

HEWLETT - PACKARD

# UPDATE

COMPUTER SYSTEMS FROM HP

DECEMBER 1989/JANUARY 1990



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PACKARD





**COVER STORY ON PAGE 4:**

The HP Vectra 486 PC opens the way to next-generation applications made possible by the Intel i486 microprocessor and Extended Industry Standard Architecture (EISA). It has fast-access disk drives, expandable memory, easy configuration and operates with a new, more comfortable mouse.

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## X Window-based graphic user interface for supervisory control

HP's User Interface Platform (UIP) software is a graphic user interface option for HP RealTime Applications Platform (RTAP) that lets you create a wide variety of graphic process schematics.

Running on the HP 9000 Series 300 and 800 using HP-UX and based on the X Window System,<sup>®</sup> the UIP reduces the time and effort required to construct sophisticated user interfaces in supervisory control systems. Customized to meet your needs, it allows you to lay out symbol libraries, animated schematics and control panels interactively, without writing programs. It also provides an object-oriented library to increase programmer efficiency and provide additional power to meet the specialized requirements of industries such as oil and gas production, pipeline, gas distribution, telecommunications, electric utilities, water and wastewater management.

*For more information, check **A** on the HP Reply Card.*

X Window System is a trademark of Massachusetts Institute of Technology.

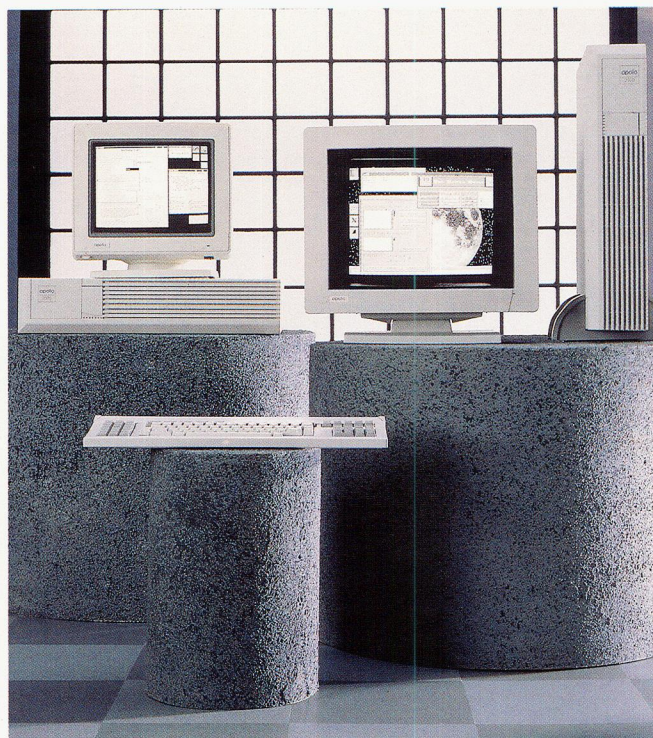


*The HP UIP's symbols simplify the construction of complex schematics and boost productivity by maximizing reuse of previous designs.*





*The Series 3500 and 4500 desktop visualization systems (above) offer excellent 2D and 3D graphics performance. The Series 2500 workstation (R) offers full workstation functionality and performance at a low entry-level price.*



## New workstations offer wide range of price and performance

Full workstation performance and a wide range of complex 2D and 3D applications are available in new powerful desktop graphics workstations from Apollo (a subsidiary of Hewlett-Packard).

### Workstation performance at PC prices

Combining high-resolution monochrome graphics with a 20-MHz Motorola central processor and a 20-MHz floating-point coprocessor, the Series 2500 workstation is a UNIX operating system-based desktop system. It offers 4 MIPS of power, integrated networking and up to 16 Mbytes of memory.

The Series 2500 low-end workstation is well suited for computer-aided software engineering (CASE), technical publishing, front-end database work, architectural engineering and construction and office automation. It is also an excellent entry-level monochrome platform for 2D drafting and schematic capture.

The use of multiple ASICs eliminates the need for costly components and injection-molded packaging reduces the cost of these workstations. Other features include:

- Expansion capability up to 2.3 Gbytes of external storage
- An external floppy or 8-mm tape drive
- 15-inch or 19-inch screen display
- Desktop or deskside design for more flexibility
- New full-function keyboard with height and angle adjustments

### Top performance with desktop visualization system

The Series 3500 and 4500 desktop visualization systems provide up to 300,000 3D vectors per second and 20,000 3D smooth-shaded polygons. They are based on the 25-MHz and 33-MHz versions of the Motorola 68030 microprocessor, delivering 5 MIPS and 8 MIPS performance, respectively.

A dedicated drawing engine and transformation processor accelerate the redrawing of wireframe images and solid models and speed up floating-point-intensive operations, such as the manipulation of 2D and 3D graphics images.

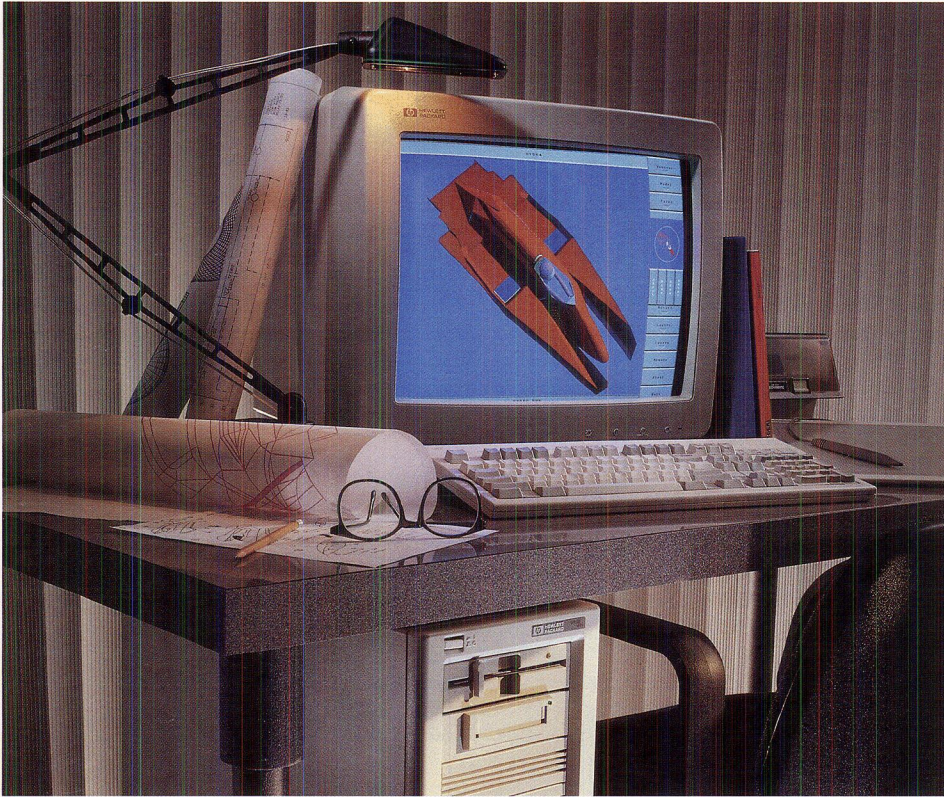
All Apollo workstations are fully compatible with Apollo's existing family of desktop workstations, which allows you to expand your system through the product line and protect your investment.

*For more information about the Series 2500, check B on the HP Reply Card. For more information about the Series 3500 and 4500, check C.*

UNIX is a registered trademark of AT&T in the U.S.A. and other countries.



# High-performance HP Vectra 486 PC sets new standards



*The HP Vectra 486 PC is based on the Intel 80486 microprocessor and EISA architecture. It offers high-speed performance for PC CAD users.*

The HP Vectra 486 PC is an excellent system for PC CAD and "Super PC" users and customers requiring a LAN server or multi-user system. It offers up to 64 Mbytes of system memory on a single card, 1.3 Gbytes of mass storage, high-performance Extended Industry Standard Architecture I/O bus and the latest in VGA and high-resolution graphic solutions. It has a full range of hard disks and controller subsystems that meet an equally wide range of performance and capacity demands.

## **Fast and expandable for high-end PC CAD**

Using the 25-MHz i486, Intel's highest performing microprocessor, the new HP Vectra performs high-speed floating-point numerical calculations and nonnumerical operations. Combined with the HP 20-inch high-resolution display, the HP intelligent graphics controller and an HP DraftMaster plotter, it gives you a powerful high-end PC CAD system.

The HP Vectra 486 PC provides the expandability necessary for many computing environments, such as LAN servers and multiuser systems. Six half-height mass storage shelves allow you to install up to two hard disks and four flexible disk drives including a tape back-up unit. It has eight Extended ISA 32-bit I/O slots for additional ISA or Extended ISA cards.

The new HP Vectra PC supports the HP VGA solution that provides  $640 \times 480 \times 256$  colors or  $800 \times 600 \times 16$  color-resolution modes and, for PC CAD users, a range of high-resolution intelligent graphics controllers. It operates with a new mini-DIN interface mouse that comes with the latest Microsoft® mouse driver.

## **Mass storage**

A full range of mass storage options is available with the HP Vectra 486 PC, from the high-capacity (670-Mbyte) drives to the 84-Mbyte drive. For the most demanding applications, the HP Vectra 486 PC Models 670 and 330 feature ESDI drives with average access time less than 16 ms. These models come standard with a high-performance 20-Mbit/s controller that has been optimized for use with the 670-Mbyte and 330-Mbyte hard disk drives.

## **Extended ISA**

The HP Vectra 486 PC is Hewlett-Packard's first implementation of the new high-performance I/O bus, Extended ISA. This design widens the data path within the PC from 16 bits to 32 bits.

## **Configuration is fast and simple**

The Extended ISA configuration software utility (EASY CONFIG) will autoconfigure Extended ISA boards, including the system board, and autodetect some ISA boards, besides giving configuration assistance for all of these accessories.

*For more information, check D on the HP Reply Card.*

Microsoft is a U.S. registered trademark of Microsoft Corporation.



## Workstation graphics performance on the PC

Bring workstation graphics performance to your PC with the HP Intelligent Graphics Controller 10 and 20 high-resolution graphics cards. These cards combine performance, flexibility and affordability for graphics-intensive applications such as CAD.

The new cards provide fast noninterlaced screen updates and display more information than conventional VGA cards. User-installable upgrades provide a broad range of features and allow for easy upgrades if your needs change.

### High performance, flexibility and compatibility

Under one-second response time for complex zoom and redraw image commands in AutoCAD is available with the HP Intelligent Graphics Controller 10 and 20. Also available are choices of colors (16 or 256), resolution (640×480 through 1280×1024), and program memory (up to 3.5 Mbytes).

For more information, check **E** on the HP Reply Card.



The HP Intelligent Graphics Controller 10 and 20 enhance productivity at a low cost.

## Notables

### Protocol analyzer

- New software enhancements to the HP 4954I protocol analyzer provide excellent simulation and emulation capabilities to test the protocol layers of your ISDN implementation. Enhancements include: dual-channel capability allows you to send data simultaneously on the D channel and one B channel, and see the data from both channels on the run-time display; link access procedure D channel (LAPD) emulator provides LAPD (Q.921) emulation for layer 2 on the D channel. This allows you to concentrate on testing Q.931 or X.25 at layer 3; integration with HP 18321A X.25 test environment allows HP 4954I to provide X.25 testing over ISDN B and D channels; INSnet decode (supported in Japan); V.120 and DMI Mode 2 decodes provide support for rate adaption. Check **F**.

### Distributed analysis

- The HP 4990A ProbeView, release A.03.00 software, a component of the HP 4990S LanProbe distributed analysis system, provides external modem support for the LanProbe and feet-to-meter conversion of distances on ProbeView's network map. Users of this new release will be able to export statistical data to a spreadsheet. The LanProbe system consists of a segment monitor, ProbeView software and a nodelocator. Together, these components provide reporting on Ethernet LAN status that can prevent downtime and improve performance. Check **G**.

### HP-UX

- An HP-UX-based version of the HP Engineering Graphics System (HP EGS) is now available. The HP-UX operating system expands your networking capabilities and provides a multitasking environment, giving you additional flexibility in meshing HP EGS into your current engineering environment. Check **H**.

### Software development

- HP Text Management Library is an object-oriented, portable toolkit that lets you produce text-based applications faster than is possible with conventional text-manipulation tools. It lets you build interactive applications that mix fonts and character sets, and present text on the screen and hard-copy devices. HP Text Management Library supports the UNIX operating system, X Window System, and other operating systems and graphics environments with PostScript output. It supports all national languages and is consistent with the National Language Support standard.
- Applications written in C or COBOL II can now easily include pop-up windows, pull-down menus, function keys, on-line help and colorful graphics effects. JAM (JYACC Application Manager) is a user-interface management system for character-based terminals and PCs that lets you create prototypes that look and behave like completed applications before entering the C or COBOL coding. Check **I**.

### HP-UX LU 6.2 API

- Combined with the HP-UX SNALink product, the new HP-UX LU 6.2 Application Programming Interface, with mapped conversations and type-independent verbs, lets you use program-to-program communication between HP 9000 C-language and CICS application programs running on an IBM System/370 or compatible mainframe.

### HP 9000

- The HP 9000 Model 815 is available and has the same IBM connectivity as the other HP 9000 Series 800 models. This includes the HP-UX SNALink product, which provides the major features of an IBM 3274 cluster controller, and the HP-UX SNA3270 and HP-UX SNA3770, which offer terminal emulation. The Model 815 can serve as a gateway for an HP 9000 Series 300 workstation running HP-UX SNA31796.

### HP LaserJet printers

- The addition of an HP 26013A I/O card to the HP LaserJet IID printer supports status checking and protects you from data loss in case of a printer power failure. The easily installed card plugs into the optional I/O slot in the back of the HP LaserJet IID printer. The HP LaserJet IID printer configured with the HP 26013A I/O card is supported on HP 3000 MPE XL and MPE V/E systems in the same configurations as other HP LaserJet printers.



## 20 Gbytes of online rewritable optical disk storage available

The HP Series 6300 Model 20GB/A 20.8-Gbyte rewritable optical disk library system combines the convenience and low storage cost of optical disk technology with the massive capacity of a library system. It is excellent for automating labor-intensive backup/recovery processes and applications requiring reliable, low-cost, high-capacity storage, such as archiving.

### Protect your data

The Model 20GB/A takes advantage of magneto-optical technology to write and read data on removable, very durable 5¼-inch disks. Optical disks are not susceptible to head crashes and are much more tolerant of magnetic interference than magnetic media. Because the laser focuses only on the disk's inner recording layer, which is sealed in a hard polycarbonate coating, fingerprints and even small scratches on its surface have no effect on the data. Data can last more than 10 years without the retensioning or reconditioning that tapes typically require.

### Save space and time

The system consists of an autochanger, 2 optical disk drives and 32 5¼-inch (650-Mbyte) optical disk cartridges in a small desk-side cabinet. The autochanger automatically selects the appropriate cartridge and inserts it into one of its two internal drives. The whole operation is transparent and has a response time of approximately 100 ms if a disk is already in the drive, or about 10 to 15 seconds if the disk needs to be changed.

The autochanger is designed for high reliability. HP's "passive payload" design eliminates many of the failure-prone components, such as motors, sensors and electronic cables, from the transport mechanism.



*The HP Series 6300 Model 20GB/A rewritable optical disk library system offers high-volume, low-cost storage in a reliable autochanger design.*

### Support of industry standards

The rewritable optical disk library system protects your long-term investment by conforming to the ANSI and ISO definition for rewritable 5¼-inch media, providing compatibility with the Model 650/A optical drive, as well as the rewritable optical drives and media of other vendors. The Model 20GB/A also implements the SCSI interface. Initial support is provided on HP 9000 Series 300 systems under HP-UX 7.0 with SCSI. Access by other systems including the Series 800 and HP3000 is possible over LAN via NFS or DS.

*For more information, check J on the HP Reply Card.*

## Automatic monitoring for your HP DeskManager network

Reduce the time it takes to detect problems on your HP DeskManager system and increase user availability with HP DeskMon, a software product that monitors the status of HP DeskManager systems throughout an entire network.

HP DeskMon automatically scans the system and notifies the system administrator of any problems it detects. Time, effort and money can be saved by configuring HP DeskMon to report network errors and exceptions to a central or local site.

HP DeskMon allows the administrator to reconfigure at any time. Configuration changes made to one machine can be duplicated on other machines via a remote update facility. The configurator comes with an on-line Help facility.

*For more information, check K on the HP Reply Card.*



### Better management and troubleshooting of network problems

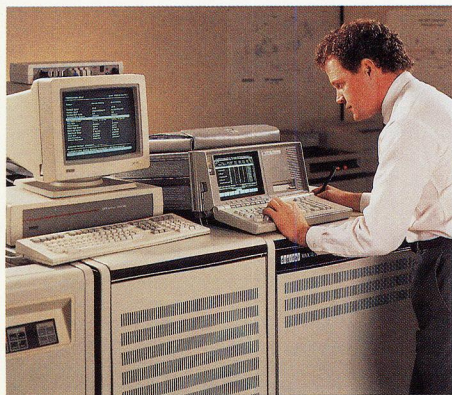
Two new software enhancements for the HP 4972A LAN protocol analyzer provide users of DECnet with detailed analysis tools for testing DECnet protocols on Ethernet LANs. The HP 18225A DECnet performance analyzer and the HP 18224A DECnet protocol interpreter offer complete DECnet and LAT protocol testing solutions. Both enhancements use LAT technology licensed from Digital Equipment Corporation (DEC).

#### Monitor usage and loading

The HP 18225A allows you to see beyond the Ethernet layers and view the operation of the network (routing) and transport layers of DECnet in action. Rapid understanding of network traffic lets you characterize usage, activity and performance for all of the networked devices.

The HP 18224A DECnet protocol interpreter provides a full-text interpretation of DEC protocols, including LAT. Captured Digital frames are decoded and displayed in easy-to-understand full-text description. Bad frames are flagged to allow quick identification.

*For more information, check **L** on the HP Reply Card.*



*The HP 18225A and 18224A offer complete DECnet and LAT testing solutions.*



*The fast, versatile HP PaintJet XL printer is an excellent solution for shared and high-volume users.*

### New color graphics printer designed for high-volume users

Rapid printing and near-letter-quality text are now available with the introduction of the HP PaintJet XL color graphics printer.

The HP PaintJet XL printer prints up to three times faster than the original HP PaintJet printer and has automatic sheet feed for HP PaintJet printer paper and transparency film, A- and B-size media handling, a special presentation mode for the best possible quality on paper and an optional font cartridge with 20 additional fonts.

Like the original HP PaintJet printer, this new printer has 180 dpi resolution, disposable print cartridges, 8 primary colors and up to thousands of color shades, depending on your software's color capabilities.

#### Hardware and software compatibility

The HP PaintJet printer can be used with a variety of computers, including the HP Vectra PC family and other IBM PC/AT compatibles, Apple Macintosh computers, HP technical computer systems and others.

#### Easy connection to Macintosh computers

The HP Color PrintKit for Apple Macintosh Computers makes it easy to connect to the Macintosh Plus, SE and II computers. The kit supports such features as background printing, font scaling and 32-bit color. It provides a QuickDraw-compatible software driver, fonts, cable and User's Guide.

*For more information, check **M** on the HP Reply Card.*



## Save time and money with new CD-ROM technology

Fast, easy and economical access to MPE V, MPE XL and HP-UX documentation and support information is now available on CD-ROM.

### For the HP 9000

HP LaserROM/UX retrieval software for the HP 9000 gives multiple users access to thousands of pages of documentation and support information stored on any HP LaserROM multiuser subscription service compact disc. Subscribers regularly receive updated compact discs that include: manuals on programming languages, operating systems, databases, utilities and software status bulletins (known problem reports). You also have access to the HP product and value-added software catalogs, application notes and the HP Education Catalog. Full-text keyword-search and browse capabilities let you retrieve information in a fraction of the time it takes to use hard copy manuals.

### For HP 3000 users

HP LaserRelease for HP 3000 MPE V systems uses compact discs instead of magnetic tape as a software-distribution media, at a lower cost to you. HP LaserRelease is available for MPE V V-Delta -5, -7 or -8. Choosing the CD-ROM media option entitles you to contractual credits for each subsystem.

### New HP-IB CD-ROM drive

HP LaserROM/UX and HP LaserRelease operate with the new HP Series 6100 Model



*HP LaserROM/UX delivers documentation and support information to HP 9000 users.*

600/A CD-ROM drive. The drive features the HP-IB Interface with Command Set 80 (CS/80) protocol and can read most CD-ROM file formats, including High Sierra Group (HSG) and ISO-9660.

*For information on HP LaserROM/UX, check **N**. \* For information on HP LaserRelease, check **O**\* and for information about the HP LaserROM product family, check **P**.\**

\*Information about the HP Model 600/A drive is included.

## Disc chip maker solves worldwide distribution problems

Burr-Brown of Tucson, Arizona, an international manufacturer and marketer of electronic components and systems, successfully met a complex distribution challenge using an interactive HP computer distribution system designed for multinational operations. The firm makes chips for 75 percent of all compact disc (CD) players sold worldwide.

The \$140 million firm's complicated ordering, shipping, inventory and billing procedures created financial problems that required a computer solution. The company had to gain closer control of its orders, invoices, shipping and inventories to boost its profits.


Burr-Brown selected integrated HP 3000 computers and the BOSS/3000 software system from SATCOM in Scotland, London, Stuttgart, Paris, Tokyo and Tucson. Applications include order entry, shipping, invoicing, and inventory control.

According to Dean Banz, director of decision support systems for Burr-Brown, "We now collect weekly data of worldwide bookings and shipments used by our marketing, sales, planning and corporate staff. Using this information, the staff does country and product sales analyses, spot trends and make strategic pricing and planning decisions—adding to our profits."

### Hewlett-Packard (Canada) Ltd.

#### UPDATE

6877 Goreway Drive  
Mississauga, Ontario L4V 1M8

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