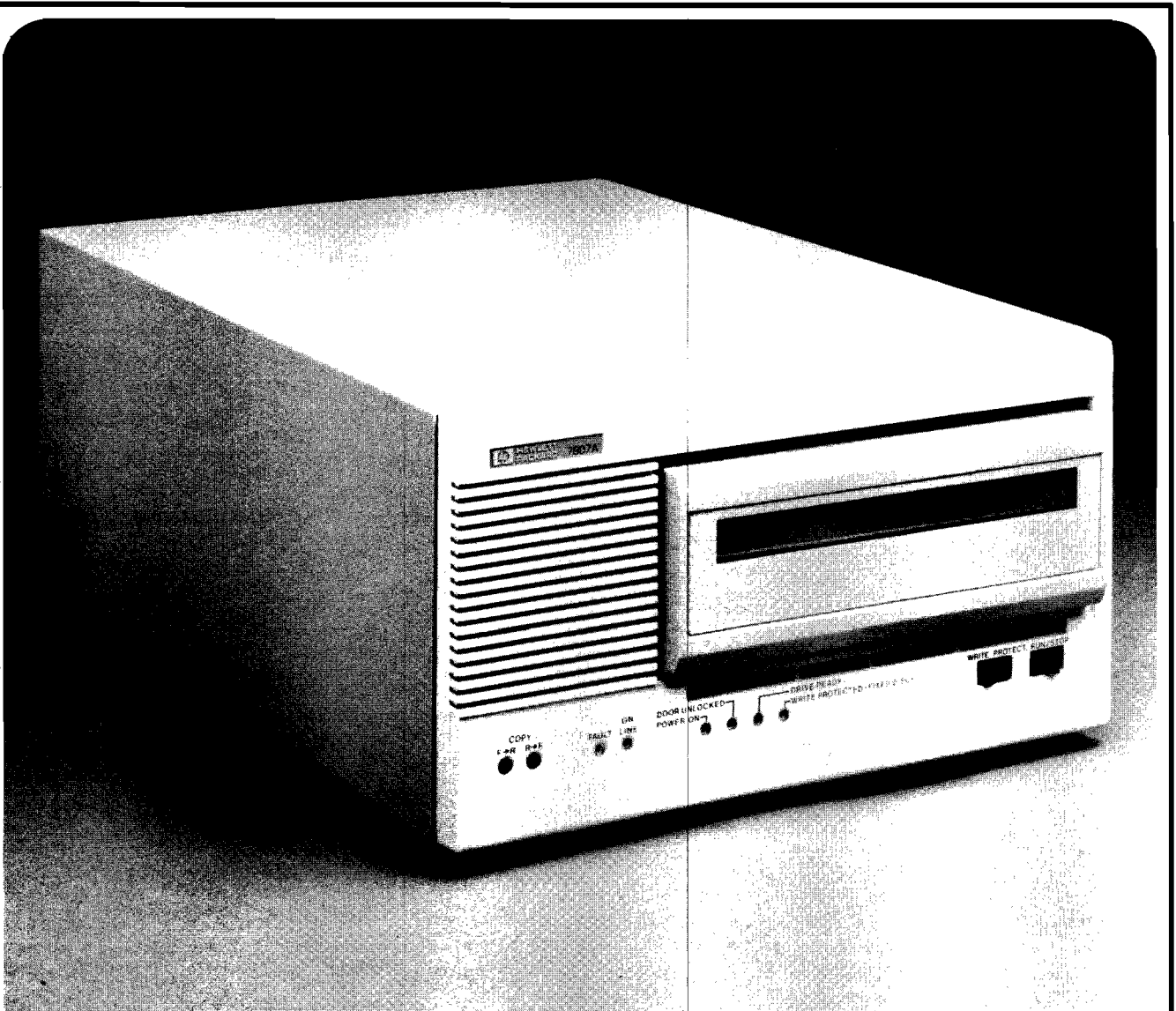


COMPUTER FOCUS

 HEWLETT
PACKARD

Computer News for HP OEMs and Independent Software Vendors

January 1986



**HP 7907A Disc Drive Enhances Applications
In Automatic Test, Manufacturing, and Design**

INTERNATIONAL VERSION

MARKETING

- 3 Supplies
DMK direct order phone numbers

PERSONAL COMPUTERS

- 4 General
New mobile PC Centre solves computer clutter
The Apple Macintosh personal computer and HP plotters
- 5 Portable
New Dual HP-IL Adapter for the HP-71
- 6 Desktop
PC Instruments now supported on HP Vectra PC and AT&T 6300 PC
Microsoft programming languages for the HP Vectra PC
HP Vectra Office: a customized office solution
PPC Professional Pack for IBM PC obsolete

TECHNICAL COMPUTERS

- 9 HP 1000
Updated Custom Products Catalog
- 9 HP 9000
HP-IL interface now available for HP Integral PC
TEK 4010/HP 2622A Terminal Emulator obsolete
Which tablet — HP 9111A or HP 46087/88A?

BUSINESS COMPUTERS

- 11 HP 3000
HPSpell is now integrated with HP's TDP/3000
HP announces the System Solution package

PERIPHERALS

- 12 Mass Storage
HP technical systems using HP 7907A a success at Autotestcon/Autofact
HP 7907A system support matrix
HP 7907A features and benefits
The HP 7907A — a disc for tough environments
HP 7978 tape drive wins 1985 industrial design award
HP 7978B OEM component available
Peripherals discontinuance reminder
- 15 Plotters
Graphics software for the HP ColorPro plotter
Using the HP ColorPro plotter with Lotus 1-2-3 and Symphony
- 16 Printers
HP LaserJet printer upgrade price increases January 1
HP 2689A laser printer operating system support
Trigger patterns for the HP 2689A laser printer
- 17 Terminals
HP 2622A, 2622D, and 2624B integral thermal printer option obsolete March 1, 1986
HP 2625A and HP 2628A upgrade kits off HP Price List March 1
HP 17623A graphics tablet to be discontinued
Programmable keyboard available for HP 23924A
Katakana terminal available

CROSS-LICENSING CLASSIFIEDS

- 18 Software Packages Available and Wanted

On the Cover

At the Autotestcon and Autofact trade shows, HP technical systems using the HP 7907A disc drive were a great success. The versatility and ruggedness of the HP 7907A make it an ideal mass storage device for automatic test, computer-integrated manufacturing (CIM), computer-aided design (CAD), and computer-aided engineering (CAE) applications. See articles beginning on page 12.



SUPPLIES

DMK DIRECT ORDER

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

Location	Telephone Number
Australia	(03) 895-2645 (03) 895-2615 (03) 895-2815 (03) 895-2861
Austria	(0222) 2500-615 (0222) 2500-616
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) 816640-258
Finland	(90) 887 2361
France	(1) 692 83 264 (1) 690 77 825
Greece	(81) 6471673
Italy	(02) 9236 9437 (02) 9236 9478 (02) 9236 9585
Middle East	
Athens	(01) 6828811
Norway	(02) 171180
South Africa	
Johannesburg	(011) 8025111
Cape Town	(021) 537954
Spain	91-6374013 91-6370011
Sweden	(08) 7502028 (08) 7502027 (08) 7502204
Switzerland	(057) 31 22 54 (857) 31 22 53 (057) 31 22 59
The Netherlands	(020) 547 6606
United Kingdom	(0734) 697201
United States	800-538-8787
Alaska, California, and Hawaii	408-738-4133
West Germany	(0130) 3322

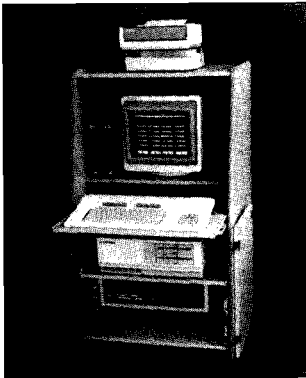


HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

GENERAL

New mobile PC Centre solves computer clutter



HP's Direct Marketing Division's (DMK) new mobile PC Centre (P/N 92208A) is the perfect solution for organizing a number of HP computers and workstations. With a footprint of only 4.3 square feet, the PC Centre fits easily behind, or next to, a user's desk. It will accommodate the HP Vectra PC, the HP Touchscreen/Touchscreen II personal computer,

or the HP Model 16 technical computer, as well as any of these HP printers: HP ThinkJet, HP 2603 daisywheel, HP 2392A, and HP 239X Series. Adequate space is also available for software, disc and diskette storage accessories, and other supplies. Depending on system components, everything can be secured when the computer is not in use.

Features

- Adjustable shelf height (five-inch range).
- Roll-out keyboard/system shelf.
- Roll-out printer/SPU shelf with paper feed tray.
- Bottom doors open 270 degrees and fold flat against sides of unit for maximum usable space.
- Flip-up door for upper compartment doubles as an extra writing surface or keyboard shelf.
- Storage space in lower compartment for manuals, paper, etc.
- Top may be used as a printer stand or as a surface for reference material.
- Pre-drilled holes in right upper side panel to allow for mounting of optional power strip (P/N 92199A).
- Heavy duty casters (two of which are braking) mounted on steel U-channels for extra strength.
- Constructed of high-quality wood with mar-resistant laminate.
- Dove gray color with black trim.

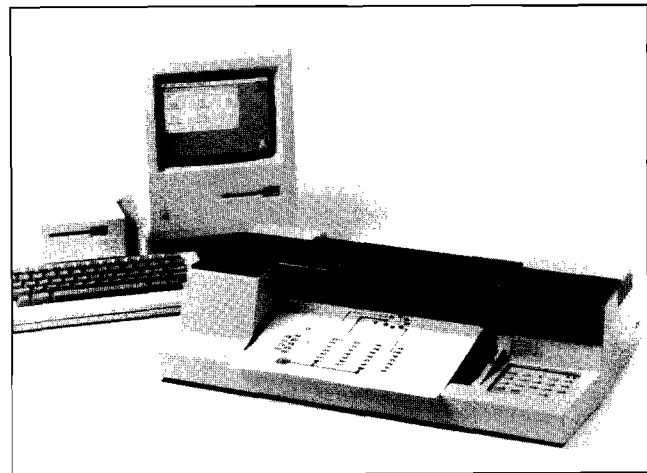
The PC Centre is shipped with parts knocked down and requires customer assembly with simple tools. Dimensions:

48.5 inches high x 25.9 inches wide x 23.7 inches deep (1,232mm x 658mm x 602mm).

For fast service, you can call DMK's Direct Order phone numbers listed in the Marketing section.

The Apple Macintosh personal computer and HP plotters

Now Macintosh PC users can benefit from the high-quality graphics produced by HP plotters. Here are some third-party software packages that support this HP-Apple team.



A series of new software products now allow HP plotters to work with the Apple Macintosh.

Plots II and MacPlots II by Computer Shoppe (919-299-4843) are two products that enable plotting on a Macintosh. Plots II is a companion product for Lisa Draw, which brings the benefits of a high performance CAD system within the range of even the smallest drawing or drafting offices. MacPlots II was designed with the drafting or engineering professional in mind. It allows high-resolution color plotting with features that include document plotting from MacDraw, graphics plotting from Microsoft® Chart and Jazz™, and variable line thicknesses. MacPlots II supports all plotters from the HP ColorPro to the HP 7586.

PLOTSTART by SoftStyle (808-396-6368) is plotter driver software that is easily installed on the application disc, such as MacDraw, MacProject, Microsoft Chart, and

Jazz. It allows high-quality color plotting directly from the applications. No special hardware is required and the package includes a cable.

MACPLOT (STANDARD) by Microspot (distributed by CompServCo, 504-649-0484) is designed to work with MacDraw, MacDraft, Microsoft Chart, MacProject, Jazz, and others. It will plot pictures from any of these applications. There is a standard version for the HP 747X and 7550, and a professional version for the HP 758X series of plotters.

PLOT-IT by Mesa Graphics (505-672-1998) is a low-cost software package that takes any MacPaint document created on a Macintosh by any application and dumps it to the HP 7475 plotter.

McCAD EDSC and McCAD PCB by Vamp, Inc. (213-466-5533) are software packages designed to support the HP 7475. McCAD EDSC allows the designer to easily create and modify electronic circuit designs directly on the Macintosh computer. McCAD PCB is a low-cost, sophisticated software tool for designing, creating, editing, and revising printed circuit board artwork on the Macintosh.

For specific information on each of these products, be sure to give the software vendor a call. For complete software support information for all the plotters on a number of different computers, use the "Software Directory for Hewlett-Packard Graphics Plotters" (P/N 5957-9466). When you need a quick matrix-style reference, use our "Graphics Software for HP Graphics Plotters" six-page brochure (P/N 5953-9859). They are available from your HP sales rep.

Both are great sales tools — no other plotter manufacturer can boast of such complete software support.

Jazz™ is a US trademark of Lotus Development Corp.

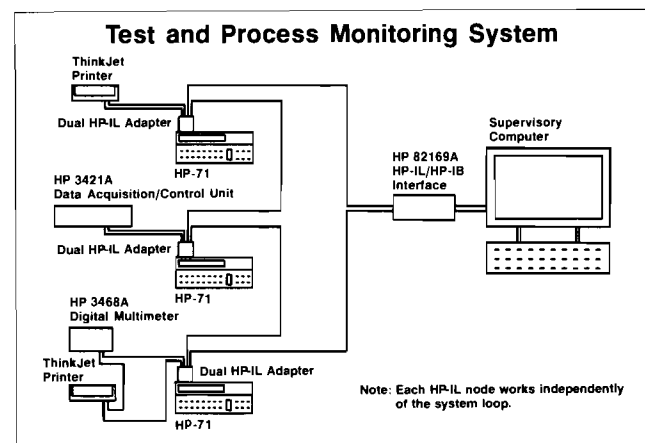
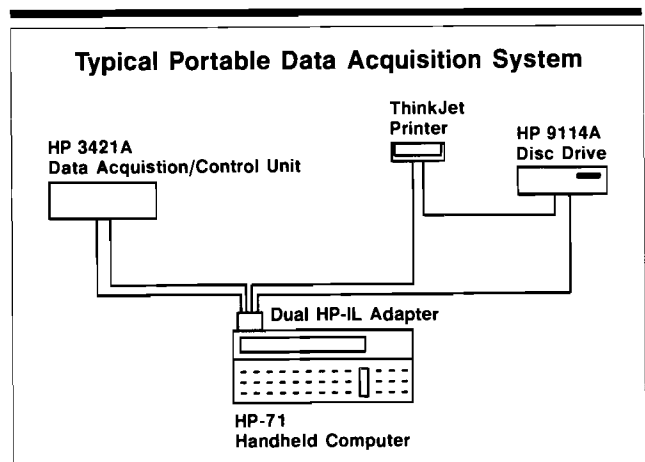
PORTABLE

New Dual HP-IL Adapter for the HP-71

Two loops instead of one — that's what you get with the new Dual HP-IL Adapter from HP.

The adapter is a plug-in HP-IL module that expands the range of manufacturing and portable data acquisition applications for the HP-71 by allowing two HP 82401A HP-IL modules to be plugged into the HP-71 simultaneously.

With the adapter, the HP-71 treats each HP-IL module as an independent interface. The HP-71 operates as a controller on both loops; a controller on one loop and a device on the other, interfacing with a local area network; or a device on both loops.



Plugging two HP-IL modules into the HP-71 is especially useful in manufacturing situations where control and com-

munications functions must exist simultaneously, yet independently.

The Dual HP-IL Adapter allows control of instruments and peripherals at the same time that data is sent to a supervisory computer. This capability makes the HP-71 an ideal solution for small networked instrument and test control applications.

In portable data acquisition settings, the adapter allows short-battery-life peripherals like the HP 9114A disc drive and HP ThinkJet printer to operate on an independent loop — accessed only as needed to conserve battery life — while intensive data acquisition is occurring on the other loop. By leaving the peripherals powered down and buffering the data in the HP-71, the effective battery time of these devices can be extended significantly.

For more information on the adapter, ask your sales rep for the Dual HP-IL Adapter data sheet, P/N 5954-1311.

Ordering information

P/N	Description
82402A	Dual HP-IL Adapter

DESKTOP

PC Instruments now supported on HP Vectra PC and AT&T 6300 PC

The new HP 61061BA PC Instruments Interface now ties PC Instruments to the HP Vectra PC, AT&T 6300 PC, and the IBM PC, PC/XT, and PC/AT. The HP 61061BA is an enhancement of the 61061AA interface and software product for the IBM family of computers. The system software has been enhanced to support the non-AT features of the Vectra PC, such as the Touchscreen, HP-HIL Mouse, and 640 x 400 graphics. In addition, it will provide an improved installation procedure, making it easier to get PC Instruments up and running for first time users.

The PC Instruments System for the Vectra PC represents a cost-effective way to achieve faster time to solution and more consistent results over a wide range of test and measurement applications. You can combine your existing HP-IB Instruments with PC Instruments, or simply use PC Instruments alone for applications including temperature measurement, production test, data logging, process monitoring, electronic component evaluation, incoming inspection, and research and development.

Combining the Vectra PC's high speed and PC Instruments' ease of use, test-and-measurement results can be generated faster than ever before. PC Instruments System Software makes it easy for you to use the system in both a manual and a programmed mode. Soft Front Panels allow you to set functions, ranges and values, and take measurements manually. Application programs can be easily customized by using the high-level commands of the System Software in Microsoft® BASIC. Two generic commands, OUTPUT and MEASURE, are used to do most of your instrument programming.

In addition, you can access thousands of software solutions for graphics presentation, word processing, and other engineering applications. PC Instruments System Software even includes data conversion utilities, which format data acquired from PC Instruments into a form compatible with many third-party packages, such as 1-2-3® by Lotus®. This means you can directly input the acquired data for immedi-

ate analysis and graphing without having to manually enter the data.

The PC Instruments now available include:

Product	Description
HP 61010AA	16-bit Digital Input/Output
HP 61011AA	8-channel Relay Multiplexer
HP 61012AA	12-bit Dual Voltage DAC
HP 61013AA	4½-digit Digital Multimeter
HP 61014AA	5 MHz Function Generator
HP 61015AA	100 MHz Universal Counter
HP 61016AA	50 MHz Digitizing Oscilloscope
HP 61017AA	8-channel Relay Actuator
HP 61018AA	PC Breadboard

Microsoft programming languages for the HP Vectra PC

HP's Direct Marketing Division (DMK) now supplements HP's line of HP Vectra PC software with Microsoft® programming languages. These languages run on MS™-DOS and use 5¼-inch media. Support to the end user will be provided by Microsoft via phone-in service.

P/N	Description
35190A	MS BASIC Interpreter
35186D	MS Pascal Compiler
35186E	MS C Compiler
35190B	MS BASIC Compiler
35186B	MS Cobol Compiler
35186C	MS Fortran Compiler
35190D	MS Word

DMK also carries numerous selections of ISV software in such categories as entertainment, word processing, data management, project management, graphics, utilities, and programming languages.

Microsoft® is a US registered trademark of Microsoft, Inc.

HP Vectra Office: a customized office solution

The new HP Vectra Office workstation is a customized office solution for advanced secretarial and administrative support personnel. Vectra Office is optimized to the needs of office users whose primary workstation responsibilities are evolving to include business applications in addition to high-volume word processing.

As a result of combining two new leadership products, the Vectra PC and AdvanceWrite word processing software, Vectra Office becomes a very unique, solutions-oriented product. It is, in fact, the only system offered today that provides word processing as good or better than that of a dedicated system and the capability of running thousands of off-the-shelf business software programs.

This is all possible because of the components which make up Vectra Office. At the heart of the system is the recently announced IBM PC AT-compatible, HP Vectra PC. The Vectra PC uses the industry-standard operating system, MS-DOS 3.1, running 30 percent faster than the PC AT, and it delivers high-resolution text and graphic displays with both the monochrome and color monitors. In addition, the Vectra PC keyboard has been designed to facilitate speed typing with features such as separate numeric and cursor pads, large return and shift keys, and a typewriter-like keystroke feel.

Users complete their Vectra Office by choosing one of three versions of AdvanceWrite, the word processing software jointly developed by Hewlett-Packard and Samna Corporation. All three levels of AdvanceWrite — I, II, and III — are compatible, full-featured PC-based solutions capable of satisfying a range of user needs from entry level to professional to advanced secretarial.

At every level, AdvanceWrite delivers all the basic editing and formatting features expected from a sophisticated word processor. With AdvanceWrite I, additional features include split-screen editing, footnoting, newspaper columns, and type-through printing. AdvanceWrite II builds upon this feature set by adding automatic table of contents generation, 80,000 word spell check, mail merge with sort/select option, and automatic index generation. An integrated spreadsheet and a filing management tool, Wordbase Manager, are features exclusive to AdvanceWrite III.

AdvanceWrite II and III offer conversion to both ASCII and IBM's Document Content Architecture (DCA) to permit easy sharing of documents between different word processing systems. Additionally, both versions feature conversion

to data interchange format (DIF) to allow sharing of data between spreadsheets and database management systems.

For all its sophistication, AdvanceWrite is surprisingly easy to use, with three levels of contextual help, on-line and self-paced tutorials, and classroom training. Also, AdvanceWrite takes full advantage of the Vectra keyboard by mapping 30 dedicated function keys allowing common writing and editing tasks to be efficiently executed with a single keystroke.

A key concern to the skilled word processing user is output, both in terms of quality and ease of generation. Either of the recommended printing solutions for Vectra Office, the HP LaserJet printer or the recently-announced HP 2603A daisywheel printer, ensure high-quality output and the most efficient software-to-printer interfaces.

Vectra Office adds value above and beyond the sum of its components. Both models of Vectra Office are pre-assembled at no additional charge. In addition, an easy-to-understand users guidebook, simplifying the set-up process, has been written specifically for the Vectra Office user. Vectra Office carries a one-year warranty, and an 800 number is available for software support.

Vectra Office ordering information

P/N	Description
72475A	Model 1: Includes SPU with two 360-Kbyte floppies, 640 Kbytes RAM, Multimode and Color Adapter Cards, Dual RS-232 Card, Keylock, OS, Manuals, and Vectra Office Guidebook and Keyboard.
72485A	Model 2: Includes SPU with one 360-Kbyte floppy and an internal 20-Mbyte hard disc, 640 Kbytes RAM, Multimode and Color Adapter Cards, Dual RS-232 Card, Keylock, OS, Manuals, and Vectra Office Guidebook and Keyboard.
<i>Also must order one of the following:</i>	
35731A	12-inch Monochrome Monitor
35741A	12-inch Color Monitor
<i>Also must order one of the following:</i>	
27506F	AdvanceWrite I
27507F	AdvanceWrite II
27508F	AdvanceWrite III

HP Price List: November 1, 1985

Shipments: End of January 1986

**The above information is also applicable for the AB and AK versions of HP Vectra Office.*

Contact your HP sales rep for more information.

PPC Professional Pack for IBM PC obsolete

Because of the availability of our new HP Vectra PC software (Executive MemoMaker, Executive Card Manager, and AdvanceLink 2392), we will be removing the Personal Productivity Center (PPC) Professional Pack (P/N 47972E), from the HP Price List. We encourage HP Vectra PC and IBM PC users to buy the new Vectra products instead (see box). This will be effective January 1, 1986, with customer orders being satisfied through January 30, 1986. Thereafter the product will not be available for purchase.

HP Vectra PC software

P/N	Product
68330F	Executive MemoMaker
68332F	Executive SpreadSheet
68331F	Executive Card Manager
68335F	Executive Card Manager: Templates
68333F	AdvanceLink 2392





HP 1000

HP 9000

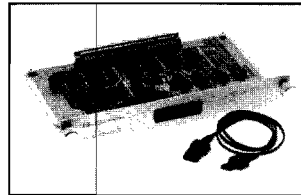
Updated Custom Products Catalog

Thirteen new products have just been added to the *Custom Products Catalog* bringing the total to over 50 custom hardware, software, and firmware products. These products are intended for *specialized applications* with HP 1000 computers and, therefore, are not offered as standard catalog items by HP. Selected options to these special products are also included in the catalog to bring the total number of items offered for sale to over 275.

The scope of the custom product line ranges from simple, non-standard cables, to complex, A-to-D "front ends." A *Quick Reference Product Guide*, which divides the product line into generic groups, is included at the end of the catalog. These product groupings include peripheral device interface kits, software drivers, cabinet/rack modifications, power modifications, and others.

Contact your sales rep to order this catalog (P/N 5955-8803).

HP-IL interface now available for HP Integral PC



The 82924A Hewlett-Packard Interface Loop (HP-IL) card is now available for the Integral PC from the Corvallis Workstation Operation (CWO). The HP-IL plug-in device provides a bit-serial

interface that combines low power, small size, low cost, and ease of use. As many as 30 devices with up to 10 meters of cable between them may be linked in a single HP-IL configuration.

Three unique features of this loop structure are auto-address assignment, device identification, and power ON/OFF control. The dynamic addressing abilities allow immediate reconfiguration of a system.

The 82924A HP-IL plug-in card is only supported by HP-UX TECH BASIC release 5.0 (both disc and ROM). By using the HP-IL interface with HP-UX TECH BASIC various HP handheld devices such as the HP-41C/CV/CX, HP-71B, and HP-75C/D can be used to upload field or factory-floor collected data into the Integral PC. The Integral PC can then take this collected data and process it with the use of custom software applications. There are no current plans to offer HP-UX DIL support for HP-IL I/O under "C", FORTRAN 77, or Pascal.

Ordering information

Description	On HP price list
82924A HP-IL Interface Card (Includes one HP-IL cable)	January 1, 1986

TEK 4010/HP 2622A Terminal Emulator obsolete

The HP 98792A is the Pascal 2.1-based TEK 4010 and HP 2622A Terminal Emulator for HP 9000 Models 216, 236, and some 220s. There are no plans to port this emulator to Pascal 3.1 due to low order volume. Since the current revision runs only on single-sided disc drives, Hewlett-Packard has decided to take the HP 98792A out of production. Users who need Pascal 3.1-based TEK 4010 terminal emulation should contact Optimization, Inc., 299 California Ave., Suite 120, Palo Alto, CA 94306, USA. The HP 98791B HP 2392A and VT100 Terminal Emulator for HP 9000 Series 200/300 handles HP 2622A terminal emulation. The obsolescence schedule for the HP 98792A is as follows:

Date	Action
April 1, 1986	Remove from HP Price List
April 30, 1986	Last domestic order accepted
July 31, 1986	Last international order accepted
August 15, 1986	Last shipment
March 31, 1996	End of support life

Which tablet — HP 9111A or HP 46087/88A?

Recently, there has been some confusion as to which tablet, HP 9111A or HP 46087/88A, should be used with which system. Because the HP 46087A and 46088A tablets cost less, many customers will prefer them. However, these tablets require an HP-HIL interface which is not available on many older systems. When HP-IB must be used, the HP 9111A tablet is the answer.

The table below summarizes this information for the major systems using tablets. For additional information on the HP 9000 family, see the HP 9000 configuration reference manuals.

System	Tablet	
	HP 9111A	HP 46087/88A
HP 9816/26/36	X	
HP 9920	X	*
HP 9817/37	X	X
HP Series 300	X	X
HP Series 500	X	**
HP Series 80	X	
HP 1000	X	***
HP 2393/97 Terminals		X

*Requires Option 535

**Requires 98700H Graphics System

***Available if interfaced through supported terminals



HP 3000

HPSpell is now integrated with HP's TDP/3000

A new version of HP's TDP/3000 gives users direct access to HPSpell from within TDP/3000, making spelling verification and correction of TDP documents much easier.

Spell checking TDP/3000 documents has been a cumbersome procedure up to now. This new version of TDP/3000 changes that. From TDP version A.04.00, and A.01.01 of HPSpell (both of which should be available on T-MIT Delta 3) it will be possible to use TDP commands to check the spelling of text interactively, or print the documents with any misspelled words highlighted and suggested corrections listed below each word. For TDP users this means:

- Quick and easy access to HPSpell.
- TDP/3000 line and intra-line commands will no longer be picked up as spelling errors.
- More efficient proofreading of documents.

HPSpell has proved to be a very successful partner to HPWord. Now its benefits are available to TDP/3000 users. Contact your sales rep for pricing and ordering information.

HP announces the System Solution package

Designed after the successful Icebreaker Plus promotional bundle, HP's Finance and Remarketing Division (FRD) has announced the System Solution package. Featuring low price and configuration flexibility, this system package is now integrated with the HP 3000 product line. A discount off the remarketed list price is offered with this package.

System Solution includes:

P/N	Description
34220AR (for the US)	
32450AR (for non-European countries)	HP 3000 Series 44R (P/N 32440BR) with 1 Mbyte and 2 GICs HP 7925MR with HP-IB HP 7925SR HP 7970ER with HP-IB 30018AR (qty 1) HP 2624BR with cable (qty 4)
Opt. 001	Replaces HP 7970ER with 7974AR
Opt. 002	Replaces HP 7925SR with 7933HR
Opt. 003	Replaces HP 3000 Series 44R with Series 48R
Opt. 004	Deletes (4) 2642BR

The primary focus of this package is to provide price-sensitive users with an ongoing, low-cost system solution. Also, budget-conscious users who are looking at adding a complete system for less may want to utilize this package.

Remember, FRD also carries a wide range of reconditioned workstation products like terminals, printers, and plotters to complete your remarketed system. Please call your HP sales rep if you need further information.

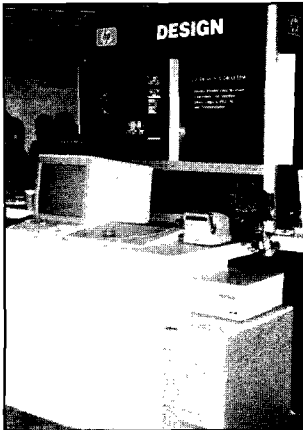


MASS STORAGE

SUCCESS AT
• AUTOTEST CON 85
• AUTOFACT 85



HP technical systems using HP 7907A a success at Autotestcon/Aufact



The Autotestcon show was held at the Nassau Coliseum in Long Island, New York, on October 22 to 24. This is a once-a-year opportunity for military contractors to show off automatic test equipment to their end user, the Armed Forces. Both our prime contractors and the US Government were very interested in HP's demo of our automatic test system (ATS) which included the HP 1000 A900, the new HP 54110B color

digitizing oscilloscope, and the HP 7907A 41-Mbyte fixed/removable drive, along with many other instrument products from throughout Hewlett-Packard.

The military prime contractors were glad to hear that HP finally has a true replacement for the HP 7906 20-Mbyte disc drive.

The Autofact '85 show was held in Detroit, Michigan, at Cobo Hall November 5 to 7. The annual show focused on the advancing technologies of computer-integrated manufacturing. This year was Autofact's largest show ever with the theme "Manufacturing Integration Comes of Age."

The HP 9000 Series 300 was displayed using HP's mechanical design package, along with an HP 7914P and HP 7907A for mass storage. This combination of disc drives for mass storage allows users to have 170 Mbytes of on-line storage and easy-to-use "unlimited" off-line storage in 20-Mbyte removable disc cartridges, which can be loaded in about one minute. This seems to be a great fit for the CAD/CAE market.

HP 7907A system support matrix

The HP 7907A is supported on Hewlett-Packard's technical computing products — just where its unique features are valued. The matrix below summarizes the current support offered:

HP 7907A system support matrix

Mainframe	Series	Operating system	Support
HP 1000	A600/700/900		Now
	E/F	RTE 6VM	Now—Add-on disc Full release 4.0 Available March (1)
HP 9000	200	BASIC 3.0	Now
		Pascal 3.0	Add-on disc only (2)
	300	HP-UX 2.1	Now
		BASIC 4.0	Now
500	Pascal 3.1	Now	
	HP-UX 5.0	Add-on disc only (2)	
	BASIC 2.0	Now	
9825T 9845B/C		HP-UX 5.0	Now (3)
			Now—use ROM from structured software
HP 64000			Now
HP 260	None		Second quarter 86
SRM			Under Evaluation

- Notes: 1) E/F can be used as a system disc with A.85 — requires 12992J boot ROM + 12821A HP-IB interface card. RTE 6VM will be distributed on 4.0 release.
2) HP 9000 (Series 200/300) system disc support on 5.1 release of operating system.
3) The run/stop switch is not acknowledged if either platter is mounted in the HP-UX file system. If either platter is the root disc, the system must be stopped to spin down the drive.

When reviewing this matrix, there are several important considerations to keep in mind. First, in most cases, system software is not distributed on the eight-inch cartridge used in the HP 7907A. This is not as big a disadvantage as it sounds. Users who put together their own applications are able to configure a system around the HP 7907A and distribute their software on it. Second, in some cases, the HP 7907A is not supported as the only disc on the system. This will be corrected in the next few months and in the meantime, this constraint may not be a problem. If you encounter a situation where this issue arises, contact your HP sales rep for assistance.

HP 7907A features and benefits

After the system support basics, the next most important area is understanding the HP 7907A's features and benefits. The cover story on page 12 should give you some idea of what applications best fit the HP 7907A. Three key individual features and their benefits are as follows:

Removable media

It has been several years since Hewlett-Packard has announced a removable-media hard disc drive. Though fixed-media drives have become popular for their low cost, the benefits users received from removable media drives in the past are still valuable today. The five major benefits of removable media drives are:

- **Data security** — data can be removed from the drive and locked up as needed.
- **Unique personal I/O** — on a workstation shared among several users, the HP 7907A cartridges provide users a convenient way to keep track of large amounts of data. A cartridge holds much more data than a floppy and can be brought on line much faster than a 1/4-inch tape cartridge. A user can bring on line 20.5 Mbytes of data in about a minute.
- **Fast system reconfiguration and integrity** — in the automatic test equipment market, it is desirable to quickly reconfigure systems. The HP 7907A provides a method for this to happen simply and quickly by inserting a cartridge into the HP 7907A containing the test programs. This feature also allows excellent integrity of the programs by keeping them each on their own disc. There is no question of what version number has been or needs to be copied off of a tape onto a fixed disc.
- **Easy data organization** — in many situations, being able to keep data and/or programs stored on their own disc is a real advantage. For instance, in a small business environment, it is common to have payroll on one disc, accounts receivable on another, and so on. For a CAE/CAD application, individual drawings or parts can be kept on each cartridge. This benefit can also be used very effectively for archiving programs or data.
- **"Infinite" data storage** — finally, by virtue of its removable nature, the HP 7907A offers boundless capacity set simply by how many cartridges a user purchases.

Intelligent controller with off-line copy capability

The HP 7907A contains an intelligent, microprocessor-based controller. One of the key capabilities this offers is an off-line copy. That is, the fixed disc can be copied to the removable disc or vice versa without any aid from the host CPU. This copy can be initiated from the host CPU or through buttons on the front panel. The three major benefits of this feature are:

- **Offline backup** — while a backup is occurring, the host can continue operation (assuming the CPU does not need to access the disc). The feature is also valuable in that a backup can occur even if the host CPU is down. For example, in a sensitive data environment, a user could still backup the disc and lock up the cartridges.
- **Rapid backup and restore** — by keeping the data path for copies inside the HP 7907A, a high data-transfer rate can be maintained. A full 20.5-Mbyte disc-to-disc copy can be done in under two minutes. This 10-Mbyte/minute rate compares to the 2-Mbyte/minute rate of a disc-to-tape copy in an HP 791X or 794X product.
- **Special applications** — the fast, off-line copy has some unique applications in itself limited by the imagination of the user. One possible use is in the area of sensitive protection where data must be erased from the disc. By using a series of cartridges with special data patterns and copying them to the fixed disc one after the other, the existing data can be effectively erased.

High tolerance to shock and vibration

Since shock and vibration is such a key feature on the HP 7907A, the following article was written by a mechanical engineer on the HP 7907A product.

The HP 7907A — a disc for tough environments

When an operating environment will be a physically rough and tumble one, the HP 7907A is a good choice. The HP 7907A has excellent immunity to shock and vibration. This stems from the design directions implemented in the head disc and supporting assemblies. Let's take a closer look at a few examples.

Some applications call for computer gear to be transported to a particular field site. Traveling along the way, a truck (or airplane) may see some really big bumps in the road. This is where the design of the HP 7907A really shines. When the disc is not in use, the heads are automatically retracted from the discs. This feature prevents any harsh bumps from affecting some of the most sensitive elements of a disc drive — the heads and media combination. The feature of retractable heads along with excellent packaging place the HP 7907A at the top of HP's list when the non-operating requirements become a challenge. It is by far our best disc for this type of application.

There are certain times in the life of computer gear where the environment may become abusive. Limits are often tested. To help offset these types of potential problems, the HP 7907A was designed conservatively. One area in particular is the track and bit spacing. The latest technology, Whitney heads, which are used in the HP 7907A, are capa-

ble of 1000+ tracks spaced in one inch and approximately 12,000 flux reversals per inch. The designers chose to go with approximately 50 percent of the capability to ensure a large degree of margin built in.

How does this provide margin? By making the track and bit size relatively large, more magnetic signal is stored per bit and this translates into more ability to recover from problems. This really comes in handy in a rugged environment where there is a possibility of momentarily exceeding the HP 7907 environmental specifications. Also, if the data is extremely valuable and you can't take any chances with it, the data on the lower disc can always be copied to the removable cartridge and removed. Further, this operation can be done without the system running which may come in handy in times of emergency.

When the disc has to function continuously through a rough environment, the HP 7907A will rise to the occasion. This disc has more ability than most. For example, the HP 7907A is being used aboard aircraft in flight and ships at sea. The HP 7907A performs at up to twice the operating shock and vibration levels as compared to its predecessor, the HP 7906. In many more environments, the HP 7907A will perform with greater flexibility (even upside down) and at even greater shock and vibration levels. If you have a unique application, HP will be glad to assist in any specialty situations. Contact your HP sales rep for more information.

HP 7978 tape drive wins 1985 industrial design award

A jury of industrial designers for *International Design Magazine* recently cited the HP 7978 half-inch tape drive for design excellence in the equipment category. The award was based on design advantages for the end-user, use of materials, and overall aesthetics.

What does it mean for you? Total quality is more than just rock solid reliability and high performance. Good industrial design is reflected in the way an operator uses the drive, the feel of the keys, the uncluttered tape path, the ease of loading. All these add up to a tape drive that's easy to use and built to last.

HP 7978B OEM component available

OEM customers needing a high-capacity, high-speed, and extremely-reliable tape drive with an HP-IB interface for their half-inch tape applications are evaluating the new HP 7978B to incorporate into their systems. The HP drive is already being used for such diverse purposes as telephone call logging, seismic-data recording in oil research, microfiche generation from half-inch tape, and, of course, backup for 400 and more megabytes of disc storage. Data integrity in these applications is critical.

Delete cabinet option for OEM customers

The HP 7978B Option 135 deletes the HP cabinet for custom configurations. (However, the component product requires final cabinet packaging to meet stability standards of UL, CSA, and IEC for end-user products.) To be eligible to purchase an OEM drive, you must have signed an OEM contract.

Data sheet available

A new OEM data sheet is now available; order P/N 5953-6861 for your copies. If you would like to talk about specific applications, contact your HP sales rep.



Peripherals discontinuance reminder

As announced last August, two peripheral products are being discontinued by Hewlett-Packard.

The HP 9895A, eight-inch floppy disc drive, and its companion product, the HP 98952A additional floppy drive for the 9895A Opt. 010, will be discontinued on May 1, 1986. There are no plans to manufacture a replacement product.

Plans have also been made to discontinue the HP 9876A thermal graphics printer on August 1, 1986. Alternative products are the HP ThinkJet printer (2225B), HP LaserJet printer (2686B), and HP 2671G thermal printer.

This information is being given to allow as much advance notice as possible so that a smooth transition from these discontinuances can be achieved. In summary, the discontinued products are:

Product	Description	Removal from HP Price List	Final orders accepted		Support life
			US	Int'l.	
9895A	Eight-inch floppy disc drive (dual drive and Opt. 010 single drive version)	May 1, 1986	May 31	July 31	through April 1991
98952A	Drive upgrade (additional floppy disc drive to upgrade single drive 9895A Opt. 010 to dual drive)	May 1, 1986	May 31	July 31	through April 1991
9876A	Thermal Graphics Printer	Aug. 1, 1986	Aug. 31	Oct. 31	through July 1996

Please notify your HP sales rep of any large quantities of these products you may want to order as "final buyouts."

PLOTTERS

Graphics software for the HP ColorPro plotter

Like all HP plotters, the ColorPro plotter has solid support from the leading graphics software vendors. For a complete current listing of software available for the HP ColorPro plotter, see the *HP ColorPro plotter Software Guide* (P/N 5953-9843). This listing is current as of the date of publication, but support is growing rapidly. We will keep you posted on up-to-date support information.

Other software with HP 7470, 7475, or 7550 drivers may be used with the HP ColorPro plotter with minor limitations, such as a reduced number of pens (two or six instead of eight), plot may be slightly off center, and so on.

The software listed is the latest version that HP has on file. Upcoming versions will list HP ColorPro plotter support on the menu using one of several names: "HP ColorPro," "HP 7440," "ColorPro," etc. Also, software listed under the "IBM PC" heading may support other CPUs, such as the IBM PC/AT or IBM compatibles. Contact your HP sales rep for the most current information.

Using the HP ColorPro plotter with Lotus 1-2-3 and Symphony

Because the HP ColorPro plotter is a new product, the device listing on your Lotus® Print-Graph disc will not include the HP ColorPro plotter. Watch for a special disc that will add the HP ColorPro plotter to your device listing; it will be available soon. In the meantime, the HP ColorPro plotter can team up with your personal computer and Lotus® 1-2-3® or Symphony® by using plotter note (P/N 5953-9887). This new plotter note gives complete instructions for configuring various versions of the Lotus Print-Graph disc for use with the HP ColorPro plotter. Contact your sales rep to get a copy of the plotter note.

Lotus®, 1-2-3®, and Symphony® are US registered trademarks of Lotus Development Corp.

PRINTERS

HP LaserJet printer upgrade price increases January 1

Remember, the price of the upgrade kit (P/N 26051A) that converts the HP LaserJet printer into an HP LaserJet PLUS printer increases on January 1, 1986.

Upgrading gives you all the enhanced features of the HP LaserJet PLUS printer, including: increased memory to 512 Kbytes (395 Kbytes user accessible), ability to download fonts and forms, macro capability, forms overlay capability, increased graphics resolution on a larger portion of the page (300 x 300 dpi on a half page), option to also upgrade to a Centronics parallel interface, and larger character size of up to 1/2 inch.

The upgrade kit must be installed by a customer engineer or authorized dealer and takes approximately one half hour. Labor charges are not included in the price of the upgrade kit. To convert the printer from RS-232 to the Centronics interface (P/N 26052A), the HP LaserJet printer must be upgraded to the HP LaserJet PLUS printer. The interface upgrade price will remain the same after January 1.

Contact your HP sales rep for more information.

HP 2689A laser printer operating system support

HP has completed testing and verification of the HP 2689A laser printer on the following IBM operating systems:

Operating system	Spooler
MVS/SP	JES 2 and JES 3
MVS/XA	JES 2 and JES 3
VM	—
DOS/VSE	POWER

The HP 2689A is an IBM direct-channel-connect version of the HP 2680A laser printer. Having the HP 2689A and 2685B laser printers gives HP the strongest direct-connect and remote-printing solution in the industry.

The HP 2689A laser printer emulates the IBM 3211 impact printer, and is positioned as a line printer replacement. Using trigger patterns (which you install with our documentation), you can take advantage of page printer features such as easier access to multiple environments (2:1 and 4:1 reductions, electronic forms, printing portrait or landscape) and automatically changing environments.*

Contact your HP sales rep for more information.

**Refer to "Trigger patterns for the HP 2689A laser printer" for more information on trigger patterns.*

Trigger patterns for the HP 2689A laser printer

The HP 2689A laser printer uses trigger patterns to dynamically change printing environments and to ensure total data integrity.

Trigger patterns are a special sequence of characters added to the job separator pages (such as the header and trailer of each job) created by the IBM output spooler. The HP 2689A control unit recognizes these specific output lines and performs special operations. A synopsis of the trigger patterns is as follows:

Trigger pattern	Synopsis
SOJ (start of job)	The HP 2689A prints the job header page with the landscape, line printer font. If the previous print job was printed with a special environment (2:1 or 4:1), this trigger pattern will load a 1:1 environment for job separation.
SOD (start of data)	The HP 2689A switches to the default environment (previously specified in the control unit) to print the job.
LUE (load user environment)	This trigger pattern is coded into an application program and is generally used to load a custom environment for a specific job. When the SOD trigger loads a default environment, the LUE trigger allows the user to bypass the default environment and use a different environment.
JRO (job run out)	The HP 2689A will not purge the job from the output spooler until the job is on paper. In the event of a data center power failure, the job remains in the spooler and the customer can reprint the file without rerunning the job.
EOD (end of data)	The HP 2689A switches to the landscape, line printer font to print the job trailer separator page.
EOJ (end of job)	The HP 2689A resets for the next job.

To enable all HP 2689A functions, the user is responsible for installing these triggers in the output writer. The modification to each operating system is different, but the function of the triggers is the same. Documentation on how and where to place the code in the IBM output writer is shipped to the user two weeks prior to shipping the printer. This allows the user time to prepare the IBM system for installation of the HP 2689A hardware.

If you have questions about installing the trigger patterns, call your HP sales rep.

**Refer to "HP 2689A laser printer operating system support" for more information on the HP 2689A laser printer.*

TERMINALS

HP 2622A, 2622D, and 2624B integral thermal printer option obsolete March 1, 1986

The integral thermal printer (Option 050) on the HP 2622A, 2622D, and 2624B will be removed from the HP Price List on March 1, 1986.

The integral thermal printer will have a ten-year support life through March 1, 1986. Last shipments will take place on May 31, 1986.

HP 2625A and HP 2628A upgrade kits off HP Price List March 1

The following upgrade kits for the HP 2625A and 2628A terminals will be removed from the HP Price List on March 1, 1986.

P/N	Description
94020A	HP 2628A Graphics Upgrade Kit
94020A Opt. 001	HP 2625A Graphics Upgrade Kit
94021A	HP 2628A HP-IB Upgrade Kit
94021A Opt. 001	HP 2625A HP-IB Upgrade Kit
94022A	HP 2628A Graphics and HP-IB Upgrade Kit
95022A Opt. 001	HP 2625A Graphics and HP-IB Upgrade Kit

The normal five-year support life will be provided on these products. Last orders will be accepted through March 31, 1986. Last shipments will take place on May 31, 1986.

HP 17623A graphics tablet to be discontinued

The HP 17623A graphics tablet will be removed from the HP Price List on March 1, 1986. The HP 17623A was designed to be used with the HP 2623A and 2627A terminals, which have been replaced by the new HP 2393A and 2397A. The new terminals are supported by the HP 46087A and 46088A graphics tablets.

The normal five-year support life will apply on the product, coinciding with the support life of the HP 2623A and 2627A.

Programmable keyboard available for HP 2392A

Do you need keys relocated on the keyboard, the use of the four blank keys, the keypad TAB key to be a return key, or some other keyboard modification?

Special Option K24 on the HP 2392A allows you the capability to redefine the entire keyboard programmatically or via a new configuration menu. The K24 features include:

- Capability to redefine every key on the keyboard.
- Keys may be defined with up to 80 characters.
- Individual keys may be disabled.
- Each key may be defined four ways — unshifted, shifted, control, and control/shifted.
- Key definitions are stored in non-volatile RAM.
- Operation in all national languages.

This option is now orderable. Contact your sales rep for more information.

Katakana terminal available

The HP 2392A special no-cost Option L04 is a bilingual alphanumeric CRT terminal that offers the following features:

- A bilingual keyboard which allows the user to mix both ASCII and Katakana text on the display, along with a keyboard that is labeled with both ASCII and Katakana legends.
- Complete ASCII and Katakana character sets.
- The ability to change languages from ASCII to Katakana, and vice versa, with a single keystroke.
- Character mode, block line mode, and block page mode are operational in both ASCII and Katakana modes.
- Compatibility with the HP 2622J terminal.
- Manual supplement written in Japanese.

This option is now available; contact your HP sales rep for more information.



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: *Telex Management*

Abstract: Datalex 250/260 is a telex management system for the HP 250/260. It handles incoming and outgoing telex messages and works with several telex interfaces such as Hasler, Distel 1000 of Telindus, etc. Advantages of Datalex include:

- Simple and quick wording of a telex message by means of a full screen editor on the computer terminal
- Use of standard telex messages and clauses
- Automatic transmission of telexes at the appropriate moment
- No more telexiste is needed because every computer user can send a telex from his/her workstation
- Multiple addressing of one and the same message
- Provides data per subscriber and statistics for tracking.

Company Name: Datakor

Address: Dam 9
B 8500 Kortrijk
Belgium

Phone Number: 056/222651
056/222652

Contact Person: Daniel Pappyn

Type of Distributor Wanted: Open

Geographic Coverage: Worldwide

Industry: *Cross industry — CAD/CAM*

Abstract: CONCEPTION-3D is powerful 2D and 3D software running on HP 150 II and Vectra PC series. The package offers the following modules: 3D, 2D, connectable 3D, measurements, hidden surfaces, and data base. CONCEPTION-3D is a very professional and easy to operate software. More than 800 systems sold in one year in France. English version available.

Company Name: SERBI

Address: 209 Boulevard Vincent Auriol
75013 Paris
France

Phone Number: (1) 45-86-69-00

Contact Person: Françoise La Hausse de Lalouviere

Type of Distributor Wanted: Open

Geographic Coverage: Worldwide

Industry: *Cross industry — real-time graphics*

Abstract: PG-1000 is used to display real-time data, in color graphic formats, to operators in control rooms, laboratories, and test facilities. Typical applications are process flow diagrams, plant mimics, security system layouts, communications and power networks, and SCADA systems.

PG-1000 handles the development of the graphic picture, the display of the background and the refresh of the real-time data. The system includes a graphic editor, compiler and a runtime display manager. A complex display with "live" data can be created and integrated into a user's system in an hour.

PG-1000 is specifically designed for easy integration into real-time applications. The run time modules are small and efficient, utilizing an absolute minimum of system resources. PG-1000 will interface to any real-time data system and supports multiple display devices.

Company Name: Industrial Systems, Inc.

Address: 18720 142nd Avenue N.E.
Woodinville, WA 98072
USA

Phone Number: 206-481-6325

Contact Person: Wayne D. Martin, VP

Type of Distributor Wanted: HP 1000 real-time system supplier/integrator

Geographic Coverage: Worldwide

Industry: *Wholesale distribution*

Abstract: Success 2000 Application Package running on the HP 3000 is a fully integrated inventory management system designed for wholesale distributors.

The Success 2000 Software Package includes: inventory management, accounts receivable, order entry, accounts payable, sales analysis, purchasing, physical inventory, and general ledger.

Company Name: Distributor Computer Systems, Inc.

Address: 1060 Kings Highway North
Cherry Hill, NJ 08034
USA

Phone Number: 609-667-6233

Contact Person: Marshall Campbell

Type of Distributor Wanted: Open

Geographic Coverage: Open

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.

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