as a separate line item. No purchase-agreement discounts or other discounts are available at these prices.*

HP also has workstation-compatible refurbished disk and tape drives at market prices.

Product No.	Description
C2213AR	664-ME SCSI disk mass storage system
C1512AR	1.3-GB DDS format tape drive

## HP Vectra PC preloaded software for Windows

By providing ready-installed software on the HP Vectra PC N series, HP is reinforcing its commitment toward plug 'n' play PC solutions and delivering more for less. MS-DOS® and Windows 3.1 have been preloaded on HP Vectra PC 486N Series from the October introduction. Starting in November, HP Dashboard was preloaded. HP Dashboard is a convenient push-button utility panel that gives the user control in Windows.

### Features and benefits

- **Ease of set-up** — Windows and HP Dashboard come preloaded and ready to run.
- **Ease of use** — The HP Dashboard control panel manages work and Windows applications with fewer steps, extends available desktop workspace to several screens, and quickly launches applications and personalized screen layouts.
- **Network ready** — HP Dashboard provides easy control and switching of network peripherals, displays all output devices for drag-and-drop printing, and changes the default output device at the touch of a button

HP Dashboard provides PC resource monitoring and is user customizable.

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

## HP Vectra 386s/20 PC discontinuance

HP Vectra 386s/20 PCs were discontinued in the United States, Latin America, and Asia Pacific Regions on November 1. They will be removed from the January 1993 HP Price List. Orders will be accepted until January 31, 1993, in Europe only.

Product No.	Description
D2512A	Model 50-3 <sup>1</sup>
D2513A	Model 120-3 <sup>1</sup>
D2514A	Model 1-3 <sup>1</sup>
D2515A	Model 1-5 <sup>1</sup>
D2516A	Model 50-5 <sup>2</sup>
D2517A	Model 120-5 <sup>2</sup>

<sup>1</sup> HP Vectra 386s/20 PC line has been replaced by HP Vectra 386s/25 PC line as of August 1, 1992. HP Vectra 386s/25 PC works at 25 MHz and is based on the 80386SX Intel processor.

<sup>2</sup> These products were available in Latin America only.

## "Introducing HP Vectra 486N PC series" correction

The October issue of HP Computer Update contained incorrect ordering information. The part numbers should start with "D26," not "D25." For example, P/N 2610A is correct, P/N D2510A is not.

## 16- and 20-MHz coprocessors discontinuance

Two coprocessors (P/Ns D1453A and D2403A) were discontinued in Europe in September. Both products will be discontinued worldwide on January 1, 1993. Orders will be accepted until January 31, 1993.

Product No.	Description
D1453A	16-MHz coprocessor supported on HP Vectra 386/16N PC PIN D2408A, HP 387SL 16-, 20-, and 25-MHz coprocessor <sup>1</sup>
D2403	20-MHz coprocessor supported on HP Vectra 386/20N and 386s/M PCs PIN D2408A, HP 387SL 16-, 20-, and 25-MHz coprocessor <sup>1</sup>

<sup>1</sup> Effective January 1, P/N D2408A will be the single HP coprocessor available that will support HP Vectra 386/16N, 20N, 25N, and 386s/20 and 25 PC..

## HP Vectra PC ESDI hard disk drives and controller discontinuance

The HP Vectra PC 330- and 670-MB ESDI hard disk drives (HDD) (P/Ns D1660A and D1661A) and ESDI Controller (P/N D1664A), **will** be removed **from** the January HP Price List. Orders **will** be accepted through January 31, 1993.

The HP Vectra PC systems that support the ESDI HDD solutions were discontinued previously. HP provides SCSI HDD solutions with similar capacity points at equal or greater **performance**.

Product No.	Description	Replacement
D1660A	HP Vectra PC 330-ME ESDI HDD	PIN D1685A, HP Vectra PC440-MB SCSI HDD
D1661A	HP Vectra PC 670-ME ESDI HDD	PIN D1686A, HP Vectra PC670-MB SCSI HDD
D1664A	HP Vectra PC ESDI Controller	PIN D1681A, HP EISA SCSI Host Bus Adapter; PIN D1682A, HP ISA SCSI Host Bus Adapter



## HP OmniBack, OmniBack/Turbo, and OpenSpool user-based licensing

User-based licensing addresses two aspects of the product benefit: network complexity reflected through a license per node in the network, and functionality according to the number of users in an application environment based on the operating system user license.

### Ordering information

Product No.	Description
<b>B1922A</b>	HP OmniBack
Opt UDE	Per node
Opt UA1	Up to 2 users
Opt UA3	Up to 8 users
Opt UA5	Up to 16 users
Opt UA7	Up to 32 users
Opt UA9	Up to 64 users
Opt UAB	Up to 128 users
Opt UAD	Up to 256 users
Opt UAT	Unlimited users within one realm
<b>B1923A</b>	HP OmniBack/Turbo
Opt. UDE	Per node 200
Opt. UA1	Up to 2 users
Opt. UA3	Up to 8 users
Opt. UA5	Up to 16 users
Opt. UA7	Up to 32 users
Opt. UA9	Up to 64 users
Opt. UAB	Up to 128 users
Opt. UAD	Up to 256 users
Opt. UAT	Unlimited users within one realm
<b>B1900B</b>	HP OpenSpool
Opt UDE	Per node
Opt. UA1	Up to 2 users
Opt. UA3	Up to 8 users
Opt. UA5	Up to 16 users
Opt. UA7	Up to 32 users
Opt. UA9	Up to 64 users
Opt. UAB	Up to 128 users
Opt. UAD	Up to 256 users
Opt. UAT	Unlimited users within one realm
Opt. UBN	Unlimited license to use for one site
Opt. OAZ	Single-company county license

### Media and documentation products

<b>B1944A</b>	HP OmniBack for HP 9000 Series 300/HP Apollo 9000 Series 400, HP-UX 8.0
<b>B1944B</b>	HP OmniBack for Series 3001400, HP-UX 9.0
<b>B1945A</b>	HP OmniBack for HP Apollo 9000 Series 700, HP-UX 8.0
<b>B1945B</b>	HP OmniBack for Series 700, HP-UX 9.0
<b>B1949A</b>	HP OmniBack for HP 9000 Series 800, HP-UX 8.0
<b>B1949B</b>	HP OmniBack for Series 800, HP-UX 9.0
<b>B1948A</b>	HP OmniBack for SunSPARC
<b>B1947A</b>	HP OmniBack for Apollo Domain
<b>B1950A</b>	HP OmniBack/Turbo for Series 800, HP-UX 8.0
<b>B1950B</b>	HP OmniBack/Turbo for Series 800, HP-UX 9.0
<b>B1903B*</b>	HP OpenSpool for Series 3001400
<b>B1907B*</b>	HP OpenSpool for Series 700
<b>B1908B</b>	HP OpenSpool for Series 800
<b>B1909B</b>	HP OpenSpool for SunSPARC

*\*SharedPrint filter set is available for Series 700 (P/N 819178) and Series 800 (P/N 819188). License to use (P/N 819008 Option 222) is required for one output device.*

For example, in an environment with one Series 700 with HP-UX 2-user license, one Series 800 with HP-UX 16-user license, and one Series 700 with HP-UX 8-user license, order application license for 32-user license and three licenses per node.

## New HP router FR and SR fixed configuration routers

The HP Field Router (FR) and the HP Synchronous Router (SR) are new routers that expand the fixed configuration offering to a "Gang of Four" with Ethernet Router (ER), and Token Router (TR).

The new HP Router FR satisfies field office connections. The new HP Router SR links remote field offices into a central site. HP Router ER provides local segmentation and field office linkage to central sites. HP Router TR provides flexible connectivity in Token Ring and Ethernet, and it links field offices into a central site.

### Features and benefits

The two new routers include BNC ports and the appropriate number of WAN cables with each router or remote bridge.

The Gang of Four each ship with new 5.74 Router Software. Users receive Learning Bridge, IP, IPX, DECnet IV, AppleTalk II, XNS, X.25, frame relay, SMDS, PPP, SNMP Agent, and ISDN. All software is in FLASH (electronically erasable programmable memory — EEPROM).

The routers support trivial file transfer protocol (TFTP), which allows new versions of operating system software to be downloaded remotely over the network.

Ordering information

Product No.	Description
27289A	HP Router FR; one AUI/BNC LAN connection and one synchronous WAN connection
27288A	HP Router SR; one AUI/BNC LAN connection and three synchronous WAN connections
27285A	HP Router ER; two AUI LAN and two synchronous WAN connections
27286A	HP Router TR; one nine-pin D-connector (Token Ring), one AUI LAN, and two synchronous WAN connections
Cable options <sup>1</sup>	
Opt 001	V.35: 28606-63008
Opt 002	RS-232: 28606-63006 <sup>2</sup>
Opt. 003	X.21: 28606-63001
Opt 004	RS-422 28606-63055

<sup>1</sup> The appropriate number of WAN cables is included with each router or remote bridge at no additional cost. For example, HP Router SR with Option 001 ships with three K35 cables, one for each WAN port. Only one option is permitted per router. Individual cables can be ordered using the 5-by-5 part number.

<sup>2</sup> RS-232 is supported up to 64 Kbps and provides an easy connection to Codex 3500 DSU/CSU without additional cables.



General

## "HP JetDirect cards supported peripherals"<sup>nm</sup> correction

The product description for HP JetDirect card (P/N C2071S) was listed incorrectly in the November issue of *HP Computer Update*.

Product No.	Correct description
C2071S	HP JetDirect card for HP-UW SCO, UNIX/SunOS, Ethernet, 10Base-T port, and HP LaserJet II/II0/III/IIID printers

## AUI port support with old HP JetDirect cards

On November 1, four new HP JetDirect cards were announced. Old HP JetDirect cards (P/Ns C2059A/B/E/T) are available for a limited time for users who require AUI ports for HP LaserJet III<sup>Si</sup> printers or DesignJet plotters. Only the new cards are supported on HP LaserJet 4 and PaintJet XI300 printers.

If an HP JetDirect AUI connection is required for an HP LaserJet III<sup>Si</sup> printer or DesignJet plotter, order old JetDirect cards using the normal ordering process. For North America, Canada, and European orders, the appropriate distribution centers will use a brief screening process to verify orders for the old cards to ensure that the correct cards are ordered for specified peripherals. Asia Pacific users must place orders for the old cards using NADO as the supplying entity.

Mass Storage

## New HP Series 6000 SCSI mass storage systems for HP business systems/servers

The new HP Series 6000 SCSI mass storage systems and expansion kits have 1- and 2-GB drives for external disk storage and 2- to 8-GB DAT and 600-MB CD-ROM for secondary storage. The new Series 6000 SCSI mass storage systems replace Series 6000 Models 420R/F, 670R/F, and 1350R/F.

The new mass storage systems were developed for HP 9000 Series 800 and Series 900 HP 3000 business systems and servers users who need external online and secondary mass storage.

### Features and benefits

- *Higher performance, larger capacity disk drives* — The new 1-GB half-height and 2-GB full-height drives offer approximately a 20% improvement in average access time, up to 70% improvement in drive transfer rate, and double the reliability (300,000 MTBF versus 150,000 MTBF). The drives replace the previous 420-MB half-height drive and 670-MB and 1.3-GB full-height drives.
- *Lower prices* — The new products are priced at or below the prices of the lower-capacity products they replace. On a dollars per megabyte basis, the new 2-GB products cost approximately 30% less and the 1-GB products, 45% less. These prices are the same as the workstation storage products prices introduced in September.

- *Easy-to-order preconfigured products* — In addition to the 2-GB in a rackmount or tower base configuration, two 2-GB disks (4 GB total) in a rackmount or tower are offered. This rounds out the other multiple-device cabinets offering, including the two DAT drives with enclosure products introduced in July (two 2-GB DAT drives in an enclosure (P/N C2465R/F) and two up-to-8 GB DAT drives in an enclosure (P/N C2467R/F).
- *Same rackmount or minitower enclosures; same nondisk expansion kits* — The rackmount holds up to three full-height or five half-height devices and can be mounted in HP 19-inch EIA cabinets. The floor-standing minitower enclosure houses up to three full-height or seven half-height devices. The nondisk expansion kits, including the 2-GB DDS-format DAT, up-to-8 GB DDS-DC format DAT, and 600-MB DD-ROM drives are the same as are used with the current products.
- *Tested and supported on HP business systems and servers* — The new products are fully tested and supported on HP 9000 Model 8X2/8X7/890 with HP-UX 9.0 and 900 Series HP 3000 with MPE 4.0 systems. A software patch is required for diagnostics and predictive support with MPE 4.0. Details regarding patch distribution are provided in the HP Price List order instructions section.

Ordering information

Product No.	Description
<i>Rackmount mass storage systems<sup>1</sup></i>	
C3023R	2-68 disk
C3024R	Two 2-GB disks
<i>Tower mass storage systems<sup>1</sup></i>	
C3023T	2-GB disk
C3024T	Two 2-68 disks
<i>Expansion kits<sup>2</sup></i>	
C3027U	1-GB disk <sup>1</sup>
C3028U	2-GB disk <sup>1</sup>
C2293U	CD-ROM <sup>3</sup>
C2477U	2-GB DAT <sup>4</sup>
C2478U	Up-to-8 GB DAT <sup>5</sup>

<sup>1</sup> Option 002 specifies business server/system firmware on the drives and must be ordered  
<sup>2</sup> Expansion kits include rackmount and tower brackets  
<sup>3</sup> Product replaces (P/N C2476R/F)  
<sup>4</sup> Product replaces (P/N C2477R/F)  
<sup>5</sup> Product replaces (P/N C2478R/F)

Low prices on refurbished tape drives

As of December 1 in the United States and Canada only, users can purchase remanufactured 1/2-inch cartridge tape drives from HP's Finance and Remarketing Division (FRD) for a limited time.

Product No.	Description
9144AR	1/2-inch cartridge tape drive with read-write-write recording; uses 16 or 67 preformatted cartridges
9145AR	133-MB capacity; uses P/N 92245L 32-track cartridge

Products are eligible for purchase agreement discounts (PADs) up to 20%.

Products can be shipped within two weeks of order receipt. Supplies are limited.

HP Series 6000 SCSI mass storage systems for HP workstations support

HP Series 6000 SCSI mass storage systems for HP workstations (P/Ns C3020T/21T/23T/24T, C3020R/21R/23R/24R) and expansion kits (P/Ns C3027U/28U) were introduced in September. The product literature states that the new mass storage systems are supported on HP Apollo 9000 Series 700, HP-UX 9.0 and 8.07; and HP 9000 Series 300 and HP Apollo 9000 Series 400, HP-UX 9.0. HP supports new storage systems only on the HP Apollo 9000 Series 700 running HP-UX 9.0. There are difficulties in supporting the new drives on the Series 700 with HP-UX 8.07, and on Series 300 and 400.

HP is investigating support of the new disks on HP Apollo 9000 Series 700 with HP-UX 8.07. If support is determined to be possible, the new disks would be supported as only nonboot, noninstall disks, and support would be via a patch. The new disk products may not be supported on HP 9000 Series 300 and HP Apollo 9000 Series 400.

Printers

Introducing HP LaserJet 4 printer

For U.S. only

In October, HP introduced the next generations of HP LaserJet printers. The HP LaserJet 4 printer (P/N C2001A) is a high-performance, enhanced replacement for HP LaserJet III printer with print features exceeding those of HP LaserJet III printer and paper handling features of HP LaserJet III printer. HP LaserJet III or IIIi printer is required for duplex printing. The new HP LaserJet 4 printer is available in the United States only and was designed for mainstream business offices and industry and department users who desire high-quality output; IBM-compatible or Apple PC users; MSDOS, Windows, Macintosh, or OS/2 operating system users; single- to medium-shared use environments; dedicated PC, simple sharing device, and LAN users.

Features and benefits

- Output and price — true 600 x 600-dpi resolution, Resolution Enhancement technology, and microfine toner designed specifically to deliver sharper and clearer 600-dpi print quality; standard 2-MB RAM and new compression algorithms that allow users to print virtually all 300-dpi documents and many 600-dpi documents without adding memory

continued on next page



- **Type Library with 45 scalable typefaces** — 35 **Intellifont** typefaces and 10 **TrueType™** typefaces used in Windows 3.1 and type **formats** that can be used on the same page, in the same sentence, and within the same word; typefaces selected to match type needs across a wide range of office applications; extended typefaces that provide users with the ability to improve the look of documents including word processing, spreadsheets, and presentations
- **Fast eight-pages-per-minute (ppm) printer** — complex documents print faster—up to eight ppm with a high-speed RISC processor and enhanced PCL 5; **600-dpi** documents print at **300-dpi** speeds, fast Windows printing with Windows 3.1 software and new drivers; print speed that increases with **TrueType** typefaces integrated in the printer, rather than scaled on the PC and downloaded as bitmapped data; faster **input/output (I/O)** performance with **200 KB** parallel VO and **56.7 Kbaud** serial I/O; performance-tuned application drivers included with printer
- **Improved paper handling** — standard dual-input trays (**250-sheet** input tray and **100-sheet/10-envelope** multipurpose tray); standard **250-sheet** face-down output tray; optional **500-sheet** input tray and **75-envelope** power feeder, total potential capacity of **850 sheets** and **75 envelopes** from four input sources

- **Mixed-environment printer** — modular VO (**MIO**) slot for **auxiliary** VO connections; hot VO for automatic switching between parallel, serial, and **MIO** ports; optional fast Adobe™ **PostScript®** SIMM with 35 standard typefaces; optional **LocalTalk** or **EtherTalk** **JetDirect** card; optional Ethernet **HP JetDirect** LAN cards for Novell, IBM, **MicroSoft**, HP-UX, Sun **Microsystems**, and SCO; optional Token Ring **HP JetDirect** LAN cards for Novell, IBM, and **Microsoft®**
- **Upgrade capabilities** — optional SIMM expansion memory (up to **34-MB** RAM); optional disk- or cartridge-based typefaces; optional **multisize** paper trays (**250-sheet** and **500-sheet** in letter, legal, executive, and A4 sizes); optional LAN cards using the **MIO format**

**Ordering information**

Product No.	Description
C2001A	HP LaserJet 4 printer. The software and software printer drivers in the printer box include Windows 3.0/3.1 driver (in shipments after February 1993), Lotus™ 1-2-3® 2.x driver, WordPerfect 5.1 driver, and HP Explorer software.

*TrueType is a U.S. trademark of Apple Computer, Inc.  
 Adobe is a trademark and PostScript is a registered trademark of Adobe Systems Incorporated which may be registered in certain jurisdictions.  
 Microsoft is a U.S. registered trademark of Microsoft Corporation.  
 Lotus and 1-2-3 are U.S. registered trademarks of Lotus Development Corporation.*

**Introducing HP LaserJet 4M printer**

The HP LaserJet 4M printer (P/N C2021A) includes all features of HP LaserJet 4 printer and Postscript Level 2 software from Adobe. The HP LaserJet 4M printer was designed for Macintosh computer users in multiple platform corporate offices using business applications and is available in the United States only.

The HP LaserJet 4M printer replaces the HP LaserJet III PostScript printer with **AppleTalk** (P/N 33429B). PostScript software is integrated onto the printer **formatter** board via a SIMM, an extra 4 MB of memory for a total of 6 MB, and a **LocalTalk** interface.

**Features and benefits**

- **600-dpi resolution** — Macintosh computer users are graphics and print quality oriented. HP **LaserJet 4M** printer offers users superior output quality due to a new engine that is designed specifically for **600 x 600-dpi** resolution. Together, the **600-dpi** engine, HP Resolution Enhancement technology, and HP microfine toner produce crisp, clean output. Scanned images appear truer to the original.
- **Speed and productivity enhancements** — A RISC-based processor, **6 MB** of memory, integrated PostScript Level 2 software from Adobe, and advanced **paper-handling** provide productivity through fast print capabilities.

• **Switches Automatically** — The HP LaserJet 4M printer switches automatically and reliably between the two built-in printer languages: **PostScript** and **enhanced HP PCL 5**. Switching is invisible to users. The three active **input/output** ports with **autosensing and autoswitching** make it easy for Macintosh computer users to share the printer with PC and workstation users. **LocalTalk**, serial, and parallel ports are standard. Users can also connect the printer to virtually any type of network or **computing** environment including **HP EtherTalk**, **EtherNet**, or **Token Ring LANs**. These can be connected **via** optional **HP JetDirect** cards and **HP Channel Partner** interfacing solutions.

HP LaserJet 4M printer offers high-quality output at a competitive price for Macintosh users.

**Ordering information**

Product No.	Description
C2021A	HP LaserJet 4M printer

Drivers for Apple Macintosh, **MS-Windows**, and major **DOS** applications are included in the printer box.

**LIDM printer supported on HP 3000**

The HP 2300/840L printer (P/N C2354A) is supported on all HP 3000 system platforms beginning with **HP MPE/iX Release 4.0**. The line printer offers speeds of up to 840 lines per minute, quiet operation, and lower cost. **Both** serial and **HP-IB** interfaces are supported on Release 4.0.

**HP Explorer software for the HP LaserJet 4 printer**

HP Explorer software, packaged with HP LaserJet 4 printers, is **a guide to help prepare the HP LaserJet 4 printer for use**. With HP Explorer software, users can make front control panel changes from a PC and understand the features of the new printer.

The HP LaserJet 4 printer has a **high-speed, bidirectional parallel port** that allows a printer and a PC to talk to each other. The HP Explorer software is the **first** development to take advantage of the status **readback** capabilities of the **Bi-Tronics** parallel interface.

**Features and benefits**

- **Setup program** — provides **step-by-step instructions** required to install the HP Explorer software and configure the PC to work with the HP LaserJet 4 printer. It offers to modify **AUTOEXEC.BAT** and **CONFIG.SYS** files. The setup program can be run at any time if the configuration changes or to delete a portion of HP Explorer from the hard disk. Once setup is complete users can access the printer control panel **via** the remote control panel.
- **Travel Guide** — helps users understand the printer without opening a **manual**. Travel Guide **information** includes printer **overview**, printer control, type, printing tasks, and problem solving. The Travel Guide is designed to explain **HP LaserJet 4** printer features, provide **step-by-step instructions** for completing common tasks, and offer quick answers to frequently asked questions.

• **Remote Control Panel** — brings the printer control panel to the PC. Printer settings can be changed using the PC without using the printer control panel. If a PC is connected to an HP LaserJet 4 printer, users can view and **update** printer settings from the PC screen. The remote control panel will not operate over a network or through a switch box.

**HP LaserJet 4 and 4M printer cartridge with microfine toner**

The HP LaserJet toner cartridge (P/N 92298A) with **microfine** toner is a critical component for producing high-quality HP LaserJet 4 and 4M printer output. Available in the United States only, the cartridge uses the printers' smaller dot **600-dpi** resolution and HP Resolution Enhancement technology to deliver **high-quality** printing.

**Features and benefits**

The toner cartridge offers 50% more toner than the HP LaserJet III printer toner cartridge, producing 6,000 pages per **cartridge**, which translates into a lower cost per page — from 3.1 to 2.5 cents. Patented toner particle size **matches** the HP LaserJet 4 and 4M printers' smaller dot **600-dpi** technology. **Toner transfer** system is designed **specifically** for the newest formula of **microfine** toner. The toner was developed using **nonozone** producing technology.

## New HP JetDirect Novell NetWare upgrade kits

HP JetDirect Novell NetWare upgrade kits are for HP LaserJet II/III/IIIi/IIIe/IIIeSi and PaintJet XI300 printers and DesignJet plotters. The upgrade kits are designed for users who purchased HP JetDirect cards before November 1.

The upgrade kit includes two new enhancements — improved frame type autosensing and encrypted password support — and are available to users who purchase HP JetDirect cards for Novell NetWare. Users who purchased the cards before November 1 can receive the enhancements by purchasing one of the new upgrade kits.

### Ordering information

Product No.	Description
<i>For HP LaserJet IIIeSi, PaintJet XL 300 printers, and DesignJet plotter</i>	
J2362A	HP JetDirect Novell NetWare upgrade kit/Ethernet (PIN C2059A)
J2363A	HP JetDirect Novell NetWare upgrade kit/floppy Ring (PIN C2059C)
<i>For HP LaserJet II, III, IIIi, and IIIe printers</i>	
J2364A	HP JetDirect Novell NetWare upgrade kit/Ethernet (PIN C2071A)
J2365A	HP JetDirect Novell NetWare upgrade kit/floppy Ring (PIN C2071E)

The upgrade kits contain an EPROM and installation manual in English only.

## MICR toner pallet pricing

HP is offering MICR toner (P/N 92295X) in pallet quantities in the United States only. Each pallet consists of 64 MICR toner cartridges. The toner cartridge is for HP LaserJet III, IIIe, II, and IIIe printers only.

## HP LaserJet IIIe printer price reduction

The price of the HP LaserJet IIIe printer (P/N 33481A) has been reduced in the United States only. The lower price makes the HP LaserJet IIIe printer more affordable for budget-conscious, small business users who need advanced printing and graphics capabilities but have been reluctant to purchase laser printing.

## HP LaserJet PostScript printers discontinuance

*For the U.S. only*

The HP LaserJet IIP PostScript printer with AppleTalk (P/N 33427A) and HP LaserJet III PostScript printer with AppleTalk (P/N 33429B) have been discontinued and replaced by HP LaserJet IIIe PostScript printer with AppleTalk (P/N 33428B) and HP LaserJet 4M printer (P/N C2021A).

### Ordering information

Product No.	Description
33427A	HP LaserJet IIP Postscript printer with AppleTalk (PIN 33428B)
334298	HP LaserJet III PostScript printer with AppleTalk (PIN C2021A)

## HP LaserJet III printer discontinuance

The HP LaserJet III printer (P/N 33449A Opts. A through AZ) has been discontinued in the United States only. Orders will be accepted while quantities last.

The HP LaserJet III printer is replaced by HP LaserJet 4 printer (P/N C2001A Opts. ABA through ABZ).

## HP ThinkJet, QuietJet, RuggedWriter, and 2934A dot matrix printer discontinuance

The HP ThinkJet, QuietJet, and RuggedWriter printers, and HP 2934A dot matrix printer, and their accessories will be removed from the HP Price List effective October 31, 1993. Products will be supported for five years from the date of last user shipment.

This announcement will assist users in finding other solutions. For example, users who do not require multipart forms or continuous-feed paper should consider the HP DeskJet laser printer family. Users who purchased the HP ThinkJet printer for its small footprint should consider the new HP DeskJet portable printer, P/N C2614A, which offers many of the same features as other DeskJet printers and is contained in a small, lightweight package that can be battery powered. No direct replacements are planned for these products.

**Discontinued Products**

Product No.	Description
2225A	HP-IB ThinkJet printer
2225B	HP-IL ThinkJet battery power printer
2225C	Centronics HP ThinkJet printer
2225D	RS-232 HP ThinkJet printer
2225P	Centronics HP ThinkJet battery power printer
2227A	RS-232/Centronics HP QuietJet Plus printer
2227B	HP-IB HP QuietJet Plus printer
2228A	RS-232/Centronics HP QuietJet printer
25015A	
Opt. ZAJ	HP QuietJet Turkish character set ROM
25015AT	HP QuietJet Hebrew character set ROM
25015AV	HP QuietJet Arabic character set ROM
2235A	HP RuggedWriter RS-232-C/ Centronics
2235B	HP RuggedWriter HP-IB/RS-232C printer
2235C	P/N 2235A with sheet feeder
2235D	PIN 2235B with sheet feeder
12235A	HP RuggedWriter printer font cartridge
12235C	HP RuggedWriter printer demo cartridge
12235D	HP RuggedWriter Arabic font cartridge
12239A	HP RuggedWriter U.S. sheet feeder
12239B	HP RuggedWriter A4 sheet feeder
2934A	Dot matrix impact printer
29086A	Interface kit for PIN 2934A (Centronics and HP-IB, Opt. 042 and 046)

**Terminals**

**New 19-inch color X station**

The HP 700/RX Model 19Cs color X station (P/N C3226A) features a high-quality, 19-inch, 1,280 x 1,024 Sony Trinitron color monitor, delivers 93,000 Xstones in performance; and has 4 MB memory.

The HP 700/RX Model 19Cs is designed for users in CAD/CAM-type environments where high-quality and graphics-intensive applications are required.

With the PowerShade 2.0 introduction, 3D wireframe and solid graphics are supported on X stations.

**Ordering information**

Product No.	Description
C3226A	HP 700/RX Model 19Cs X station 19-inch 1,280 x 1,024 Sony color monitor (PIN A2094A/B), includes X Window processor base unit, PS/2 keyboard, PS/2 3-button mouse, 2-MB VRAM 4-MB DRAM, power cords, and manual
Opt. 1A2	Delete keyboard
Opt. AN7	Delete 2-MB SIMM



**HP 700/RX price increase**

HP 700/RX tradeup product prices have increased. With HP 700/RX tradeup products, users can trade in an HP 700/X processor unit for the latest HP 700/RX processor unit.

**Ordering information**

Product No.	Description
C2712A	Upgrade to monochrome high-performance XPU, Model Mi
C2713A	Upgrade to color midrange-performance XPU, Model Ci
C2714A	Upgrade to color/grayscale high-performance XPU, Model Ca

## HP Sales Offices

For more information about the products described in this issue, call your local HP representative.

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