

COMPUTER FOCUS

 HEWLETT
PACKARD

Computer News for HP OEMs and Independent Software Vendors

May 1985



New Office Productivity Solutions

**The HP 150 II Personal Computer
New Personal Productivity Center Capabilities**

INTERNATIONAL VERSION

MARKETING

- 3 General
 - June commercial VAR conference to focus on "Leaders In Solutions"
 - Software Supplier Survey — Hewlett-Packard invites your comments
- 4 Supplies
 - HP's Spring/Summer 1985 *Computer Users Catalog* published
 - DMK direct order phone numbers

PERSONAL COMPUTERS

- 5 HP Series 80
 - New extended mass storage ROM for HP Series 80 personal computers
- 5 HP 100 Series
 - The HP 150 II personal computer family
 - HP Touch accessory available for HP 150 II personal computer
 - Introducing EtherStart/150
 - New personal data storage solutions for HP 150 II personal computer
 - Software Catalog for the HP 150 personal computer and The Portable
 - Introducing the new Touchscreen Technical products
 - New high-performance, low-cost data acquisition system for the HP Integral PC

TECHNICAL COMPUTERS

- 12 HP 1000
 - New HP 1000 A-Series I/O Extender now available
 - Product Line 65 simplification continues
 - HP 1000 A-Series tall cabinet improved
 - All HP 1000 tall cabinets are not alike

- 14 HP 9000
 - New high-performance graphics system introduced
 - HP-UX 5.0 now available for HP 9000 Series 500
 - ME solutions on the HP 98700H Graphics Display Station
 - HP-HIL input devices for the HP 98700H Graphics System
 - New server and cables enhance SRM system
 - HP 9000 language system obsolescence
 - HP 9000 Series 200 BASIC and Pascal now on double-sided media

BUSINESS COMPUTERS

- 19 HP 3000
 - HP 3000 Series 37 pricing structure update
 - HP 7914CT supported on HP 3000
 - HP 9144A and HP 7945A supported across HP 3000 line

PERIPHERALS

- 20 Mass Storage
 - New mass storage alternative for HP 1000 and HP 9000 systems
 - System support on the new HP 7907A
 - Discontinuance plans for HP 7970/7971 tape product family
- 22 Networks
 - HP AdvanceNet implemented on HP 9000 Series 500
- 22 Printers
 - New HP ThinkJet printer now offers RS-232-C interface
 - New font cartridges for HP LaserJet printer
 - New supplies for HP ThinkJet printer

CROSS-LICENSING CLASSIFIEDS

- 25 Software Packages Available and Wanted

On the cover:

HP introduces new products that make it easy to improve office productivity. The HP 150 II personal computer with a full-size screen, enhanced features, and new peripherals is the workstation of choice for any office professional. See articles beginning on page 5.

HP Computer Museum
www.hpmuseum.net

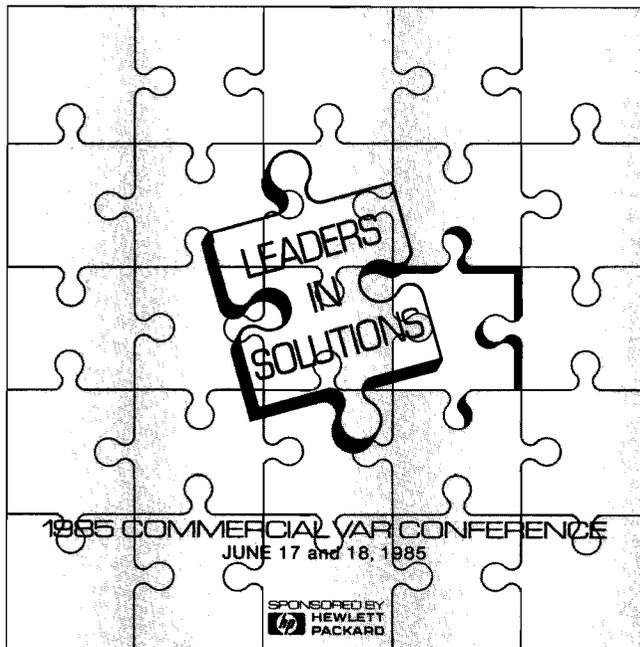
For research and education purposes only.



GENERAL

June commercial VAR conference to focus on "Leaders In Solutions"

Hewlett-Packard invites all Commercial HP 3000 Value-Added Resellers (VARs, or OEMs) to join us for the 1985 Commercial Value-Added Reseller Conference on June 17 and 18 at the Marriott Hotel in Santa Clara, California. *The deadline for conference and hotel registration is Friday, May 24.*



This year's theme is "Leaders In Solutions," and we've tailored the conference presentations and workshops to meet the needs of commercial VARs. We'll be sharing our business and product strategies, Third Party Program objectives, and our commitment to the VAR channel through interactive presentations and workshops focused on solution selling. Planned for inclusion in the agenda are:

- *General Sessions* — Market Trends and HP Directions, Third Party Program Update, Commercial Systems Strategy, and Future Systems Architecture.

- *Workshops* — Marketing Communications, Raising Capital, Positioning Your Product, Pricing for Profit, and Peripheral, Data Communications, and Workstation Strategies.

Commercial VARs in the US should watch for their personal invitations in the mail which will include important registration information. VARs outside of the US should contact their HP sales rep for an invitation packet.

If your company has a current US commercial VAR contract with HP and you do not receive an invitation by May 13, please contact Gina Ferrari or Dave Duckworth at:

Hewlett-Packard Company
Value Added Solutions Marketing
10520 Ridgeview Court
Cupertino, CA 95014
408-973-1919

Don't forget to mark your calendar for "Leaders In Solutions," June 17 and 18. Remember, the registration deadline is May 24.

Software supplier survey — Hewlett-Packard invites your comments

Hewlett-Packard's newly formed Corporate Third Party Program is sending out a questionnaire to all software suppliers currently subscribing to *Computer Focus*. The purpose of this survey is to gather sales information (\$ leveraged for HP), company data, and comments regarding our Third Party Program in general. The survey was sent out April 15, and is intended to provide us with information for the first half of FY85 (November 1, 1984 to May 1, 1985). All survey respondents will have a chance to win The Portable — just for turning their surveys in. In addition, top performers in several categories will be recognized (25 awards). We will continue to send out these surveys on a semi-annual basis, so that we can better judge the effectiveness of our program in leveraging HP sales.

SUPPLIES

HP's Spring/Summer 1985 Computer Users Catalog published

See the wide selection of supplies and accessories featured in the new *Computer Users Catalog*. The 164-page Spring/Summer '85 edition reconfirms HP's standing commitment to total service. To meet your growing needs, we've added 195 new products — all guaranteed to bring out the best in your HP equipment.



Thorough explanations, color-coded diagrams, and easy-to-follow compatibility guides will help you select exactly what you need. Any of our 1,800 plus products can be located within seconds by referring to one of three handy indexes, or by flipping to the appropriate catalog section: Data Communications; Cables, Connectors, and Power; Handheld Calculators and Computers; Personal Computers and Software; Peripherals and Terminals; Furniture and Accessories; Printer Supplies; Plotter Supplies; Magnetic Media; and Publications and Learning Aids.

connectors, and Power; Handheld Calculators and Computers; Personal Computers and Software; Peripherals and Terminals; Furniture and Accessories; Printer Supplies; Plotter Supplies; Magnetic Media; and Publications and Learning Aids.

Catalog highlights

- A new eight-page Data Communications section (pages 2-9).
- An expanded offering of Local Area Network cables (pages 12-15).
- And HP's new line of elegant, but affordable ergonomic workstation chairs (pages 88-89).

Fast, easy ordering — in the US

Our friendly Direct Phone Order Service makes ordering a breeze. You're just a phone call away from this fast and helpful service. Our telemarketing professionals are ready and waiting to accept calls between 9 a.m. and 8 p.m. (Eastern Standard Time). We'll confirm availability and price on the spot, and ship within 24 hours of order receipt. You can order against your open Direct Marketing Division account or charge your order to VISA, MasterCard, or American Express credit cards.

Fast, easy ordering — outside the US

Special fast-order direct phone lines for computer supplies are available in many countries. Direct phone order service is the ideal companion to the new *Computer Users Catalog*, making it easy for you to identify and order the supplies and accessories you need.

P/N	Catalog edition
5953-2450	International edition (English language)
5953-2450(C)	Canadian edition (To order, call 416-671-8383)
5953-2450(FR)	French language edition
5953-2450(GE)	German language edition
5953-2450(IT)	Italian language edition
5953-2450(UK)	UK edition
5953-2450(D)	US edition

DMK DIRECT ORDER

DMK Fast Phones — the easy, direct way for you to order supplies, accessories, media, furniture, and software.

Location	Telephone Number
Austria	(0222) 2500615 (0222) 2500616
Belgium/Luxembourg	(02) 762 32 00
Canada	
Toronto Local	416-671-8383
Ontario	1-800-387-3417
Quebec	1-800-387-3417
British Columbia	112-800-387-3154
Other Provinces	1-800-387-3154
Denmark	(02) 816640, ext. 258
Finland	(90) 4550211
France	(6) 928 32 64
Greece	(01) 6473360-1
Italy	(02) 92 36 91 (06) 5 48 31
Middle East	
Athens	(01) 808-0359
Norway	(02) 171180
South Africa	
Johannesburg	(011) 8025111
Cape Town	(021) 537954
Durban	(031) 284178
Spain	(01) 6384013
Sweden	(08) 7502028
Switzerland	(057) 31 22 54 (057) 31 22 59
The Netherlands	(020) 470639
United Kingdom	(0734) 697201
United States	800-538-8787
California	408-738-4133
West Germany	01303322

HP SERIES 80

New extended mass storage ROM for HP Series 80 personal computers

To continue the successful sales life of the HP-85B and HP-86B, Hewlett-Packard announces the new HP Extended Mass Storage ROM, on the May 1, 1985, HP Price List. With the insertion of this new ROM into a slot in the HP Series 80 ROM Drawer Card, a greater amount of mass storage is made available. The ROM supports double-sided, double-density disc drives from HP. This extra capacity allows HP Series 80 users to store larger amounts of data than ever offered before on HP's lowest cost technical computers.

The Extended Mass Storage ROM enables HP Series 80 personal computers to communicate with any HP disc drives that use the Subset-80 (SS-80) protocol. A disc protocol is the language used by the computer and the disc drive when they communicate with each other. Before the Extended Mass Storage ROM was introduced, HP Series 80 computers supported only a disc protocol known as Amigo. Disc drives that use Amigo protocol include the HP 82901M, 82902M, 9121D/S, 9133V, 9133XV, and 9134XV.

The most recently introduced HP disc drives use the SS-80 protocol. These disc drives can only be used with HP Series 80 computers equipped with the optional Extended Mass Storage ROM. With the Extended Mass Storage ROM installed, both Amigo and SS-80 disc drives can be used simultaneously. The SS-80 disc drives that are supported on HP Series 80 personal computers are the HP 9122D/S, 9133D/H/L (up to 16.7M bytes), 9134D/H/L, 9153A, and 9154A.

Disc drives not supported are the HP 9114A (HP-IL), 9125S, 9142A, 9144A, and 794XX.

Mass storage operations with the Extended Mass Storage ROM installed are no different from those without the ROM installed. You use your mass storage commands as you normally would without the Extended Mass Storage ROM installed.

There are two versions of the Extended Mass Storage ROM available for HP Series 80, the HP-85B and HP-86B. The HP-85B version is compatible only with the HP-85B personal computer or the HP-85A personal computer that has been upgraded to the functionality of an HP-85B through the installation of the HP 82972 Upgrade Kit. The HP-86B version of the Extended Mass Storage ROM is compatible with all HP-86 and HP-87 personal computers.

Ordering information

P/N	Description
00085-15013	Extended Mass Storage ROM HP-85B
00087-15013	Extended Mass Storage ROM HP-86B

Hewlett-Packard is committed to continuing the ongoing success of the HP Series 80 product line. With the introduction of the Extended Mass Storage ROM, you can continue to enhance the value of your HP personal computers.

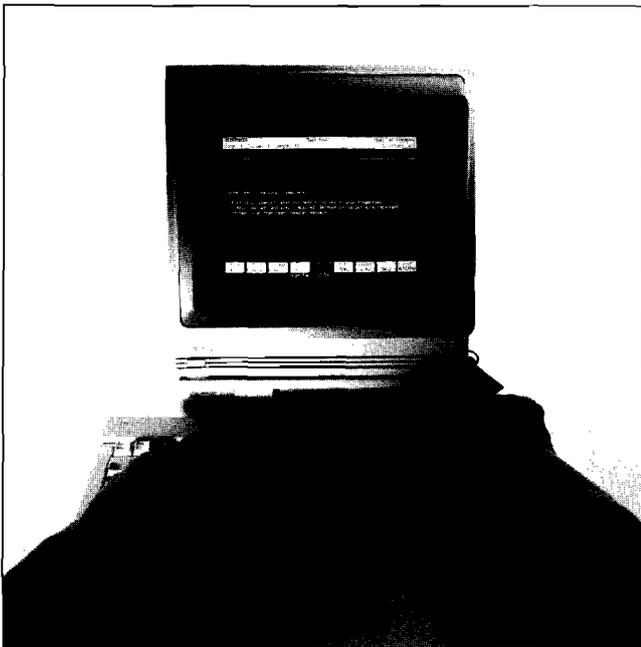
HP 100 SERIES

The HP 150 II personal computer family

Hewlett-Packard is proud to announce the HP 150 II family of personal computers. The new HP 150 II personal computer combines the benefits of the original HP 150 personal computer with additional benefits to make the HP 150 II the best solution ever for the business professional. It's easy to use — yet expands to meet the demands of the most sophisticated business needs.

Personal Computers

The HP 150 II is designed to be completely compatible with previous members of the HP 150/Touchscreen family. This means that with the HP 150 II you still get ease of use — from the Personal Applications Manager, softkeys, HP Touch, and Easy Config to set up your peripherals — and you can still choose from more than 600 software packages already available for HP 150 personal computers. Complete hardware compatibility means users have access to all of the available hardware accessories to meet expansion needs.



The HP 150 II personal computer with a full-size screen, enhanced features, and new peripherals is the workstation of choice for any office professional

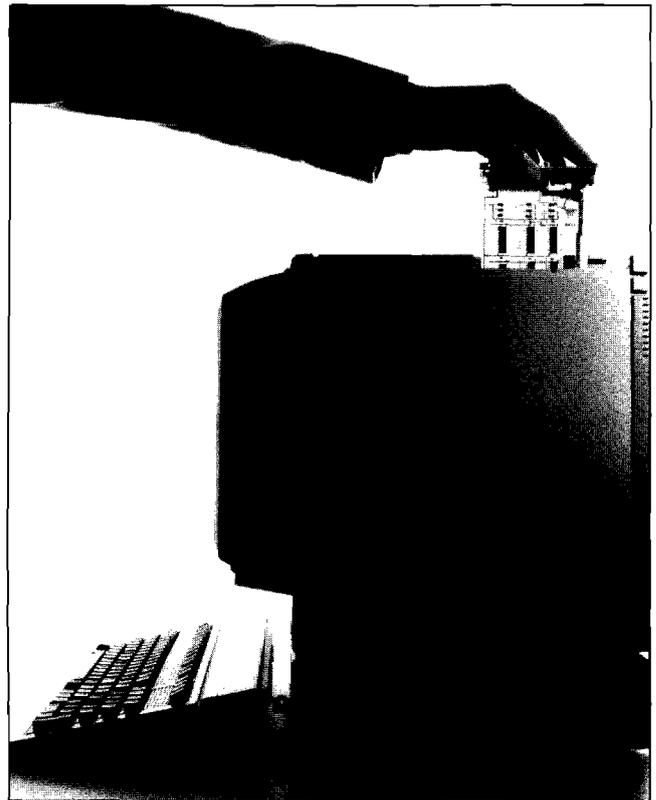
System features

Like the previous members of the HP 150/Touchscreen family, the HP 150 II features the MS™-DOS (version 2.11) operating system, powered by the Intel 8088 16-bit microprocessor. The HP 150 II comes standard with 256K bytes of RAM and may be expanded to a maximum of 640K bytes. In addition, the HP 150 II offers a host of new features, including a new ergonomic display, enhanced graphics capability, new accessories, and new peripherals.

Designed for the office, the HP 150 II has a high-resolution 12-inch display with built-in display tilt. It offers the best resolution available today on a personal computer, providing you with crisp, clean text and graphics. The HP 150 II, with its larger display and new ergonomic design, still provides the same footprint of the original HP 150 personal computer — 12.8 inches wide by 12 inches deep.

The HP 150 II also offers room to expand with four accessory slots in addition to four standard ports. You can easily add accessories such as memory cards, an internal modem, a Centronics interface, and other available hardware accessories. Hardware accessory cards are easily installable through the HP 150 II's removable top panel.

Recognizing the importance of communications, the HP 150 II comes standard with four ports: one HP-IB parallel port, one RS-232/RS-422 communications port, and one standard RS-232 port. In addition, the HP 150 II offers HP-HIL (HP Human Interface Link), which allows users to simultaneously daisy



Hardware accessory cards are easily installable through the HP 150 II's removable top panel.



chain up to seven input devices, including the HP Mouse, graphics tablet, and bar code reader, to the keyboard. HP-HIL provides flexibility and expandability so personal computer users can operate input devices interchangeably, moving from the HP Mouse to the keyboard to the touchscreen.

Advanced ergonomics

The HP 150 II is ergonomically designed for user comfort and convenience. The built-in tilt allows you to adjust the high-resolution, 12-inch display for optimal viewing. The power switch, brightness control, and keyboard connection are located on the front and side panels for easy access. The new design also includes a cable-management system that eliminates exposed cables and enables the HP 150 II to be set flush against a wall.

New accessories and peripherals

In addition to the already available accessories from the HP 150/HP Touchscreen family, new accessories are available with the HP 150 II. HP Touch is now offered as a user-installable accessory for the HP 150 II for those who desire touch capability to enhance the user interface. The HP 150 II also supports the new 8087 Match Co-processor (available this summer) that allows you to speed up scientific and other real-number-intensive applications.

Several new mass storage options are available for the HP 150 II family. The HP 150 II System offers the new HP 9123D dual 3½-inch floppy disc drive with a capacity of 710K bytes each. The HP 150 II MAX offers a choice of Winchester disc drives with an integrated 3½-inch floppy disc drive, including 10, 20, and 40M-byte versions.

New configurations

The HP 150 II is offered as a base system that does not include a disc drive, allowing maximum ordering flexibility. The base system includes the system processing unit with the integrated display, the keyboard, all system software, and complete documentation. You can order the base system and then add the mass storage you desire.

The HP 150 II Terminal is also available as a new product. Like the HP 150/HP Touchscreen family, it offers full terminal capabilities that include many of the features of the HP 2623 graphics terminal. The HP 150 II Terminal will run all of the popular HP 3000 applications just like its predecessor. In addition, the new HP 150 II Terminal Upgrade Kit is available for anyone who wishes to later upgrade their terminal to the HP 150 II personal computer.

HP Touch accessory available for HP 150 II personal computer

The 35723A HP Touch accessory is a 12-inch, user-installable bezel for use with the HP 150 II personal computer.

The new HP Touch accessory uses the same infrared technology that was introduced by the original HP 150 personal computer. You get all the easy-to-use features of the original HP 150 personal computer along with some improvements:

- The touch area is increased to 12 inches
- The resolution is increased to 43 vertical by 57 horizontal (2451 touchpoints)
- The bezel is solid, using an infrared transparent material so that no holes are necessary for the optical paths

When you purchase the HP Touch accessory, you can continue to take advantage of the many HP software packages that have been specially enhanced to use HP Touch. (For those that require ZH1 approval, order 35723A Option 100, which is the same product with a transparent inner bezel that meets ZH1 requirements.)

Introducing EtherStart/150

With EtherStart/150 your HP 150 and HP 150 II personal computers can operate on an EtherSeries/150 local area network (LAN) without disc drives. EtherStart/150 consists of software and a plug-in ROM for the EtherLink/150 accessory board. EtherStart/150 enables a networked HP 150 personal computer to automatically load its operating system from the Winchester disc of an EtherSeries network server.

Now an EtherSeries/150 LAN can operate economically with only two disc drives: one for disc sharing and one at a user workstation to load software.

EtherStart/150 is completely user installable and works on any HP 150 or 150 II personal computer with operating system C.01.00, firmware Revision E or later, and an EtherLink/150 accessory board.

New personal data storage solutions for HP 150 II personal computer

Now you can choose the data storage capacity that fits your needs. These new low-cost Winchester are available in 10, 20 and 40M byte* capacities to handle applications ranging from word processing to local area networking. For reliable backup of critical life-line data, or large amounts of data, the new low-cost ¼-inch streaming tape backup* is perfect for the job.

Every business needs the performance of a Winchester

Choosing a Winchester for a personal computer workstation adds convenience, greater performance and speed, and large capacities for most applications.

Winchesters offer an entire software library in residence — at your fingertips. And now they're priced lower than ever before.

Start out with a Winchester

The ideal entry-level Winchester is the new HP 10M-byte 3½-inch Winchester with a 3½-inch 710K-byte double-sided microfloppy. Daily office tasks using word processing, spreadsheets with 1-2-3™ from Lotus™, and creating high-quality graphic slides are a perfect match for the 10M-byte disc. You can now start out with a Winchester-based system and increase performance and capacity over a floppy-based system.

Is your personal computer expanding with you?

Data-base and small local-area-networking applications need high capacity as well as Winchester performance. The 20M-byte Winchester with 3½-inch 710K-byte microfloppy is made to share common data bases and information. Workstations based on a UNIX™ operating system will find the 20M byte ideal for Basic Statistics or Numerical Analysis on HP 9000 Series 200 BASIC and Pascal computers.

Business power

Large multiuser area networking applications match the new 40M-byte drive with a 3½-inch 710K-byte microfloppy. It has half the access time of our smaller Winchesters, significantly increasing the performance of networking and applications based on UNIX operating systems.

Expand existing systems

All of these new products are also available as stand-alone Winchesters for the expansion of existing floppy-based systems. The convenience, performance, and capacity of these Winchesters increase the productivity and efficiency of any personal computer workstation.

Safeguard your investment

All businesses, large or small, make a real investment in data. Whether it's payroll, research, financial, or personnel records, it's critical to the operation of that business. Safeguarding this investment is easy with the new ¼-inch Tape Backup with a 13/52M byte (HP 150 II only; up to 60M bytes on HP 9000 Series 200) capacity. It's security for anyone using 10-100M-byte Winchesters as well as protecting critical life-line data. Its error protection system ensures against possible loss of data by duplicating 50 percent of all data to allow reliable recovery of information.

If your hard disc fails, this Tape Backup can be used as a disc in emergency situations. Because it emulates a disc, you can use normal DOS commands to access files until your hard disc is repaired. And data can be restored on discs other than the one you copied from providing data interchangeability as well as transportability. And its softkey driven menu makes backup a snap. Combine its low price tag, high reliability, and touch/softkey driven interface, and it's a wise choice to safeguard your investment.

Which backup solution makes sense?

The new tape backup, HP 9142A, is designed as a low-cost solution for the personal computer marketplace. The existing tape backup, the HP 9144A, was designed to be compatible with HP's high performance systems and, therefore, can exchange tape cartridges with the HP 7908, 7911, 7912, and 7914. The HP 9144A is also twice as fast as the HP 9142A for high performance usage. Each product has its own distinctly different targeted market and is not compatible with the other.

Ordering information

These Winchester and tape products are supported on the new HP 150 II personal computer. HP 150 personal computer users can use the new drives with the HP 150 II upgrade.

P/N	Description
HP 9153A	10M byte 3½" Winchester with 3½" microfloppy
HP 9154A	10M byte Winchester standalone
HP 9133H	20M byte Winchester with 3½" microfloppy
HP 9134H	20M byte Winchester standalone
HP 9133L	40M byte Winchester with 3½" microfloppy
HP 9134L	40M byte Winchester standalone
HP 9142A	¼" streaming tape backup drive
45849-63006	HP 150 II operating system upgrade kit

**40M byte Winchester and tape backup will be available this summer.*

1-2-3™ and Lotus™ are US trademarks of Lotus Development Corporation.

UNIX™ is a trademark of AT&T Bell Laboratories.

Software Catalog for the HP 150 personal computer and The Portable

Hewlett-Packard is pleased to announce the second edition of the Hewlett-Packard Software Catalog. This publication describes over 500 software products available for the HP 150 personal computer and over 75 products for The Portable. Included are products distributed by HP as well as numerous products available directly from Independent Software Vendors.

Over 175 software vendors are represented in The Software Catalog. Hewlett-Packard personal computer dealers and sales reps receive copies of the catalog, which is also available for purchase from HP's Direct Marketing Division (800-538-8787), in California (408-738-4133). Vendors that offer software for the HP 150 or The Portable should contact HP's Personal Software Division at 408-773-6332 for information on including their products in the catalog.

Introducing the new HP Touchscreen Technical products

The personal computer is fast becoming standard equipment in the technical environment. Over 600,000 personal computers were sold into scientific/engineering applications in 1984. Linking instrumentation systems into the world of the personal computer creates a more efficient, cost-effective way to program and perform test procedures, analyze and compare data, and record and plot results. You can perform your test-and-measurement functions plus have the flexibility to run popular business applications — all at one integrated workstation. The HP Touchscreen Technical products bring HP 150 personal computer technology to the world of instrument control. They are based on the new HP 150 II personal computer.

The first product, the Touchscreen HP-IB Controller (P/N 45861A), gives you access to over 2,000 HP-IB instruments for unmatched flexibility. It couples the HP 150 II, the new HP-IB Command Library for MS™-DOS (P/N 14857AA), and a choice of Pascal or GWBASIC.

The second product, the Touchscreen PCIB Controller (P/N 45862A), is a new solution for the automated test-and-measurement needs of a wide range of technical professionals. It couples the HP 150 II and the PC Instruments Interface (P/N 61060AA, card plus PC Instruments System Software) to give you access to the new family of low-cost, modular PC Instruments.

The HP-IB Command Library is designed to be compatible with the PC Instruments System Software, thus allowing you to control both HP-IB instruments and PC Instruments from the same GWBASIC program.

Because the HP 150 II runs the industry-standard MS-DOS operating system, it is easy for you to take advantage of the hundreds of application packages already available, such as 1-2-3™ from Lotus™, WordStar®, and the PFS software line. This gives you access to productivity tools that will help you work more efficiently from one centralized work site.

It makes sense for technical professionals to cut costs and increase productivity by consolidating the many functions they perform each day using the HP Touchscreen Technical products.

1-2-3™ and Lotus™ are US trademarks of Lotus Development Corporation.

WordStar® is a US registered trademark of MicroPro International Corporation.

New high-performance, low-cost data acquisition system for the HP Integral PC

TransEra Corporation is now shipping a new high-performance, low-cost data acquisition system designed to operate with the new HP Integral PC. Called the 7000-MDAS, "Modular Data Acquisition System," the new device is based on the Motorola 68000 microprocessor operating at 10MHz and supports up to 2M bytes of memory. With its own operating system, the 7000-MDAS can function independently of the host, capture large arrays of analog and digital data at high speeds, and coordinate complex acquisition and control routines. The real-time operating system also supports multitasking, and provides high-level communications with any host. Single-channel burst rates of 540KHz and multiple-channel scan rates of 160KHz can be achieved, giving 7000-MDAS the highest performance of any data acquisition system in its price range.

The system is designed to accommodate from 1 to 64 channels. Modular plug-in cards permit any combination of analog or digital I/O channels. The modular configuration of the 7000-MDAS allows you to specify the exact system needed without paying for anything not really desired. A comprehensive assortment of over 20 different I/O modules are available that permit direct connection to many sensors and transducers. The types of I/O modules available include high-performance differential input, frequency and pulse measurement, bridge excitation and conditioning, thermocouple input, mechanical relays, solid state relays, 4-20 mA I/O, stepper motor drive, and many others.

The speed and power of the 7000-MDAS converts the HP Integral PC via HP-IB (IEEE-488) into a sophisticated instrumentation workstation. Software residing in the 7000-MDAS is both powerful and easy to use. Application software with set up examples is also available. Over 60 software routines are provided that perform analog and digital I/O, signal processing, math, control, communication, hardware tests, calibration, setups, and so on.

A partial list of specifications is as follows:

- MC 68000 processor (10MHz) with 16 to 32K bytes of static RAM, no wait states, and real-time clock.
- Non-volatile memory for set-ups and calibration.
- 128K to 512K bytes of dynamic RAM.
- Stand-alone operation with built-in keys and display.
- Two RS-232 ports and one HP-IB (GPIB IEEE 488) interface bus.
- Five MHz counter/timer for accurate timing/sequencing and frequency measurement/generation.
- Choice of analog cards for optimum price/performance ratio, 50 to 400KHz 12 bit, 60KHz 8 bit A/D.
- 100KHz 16 bit D/A converter (standard, all cards).
- FFT and other signal processing routines.
- Weight 12 lbs., very portable.
- Battery back-up with sleep/wake modes (optional).

The 7000-MDAS brings these capabilities to you for a low initial cost for a complete system with four channels.



The 7000-MDAS from TransEra Corporation is a new high-performance, low-cost data acquisition system for the HP Integral PC.

For further information contact TransEra Corporation, 3707 North Canyon Road, Provo, UT 84604, 801-224-6550/Telex 296438, Attn: Van Twelves/Ron Wilson.

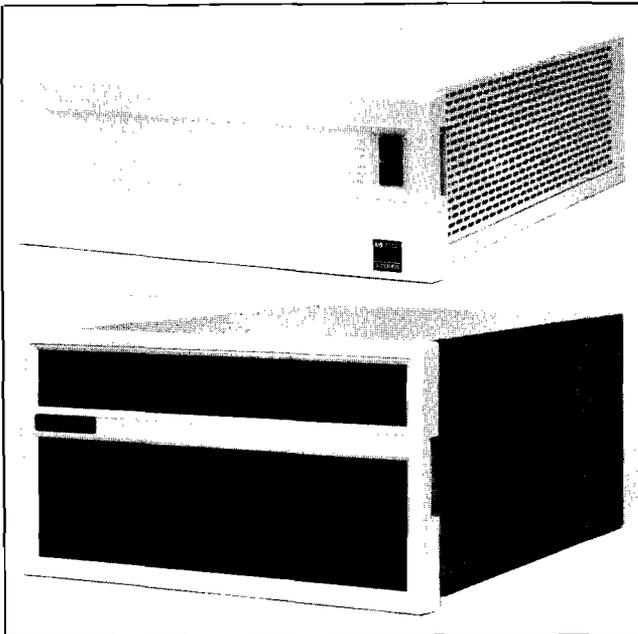


HP 1000

New HP 1000 A-Series I/O Extender now available

The HP 1000 A-Series now has an I/O Extender to help you support a variety of interface cards designed to meet the needs of your computer integrated manufacturing (CIM) and real-time applications. Users with large I/O requirements will find the HP 1000 solution even more attractive. The A-Series Extender has the following features:

- Available for A600+, A700 and A900 Series computers.
- Choice between 12- or 18-slot versions.
- Compatibility with A-Series DMA I/O architecture.
- Transparent to application software.
- Supports up to 24 I/O channels today.
- Will support up to 48 I/O channels with the new release of RTE-A.



Top: The 12025A 12-slot I/O Extender. Bottom: The 12025B 18-slot I/O Extender.

Range of solutions

The I/O Extender effectively extends the backplane of the A-Series, although the maximum bandwidth of the computer does not change. With two versions and multiple extender support, a range of I/O expansion solutions provide you with flexibility today and growth paths for the future.

Product structure and ordering information

The product structure of the Extender is straightforward yet versatile. The 12025A is based upon the Micro 1000 box and offers 12 additional I/O channels to any of the HP 1000 A600+, A700, or A900 Series computers. The 12025B uses the larger 20-slot box and provides 18 additional I/O channels. Multiple Extenders can be used with one CPU by adding combinations of either version for a maximum of 48 total I/O channels.

Product/ Option	Description
12025A	12-slot I/O Extender
Opt. 001	A900 upgrade kit
Opt. 002	A700 upgrade kit
Opt. 015	230V ac power
12025B	18-slot I/O Extender
Opt. 001	A900 upgrade kit
Opt. 002	A700 upgrade kit
Opt. 015	230V ac power

Upgrade options are required for Extender use for earlier revisions of the A900 and A700 Series computers. The A900 upgrade is customer installable while the A700 requires customer engineer installation (included with the upgrade). This table will help you determine if you need an upgrade option:

Upgrade option requirement

SPU	Before date code 2500	Date code 2500 or more
A600+	None	None
A700	002	None
A900	001	None

Performance

The I/O Extender is ideally suited for many applications, such as data acquisition, where the Extender is capable of Input DMA rates equal to the CPU's. Maximum DMA rates are, of course, a function of the A600+, A700, or A900 backplanes. Output DMA of the Extender is limited to approximately 40 percent of the maximum bandwidth and thus makes the Extender's use less than ideal for applications like simulation where output rates are important. In any configuration, I/O interfaces critical to system performance — such as the disc interface — should be installed in the computer, not the Extender.

Other limitations associated with the Extender relate to the table space boundaries of RTE-A. Although the Extender will be capable of greatly expanding the I/O capability of the A-Series, it is recommended that you have your support engineer verify that adequate table space exists for specific configurations.

With the new I/O Extender, even more opportunities exist for you to solve your processing and I/O needs today and in the future.

Product Line 65 simplification continues

As part of the continuing effort to simplify Product Line 65, the following products will be removed from the HP Price List after the designated dates. The simplification effort, which was initiated in June 1984, is aimed at removing technically obsolete, low-volume, and confusing products from the HP Price List. It benefits you by decreasing the complexity of the product line and reducing the delays due to ordering errors.

Please make note of all products scheduled for removal. All products will enter into standard support life upon removal.

P/N	Description	Removal date
<i>Misc. products</i>		
12107A	A600 to A600+ upgr. (VC+)	May 1986
12728G	E-Series front panel	November 1985
12728H	E-Series instr. set ROMs	November 1985
12824A	Vector instruction set IVB	November 1985
12967A	Sync. comm. interface	November 1985
12968A	Async. comm. interface	November 1985
12992E	Loader ROM for flex. disc	November 1985
12992F	Loader ROM - RPL compatible	November 1985
13047A	2K byte user control store board	November 1985
2109B	E-Series computer w/o memory	November 1985
2113B	E-Series computer - 12"	November 1985
2156A	A600 box computer	May 1985
92086A	RTE-6 upgrade kit	November 1985
<i>Memory products</i>		
12747HD	20 Pack 12747H	November 1985
12779H	256K-byte HP check board	May 1986
12781A	Dual CPU Kit for 12979B	May 1986
12786A	128K-byte E-Series std. perf. memory	May 1986
12786B	256K-byte E-Series std. perf. memory	May 1986
12786C	512K-byte E-Series std. perf. memory	May 1986
12787A	128K-byte E-Series FC std. perf. memory	May 1986
12787B	256K-byte E-Series FC std. perf. memory	May 1986
12787C	512K-byte E-Series FC std. perf. memory	May 1986
12787D	1024K-byte E-Series FC std. perf. memory	May 1986
12789E	512K-byte HP FC memory pkg.	November 1985

HP 1000 A-Series tall cabinet improved

Beginning mid-May, HP will be shipping all 291XC A-Series systems in a new and improved tall cabinet. The 29431G replaces the former 29431F cabinet as the standard HP tall systems cabinet.

The new cabinet offers enhanced racking support of the long-awaited I/O Extender and improved cable management. It allows you to mount up to two Extenders in the top portion of the cabinet while the 29431F can only support one Extender. Also, the separator panel and rear door assembly have been modified to enhance the internal routing of cables.

The 29431G cabinet will appear on the June 1 HP Price List so you can order it as an accessory. The 29431F will be removed from the HP Price List one month later in July. For further information, please contact your HP sales rep.

All HP 1000 tall cabinets are not alike

Recently, a large US defense contractor expressed serious concern over the differences in the standard A-Series and magnetic tape tall cabinets. After installing both a 2199C and 7914ST in their "showcase" computer room, they realized that the cabinets were not alike in several ways. Please be aware that not all HP tall (63-inch) cabinets are the same with regard to height, color of finish, front door latching and HP logo.

Appearance of the HP 1000 219XC differs noticeably from the HP 7974A, 7978A, or 7914ST cabinets. The 219XC and 7914TD are housed in the same 29431X cabinet. The HP 7974 and 7978 come standard in a cabinet of their own, while the HP 7914ST uses one of the HP standard "Rosebud" cabinet designs. While these cabinets are similar in size and design, those who consider uniformity of appearance of their computer system as highly important should review these differences before planning to install two dissimilar cabinets next to one another.

HP is working to remedy these inconsistencies and will make an announcement if the situation should change.

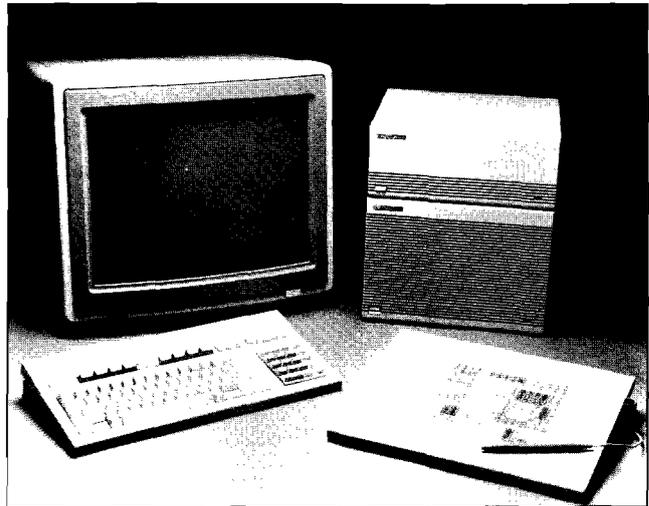
HP 9000

New high-performance graphics system introduced

Hewlett-Packard is introducing a high-performance graphics system that offers OEMs, ISVs, and end-users flexible configurations with the graphics and computational speed performance necessary for engineering applications.

The graphics system, based on the HP 9000 Model 550, can be configured with up to three high-performance graphics display stations, which, along with other terminals, provides an engineering team with a multi-user design center that responds like a single-user workstation. This powerful system, running the HP-UX 5.0 operating system, improves productivity at a per-seat cost less than comparable graphics systems.

The HP 98700H Display Station includes a 19-inch memory-mapped color monitor which is refreshed at a 60Hz non-interlaced rate and has a displayable resolution of 1024 x 768. The display controller, also part of the display station, contains the frame buffer for four or eight planes of 1024 x 1024 bits each for the chosen color map of 16 or 256 colors out of a possible 16 million.



The HP 98700H Graphics Display Station consists of the graphic processor, a new 19-inch color monitor, and the HP-HIL keyboard (the digitizer tablet is optional). The Model 550, needed to run the system, is purchased separately.

The display controller interface plugs directly into the memory processor bus of the Model 550, allowing the graphics to be memory-mapped into the CPU's address space. This tight coupling provides a 2M-byte-per-second data transfer rate from the CPU to the controller. The result is fast first-time picture generation, and fast modifications to an existing picture.

An optional graphics accelerator (HP 98710A) further increases performance by offloading the CPU and implementing the graphics functions in hardware. The graphics accelerator contains both a hardware scan converter and a transform engine, a bit-slice processor with writeable control store, three floating point chips, and a vector generation chip with area fill support hardware. The accelerator can improve performance tenfold, to 50,000 vectors per second.

The accelerator's transform engine contains 4,000 lines (72 bits per line) of read/write microprogram memory. At power-on, the HP-UX operating system downloads this memory with standard, HP-supplied graphical functions. This memory can give you the ability to access the functionality of the system.

Also being introduced is a new 2-D and 3-D graphics library, which is bundled into the latest release of HP-UX (5.0). This fast, flexible library offers asynchronous input and tracking, raster operation support, support for multiple input and output devices, and true device independence.

Design stations can be linked together with the enhanced LAN/9000, which includes a new LAN card and network services. LAN/9000 provides increased performance and reliability, and supports the IEEE 802.3 standard in addition to Ethernet. The new LAN product also allows for connections to HP 3000s.

The HP 98700H display station consists of the display controller, a 19-inch, high-resolution color monitor, an HP-HIL (Human Interface Link) keyboard, the HP-HIL audio, the display station buffer (interface) and the required cables.

Contact your HP sales rep for ordering information.

HP-UX 5.0 now available for HP 9000 Series 500

HP-UX 5.0 is the latest enhancement to the HP 9000 Series 500 HP-UX operating system. The new HP-UX supports the 98700H Graphics Display Station on the Model 550 and the new Starbase Graphics Library, and provides better support for multiuser systems on all the HP 9000 Series 500 models. Also, this release adds program importability with other Bell System V.2 systems and greater convergence with HP 9000 Series 200 HP-UX.

In addition to supporting the new graphics display station, HP-UX 5.0 allows current 97060T graphics subsystem users to migrate to the new 98700H. HP-UX 5.0 can make either of these graphics subsystems look identical to an application programmer. Features supported by HP-UX 5.0 for the 98700H include the ability to use the 98700H as a system console and the flexibility of reading from multiple HP-HIL devices daisy-chained off the keyboard simultaneously.

To provide better support for multiuser systems, the System V accounting feature has been added to HP-UX 5.0, allowing data collection on resource utilization, summarizing and reporting the data, and fee charges to specific log-ins. Other enhancements include file and record locking that allows a calling process to lock entire files or byte ranges within disc files.

Bell System V.2 program importability is supported in HP-UX 5.0 by the additions of compatible interprocess communication facilities and the commands and library routines necessary to support these facilities. These System V.2 mechanisms allow for better support of multitasking applications, allowing you to take advantage of the HP 9000 Series 500 multi-CPU architecture.

HP-UX 5.0 also supports the new 6-port modem MUX, which allows up to six terminals, modems, or asynchronous serial communication lines to be connected on a single interface.

Based on ANSI CGI standards, the new Starbase Graphics Library offers asynchronous input and tracking, raster operation, support of multiple input devices, and true device independence. It has been

tuned for the high performance needed for engineering applications. In addition to the 98700H, Starbase Graphics Library supports the HP 262X family of terminals, HPGL plotters, HP-HIL input devices, and the Model 520A. The library is callable from FORTRAN 77, HP Pascal, and C.

The price of HP-UX 5.0 remains the same. Consult your HP sales rep for ordering information.

ME solutions on the HP 98700H Graphics Display Station

To achieve significant performance and productivity gains on the new HP 98700H Graphics Display Station HP has selected leading mechanical engineering applications that link the design, drafting, modeling, and analysis of a product.

Through agreements with third parties, the HP 98700H Graphics Display Station supports ANVIL-4000®, PATRAN®, and ANSYS®.

ANVIL-4000 is an integrated CAD/CAM software package that provides the capabilities for automating the design and manufacture of a product. It includes integrated design, drafting, information management, analysis, and NC control functions. Through ANVIL-4000, the 3-D geometric entities of an engineering part can be defined, constructed, and viewed.

PATRAN is an interactive graphics pre- and post-processor for the construction, display, and editing of 3-D finite element models. With it, independent solid geometry models separate from subsequent finite element models can be created. Combined with the 98700H display station and the Model 550, PATRAN offers state-of-the-art performance for product design and analysis.

ANSYS is a powerful, large-scale, general-purpose finite element program that solves several classes of engineering problems. It provides important information about physical structures from temperature distribution to stresses, to the electrical and magnetic fields surrounding a cryogenic coil. ANSYS is a complete stand-alone program that allows you to design and analyze models and view of results.

When you combine the power of the Model 550 and the high-performance of the 98700H Graphics Display Station with these third-party software solutions, you will experience significant productivity gains. Look for more third-party software solutions for the HP 98700H in the near future.

ANVIL-4000® is a US registered trademark of Manufacturing and Consulting Services, Inc.

ANSYS® is a US registered trademark of Swanson Analysis Systems, Inc.

PATRAN® is a US registered trademark of PDA Engineering.

HP-HIL input devices for the HP 98700H Graphics System

Several new HP-HIL (Human Interface Link) input devices are being introduced with the new high-performance graphics system from HP. The HP 98700H Display Station for the Model 550 has the ability to hook up multiple input devices providing the user with a wide variety of devices to choose from.

All of the HP-HIL input devices are compatible with the standard HP-HIL interfaces and are powered from the host, eliminating the need for numerous power cords.

In addition to the current 46060A HP-HIL two-button mouse, the following input devices are available for the 98700H Display Station, as well as for other HP equipment.

- HP 46086A Button Box — Contains 32 user-definable keys and one user-programmable LED. The button box supports a user-selectable auto-repeat rate of 1/30 or 1/60 second.
- HP 46087A ANSI A/ISO A4 Digitizer — For use in interactive graphics, graphics entry, and menu selection applications. The choice of a standard stylus for pointing or an optional four-button cursor with crosshair for digitizing is offered (Opt. 001).
- HP 46088A ANSI B/ISO A3 Digitizer — A larger version of the 46087A, with identical capabilities.
- HP 46089A Four-Button Crosshair Cursor — For use with either the 46087A or the 46088A. This device provides the accuracy for digitizing and four user-definable buttons for picking.

New server and cables enhance SRM system

The Shared Resource Management (SRM) system for HP 9000 computers has been enhanced with a new file and printer/plotter server and a simplified cabling scheme. These enhancements also include a price reduction of 30 percent over the previous SRM system.

The previous SRM system consisted of a 9920A computer, five boards, interface cards, and a heavy cable to link the workstations together. The new SRM system replaces the box and boards with a single server board containing the CPU, 1/2M byte of RAM, DMA circuitry, HP-IB interface, and backplane control logic housed in a 325mm box. When combined with a video monitor and keyboard, the new server hardware provides the same capabilities in a much smaller package.

The new cabling scheme replaces the SRM Multiplexer and 13mm cable, which was limited to 60 meters in length, with a 5mm RG-58 coax cable that can extend up to one kilometer. The new cable is thin enough to fit through conduit, so it can be placed out of sight, and is available at a lower price than the previous cables.

The cable connects to the computers through standard BNC connectors and a new coax adaptor module that attaches directly to the SRM interface card. Up to 25 nodes (including workstations and servers) can be physically connected in daisy-chain fashion. The computers are connected electrically in bus fashion so that the link is not broken if one computer is powered down.

No modification is necessary to the operating system or applications software of existing SRM workstations or to the SRM operating system to use the new link hardware. Hardware upgrade kits for existing SRM systems will be available in several months.

HP 9000 language system obsolescence

Hewlett-Packard is planning to take a number of RAM products off the HP Price List as of November 1, 1985.

The HP 9000 Series 500 products that will be removed include:

P/N	Product
97050A	BASIC 1.0
97052A	3-D Graphics
97053A	IMAGE Data Base

Note that the B versions of these products have replaced the A versions and will remain on the price list. The B versions work on any HP 9000 Series 500 Model 520 (with both Boot ROM A and B).

The HP 9000 Series 200 language systems that will be removed are:

P/N	Systems
98611A	RAM-based BASIC 2.0
98612A	RAM-based BASIC 2.1 Extensions
98615A	RAM-based Pascal 2.1

All of the ROM-based language systems will remain on the price list, as will all R (and E for the 98615B) versions of this product.

The obsolescence program will follow this schedule:

Removal from HP Price List	November 1, 1985
Final US orders accepted	November 31, 1985
Final international orders accepted	January 31, 1986
Final shipments	April 15, 1986
Support	Through April 15, 1991

If you encounter any problems because of this obsolescence, please contact your HP sales rep.

HP 9000 Series 200 BASIC and Pascal now on double-sided media

Hewlett-Packard is currently converting the BASIC and Pascal Language Systems (98613A and 98615B) to double-sided media recorded in single-sided format. The change is being made because single-sided discs wear quickly when used in double-sided disc drives. The new product will still run in all disc drives that the single-sided media ran in, except those without an auto-shutter mechanism. You should refer to your disc drive installation manual for specific media wear guidelines.

An auto-shutter upgrade kit was offered to all of our early HP 9000 Model 216 users who purchased a 9121D/S. If you are one of these users and do not have this auto-shutter mechanism, call your HP sales rep to order the upgrade kit (P/N 09121-88875). Order two kits for the 9121D (dual). Kits will be installed by HP field personnel.

HP plans to convert all of their software products to double-sided discs recorded in single-sided format, for better use and longer life in the new double-sided disc drives.





HP 3000

HP 3000 Series 37 pricing structure update

This article will help clarify the most recent price structure for the HP 3000 Series 37 computer system. As you may be aware, the prices for the SPU, associated memory, Series 37XE upgrade, and the Series 37 System Package did change effective March 1, 1985.

The current prices in effect are those on the current HP Price List and those presented in the March issue of Computer Focus. Use these prices when ordering products.

If your needs are growing and more memory will be required in the near future, the 1M-byte memory configuration is extremely cost effective as the original order for the 32449A system.

HP 7914CT supported on HP 3000

The new HP 7914CT is now supported on all current HP 3000s with MPE-V/E T-MIT*. This device packages the 132M-byte HP 7914 disc and the new HP 9144A 1/4-inch cartridge tape into a single cabinet that matches the HP 3000 Series 37. The Series 37/37XE/39/40SX/40/42 supports the HP 9144A as the system backup device for limited disc configurations. If the SPU has at least 1M byte of main memory, the backup limit is 220M bytes of disc. If the SPU has less than 1M byte of main memory, the backup limit is 132M bytes.

The configuration details for the HP 7914CT are:

Number of HP 3000 Series devices supported

	39/40SX/			
	37/37XE	40/42	44/48	64/68
HP 7914CT	2	4(a)	4(b)	4(b,c)

*The HP 7914CT may not be available in all countries. Contact your HP sales rep for more information.

Device characteristics

	Peripheral speed	HP-IB elec. load	Internal cable length
HP 7914	High	1	1
HP 9144A	High	1	0

- a) HP 9144A can cold load with CPS-E microcode only.
- b) HP 9144A not supported as a cold load device.
- c) HP 9144A can not be placed on same GIC as system disc or cold load device.

Note: The HP 9144A does not require a dedicated GIC.

HP 9144A and HP 7945A supported across HP 3000 line

HP's new 1/4-inch cartridge tape drive and new 55M-byte disc drive (that were introduced with the HP 3000 Series 37) are now supported by all current HP 3000s on MPE-V/E T-MIT. The HP 9144A provides enhanced reliability with read-after-write capability and can exchange cartridges with its predecessor. The HP 7945A fixed Winchester disc drive provides 55M bytes of storage in a package smaller than an overhead projector that was designed for the office environment.

The following charts provide the configuration details.

Number of HP 3000 Series devices supported

	39/40SX/			
	37/37XE	40/42	44/48	64/68
HP 9144A	2	4(a)	4(b)	4(b,c)
HP 7945A	4	4	4	4(c,d)

Device characteristics

	Peripheral speed	HP-IB elec. load	Internal cable length
HP 9144A	High	1	0
HP 7945A	High	1	0

- a) Cold load with CPS-E microcode only.
- b) Not supported as a cold load device.
- c) Cannot be placed on same GIC as system disc or cold load device.
- d) Not supported as the primary system disc (LDEV1)

Note: The HP 9144A does not require a dedicated GIC.



MASS STORAGE

New mass storage alternative for HP 1000 and HP 9000 systems

Introducing the HP 7907A — a new fixed/removable disc drive that offers high performance and special features at a very affordable price. Now users of HP 1000 and HP 9000 systems have an alternative to the fixed disc 1/4-inch cartridge tape solutions (HP 7942A/46A).



The HP 7907A disc drive has a total of 41M bytes with 20.5M bytes of removable storage on an easy-to-handle 8-inch cartridge. It's a complete mass storage subsystem with features such as a small lightweight package, off-line store/restore capability that can be completed in 2-3 minutes, and 19-inch EIA rack mount option. The drive is also capable of 22 I/Os per second and has an environmentally rugged design.

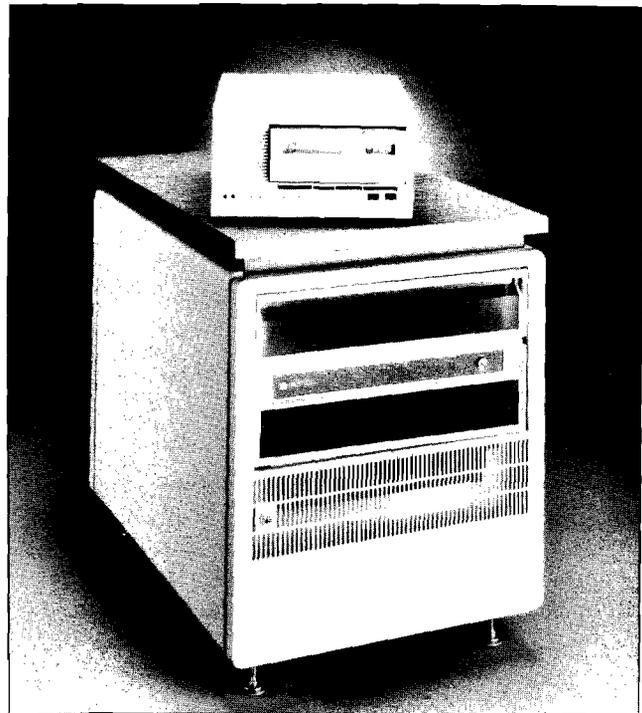
The benefits of the HP 7907A

- Twice the storage capacity of the HP 7906 and one-third the cost per megabyte.
- Offers a fixed/removable solution to HP 9000 users for the first time.
- Completely user installable.
- Complete data security due to the removability of the 8-inch disc cartridge.
- Drastically reduced system downtime for backups and data interchange, as compared to using a 1/4-inch cartridge tape. The HP 7907A is up to five times faster.

- Affordable data interchange/backup alternative to fixed Winchester with 1/4-inch tape cartridges.

The HP 7907A was designed with the following applications in mind:

- Computer aided engineering and manufacturing
- Government OEMs for military intelligence/security information
- Automatic test systems
- Data logging.



Compare the HP 7907A with the HP 7906

HP 7906MR	HP 7907A
Option 102 9.8M bytes of fixed, 9.8M bytes removable storage	20.5M bytes fixed, 20.5M bytes removable storage
14" removable cartridge disc drive based on the MAC family controller	8" removable cartridge with an intelligent controller using the CS-80/HP-IB protocol
Height: 15.75"	Height: 6.8"
Width: 18.95"	Width: 12.8"
Depth: 28.00"	Depth: 18.2"
Net weight: 267 lbs.	Net weight: 55 lbs.

For further details on the HP 7907A, contact your HP sales rep.

System support on the new HP 7907A

The HP 1000 A-Series and the HP 9000 will be the first two systems to support the HP 7907A, but many other systems plan support during the last half of 1985.

SYSTEM SUPPORT MATRIX

MAINFRAME	SERIES	OPERATING SYSTEM	SUPPORT
1000 SYSTEM	A600 A700 A900	RTE A	A.85 (MAY 85)
	E/F	RTE 6VM	B.85 (PLANNED)
9000 SYSTEMS	200	BASIC 3.0 PASCAL 3.0 HP-UX 2.1	AT INTRODUCTION
	500	BASIC 2.0 HP-UX 4.0	AT INTRODUCTION UNDER INVESTIGATION
	9825T 9845B/C		PLANNED 2ND HALF FY 85
SRM		SRM 2.1	AT INTRODUCTION
3000 SYSTEMS	NONE		NO SUPPORT PLANNED
250 SYSTEMS	NONE		NO SUPPORT PLANNED

MC 2/22 9807

Note: No system software will be distributed on the 8-inch removable cartridge at introduction. We will continue to review the need for this service.

HP 9000 support Series 200

Basic 3.0: Both the fixed and removable discs may be used as either an add-on or boot device.

Pascal 3.0: Both the fixed and removable discs may be used as either an add-on or boot device.

HP-UX 2.1: Both the fixed and removable disc may be used as add-on discs only. Currently, the installation procedure for the boot device requires a shared controller CS/80 disc/cartridge tape device.

Series 500

Basic 2.0: Both the fixed and removable disc may be used as either an add-on or boot device.

HP-UX 4.0: Not supported at this time, but under investigation, for future release.

Discontinuance plans for HP 7970/7971 tape product family

The HP 7970 tape product line has been very successful over the past 10 to 12 years since its introduction. Since the early 1970s, systems have become faster and more powerful, and disc storage on these systems has grown at a tremendous rate. With the introduction of the higher performance and less expensive HP 7974A and 7978A tape drives, demand for the earlier drive is decreasing and it is necessary to discontinue the HP 7970 tape product line.

Three-phase discontinuance plan

The discontinuance will be accomplished in three steps.

- (1) In August 1985 we will remove the options with very low demand (HP 3000 Series III, slave drives, HP 7970C, and some special options will not be orderable as new equipment).
- (2) On November 1, 1985, all HP-IB options for the HP 1000 A-Series, HP 3000 Series 3X, 4X, and 6X, HP 9000 Series 200 and 500, and HP 9835 and 9845 systems will be removed. The HP 7970B options will not be orderable after that date as new equipment. Many of these options will then be available on a remarketed basis from HP's Finance and Remarketing Division.
- (3) On November 1, 1986, the remaining HP 1000 E/F-Series tape drive options, component OEM options, remarketed options, and accessories will be discontinued.

Ten-year support for discontinued tape products

If you have concerns about Hewlett-Packard supporting your HP 7970 tape product, you can be assured that full hardware and software support for most of the HP 7970/71 tape options will continue for a period of 10 years after November 1, 1986.

NETWORKS

HP AdvanceNet implemented on HP 9000 Series 500

HP AdvanceNet networking architecture is now being implemented on the HP 9000 Series 500 computers. The AdvanceNet strategy calls for the networking of all HP computer families over standard network protocols.

With the introduction of the Network Services/9000 (NS/9000) software and the LAN/500 Link, the HP 9000 Series 500 computers communicate with each other and with the HP 3000 over the industry-standard IEEE 802.3 network protocol. This investment in industry standards offers you protection for your investment and a reliable growth path.

The LAN/500 Link and the NS/9000 together are a full implementation of the IEEE 802.3 committee standards for a baseband multiple-access/collision detection LAN, and offer support of Ethernet for compatibility with existing LANs. The network supports as many as 100 systems linked over a maximum 500-meter distance.

NS/9000 software provides AdvanceNet file transfer for communications with the HP 3000. This software offers a full complement of networking services between HP 9000 Series 500 systems supporting file transfer for communications with the HP 3000. This software offers a full complement of networking services between HP 9000 Series 500 systems supporting file transfer, remote program management, inter-process communication, and remote file access. A low-level programmatic link level access is provided for those desiring to write their own network protocols for higher performance or multivendor communication.

The LAN/500 Link replaces the previous HP 2285A LAN unit with a single interface card, providing increased performance in a smaller package. Preliminary performance benchmarks have revealed a 60 percent increase in performance over the HP 2285A. The interface card has an on-board Motorola 68000-based microprocessor which off-loads the IEEE 802.3 or Ethernet protocol processing from the central processing unit components.

Ordering information

P/N	Description
<i>Software</i>	
50953A	NS/9000 for Single-user HP-UX
50953M/R	Additional Systems
50954A	NS/9000 for Multiuser HP-UX
5095M/R	Additional systems
<i>Hardware</i>	
27125A	LAN/500 Link

The system also requires the purchase of an Attachment Unit Interface (AUI) cable and Medium Attachment Unit (MAU), ordered from the HP Computer Users Catalog.

PRINTERS

New HP ThinkJet printer now offers RS-232-C interface

Meet the new HP 2225D, the RS-232-C version of the HP ThinkJet personal printer. Announced on April 26, 1985, it was shown at COMDEX/Spring '85, May 6-9, in Atlanta, Georgia.



The new RS-232-C version of the HP ThinkJet printer is a good choice for most any personal computer that requires an RS-232-C interface.

Now that the HP ThinkJet printer comes in four interface versions (HP-IB, HP-IL, Centronics parallel, and now RS-232-C), you will be able to accommodate an HP ThinkJet printer to just about any system you want to sell.

In addition, the RS-232-C HP ThinkJet printer will support (for text only) the HP 2623, 2624B, 2627, 2628, and 2392 terminals. Other computers that will interface with the RS-232-C HP ThinkJet printer include HP 150 personal computers; IBM PC, PC AT, PC XT, and PCjr; and Apple IIc, IIe, and Macintosh.

Compatibility with the Apple Macintosh is made possible by a special software driver, called Jetstart, developed for HP by SoftStyle, Inc. Jetstart can be bought from HP (P/N 35177M) or from SoftStyle.

Offering all the features of the earlier versions, the RS-232-C HP ThinkJet printer is a fast, quiet, convenient solution to a host of text and graphic printing needs. These features — plus its small size, light weight, and impressive software support — will make the HP ThinkJet printer a good choice for most any personal computer that requires an RS-232-C interface.

New font cartridges for HP LaserJet printer

On May 1, four new font cartridges became available for the HP LaserJet printer. These cartridges are as follows:

P/N	Cartridge name
92286M	Prestige Elite Portrait and Landscape
92286N	Letter Gothic Portrait and Landscape
92286P	Tms Rmn Portrait and Landscape
92286Q	MEMO 1

The 92286M Prestige Elite font cartridge supplements the 92286D Prestige Elite cartridge by adding landscape orientation. The 92286N Letter Gothic cartridge supplements the 92286E Letter Gothic cartridge by adding landscape. However, only Roman8 is available on the 92286M and 92286N. The 92286P and 92286Q cartridges are used for general text processing and are required for HP Word support.

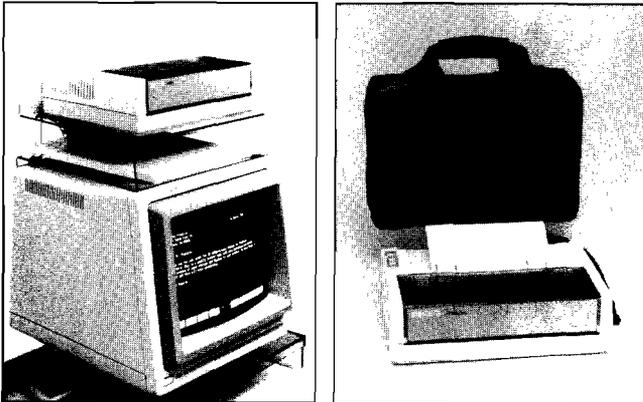
Below is a list of the font cartridges available for the HP LaserJet printer:

P/N	Cartridge name
92286A	Courier 1
92286B	TMS Proportional 1
92286C	International 1
92286D	Prestige Elite
92286E	Letter Gothic
92286F	TMS Proportional 2
92286G	Legal Elite
92286H	Legal Courier
92286L	Courier Portrait and Landscape
92286M	Prestige Elite Portrait and Landscape
92286N	Letter Gothic Portrait and Landscape
92286P	Tms Rmn Portrait and Landscape
92286Q	MEMO 1
92286T	TAX

The HP LaserJet printer font cartridges can be ordered through Direct Marketing Division. See page 4 for telephone ordering numbers.

New supplies for HP ThinkJet printer

The latest additions to Direct Marketing Division's line of HP ThinkJet printer supplies include a terminal-top stand and a custom-fit carrying case.



HP 2392A Terminal top HP ThinkJet printer stand and ThinkJet printer carrying case.

If you use an HP ThinkJet printer with your HP 2392A terminal, you now can purchase a printer stand (92171X) that saves space and helps keep your workstation organized. Contoured perfectly to fit on top of an HP 2392A terminal, the stand gives the appearance that the HP ThinkJet printer is built-in. Made of clear gray acrylic, the stand holds 450 sheets of HP ThinkJet printer paper; routes the printer cable and power cord out of the paper path; and allows proper ventilation.

For those on the go, we offer an affordable, durable, water-resistant gray cordura nylon bag exclusively styled for the HP ThinkJet printer (13269TT). Thickly padded, the carrying case features a convenient carry handle, a detachable shoulder strap and a flat pocket to store approximately 150 sheets of ThinkJet printer paper.

For more quality accessories/supplies for HP ThinkJet printers, refer to the new *Spring/Summer '85 Computer Users Catalog*. For fast service, call DMK's Direct Order phone numbers listed on page 4.



Software Packages Available and Wanted

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

Software Packages Available

Industry: *Cross-Industry*

Abstract: CP/M-68K: An extension of the popular CP/M™ operating system for the HP 9000 Series 200 machines. CP/M-68K supports from 128K bytes to 16M bytes of RAM, from 1 to 16 disk drives of up to 512M bytes each, and the C language. (C Compiler and run-time library are subset compatible with UNIX™.)

Languages supported under CP/M-68K include: 68K BASIC, 68K Fort, SVS FORTRAN 77, SVS Pascal, SVS BASIC-Plus, and Whitesmiths' "C".

Company Name: Empirical Research Group, Inc.

Phone Number: (206) 874-4844

Address: 1112 S. 344th Street, Suite 301
Federal Way, WA 98003

Contact Person: Jack Hardison

Type of Distributor Wanted: Open

Geographic Coverage: Worldwide

SVS is a trademark of Silicon Valley Software.

CP/M-68K and CP/M are trademarks of Digital Research, Inc.

UNIX is a trademark of AT&T Bell Laboratories.

Industry: *CAD/CAM*

Abstract: DGS-2000 is an easy to operate, menu driven, 2D CAD package with high performance capabilities running on HP 9000 Series computers.

Company Name: Data Automation

Address: 10731 Trenea Street, Suite 106
San Diego, CA 92131

Phone Number: (619) 695-0806

Contact Person: Rick Hackworth, President
Allen Elowe, Product Manager

Type of Distributor Wanted: Open

Geographic Coverage: Worldwide

Industry: *Cross-Industry*

Abstract: Coda-IAS is the leading Integrated Accounting System in the UK with 150 licenses sold. The package addresses the main functional areas of accounts receivable, accounts payable, and general ledger. A powerful financial reporting system is included for management accounting/budgeting purposes.

Company Name: Coda Limited

Address: Aire House
12 Swinegate
Leeds LS1 4AG
United Kingdom

Phone Number: 0532 461726

Contact Person: Rodney Potts, Managing Director

Type of Distributor Wanted: Software houses, OEMs, consultants with strong accounting expertise.

Geographic Coverage: Worldwide

Industry: *Real Estate — REPELS*

Abstract: Designed to operate on the HP 150 and The Portable, REPELS allows easy access to residential and commercial listings based on user-defined keys. Ideal for brokers, agents or appraisers.

Company Name: Information Systems Group Limited

Address: P.O. Box 2397, Station C
St. John's, Newfoundland A1C 6E7
Canada

Phone Number: (709) 579-5076

Contact Person: Ken Hann

Type of Distributor Wanted: Dealers, OEMs, Distributors

Geographic Coverage: North America

Industry: *Photofinishing*

Abstract: Designed to operate on the HP 250, this package is ideal for small to medium-size photofinishing companies. Multi-store order processing with route optimization being the basis of the system's design.

Company Name: Information Systems Group Limited

Address: P.O. Box 2397, Station C
St. John's, Newfoundland A1C 6E7
Canada

Phone Number: (709) 579-5076

Contact Person: Ken Hann

Type of Distributor Wanted: OEMs, Distributors

Geographic Coverage: North America

Cross-Licensing Classifieds

Industry: *Mechanical and AEC (Architect, Engineering and Construction)*

Abstract: The CAVCAD System is a 3-Dimensional CAD/CAE software available on HP 9000 Series 200 and Series 500.

Company Name: CAV Corporation

Address: P.O. Box 4610
Foster City, CA 94404
USA

Phone Number: (415) 571-6707

Contact Person: Mr. Gerald C. Hsu

Type of Distributor Wanted: Sales and marketing organization, engineering computer specialist, manufacturing representatives, dealers and distributors

Geographic Coverage: Worldwide

Industry: *Mining and geotechnical engineering*

Abstract: Software products are designed for use on HP 9000 Series 200 microcomputers. These include:

- SUBSID-B for analysis of subsidence due to underground mining.
- STRESSBE — designed to analyze stress, displacement, and failure around single or multiple caverns.
- SLIDE — designed for slope stability analysis.
- MESHMAKER-2 for mesh generation using finite element analysis.
- HEATTRANS for rapid calculation of underground heat transfer.
- LEACHGRO — calculates the rate of dissolution of leach growth on cavern walls.
- MINEGRAPH — plots potash/salt mine layouts.
- DRAFTER — produces high quality graphs and illustrations.
- GEOROC-2 — predicts stresses, displacements, and failures for complex underground openings. This program is designed for use on mainframe computers.

Company Name: RE/SPEC Ltd.

Address: 005, 4616 Valiant Drive, N.W.
Calgary, Alberta T3A 0X9
Canada

Phone Number: (403) 288-7820

Contact Person: Dr. Hans Y. Tammemagi

Geographic Coverage: Open

Industry: *Inpatient hospitals — nurse staffing, pricing, UR-QA, discharge planning, and DRG assignment in English*

Abstract: The Concurrent English-Equivalent Grouper™ (CEEG™) and the DRG-Nursing Unit Manager™ are fully Touchscreen executed programs designed for physicians and nurses who require concurrent DRG assignment for productivity analysis, physician profiling, UR-QA programs, discharge planning and patient classification-nursing acuity applications. The system can be installed within minutes and user competence is attained within 15 minutes. The software runs on the HP 150 Touchscreen MAX. All applications can be customized for specialized reporting, and can be adapted for communications among multiple users. The applications can also be interpreted for integration with the HP 3000 Series.

Company Name: CLIENT-CENTERED SYSTEMS, INC.

Address: 13 Main Street
The Carson Building, Suite #2
Robbinsville, NJ 08691
USA

Phone Number: (609) 259-6113

Contact Person: Russell P. Caterinicchio, Ph.D.

Type of Distributor Wanted: Open

Geographic Coverage: Open

Industry: *Environmental engineering, urban drainage, sewer systems.*

Abstract: MOUSE is a general software package for modelling of urban sewer systems. Fully interactive menu-driven user communication. Data bases for catchment and pipe system data, synthetic and historical rain events. Range of computational modules, comprising:

- Simple and advanced surface runoff modelling
- Generalized pipe flow modelling
- Pollution load modelling

Integrated routines for tabulated and graphical presentation of input and output data.

Contact Person: Sten Lindberg

Industry: *Offshore engineering, pipelaying contractors.*

Abstract: The Dynamic Seapipe System is a finite-difference modelling system for three-dimensional analysis of pipeline behavior in the sea. The software package is designed for simulations of pipe laying, tie-in operations, pipe towing, on-bottom stability calculations, riser dynamics, etc. The package is available on HP 9000 Series 200 as well as HP 1000 Series 900, 700, 600.

Contact Person: Jorgen Bo Nielsen

Company Name: Danish Hydraulic Institute

Address: Agern Allé 3-5
DK-2970 Horsholm
Denmark

Phone Number: 45 2 868033

Telex: 37352 dhimp dk

Type of Distributor Wanted: Open

Geographic Coverage: Worldwide

You can list your company in the **Cross-Licensing Classifieds** (either Software Packages Available or Software Packages Wanted) by sending the information in the format used here to:

Hewlett-Packard Company
Value Added Solutions Marketing
Attn: Marilyn Rauchle
10520 Ridgeview Court
Building 49C
Cupertino, CA 95014
USA

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



Computer Focus is published monthly for Hewlett-Packard OEMs and Independent Software Vendors to keep you informed of HP products and services and to provide information to help you be more successful.

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

Note: Not all HP computer products are sold and supported in all countries. Please check with your local HP Sales Office.

Hewlett-Packard does not warrant the accuracy of the information provided in **Computer Focus** and shall not be liable for any use made of the information contained herein. Information provided in **Computer Focus** is subject to change without notice.

If you have any suggestions or comments on **Computer Focus**, please send them to:

Editor: Tracy Wester

*Hewlett-Packard Company
Corporate Marketing Communications
3000 Hanover Street, Building 20BV
Palo Alto, CA 94304-0890 USA*

