HP 1000 Computer Systems

HEWLETT PACKARD

Peripherals Selection Guide

Documentation Map for HP 1000 Data Books

I/O Architecture	Centralized Intelligence	Distributed Intelligence
Series	**M/E/F**	**A/L**
Systems and Computers	HP 1000 M/E/F-Series Hardware Technical Data Book	HP 1000 A/L-Series Hardware Technical Data Book*
Interfaces	HP 1000 M/E/F-Series Interfaces Summary	HP 1000 A/L-Series Interfaces Summary*
Software	HP 1000 Computers Systems Software Technical Data Book	
Communications	HP 1000 Computer Systems Communications Products Technical Data Book	
Peripherals	HP 1000 Peripherals Selection Guide	
Measurement and Control	HP 2250 Measurement and Control Processor Technical Data HP 2240 Measurement and Control Processor Technical Data	

* *Until about Mid-August 1982, there will be separate A- and L-Series data books, each containing information on interfaces.*

NOTE: Data Book Supplements containing new or revised information are sometimes printed between data book revisions. Ask your Hewlett-Packard representative for the current data book or supplement in your area of interest.

Peripherals Information Locator

Product Number Index

Alphabetical Index

Operator Terminals Selection Guide

HEWLETT PACKARD

HP 1000 Computer Systems can be equipped with any of the terminals described in this selection guide, all of which share the common features listed below.

Features

- **Full upper/lower case ASCII character set**
- **Built-in self test**
- **Standard I/O driver support for point-to-point and multiplexer communications with HP 1000 RTE operating systems**

Terminal choices and interfacing

The terminal choices available in HP 1000 A/L/M/E/F-Series Computer Systems are listed in Table 1 (next page). Terminal interfaces and cables are listed in Table 2 on page 5.

NOTE: Some terminal capabilities listed in terminal data sheets may not be supported in the HP 1000 Systems environment. For capabilities and data rates that are supported, rely upon the information in this selection guide. Configuration requirements for system consoles are covered in the HP 1000 A- and L-Series and M/E/F-Series Hardware Technical Data books.

Table 1. Operator Terminals Capability, Capacity, and Performance

Terminal Product No. and Name	HP 1000 Software-Supported Capabilities	Char per Line	Lines per Display	Memory Capacity		Maximum Data Rates*				HP 1000 Interfacing Choices
				Text§	Graphics (Dots x Rows)	System -to- Display	Print Output	CTU I/O	Graphics Output	
2382A (or 2389B OEM) Office Display Terminal	Keyboard-display I/O only	80	24	48 lines x 80 char		960 cps				Point-to-point and multiplexer
2621B (or 2629L OEM) Interactive Terminal	Keyboard-display I/O only	80	24	48 lines x 80 char		960 cps				Point-to-point and multiplexer
2622A (or 2629E OEM) Display Terminal	Keyboard-display I/O with block mode; line drawing set and integral 40/80/132 column thermal printer optional	80	24	48 lines x 80 char		960 cps	60 cps typ w/Opt 050			Point-to-point and multiplexer†
2623A (or 2629G OEM) Graphics Terminal	Keyboard-display I/O with graphics capability; supported by Graphics/1000-II software; line drawing set and integral 40/80/132 column thermal printer optional	80	24	48 lines x 80 char	512 x 390	960 cps	60 cps Typ. w/ Opt 050		210 vectors per second	Point-to-point and multiplexer
2624B (or 2629F OEM) Display Terminal	Keyboard-display I/O with soft-key capability and forms capability; integral 40/80/132 thermal printer optional	80	24	96** lines x 80 char, exp. to 216		960 cps	60 cps typ w/Opt 050**			Point-to-point, multiplexer† and multipoint
2626A (or 2629D OEM) Display Station	Keyboard-display I/O with soft-key capability and line drawing set with interactive forms design capability, integral 40/80/132 column thermal printer optional. Multiple workspaces and split screen capabilities are available to the application programmer	80 (160 int)	24	107 lines x 80 char		960 cps	60 cps typ. w/Opt 050**			Point-to-point, multiplexer†, and multipoint‡
2635B Printing Terminal	Keyboard-printer I/O with a choice of normal (136 col), expanded (68 col) and compressed (227 col) dot-matrix impact printing	136					180 cps (240 cps to buffer)			Point-to-point and multiplexer†
2642A Enhanced Display Station	Keyboard-display I/O with soft-key and line drawing set with interactive forms design capability, display enhancements, text preparation support, optional auxiliary printer output, and 1kb/sec mini flexible disc for system-accessible local mass storage. Mini cartridge I/O instead of mini flexible disc is opt 070.)	80	24	88 lines x 80 char		960 cps	180 cps*	120 cps w/Opt 070		Point-to-point and multiplexer†

* *Actual data rate will depend upon the choice of interfacing mode and whether the connection to the system is via direct connect cable or modems and telephone lines.*

§ *The basic text memory capacity stores characters, so more than the specified number of lines can be stored if there are fewer then 80 characters per line.*

** *Maximum memory is available when applications do not make extensive use of alternate character sets, display enhancements and/or edit checks.*

** *External 2601A, 2631B, 2671A/G opt. 040, or 2673 opt. 040 Printer for data rate to 180 cps (with 2631B) may be connected to 2624B/2626A/2629D/2629F terminal port 2 via 13242G cable.*

* *With 2631B+240 Auxiliary Printer (also requires Mini cartridge I/O or Device Support Firmware in 264x Terminal).*

† *The 12040A and 12792A multiplexers support only keyboard-display or keyboard-printer communication; they do not support terminal peripherals, such as Mini cartridge tapes or auxiliary printer output. The 12920B 16-channel multiplexer for M/E/F-Series does support terminal peripherals.*

‡ *Multipoint communication is supported only on HP 1000 M/E/F-Series systems. Multipoint access to terminal peripherals, such as Mini cartridge tapes or auxiliary printer requires a multipoint subroutine, which does not provide a direct interface to/from the RTE File Manager.*

Table 1. Operator Terminals Capability, Capacity, and Performance (Continued)

Terminal Product No. and Name	HP 1000 Software-Supported Capabilities	Char per Line	Lines per Display	Memory Capacity		Maximum Data Rates*				HP 1000 Interfacing Choices
				Text§	Graphics (Dots x Rows)	System -to- Display	Print Output	CTU I/O	Graphics Output	
2645A (or 2649B OEM) Display Station	Keyboard-display I/O with soft-key capability and display enhancements; Mini cartridge tape I/O, line drawing set for forms capability, and auxiliary printer output are optional.	80	24	32 lines x 80 char, exp. to 88		960 cps	180 cps*	120 cps w/Opt 007		Point-to-point, multiplexer†, and multipoint‡
2647A (or 2649G OEM) Intelligent Graphics Terminal	Keyboard-display I/O with dual Mini cartridge tape I/O and graphics display supported as a virtual 2648A Terminal; display enhancements, and auxiliary printer or graphics hard-copy output on raster dump device are optional. This terminal is supported by HP 1000 Graphics software.	80	24	75 lines x 80 char	720x 360	960 cps	180 cps*	120 cps	100 vectors per second	Point-to-point and multiplexer†
2648A (or 2649C OEM) Graphics Terminal	Keyboard-display I/O with graphics display and device support firmware; dual Mini cartridge tape I/O, display enhancements, and auxiliary printer or graphics hard-copy output on raster dump device are optional. This terminal is supported by HP 1000 Graphics software.	80	24	37 lines x 80 char	720x 360	960 cps	180 cps*	120 cps w/Opt 007	100 vectors per second	Point-to-point, multiplexer†, and multipoint‡

* *Actual data rate will depend upon the choice of interfacing mode and whether the connection to the system is via direct connect cable or modems and telephone lines.*

§ *The basic text memory capacity stores characters, so more than the specified number of lines can be stored if there are fewer then 80 characters per line.*

* *With 2631B+240 Auxiliary Printer (also requires Mini cartridge I/O or Device Support Firmware in 264x Terminal).*

† *The 12040A and 12792A multiplexers support only keyboard-display or keyboard-printer communication; they do not support terminal peripherals, such as Mini cartridge tapes or auxiliary printer output. The 12920B 16-channel multiplexer for M/E/F-Series does support terminal peripherals.*

‡ *Multipoint communication is supported only on HP 1000 M/E/F-Series systems. Multipoint access to terminal peripherals, such as Mini cartridge tapes or auxiliary printer requires a multipoint subroutine, which does not provide a direct interface to/from the RTE File Manager.*

Table 2. HP 1000 Terminals Interfacing Summary

Terminal		Point-to-Point Interface and Cable		Multiplexer Interface & Panel, and Cable	
Product Number(s)	Opt. No.	For A/L-Series 12005A Interface	For M/E/F-Series 12966A Interface	For A/L-Series 12040A & 12828A	For M/E/F-Series 12792A & 12828A
2382A/2389B		Option 002 cable	Std cable*	13242N cable	13242N cable
2621B/2629L		Option 002 cable and 40242C rfi cable	Standard cable* and 40242Z rfi cable	40242M cable	40242M cable
Other 262x Terminals		Option 001 cable	Option 005 cable*	13222N cable	13222N cable
2635B		Option 002 cable		Cable incl. w/2635	Cable incl. w/2635
2635B	051		Option 001 cable		
264x Terminals		Option 005 cable	Option 001 cable	13232A/Y cable	13232A/Y cable

* = *12966A standard, option 002, or option 005 cable must be rewired at the interface connector hood for a fixed baud rate when used with 238x, 2621B, 2622A, 2623A, 2624B, 2629E, 2629F, 2629G, or 2629L terminal.*

Data Capture Terminals Selection Guide

HEWLETT PACKARD

HP 1000 Peripheral Devices

HP 1000 M/E/F-Series Computer Systems can be equipped with up to 90 Data Capture Terminals offering an extensive choice of optional capabilities (Table 1) for factory data collection and other data capture uses. Operations can be supported by HP's high-level, off-the-shelf 92080A DATACAP/1000-II software* running in the 92084A RTE-6/VM or 92068A RTE-IVB operating system. Terminals are available in both desktop and wall-mounting configurations. The wall-mounting terminals use a Wall-Mounting Cradle which includes a relay that can be switched by the HP 1000 Computer System to control an electric door lock or other external device.

**91730A Multipoint/Data Link software is also required.*

Table 1. HP 1000 Data Capture Terminals Capability Summary

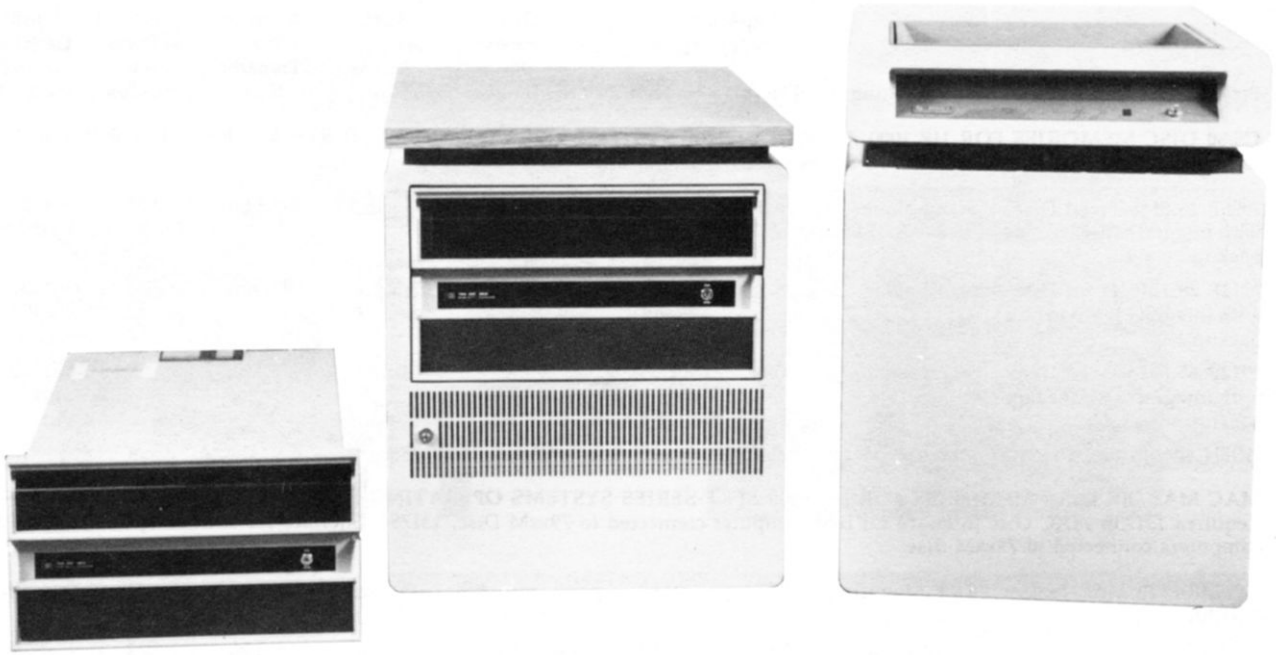
	3075A Desk-top Data Capture Terminal	3076A Wall-Mounting Data Capture Terminal	3077A Wall-Mounting Time Reporting Terminal
Base capabilities	On-line data capture using 15-key numeric and 10-key function keyboards, 15-position numeric display, and 17 user-definable prompting lights		Timekeeping and name/security data input via Type V badge reader
Dir Conn Interface	To HP 1000 M/E/F-Series Computer via 12790A Multipoint interface and multipoint cables, or via 12790A+001 Multipoint interface, 3074A Data Link Adapter, HP 92902A and 92905A Data Link cabling, and 92901A Data Link Connection Boxes		
Modem Interface	To HP 1000 M/E/F-Series Computer via 12790A+001 Multipoint interface, modems, and multipoint cables or via 12790A+001 Multipoint interface, modems, 3074M Data Link Adapter, HP 92902A and 92905A Data Link cabling, and 92901A Data Link Connection Boxes		
Opt. 001	Not available		Multifunction card/badge reader instead of Type V badge reader
Opt. 002	Not available		Hand-operated, uni-directional magnetic stripe reader instead of Type V badge reader
Opt. 004	26-key alphabetic keyboard in addition to numeric keyboard; keys are settable for transmission of either alphabetic or function information		Not available
Opt. 005	24-position alphanumeric display instead of numeric-only display		Adds 24-position alphanumeric display
Opt. 006	8/16-line CRT display instead of 1-line numeric or alphanumeric display		Not available
Opt. 007	Adds multifunction card/badge reader that can read either marks or holes		(See opt 001)
Opt. 008	Adds Type V badge reader		Standard
Opt. 009	Adds 40 LPM, 20 column thermal alphanumeric strip printer to record operator's transactions at the terminal		Not available
Opt. 010, 054, or 055	Adds hand-held Bar Code Reader wand capable of bi-directional reading of bar codes printed on shipping papers or other turnaround documents		Not available
Opt. 011	Adds HP-IB I/O port for connection of HP-IB instruments or other HP-IB devices to the 3075A/3076A terminal, which functions as controller. The HP-IB port cannot be used for connection to the HP 1000 Computer System		Not available
Opt. 012	Adds hand-operated, uni-directional magnetic stripe reader for reading magnetic stripes from credit-card type badges or documents where the greater security of data entry from magnetically encoded sources is desirable		(See opt 002)
Opt. 013	Adds RS-232-C/CCITT V.24 serial I/O port for connection of an external device, such as a digital weighing scale, serial printer, or cassette recorder to the 3075A/3076A terminal. This I/O port cannot be used for connection to the HP 1000 Computer System		Not available
Opt. 030	Installation and programming kit		Installation and programming kit

NOTE: Only two of options 007 through 013 and 054 and 055 can be ordered for any 3075A/3076A terminal.

Disc Memories Selection Guide

HEWLETT PACKARD

HP 1000 Peripheral Devices



Select the Appropriate Type of Disc Memory†

Type of Disc Memory	Basis for Selection	Disc Products Available	Usable in HP 1000 Series			
			A	L	E	F
CS/80 (Command Set 80) Discs	Lowest cost per byte of storage, fast, easy backup of most fixed discs on convenient cartridge tape, maximum disc capacity, latest Hewlett-Packard disc technology.	7908P/R 16.5MB fixed disc	Y	X	6	6
		7911P/R 28.1Mb fixed disc	Y	X	6	6
		7912P/R 65.6Mb fixed disc	Y	X	6	6
		7933H Standalone 404Mb fixed disc	N	N	6	6
MAC Multi-Access Controller Discs	Accommodates multi-system access to common disc storage facility*, up to 1920Mb with two 13175B interfaces, two 7925M discs, and 14 7925S discs.	7906M Standalone 19.6Mb Cartridge disc	N	N	Y	Y
		7906MR+020 Rack mtg 7906M	N	N	Y	Y
		7920M Standalone 50Mb Disc	N	N	Y	Y
		7925M Standalone 120Mb Disc	N	N	Y	Y
ICD (Integrated Controller Disc) Memories	Only removable media discs supported for L-Series.	7906H Standalone 19.6Mb Cartridge disc	N	Y	Y	Y
		9895A 2.36Mb Master Dual Flexible Disc	Y	Y	Y	Y

Y = Yes, X = requires RTE-XL, 6 = requires RTE-6/VM; only 79xxP and 7933H discs are currently usable, N = No.

† *Two system disc interfaces can be used in the same E/F-Series computer to connect two disc I/O facilities. These can be two MAC Master Discs, each expandable to a total capacity of 960Mb (1920Mb total) or one MAC Master and one CS/80 disc, or all CS/80 discs. CS/80 discs can be expanded to a total of four per interface (up to 1.6Gb; 3.2Gb with two CS/80 interfaces) when the proper interconnecting HP-IB cables are used.*

* *In multi-computer installations, more than one E/F-Series computer can be connected to the 13037C disc controller of the MAC Master disc. Such connection is via a 13178C Multiple Computer Interface kit in each additional computer. Multi-computer compatibility is supported by the RTE-6/VM and RTE-IVB systems and their file managers for computers that access their own exclusive disc spaces on one or more MAC disc drives. However, shared access to the same file space by one or more HP 1000 E/F-Series computers requires modification of the file manager by the user.*

HP 1000-Compatible Disc Memories Capacity and Performance Summary

Product No. and Name	Packaging	Capacity/Drive (Megabytes) Fixed	Capacity/Drive (Megabytes) Removable	Disc Drives per Interface	Total Average Access Time*	Average Burst Transfer Rate	RTE Software Media Option	Additional Cartridge or Disc Pack Product No.
CS/80 DISC MEMORIES FOR HP 1000 A/L/M/E/F-SERIES SYSTEMS OPERATING UNDER RTE-A.1, RTE-XL, OR RTE-6/VM — Requires 12009A HP-IB interface in A/L-Series, 12821A Disc Interface in M/E/F-Series.								
7908P 16.5Mb Fixed Disc with integral cartridge tape backup	Stand-alone	16.5	16.7 (tape)	4, max.	50 ms	537 kb/s	022	88140S Tape Cartridge
7911P 28.1Mb Fixed Disc with integral cartridge tape backup	Stand-alone	28.1	67.0 (tape)	4, max.	35 ms	983 kb/s	022	88140L or 88140S Tape Cartridge
7912P 65.6Mb Fixed Disc with integral cartridge tape backup	Stand-alone	65.6	67.0 (tape)	4, max.	35 ms	983 kb/s	022	88140L or 88140S Tape Cartridge
7933H 404Mb Fixed DiscΔ	Stand-alone	404	none	4, max.	35.1 ms	1.2 Mb/s	n/a	n/a
MAC MASTER DISC MEMORIES FOR HP 1000 M/E/F-SERIES SYSTEMS OPERATING UNDER RTE-6/VM OR RTE-IVB — Requires 13175B MAC Disc Interface for first computer connected to 79xxM Disc, 13178C Interface for each of up to 7 additional computers connected to 79xxM disc.								
7906MR+020 MAC Master Cartridge Disc	Rack Mounting	9.83	9.83	8, max.‡	33.3 ms	740 kb/s	031	12940A
7906M MAC Master Cartridge Disc	Stand-alone	9.83	9.83	8, max.‡	33.3 ms	740 kb/s	031	12940A
7920M MAC Master Disc‡‡	Stand-alone	none	50.07	8, max.‡	33.3 ms	740 kb/s	032	13394A
7925M MAC Master Disc‡‡	Stand-alone	none	120.17	8, max.‡	36.1 ms	740 kb/s	033††	13356A
MAC SLAVE DISC MEMORIES FOR HP 1000 M/E/F-SERIES SYSTEMS — Requires compatible MAC Master Disc**								
7906SR+020 MAC Slave Cartridge Disc	Rack Mounting	9.83	9.83	7 per Master‡	33.3 ms	740 kb/s	n/a	12940A
7906S MAC Slave Cartridge Disc	Stand-alone	9.83	9.83	7 per Master‡	33.3 ms	740 kb/s	n/a	12940A
7920S MAC Slave Disc	Stand-alone	none	50.07	7 per Master‡	33.3 ms	740 kb/s	n/a	13394A
7925S MAC Slave Disc	Stand-alone	none	120.17	7 per Master‡	36.1 ms	740 kb/s	n/a	13356A
ICD AND FLEXIBLE DISC MEMORIES — Requires 12009A HP-IB Interface in A/L-Series, 12821A ICD Disc Interface in M/E/F-Series								
7906H ICD Cartridge Disc Memory■	Stand-alone	9.83	9.83	2, max.	33.3 ms	740 kb/s	036††	12940A
9895A Master Dual Flexible Disc Memory	Rack or Table Mounting	none	2.3	2, max.	174 ms	23 kb/s	041▶	9146-0100 10-disc kit
9895A+010 Master Single Flexible Disc Memory	Rack or Table Mounting	none	1.18	2, max.	174 ms	23 kb/s	041▶	9146-0100 10-disc kit

* *Total average access time is the sum of average seek time plus average rotational delay.*

Δ *For RTE-6/VM operating system only. The 7933H disc has not been tested in RTE-A.1 or RTE-L/XL based systems. In addition, the RTE-A.1 or RTE-L/XL file manager can only take advantage of half the capacity of the 7933H.*

†† *For RTE-6/VM or RTE-IVB operating system only.*

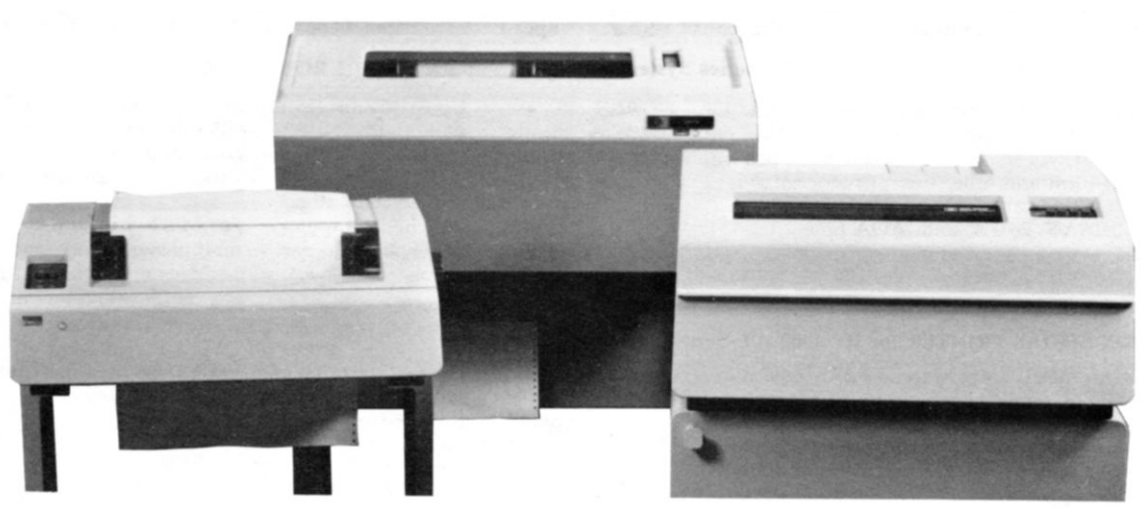
‡ *The total of 8 discs usable with the MAC Master disc includes the MAC Master disc and up to seven MAC Slave discs.*

‡‡ *A 7970B/E+226/236 Magnetic Tape Subsystem or an additional 7920/25M/S disc is required to provide backup and copy capability for the 7920M or 7925M disc. This requirement is satisfied if there is a second system with 7920M or 7925M disc and appropriate backup at the same site.*

** *A MAC Master Disc Controller is compatible with 7925S Slave disc memories, but if you are adding a 7925S to an existing system for the first time, the master disc controller may not be compatible with the 7925S. You can ask your HP sales representative to arrange for a compatibility test. A 7925S option 250 can be ordered for the first 7925S MAC Slave disc to establish compatibility with an older controller if that is necessary. Otherwise, all MAC Slave discs are compatible with all MAC Master discs.*

■ *Not tested in A-Series.*

▶ *For RTE-A.1/L/XL Operating system only.*



Select the Appropriate Type of Printer

Select the Printing Technique	THERMAL PRINTING For fast, quiet, operation at low initial price where additional copies needed can be made on a copier.		IMPACT PRINTING For lowest cost per page (because thermal paper costing about 3.8 times as much as plain paper is not needed), multi-form printing, and fastest available printing speed.			
Select the Character Formation Method	**DOT-MATRIX** For greatest printing versatility, including software-selectable character sets and raster graphics (not software-supported under Graphics/1000-II).		**DOT-MATRIX** For greatest printing versatility, including software-selectable character sets and raster graphics (software supported under Graphics/1000-II for 2608A/S only)		**DAISYWHEEL** Offers highest character quality at slow print rate, easy manual change of daisywheel character fonts	**DRUM/CHAIN** Offers highest output rates (up to 1000 LPM)
Select Operating Mode	**Dot-Matrix Line Printer** for maximum print speed	**Dot-Matrix Serial** for lowest cost	**Dot-Matrix Serial** for lowest cost	**Dot-Matrix Line Printer** for maximum print speed	**Serial** (required by Daisywheel design)	**Line Printer** for maximum print speed
System Printers via HP-IB Interface	9876A Thermal Graphics Printer	2671A Printer 2671G Graphics Printer	2631B+214 Printer 82905B Impact Printer	2608S+210 Line Printer	n/a	n/a
System Printers via Serial Interface	n/a	n/a	2631B Printer	n/a	2601A Daisywheel Printer	n/a
System Printers via Parallel Interface	n/a	n/a	2631B+210 Printer	2608A+210 Line Printer	n/a	2617A+100 Line Printer 2619A+100 Line Printer

HP 1000 Printers Capability and Performance Comparison — Impact Printers

Printer Product No. and Name	HP 1000 Software-Supported Capabilities	Char/in or No. of Columns	Matrix Size or Char. Set Size	Print Speed	Paper Type	Required Interface
DAISYWHEEL PRINTER for HP 1000 A/L/M/E/F-Series Systems						
2601A Daisywheel Printer	High-quality serial printing, using changeable plastic or metal print-wheels. Commands for top-of-form and other line printer functions are not the same as for 2608A/S, 2617A, and 2619A Line Printer.	10/12/15 char per inch	88, 92, or 96 char set	40 cps (plastic print-wheel), 30 cps (metal print-wheel)	Up to 406mm (16 in) wide; with 26010A tractors, 84-387mm (3-1/4 - 15-1/4 in) wide std fan-fold, edge-punched computer paper, up to 6-part forms.	**For A/L-Series,** use 12005A w/Opt. 003 cable or 12040A multiplexer chan conn via 12828A multiplexer panel and std 2601A cable. **For M/E/F-Series,** use 12792A multiplexer chan connected via 12828A multiplexer panel and std 2601A cable.
DOT-MATRIX SERIAL PRINTER for HP 1000 A/L-Series Systems						
82905A Impact Printer	Dot-matrix impact serial printing on single sheet and up to 3-part forms using 128 character set. Lacks vertical form control, but provides programmable line spacing.	80 normal, 132 or 96 compr, 40, 48, or 66 expanded	9 x 9	80 cps bidirectional	Up to 254mm (10in) wide fan-fold, edge-punched computer paper, up to 3-part forms	**For A/L-Series,** use 1/14 of 12009A interface & 10833x or 31389x cable.
DOT-MATRIX SERIAL PRINTER for HP 1000 A/L/M/E/F-Series Systems						
2631B Printer	Dot-matrix impact serial printing on single sheet and up to 6-part forms using 128 character set; eight different international character sets in either normal or high-density print are optional.	136 normal, 227 compr, 68 expanded	7 x 9	180 cps	Up to 400mm (15-3/4 in) wide fan-fold, edge-punched computer paper; up to 6-part forms	**For A/L-Series,** use 2631B Opt. 214 and 1/14 of 12009A interface, or 12040A multiplexer chan connected via 12828A multiplexer panel and std 2631B cable. **For M/E/F-Series,** use 2631B Opt. 210, or 12792A multiplexer chan connected via 12828A multiplexer panel & std 2631B cable.
DOT-MATRIX LINE PRINTER for HP 1000 M/E/F-Series Systems						
2608A Line Printer	Dot-matrix impact printing on single sheet and up to 6-part forms using 128 character set.	132 normal, 66 double size	5 x 7 5 x 9 7 x 9	400 LPM 320 LPM 250 LPM	125-409mm (4.9-16.1 in) wide std fan-fold, edge-punched computer paper	**For M/E/F-Series,** use 2608A Opt. 210 or 26099A interface.
2608S Line Printer	Dot-matrix impact printing on single sheet and up to 6-part forms using 128 character set.	132 normal, 66 double size	5 x 7 5 x 9 7 x 9	400 LPM 320 LPM 250 LPM	125-409mm (4.9-16.1 in) wide std fan-fold, edge-punched computer paper	**For M/E/F-Series,** use 2608S Opt. 210 and 12821A+001 interface.
DRUM AND CHAIN LINE PRINTERS for HP 1000 M/E/F-Series Systems						
2617A Line Printer	Impact-on-drum printing on single sheet and up to 6-part forms; 96 char set and/or OCR-B font optional.	136	64 char 96 char	600 LPM 436 LPM	102-426mm 4-16.75 in) wide std fanfold, edge-punched computer paper	**For M/E/F-Series,** use 2617A Opt. 100 or 12845B interface.
2619A Line Printer	Impact-on-chain printing on single sheet and up to 6-part forms; 96 char set and/or OCR-B font optional	132	64 char 96 char	1000 LPM 750 LPM	88-495mm (3.5-19.5 in) wide std fanfold, edge-punched computer paper	**For M/E/F-Series,** use 2619A Opt. 100 or 12845B interface.

HP 1000 Printers Capability and Performance Comparison — Thermal Printers

Printer Product No. and Name	HP 1000 Software-Supported Capabilities	Char/in or No. of Columns	Matrix Size or Char. Set Size	Print Speed	Paper Type	Required Interface
DOT-MATRIX SERIAL PRINTERS FOR HP 1000 A/L-Series Systems						
2671A Printer	Dot-matrix thermal printing, on fan-fold or roll-fed thermal paper, using 128 character set. Also includes line drawing set.	80 normal, 132 compressed	7 x 11	120 cps bidirectional	216 mm (8.5 in) wide fan-fold or roll-fed thermal paper, page-perforated or continuous	**For A/L-Series,** use 1/14 of 12009A interface & 10833x or 31389x cable.
2671G Graphics Printer	Dot-matrix thermal printing, of text and/or graphics on fan-fold or roll-fed thermal paper using 128 character set. Includes line drawing set. 2671G Printer is NOT supported by HP 1000 Graphics software.	80 normal, 132 compressed	7 x 11	120 cps bidirectional	216 mm (8.5 in) wide fan-fold or roll-fed thermal paper, page perforated or continuous	**For A/L-Series,** use 1/14 of 12009A interface & 10833x or 31389x cable.
2673A Intelligent Graphics Printer	Dot-matrix thermal printing of text and/or graphics on fan-fold or roll-fed thermal paper using 128 character set. Also includes national character sets and line drawing set. 2673A printer is NOT supported by HP 1000 Graphics software.	80 normal, 132 compressed, 40 expanded	7 x 11	120 cps bidirectional	216 mm (8.5 in) wide fan-fold roll-fed thermal paper, page perforated or continuous	**For A/L-Series,** use 1/14 of 12009A interface & 10833x or 31389x cable.
DOT-MATRIX LINE PRINTER for HP 1000 M/E/F-Series Systems						
9876A Thermal Graphics Printer	Dot-matrix thermal printing, using 128 character set. Seven additional international character sets are software-selectable. 9876A is NOT supported by HP 1000 Graphics software. Commands for top of form and other line printer functions are not the same as for 2608A, 2617A, and 2619A Line Printers.	80	5 x 7	90-480 LPM	216 x 279mm (8.5x 11in) English; 210 x 297mm (8.27x11.69in) Metric fan-fold thermal paper	**For M/E/F-Series,** use 1/14 of 59310B interface & 10833x or 31389x cable.

Graphics Devices Selection Guide

HEWLETT PACKARD

HP 1000 Peripheral Devices

Fourteen different graphics devices are supported by graphics software on HP 1000 A/L/M/E/F-Series Systems, as summarized in the capability and performance comparison on the next page. Other graphics peripherals may be connected to HP 1000 Systems, but are not listed here because they are not currently supported by the 92841A Graphics/1000-II Device-Independent Graphics Library (DGL) or the 92840A Graphics/1000 (mature) Graphics Plotting Software (GPS) package. Devices not listed in Table 1 may become supported under DGL after the publication of this selection guide, so if interested in using a different graphics device, check with your Hewlett-Packard Sales Representative to determine its current support status under DGL. For information on Graphics/1000-II software, see the HP 1000 Software Technical Data book, which is available from your Hewlett-Packard Sales Representative.

HP 1000 Graphics Devices Capability and Performance Comparison

Graphics Device Product No. and Name	HP 1000 Software-Supported Capabilities	Graphics or Media Area	Addressable Resolution	Display, Plotting or; Digitizing Speed‡	Required Interface and Graphics Software Support
SOFT COPY DEVICES for HP 1000 A/L/M/E/F-Series Systems					
1351S Graphics Display System	High resolution Graphics Translator (1351A) with storage for 8192 vectors and/or characters in 64 addressable memory files, and 8 brightness levels, driving a 14-in (std), 17-in (Opt. 510, or 21-in (Opt. 521) fast, direct-writing CRT display.	Quality area is 216x216mm (8.5x8.5in) std; 254x254mm (10x10in) Opt. 517; 279x279 mm (11x11in) Opt. 510; 305x 305mm (12x12 in) Opt. 523.	1021 x 1021 points	1600 vectors/sec (DGL), 525 vectors/ sec (AGP),	**For A/L-Series,** use 1/14 of 12009A and 10833x or 31389x cable; supported under GII. **For M-E/F-Series,** use 1/14 of 59310B and 10833x or 31389x cable; supported under GII.
2623A (or 2629G OEM) Graphics Terminal	Fast raster-scan graphics output.	215 x 164mm (8.5 x 6.5in)	512 col x 390 rows	210 vectors/sec (DGL or AGP)	**For A/L-Series,** use 12005A with Opt. 001 cable; supported under GII. **For M/E/F-Series,** use 12966A with std. cable and 13222C cable, or 12792A mpxer chan conn via 12828A mpxer panel and 13222Y cable; supported under GII.
2647A (or 2649G OEM) Intelligent Graphics Terminal	Fast raster-scan graphics output.	254 x 127mm (10 x 5in)	720 col x 360 rows	130 vectors/sec (DGL or AGP), 40 vectors/sec (GPS)	**For A/L-Series,** use 12005A with Opt. 005 cable; supported under GII. **For M/E/F-Series,** use 12966A with Opt. 001 cable, or 12792A mpxer chan conn via 12828A mpxer panel and 13232A/Y cable; supported under G and GII.
2648A (or 2649C OEM) Graphics Terminal	Fast raster-scan graphics output.	254 x 127mm (10 x 5in)	720 col x 360 rows	130 vectors/sec (DGL or AGP), 40 vectors/sec (GPS)	
HARD COPY DEVICES for HP 1000 A/L/M/E/F-Series Systems					
7220C Graphics Plotter	RS-232-C Eight-pen plotter with HP-GL programming	285 x 400mm (11.2 x 15.75in)	0.025mm (0.001in)	360mm/sec (14ips) in each axis; 509mm/sec 20ips) along 45° vector	**For M/E/F-Series,** use 12966A with Opt. 004 and 264x or 2635A/B+051 terminal
7220T Graphics Plotter	7220C as above with programmable paper advance	Same as 7220C	Same as 7220C	Same as 7220C	Same as 7220C
7221C Graphics Plotter	RS-232-C Eight-pen plotter with compacted binary programming	Same as 7220C	Same as 7220C	Same as 7220C	Same as 7220C
7221T Graphics	7221C as above with programmable paper advance	Same as 7220C	Same as 7220C	Same as 7220C	Same as 7220C

GII = Supported by the 92841A Graphics/1000-II Device-Independent Graphics Library (DGL), which is basic to all Graphics/1000-II software.

G = Support by the 92840A GRAPHICS/1000 Graphics Plotting Software (GPS) package.

‡ *These speeds are based on operation in HP 1000 F-Series computer with parity memory, use of 100 word buffers, assuming one move followed by 4000 maximum-length draws, clipping features turned off for GPS and AGP, use of unbuffered EQTs. Device initialization and termination times are excluded. Actual speeds realized under system control will depend on the application and overall activity in the system. Speed in A700 Computer with floating point should be as fast as F-Series. A600/L/M/E-Series speeds wilbe slower.*

HP 1000 Graphics Devices Capability and Performance Comparison, Cont'd.

Graphics Device Product No. and Name	HP 1000 Software-Supported Capabilities	Graphics or Media Area	Addressable Resolution	Display, Plotting or; Digitizing Speed‡	Required Interface and Graphics Software Support
HARD COPY DEVICES for HP 1000 A/L/M/E/F-Series Systems, continued					
7470A+002 Graphics Plotter	Low-priced, two-pen plotter	210 x 297mm (ISO A4) or 8.5 x 11 in (ANSI A)	0.025mm (0.001 in)	381mm/sec (15ips) independent of vector direction	**For A/L-Series,** use 1/14 of 12009A and 10833x or 31389x cable, supported under GII
7580A+002 Drafting Plotter	Eight-pen plotter for fast, versatile drawing on paper sizes from A through D.	203 x 267mm (8 x 10.5in) to 622 x 1190mm (24.5 x 46.85in)	0.025mm (0.001in)	600mm/sec (24ips) independent of vector direction.	**For M/E/F-Series,** use 1/14 of 59310B and 10833x or 31389x cable, supported under GII.
9872C Graphics Plotter	Eight-pen plotter for multi-color, multi-line width plotting.	285 x 400mm (11.2 x 15.75in)	0.025mm (0.001in)	360mm/sec (14ips) in each axis; 509mm/sec (20ips) along 45° vector.	
9872T Graphics Plotter	9872C as above with programmable paper advance.	Same as 9872C	Same as 9872C	Same as 9872C	
2608A Line Printer	Dot-matrix raster printing	335 x 1082mm (13.2 x 42.5in)	0.36mm (0.014in) horizontal, 0.35mm (0.138in) vertical	40 dot rows per second or 14mm (0.55in) per second down the full sheet width	**For M/E/F-Series,** use 2608A Opt. 210 or 26099A; supported under G and GII.
7225B+ 17601A Graphics Plotter	Single-pen plotting, multi-color with manual pen change.	203 x 285mm (8 x 11.2 in)	0.025mm (0.001in)	250mm/sec (10ips) in each axis; 350mm/sec (13.8 ips along 45° vector	**For M/E/F-Series,** use 17601A Plotter Personality module, 59310B interface, & 10833x or 31389x cable; supported under G.
7245B Plotter/ Printer	Quiet thermal plotter for quality vector-drawn graphs or 38 char/sec dot-matrix printing.	188mm x 5m† (7.4in x 16.4ft)	0.025mm (0.001in)	256mm/sec (10.1ips) in each axis, 363mm/sec (14.3ips) along 45° vector	**For M/E/F-Series,** use 1/14 of 59310B and 10833x or 31389x cable; supported under G.
INPUT DEVICES for HP 1000 A/L/M/E/F-Series Systems					
9111A+100 Graphics Tablet	Operator input for interactive graphics system. Option 050 adds capability for direct interaction with 1351S Graphics Display System.	218 x 300.8mm (8.6 x 11.8 in)	0.1mm (0.004in)	60 points/sec	**For M/E/F-Series,** use 1/14 of 59310B and 10833x or 31389x cable; supported under GII.
9874A Digitizer Plotter	Provides for manual tracing of graphic images or chart traces in either a continuous or manually-triggered mode for entry of digital coordinates of traced data.	315 x 435mm (12.4 x 17.13in)	0.025mm (0.001in)	30 points/sec	**For A/L-Series,** use 1/14 of 12009A and 10833x or 31389x cable; supported under G and GII. **For M/E/F-Series,** use 1/14 of 59310B and 10833x or 31389x cable; supported under G and GII.

GII = Supported by the 92841A Graphics/1000-II Device-Independent Graphics Library (DGL), which is basic to all Graphics/1000-II software.

G = Support by the 92840A GRAPHICS/1000 Graphics Plotting Software package.

‡ *These speeds are based on operation in HP 1000 F-Series computer with parity memory, use of 100 word buffers, assuming one move followed by 4000 maximum-length draws, clipping features turned off for GPS and AGP-3, use of unbuffered EQTs. Device initialization and termination times are excluded. Actual speeds realized under system control will depend on the application and overall activity in the system. Speed in A700 Computer with floating point should be as fast as F-Series. A600/L/M/E-Series speeds will be slower.*

† *The 92840A GRAPHICS/1000 Graphics Plotting Software supports a maximum 7245B Plotter/Printer graphics area of 188 x 270mm (7.4 x 10.6 in).*

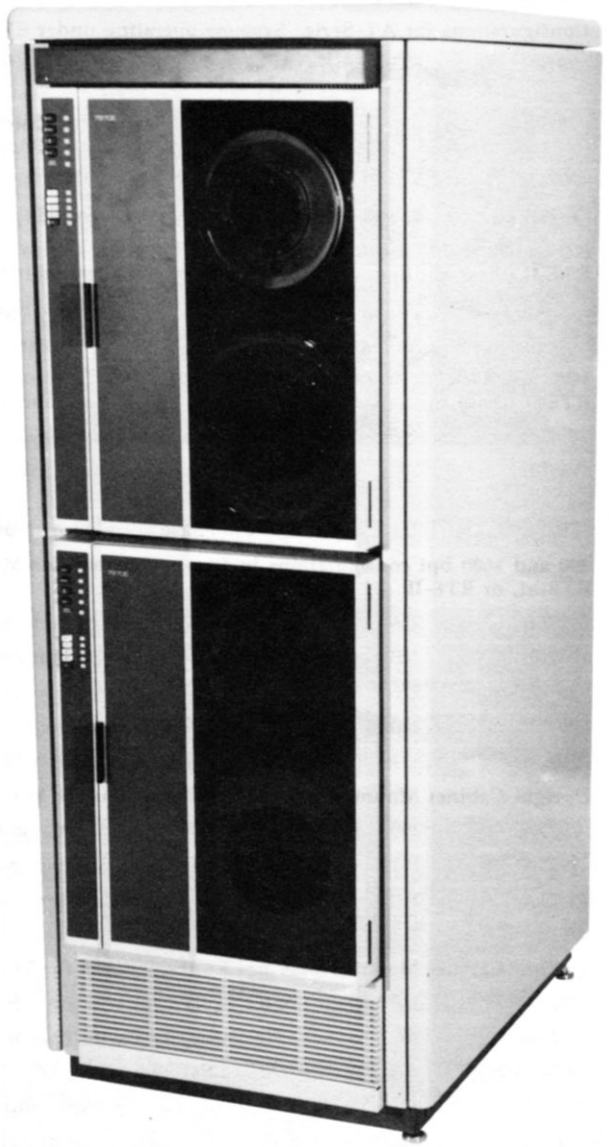
‡‡ *HP 9111A Graphics Tablets with serial number 2001 and above are supported for A/L-Series use. 135xS interaction option 050 to the 9111A is not supported in A/L-Series, but does not affect A/L-Series compatibility.*

Mag tape units for M/E/F-series systems

HP 1000 M/E/F-Series Computer Systems can be equipped with 7970B 800 bpi NRZI or 7970E 1600 bpi Phase-Encoded (P.E.) Magnetic Tape Units for disc backup and other mass storage uses. These tape units are supported under the RTE-6/VM, RTE-IVB, RTE-IVE, RTE-M, and RTE-II real-time executive operating systems. They require two computer I/O channels, which can serve up to four mag tape drives. They are available one or two drives to an upright cabinet (ordered as 7971A product number with appropriate options) or in rack-mountable or low-profile cabinet configuration (7970B/E). The first (subsystem) drive and the required HP 1000 M/E/F-Series two-card interface plus cable and subsystem manual are ordered as a simple 7970B/E option. Each of up to three add-on drives with daisy-chain cable only is ordered in the same way.

Mag tape units for A/L-Series systems

HP 1000 A/L-Series Computer Systems operating under RTE-A.1/XL can be equipped with a 7970E 1600 bpi Phase-Encoded (P.E.) Magnetic Tape Unit in either rack mountable or low-profile cabinet configuration or in a 7971A option 140 or 141 upright cabinet configuration. All configurations are interfaced via a 12009A HP-IB Interface Card.



Mag tape units specifications

	Mag Tape Product No.	
Specifications	**7970B**	**7970E**
Formats	9-track NRZI	9-track Phase-Encoded
Density	800 bpi	1600 bpi
Tape Speed	45 ips	45 ips
Max. Data Rate	36 kb/sec	72 kb/sec
Rewind Speed	160 ips	160 ips

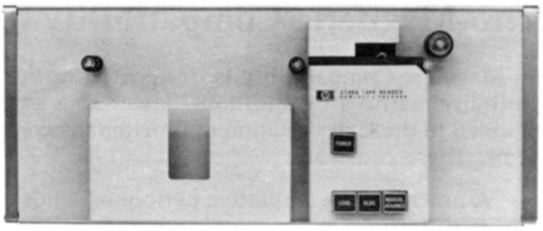
HP 1000 Magnetic Tape Configurations Summary

Product Number	Option Number	Provides
Configurations for A/L-Series Systems operating under RTE-A.1/XL		
7970E	626	1600 bpi Phase-Encoded Master HP-IB Tape Unit in low-boy cabinet; requires 1/14 of 12009A HP-IB interface
7970E	636	1600 bpi Phase-Encoded Master HP-IB Tape Unit without cabinet; requires 1/14 of 12009A HP-IB interface and user-furnished cabinet space
7971A	140	One 7970E Master HP-IB Tape Unit in upright cabinet; requires 1/14 of 12009A HP-IB interface
7971A	144	Two 7970E Master HP-IB Tape Units in upright cabinet; requires 2/14 of 12009A HP-IB interface
800 bpi Rack Mounting Configurations for M/E/F-Series Systems operating under RTE-6/VM, RTE-IVB, RTE-IVE, RTE-M, or RTE-II (these configurations require user-furnished cabinet space)		
7970B	236	800 bpi NRZI Master Magnetic Tape Subsystem with one drive and two-card 13181B interface
7970B	230	800 bpi NRZI Add-on Master Magnetic Tape Drive (max. of 4 drives per 7970B+236 subsystem)
1600 bpi Rack Mounting Configurations for M/E/F-Series Systems operating under RTE-6/VM, RTE-IVB, RTE-IVE, RTE-M, or RTE-II (these configurations require user-furnished cabinet space)		
7970E	236	1600 bpi Phase Encoded Magnetic Tape Subsystem with one Master drive and 13183B two-card interface
7970E	230	1600 bpi Phase Encoded Add-on Master Magnetic Tape Drive (max. of 4 drives per 7970E+236 Subsystem)
7970E	231	1600 bpi Phase Encoded Add-on Slave Magnetic Tape Drive (max. of 4 drives per 7970E+236 Subsystem)
800 and 1600 bpi configurations in low-boy cabinet for M/E/F-Series Systems operating under RTE-6/VM, RTE-IVB, RTE-IVE, RTE-M, or RTE-II		
7970B	226	Same as 7970B with option 236, but in low-boy cabinet
7970B	220	Same as 7970B with option 230, but in low-boy cabinet
7970E	226	Same as 7970E with option 236, but in low-boy cabinet
7970E	220	Same as 7970E with option 230, but in low-boy cabinet
7970E	221	Same as 7970E with option 231, but in low-boy cabinet
Upright Cabinet Mounted 800 bpi Configurations for M/E/F-Series Systems operating under RTE-6/VM, RTE-IVB/IVE/M/II		
7971A	250	7970B Subsystem with one master drive in upright cabinet and 13181B two-card interface
7971A	251	7970B Subsystem with two master drives in upright cabinet and 13181B two-card interface
7971A	210	One 7970B Add-on master drive in upright cabinet (max. of 4 drives per subsystem)
7971A	211	Two 7970B Add-on master drives in upright cabinet (max. of 4 drives per subsystem)
Upright Cabinet Mounted 1600 bpi Configurations for M/E/F-Series Systems operating under RTE-6/VM, RTE-IVB/IVE/M/II		
7971A	260	7970E Subsystem with one master drive in upright cabinet and 13183B two-card interface
7971A	262	7970E Subsystem with two master drives in upright cabinet and 13183B two-card interface
7971A	263	7970E Subsystem with one master and one slave drive in upright cabinet and 13183B interface
7971A	220	One 7970E Add-on master drive in upright cabinet (max. of 4 drives per subsystem)
7971A	222	Two 7970E Add-on master drives in upright cabinet (max. of 4 drives per subsystem)
7971A	230	One 7970E Add-on slave drive in upright cabinet (max. of 4 drives per subsystem)
7971A	233	Two 7970E Add-on slave drives in upright cabinet (max. of 4 drives per subsystem)
Upright Cabinet Mounted Configurations with both 800 bpi and 1600 bpi Drives for M/E/F-Series Systems operating under RTE6/VM, RTE-IVB/RTE-IVE, RTE-M, or RTE-II		
7971A	256	One 7970B and one 7970E Master subsystem in upright cabinet with 13181B and 13183B interfaces
7971A	212	One 7970B Add-on master drive and one 7970E add-on slave drive in upright cabinet (max. of 4 drives per subsystem)

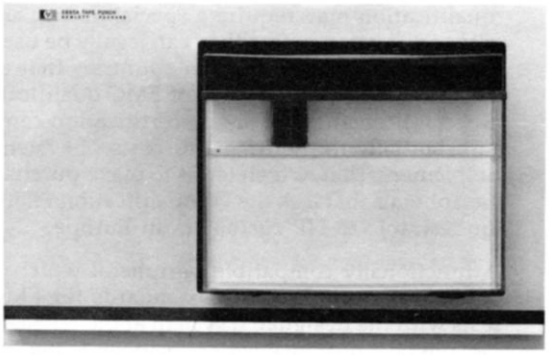
Punched Tape and Punched Card Peripherals Summary

HEWLETT PACKARD

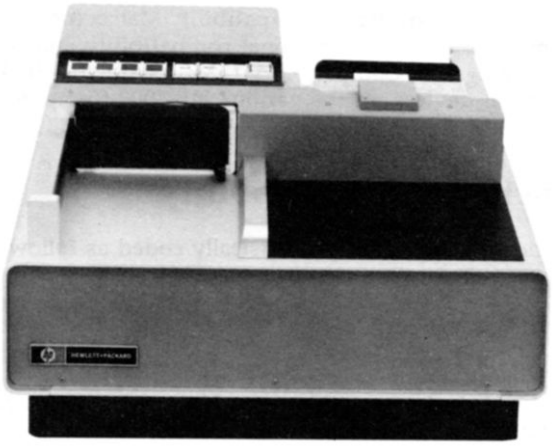
HP 1000 Peripheral Devices



12925A Punched tape reader subsystem



12926A Tape punch subsystem



12985A Card Reader Subsystem

HP 1000 M/E/F-Series Systems can be equipped with any of the punched tape or punched card peripherals shown on this page. Each of these is provided as a subsystem that includes a computer interface. Performance is summarized in the Table below.

Table 1. HP 1000 M/E/F-Series Punched Tape and Punched Card Peripherals Summary

Product No. and Name	HP 1000 Software-Supported Capabilities	Media Description	Data Rate	Other Characteristics
PUNCHED TAPE PERIPHERALS				
12925A Punched Tape Reader Subsystem	Reads 8-level code on punched tape	2.5cm (1-inch) tape with transmissivity less than 60%	500 char/sec (60 Hz), 415 char/sec (50 Hz)	Starts in less than 6 ms, stops in less than 500 ms
12926A Tape Punch Subsystem	Punches tape, either 8-level or 5-level output	2.5cm (1 in) wide paper, plastic, or mylar tape (8-level), 1.65cm (0.96 in) wide tape (5-level)	75 char/sec	Thickness: 0.08mm (0.003in) to 0.13mm (0.005in) for paper tape, to 0.1mm (0.004in) for mylar tape, to 0.11m (0.0045in) for plastic tape
PUNCHED CARD READER				
12985A Punched Card Reader Subsystem	Reads punched cards	Standard 80-column EIA tab card	600 cards/min	1000-card hopper/stacker, card life in excess of 1000 passes

Compatibility of Peripherals in HP 1000 Computer Systems

HEWLETT PACKARD

The HP 1000 Peripherals Compatibility Matrix (next page) summarizes both the functional compatibility and the Electro-Magnetic Compatibility (EMC) status of HP 1000 peripheral devices on the various HP 1000 Computer Systems.

Functional Compatibility

Functional compatibility is basically coded as follows:

C = Compatible

N = Not compatible

Nt = Not Tested

Peripheral devices designated as **Nt** may in fact be functionally compatible, but at the time of publication of the compatibility matrix, HP takes no responsibility for their degree of compatibility. Relatively new **Nt** peripherals may later be tested and designated as compatible, but until such testing has been completed and a **C** designation given to a peripheral, establishing and maintaining its compatibilty is the responsibility of the customer who wishes to use the **Nt** item.

Qualifications required for compatibility and/or further compatibility information is provided in numbered **C** and **N** footnotes and additional footnotes not keyed to **C** or **N** designation.

Electro-Magnetic Compatibility

Electro-Magnetic Compatibility is designated in the compatibility matrices by additional lower-case letter codes added to the **C** designation of functionally compatible items. These codes are:

Cz = A functionally-compatible peripheral whose EMC qualification in Germany is attested by its having been included in or added to the FTZ license for the designated system. Peripherals without the **Cz** qualification may require a special license and/or site certification before they can legally be used in Germany or other European countries that use FTZ licensing as a standard of EMC qualification. Special licensing and/or site certification can add substantially to the time and costs of system implementation, which tends to make purchase of peripherals that lack the **Cz** qualification relatively undesirable to HP customers in Europe.

Cc = A functionally compatible peripheral which has successfully met U.S. FCC standards for EMC in tests with the designated system at the HP factory. Peripherals introduced since October 1, 1981 must meet FCC standards prior to shipment to U.S. Customers. Other peripherals that do meet FCC standards for EMC cannot be shipped to U.S. Customers after October 1, 1983.

Ccz = A functionally compatible peripheral which meets both the **Cc and Cz** EMC qualifications.

Cn = A functionally compatible peripheral which has not been EMC qualified with the designated system. As noted above, peripherals designated **Cn** can be shipped to U.S. customers until October 1, 1983 with no current time limit on how long customers can continue to use them.

HP 1000 Peripherals Compatibility Matrix

LEGEND:
Cc = Compatible and qualified under FCC EMC standards
Cz = Compatible and FTZ licensed
Ccz = Compatible, qualified under FCC EMC standards, and FTZ licensed
Cn = Compatible, but not EMC qualified
C = Compatible or supported without reference to EMC qualification
N = Not compatible
Nt = Not tested

PRODUCT AND OPTION NUMBERS	DESCRIPTION	HP 1000 SYSTEMS COMPATIBILITY							OPERATING SYSTEM COMPATIBILITY				
		MODEL 5	MODEL 6	MODEL 16	MODEL 17	MODEL 40/45	MODEL 60	MODEL 65	RTE-A.1	RTE-L	RTE-XL	RTE-IVB	RTE-6/VM
1. OPERATOR COMMUNICATION TERMINALS													
2382A/2389B	Office Display Terminal/OEM Office Display Terminal	Cn	Cn	Ccz	Ccz	Cn	Cn	Cn	C	C	C	C1	C1
2621B*/2629L*	Interactive Terminal/OEM Interactive Terminal without option 050 printer	Ccz	Ccz	Cz	Cz	Cn	Cn	Cn	C	C	C	C1	C1
2622A*/2629E*	Display Terminal/OEM Display Terminal	Cn	Cn	Cn	Cn	Cn	Cn	Cn	C	C	C	C1	C1
2623A*/2629G*	Graphics Terminal/OEM Graphics Terminal without option 050 printer	Ccz	Ccz	Ccz	Ccz	Cn	Cn	Cn	C	C	C	C1	C1
2624B*/2629F*	Display Station/OEM Display Station	Cn	Cn	Cn	Cn	Cn	Cn	Cn	C	C	C	C1	C1
2626A*/2629D*	Display Station/OEM Display Station	Cn	Nt	Nt	Nt	Cn	Cn	Cn	C	C	C	C2	C2
2635B	Printing Terminal	Cn	Cn	Ccz	Ccz	Cn	Cn	Cn	C	C	C	C2	C2
2642A	Enhanced Display Station with Minifloppy disc	Cn	Nt	Nt	Nt	Cn	Cn	Cn	Nt	C	C	C2	C2
2642A+070	Enhanced Display Station with Mini cartridge tape I/O	Cn	Nt	Nt	Nt	Cn	Cn	Cn	Nt	C	C	C	C
2645A/2649B	Display Station/OEM Display Station	Cn	Nt	Nt	Nt	Cn	Cn	Cn	Nt	C	C	C2	C2
2645A+007/ 2649B+007	Display Station/OEM Display Station with Mini cartridge I/O	Cn	Nt	Nt	Nt	Cn	Cn	Cn	Nt	C	C	C	C
2647A/2649G	Intelligent Graphics Terminal/OEM Intelligent Graphics Terminal	Cn	Nt	Nt	Nt	Cn	Cn	Cn	Nt	C	C	C	C
2647F	Intelligent Graphics Terminal with Minifloppy disc	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt
2648A/2649C	Graphics Terminal/OEM Graphics Terminal	Cn	Nt	Nt	Nt	Cn	Cn	Cn	Nt	C	C	C2	C2
2648A+007/ 2649C+007	Graphics Terminal/OEM Graphics Terminal with Mini-cartridge I/O	Cn	Nt	Nt	Nt	Cn	Cn	Cn	Nt	C	C	C	C
2. DATA CAPTURE TERMINALS													
3075A	Desktop Data Capture Terminal	N	N	N	N	Cn	Cn	Cn	N	N	N	C3	C3
3076A	Wall-mounting Data Capture Terminal	N	N	N	N	Cn	Cn	Cn	N	N	N	C3	C3
3077A	Time Reporting Terminal	N	N	N	N	Cn	Cn	Cn	N	N	N	C3	C3
3078A	Data Coupler	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt
3. DISC MEMORIES													
7906H/HR+020	19.6Mb Cartridge ICD Memory	Cn	Nt	Nt	Nt	Cn	N	N	Nt	C	C	C	C
7906M/S	19.6Mb MAC Master/Slave Cartridge Disc Memory	N	N	N	N	Cn	Cn	Cn	N	N	N	C	C
7908P	16.5Mb Fixed Disc w/built-in cartridge tape backup	Ccz	Ccz	Ccz	Ccz	N	Cn	Cn	C	N	C	N	C
7908R	16.5Mb Fixed Disc w/built-in cartridge tape backup	N1	N1	Ccz	Ccz	N	N2	N2	C	N	C	N	C
7911P	28.1Mb Fixed Disc w/built-in cartridge tape backup	Ccz	Ccz	Ccz	Ccz	N	Cn	Cn	C	N	C	N	C
7911R	28.1Mb Fixed Disc w/built-in cartridge tape backup	N1	N1	Ccz	Ccz	N	N2	N2	C	N	C	N	C
7912P	65.6Mb Fixed Disc w/built-in cartridge tape backup	Ccz	Ccz	Ccz	Ccz	N	Cn	Cn	C	N	C	N	C
7912R	65.6Mb Fixed Disc w/built-in cartridge tape backup	N1	N1	Ccz	Ccz	N	N2	N2	C	N	C	N	C
7920H/7925H	50Mb/120Mb ICD Memory	Nt	Nt	Nt	Nt	Cn	N	N	Nt	Nt	Nt	C	C
7920/25M & S	MAC Master and Slave Disc Memories	N	N	N	N	Cn	Cn	Cn	N	N	N	C	C
7933H	404Mb Fixed Disc	Nt	Nt	Nt	Nt	N	Cn	Cn	N	N	N	N	C
9134A**	4.6Mb Mini Winchester Disc	Ccz	Ccz	N	N	N	N	N	C	N	C	N	N
9135A	4.6Mb Mini Winchester and Minifloppy Discs	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt
9138A	4.6Mb Mini Winchester and Flexible Discs	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt
9895A	2.35Mb Master Dual Flexible Disc Drive	Ccz	Ccz	Ccz	Ccz	Cn	Cn	Cn	C	C	C	C	C

* = This terminal is usable as system console for Model 5/6 Microsystem when ordered with compatibility option 090.
** = Usable only in 2142A or 2186A Microsystem for which built-in Minifloppy discs provide a software and diagnostics load device.
C1 = This terminal is usable as a system console if a 264x terminal with Mini cartridge I/O and 12966A+001 interface are available at the system site for loading of diagnostics and software updates. Connector hood at the 12966A interface may have to be restrapped to hard-wire the terminal baud rate.
C2 = This terminal is usable as a system console if a 264x terminal with Mini cartridge I/O and 12966A+001 interface are available at the system site for loading of diagostics and software updates.
C3 = Compatible when 91730A Multipoint/Data Link software is also provided.
N1 = Functionally compatible, but is a rack mountable version not intended for use with tabletop Microsystems.
N2 = Functionally compatible rack mountable version not currently available with Model 60 and 65 Systems.

HP 1000 Peripherals Compatibility Matrix, continued

LEGEND:
Cc = Compatible and qualified under FCC EMC standards
Cz = Compatible and FTZ licensed
Ccz = Compatible, qualified under FCC EMC standards, and FTZ licensed
Cn = Compatible, but not EMC qualified
C = Compatible or supported without reference to EMC qualification
N = Not compatible
Nt = Not tested

PRODUCT AND OPTION NUMBERS	DESCRIPTION	HP 1000 SYSTEMS COMPATIBILITY							OPERATING SYSTEM COMPATIBILITY				
		MODEL 5	MODEL 6	MODEL 16	MODEL 17	MODEL 40/45	MODEL 60	MODEL 65	RTE-A.1	RTE-L	RTE-XL	RTE-IVB	RTE-6/VM
4. MAGNETIC TAPE UNITS													
7970E+636	Rack Mtg 1600 bpi, 9-tr Phase Encoded Mag Tape Subsys.	N1	N1	Cn	Cn	N	N	N	C	C	C	N	N
7970B+236	Rack Mtg 800 bpi, 9-tr NRZI Mag Tape Subsystem	N	N	N	N	Cn	Cn	Cn	N	N	N	C	C
7970E+236	Rack Mtg 1600 bpi, 9-tr Phase-Encoded Mag Tape Subsys.	N	N	N	N	Cn	Cn	Cn	N	N	N	C	C
7971A+140/144	One or two 7970E+636 Mag Tape Subsystems in cabinet	Nt	Nt	Nt	Nt	Nt	Nt	Nt	C	C	C	N	N
7971A+2xx	One or two 7970B/E Mag Tape Units in cabinet with 13181B and/or 13183B interface	N	N	N	N	Cn	Cn	Cn	N	N	N	C	C
5. PRINTERS													
2601A	40 cps Daisywheel Printer	Cn	Cn	Cn	Cn	Cn	Cn	Cn	C	C	C	C	C
2608A+210	400 lpm Line Printer (includes interface)	N	N	N	N	Cn	Cn	Cn	N	N	N	C	C
2608S+210	400 lpm Line Printer (requires 12821A+001 interface)	N	N	N	N	Cn	Cn	Cn	N	N	N	C	C
2608S+214	400 lpm Line Printer (requires 12009A interface)	Nt	Nt	Nt	Nt	N	N	N	Nt	Nt	Nt	N	N
2617A	600 lpm Line Printer	N	N	N	N	Cn	Cn	Cn	N	N	N	C	C
2619A	1000 lpm Line Printer	N	N	N	N	Cn	Cn	Cn	N	N	N	C	C
2631B+210	180 cps (impact) Printer (includes interface)	N	N	N	N	Cn	Cn	Cn	N	N	N	C	C
2631B+214	180 cps (impact) Printer (requires 12009A interface)	Cn	Cn	Cz	Cz	N	N	N	C	C	C	N	N
2671A	120 cps (thermal) Printer	Cz	Cz	Cz	Cz	Nt	Nt	Nt	C	C	C	Nt	Nt
2671G	120 cps (thermal) Graphics Printer	Cz	Cz	Cz	Cz	Nt	Nt	Nt	C	C	C	Nt	Nt
2673A	120 cps Intelligent (thermal) Graphics Printer	Cz	Cz	Cz	Cz	Nt	Nt	Nt	C	C	C	Nt	Nt
82905B	80 cps Impact Printer	Ccz	Ccz	Ccz	Ccz	Nt	Nt	Nt	C	C	C	Nt	Nt
9876A	Thermal Graphics Printer	Nt	Nt	Nt	Nt	Cn	Cn	Cn	Nt	Nt	Nt	C	C
6. GRAPHICS SOFTWARE-SUPPORTED GRAPHICS DEVICES													
1351S	Graphics Display System	Cn	Nt	Nt	Nt	Cn	Cn	Cn	Nt	C1	C1	C1	C1
2623A*/2629G*	Graphics Terminal/OEM Graphics Terminal without option 050 printer	Ccz	Ccz	Ccz	Ccz	Cn	Cn	Cn	C1	C1	C1	C1	C1
2647A/2649G	Intelligent Graphics Terminal/OEM Intelligent Graphics Terminal with Mini cartridge I/O	Cn	Nt	Nt	Nt	Cn	Cn	Cn	Nt	C1	C1	C1	C1
2647F	Intelligent Graphics Terminal with Minifloppy disc	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt
2648A/2649C	Graphics Terminal/OEM Graphics Terminal	Cn	Nt	Nt	Nt	Cn	Cn	Cn	Nt	C1	C1	C1	C1
7220C/T	RS-232 Graphic Plotter w/8 pens & HP/GL programming	N	N	N	N	Cn	Cn	Cn	N	N	N	C1	C1
7221C/T	RS-232 Graphic Plotter w/8 pens & compacted binary programming	N	N	N	N	Cn	Cn	Cn	N	N	N	C1	C1
7225B+17601A	Graphics Plotter (one pen)	Cn	Nt	Nt	Nt	Cn	Cn	Cn	Nt	C1	C1	C1	C1
7245B	Plotter/Printer	Nt	Nt	Nt	Nt	Cn	Cn	Cn	Nt	Nt	Nt	C2	C2
7470A+002	Graphics Plotter (two pens)	Ccz	Ccz	Ccz	Ccz	Cn	Cn	Cn	C1	C1	C1	C1	C1
7580A+002	Drafting Plotter (eight pens)	Cz	Cz	Ccz	Ccz	Cn	Cn	Cn	C1	C1	C1	C1	C1
9111A	Graphics Tablet	N2	N2	N2	N2	Cn	Cn	Cn	N2	N2	N2	C1	C1
-050	Adds capability for interactive use with 1351S	N	N	N	N	C	C	C	N	N	N	C1	C1
9872C/T	Graphics Plotter (eight pens)	Cz	Cz	Ccz	Ccz	Cn	Cn	Cn	C1	C1	C1	C1	C1
9874A	Digitizer	Cn	N	N	N	Cn	Cn	Cn	N	C1	C1	C1	C1
7. OTHER PERIPHERAL DEVICES													
12925A	Punched Tape Reader Subsystem	N	N	N	N	Cn	Cn	Cn	N	N	N	C	C
12926A	Tape Punch Subsystem	N	N	N	N	Cn	Cn	Cn	N	N	N	C	C
12985A	Punched Card Reader Subsystem	N	N	N	N	Cn	Nt	Nt	N	N	N	C	Nt

C1 = Compatible when 92841A Graphics/1000-II Device-Independent Graphics Library is also provided.
C2 = Compatible when 92840A Graphics/1000 Graphics Plotting Software is also provided.
N1 = Functionally compatible, but is a rack mountable version not intended for use with tabletop Microsystems
N2 = 9111A Graphics Tablet cannot be used dependably with Model 5, 6, 16, or17 in default Binary Data Transfer mode.
* = Use as system console in Model 5 or 6 Microsystem requires 262x terminal option 090.

HP 1000 Peripherals Power Requirements

Product Number and Name	Max. AC Power	Voltage Limits (V)		Frequency Limits (Hz)	
		115V	(230V)	60 Hz	50 Hz
12925A Punched Tape Reader Subsystem	240W	104-126	(207-253)	57-63	(47.5-52.5)
12926A Tape Punch Subsystem	300VA	90-126†	(198-264)*	47.5-100	(47.5-100)
12985A Card Reader Subsystem	460VA	104-126	(207-253)	58.8-61.2	(49-51)
1351S Graphics Display System	215VA	108-126	(207-252)*	48-66	(48-66)
2382A (or 2389B OEM) Office Display Terminal	80W	90-126†	(198-252)	59-61	(49-51)
2601A Daisywheel Printer	180W	85-132†	(187-264)*	49-61	(49-61)
2608A/S Line Printer	1500VA	90-126†	(196-252)*	48-66	(48-66)
2617A Line Printer	702W	104-126	(198-264)*	58.8-61.2	(49-51)
2619A Line Printer	1500VA	90-126	(207-253)	59-61	(49-51)
2621B (or 2629L OEM) Interactive Terminal	50W‡	86-126	(173-253)	57-63	(47.5-52.5)
Other 262x Terminals	120W‡	90-126†	(198-252)*	57-63	(47.5-52.5)
2631B Printer	265VA	88-132	(194-264)*	48-66	(48-66
2635B Printing Terminal	220VA	88-132	(194-264)*	48-66	(48-66)
2642A Enhanced Display Station	150W	89-126	(196-253)	58.8-61.2	(49.0-51.0)
2645A (or 2649B OEM) Display Station	140W	89-126	(196-253)	58.8-61.2	(49.0-50.0)
2647A (or 2649G OEM) Intelligent Graphics Terminal	170W	89-126	(196-253)	58.8-61.2	(49.0-51.0)
2648A (or 2649C OEM) Graphics Terminal	150W	88-126	(196-253)	58.8-61.2	(49.0-51.0)
2671A/G Printer/Graphics Printer	50W	90-126†	(198-252)*	47-66	(47-66)
2673A Intelligent Graphics Printer	75W	90-126†	(198-252)*	47-66	(47-66)
3074A/M Data Link Adapter	11W	87-126	(173-253)	48-66	(48-66)
3075A/3076A/3077A Data Capture Time Reporting Terminal	90W‡‡	87-126	(173-253)	48-66	(48-66)
3077A Time Reporting Terminal	90W‡‡	87-126	(173-253)	48-66	(48-66)
37203A HP-IB Extender	25VA	90-126†	(198-253)*	48-66	(48-66)
7220/1xC/T 8-pen, RS-232-C Graphics Plotter	180W	90-126†	(198-252)*	48-66	(48-66)
7225B Graphics Plotter	100W	90-126†	(198-252)*	48-66	(48-66)
7245B Plotter/Printer	300W	90-126†	(198-252)*	48-66	(48-66)
7470A (2-Pen) Plotter	25W	90-126†	(196-252)*	48-66	(48-66)
7580A Drafting Plotter	170W	90-126†	(198-252)*	48-66	(48-66)
7906H/S 19.6M byte ICD/MAC Slave disc in cabinet	520W	90-126†	(198-252)*	48-66	(48-66)
7906M 19.6M byte MAC Master disc in cabinet	740W	90-126†	(198-252)*	48-66	(48-66)
7906MR rack-mounting 19.6M byte MAC Master disc	720W	90-126†	(198-252)*	48-66	(48-66)
7906SR rack-mounting 19.6M byte MAC Slave disc	500W	90-126†	(198-252)*	48-66	(48-66)
7908P/R 16.5M byte Fixed Disc	400W	88-127	(180-253)	48-66	(48-66)
7910/7910HR 12M byte Fixed disc	274W	90-126†	(198-252)*	48-66	(48-66)
7911/12P/R 28.1M byte/65.6M byte Fixed Disc	700W	90-126†	(198-252)*	54-66	(48-55)
7920M 50M byte MAC Master disc in cabinet	700W	90-126†	(198-252)*	48-66	(48-66)
7920S 50M byte MAC Slave disc in cabinet	480W	90-126†	(198-252)*	48-66	(48-66)
7925M 120M byte MAC Master disc in cabinet	600W	90-126†	(198-252)*	48-66	(48-66)
7925S 120M byte MAC Slave disc in cabinet	400W	90-126†	(198-252)*	48-66	(48-66)
7933H 404M byte Fixed Disc	1400W‡‡	90-132	(198-264)*	48-66	(48-66)
797xA/B/E Magnetic Tape Drives	400W	104-126	(207-253)	48-66	(48-66)
82905B Impact Printer	100W	90-132†	(198-264)*	48-66	(48-66)
9111A Graphics Tablet	25W	90-132	(198-264)*	48-66	(48-66)
9134A 4.6M byte Winchester Disc	140W	90-126†	(196-252)*	48-66	(48-66)
9872C/T 8-pen Graphics Plotter	180W	90-126†	(198-252)*	48-66	(48-66)
9874A Digitizer	176W	90-126†	(198-252)*	48-66	(48-66)
9876A Thermal Graphics Printer	155VA	90-132	(198-264)*	48-66	(48-66)
9895A Flexible Disc Memory	180W	90-132	(198-264)*	58.8-61.2	(49-51)

† *Range shown for 115V here includes user-selectable choice of 100V (90-105V) or 120V (108-126V) input. NOTE that there may be a gap between 105V and 108V.*

* *Range shown for 230V here includes user-selectable choice of 220V (198-231V) or 240V (216-252V) input plus the voltage tolerance.*

‡ *Option 050 integral printer adds 50W to 262x terminal power consumption.*

‡‡ *Denotes typical power requirement, not maximum.*

HP 1000 Peripherals Physical Characteristics

Product Number and Name	Dimensions (Height x Width x Depth) Centimeters and (inches)		Approx. Floor Space Recommended metres & (feet)	Net Weight kg & (lb)
12925A Punched Tape Reader Subsystem	17.8x48.3x40.6	(7x19x16)	Rack mounting	19.1(42)
12926A Tape Punch Subsystem	26.7x48.3x53.8	(10.5x19x21.2)	Rack mounting	22.7(50)
12985A Card Reader Subsystem	41.3x58.6x45.7	(16.3x23.1x18)	Table mounting	40.9(90)
1351S Graphics Display System	49.8x49.5x57.8	(19.6x19.5x22.8)	Table mounting**	40(88)
2382A (2389B OEM) Office Display Terminal	28.7x30.5x48.5	(11.3x12x19.1)	Table Mounting	10(22)
2601A Daisywheel Printer	25.3x61x48.1§	(10x24x19)§	Table mounting	26(57)
2608A/S Line Printer	104.2x68x55.5	(41x26.5x21.8)	1 x 3 (3 x 9)	97.7(215)
2617A Line Printer	114.5x83.8x66	(45x33x26)	1 x 3 (3 x 9)	168.2(370)
2619A Line Printer	108.5x92.7x66.1	(42.8x36.5x26)	2 x 3 (6 x 9)	259(570)
262x Terminals	44x38x66.5	(17.3x15x26.2)	Table mounting	21.3(47)
2631B Printer	21.5*x64x46.9	(8.5*x25.2x18.5)	1 x 2 (3 x 6)	24.1*(53*)
2635B Printing Terminal	21.5*x64x59.5	(8.5*x25.2x23.1)	1 x 2 (3 x 6)	25.9*(57*)
2642A Enhanced Display Station	34.3x44.5x64.8	(13.5x17.5x25.5)	Table mounting	29.5(65)
Each Flexible Mini Disc Drive of 2642A (one std)	12.8x18x28.8	(5.1x7.1x11.4)	Table mounting	4.4(9.7)
Other 264x Terminals	34.3x44.5x64.8	(13.5x17.5x25.5)	Table mounting	30.5(67)
2671A/G Printer/Graphics Printer	10.5x42.8x42.4	(4.1x16.9x16.7)	Table mounting	12.7(28)
2673A Intelligent Graphics Printer	10.5x42.8x42.4	(4.1x16.9x16.7)	Table mounting	14.1(31)
3074A/M Data Link Adapter	5x25x11	(2x9.9x4.4)	Table mounting	1(2.2)
3075A Data Capture Terminal	15.7x22.7x40	(6.2x10.9x15.7)	Table mounting	6.4(14)
3076A Data Capture Terminal	55x29x13	(21.7x11.4x5.1)	Wall mounting	10.5(23)
3077A Time Reporting Terminal	55x29x13	(21.7x11.4x5.1)	Wall mounting	10.5(23)
37203A HP-IB Extender	8.9x21.3x35.6	(3.5x8.4x14)	Table mounting	3.1(6.8)
7220/1C Graphics Plotter	18.8x49.5x47.5	(7.4x19.5x18.7)	Table mounting	17.7(39)
7220/1T Graphics Plotter	21x85.8x47.5	(8.3x33.8x18.7)	Table mounting	30(66)
7225B Graphics Plotter	14x41.3x37.9	(5.5x16.3x14.9)	Table mounting	8(17.6)
7245B Plotter/Printer	20.1x44.2x48.3	(7.9x17.4x19)	Table mounting	19.1(42)
7470A (2-Pen) Plotter	12.7x43.2x34.3	(5x17x13.5)	Table mounting	5.7(12.5)
7580A Drafting Plotter	118.8x108.7x55.7	(46.8x42.8x21.9)	2 x 2 (6 x 6)	63.6(140)
7906H 19.6M byte ICD disc in cabinet	71.8x55.3x79.1	(28.3x21.8x31.2)	1 x 3 (3 x 9)	134.1(295)
7906M/S 19.6M byte MAC disc in cabinet	71.8x55.3x79.1	(28.3x21.8x31.2)	1 x 3 (3 x 9)	151.8(334)
7906MR/SR rack-mounting 19.6M byte MAC disc	53.4x48.3x71.1	(21x19x28)	Rack mounting	108.6(239)
7906SR rack-mounting 19.6M byte MAC Slave disc	40.1x48.3x71.1	(15.8x19x28)	Rack mounting	91.8(202)
7908P Fixed disc	72x35.4x74	(28.4x14x29.1)	1 x 2 (3 x 6)	72.7(160)
7908R rack-mounting Fixed disc	17.7x48.3x68.9	(7x19x27.1)	Rack mounting	37.1(81.6)
7911P/7912P Fixed Disc	72x35.4x74	(28.4x14x29.1)	1 x 2 (3 x 6)	85.4(188)
7911R/7912R rack-mounting Fixed disc	31.1x48.3x70.5	(12.25x19x27.8)	Rack mounting	67.3(148)
7920M 50M byte MAC Master disc in cabinet	82.6x49.9x81.3	(32.5x19.7x32)	1 x 3 (3 x 9)	156.4(344)
7920S 50M byte MAC Slave disc in cabinet	82.6x49.9x8113	(3295x19.7x32)	1 x 3 (3 x 9)	137.3(302)
7925M 120M byte MAC Master disc in cabinet	82.6x49.9x81.3	(32.5x19.7x32)	1 x 3 (3 x 9)	155(341)
7925S 120M byte MAC Slave disc in cabinet	82.6x49.9x81.3	(32.5x19.7x32)	1 x 3 (3 x 9)	138.2(304)
7933H 404M byte Disc Pack Drive	82.5x55.2x83.4	(32.5x21.7x32.8)	1 x 3 (3 x 9)	154(339.5)
7970B/E+236 Magnetic Tape Drive	66.7x48.3x30.4	(26.3x19x12)	Rack mounting	68.2(150)
7971A Magnetic Tape Subsystem with one drive	158.5x62.3x90.5	(62.4x24.5x35.6)	3 x 3 (9 x 9)	195(430)
Additional drive in 7971A Cabinet	no change	no change	no change	59(130)
82905A Impact Printer	10.7x37.4x30.5	(4.2x14.7x12)	Table mounting	5.5(12)
9111A Graphics Tablet	8.5x44x44	(3.4x17.3x17.3)	Table mounting	5.8(12.8)
9134A 4.6M byte Mini Winchester Disc	13x42.5x47.6	5.1x16.7x18.7	Table mounting	13.4(29.5)
9872C Graphics Plotter	18.8x49.5x47.5	(7.4x19.5x18.7)	Table mounting	17.7(39)
9872T Graphics Plotter	21x85.8x47.5	(8.3x33.8x18.7)	Table mounting	30(66)
9874A Digitizer	54.6x85.1x52.1	(21.5x33.5x20.5)	Table mounting	27.5(60.5)
9876A Thermal Graphics Printer	15.2x34.9x44.5	(6x13.8x17.5)	Table mounting	12.3(27)
9895A Flexible Disc Memory	19.2x48.3x57.5	(7.6x19x22.6)	Table/rack mounting	26.8(59)

* *Not including optional pedestal.*

** *The 1351S Graphics Display System consists of the 1311A Display and 1351A Graphics Translator; appropriate accessories should be ordered for table mounting; the 1351S is not approved as a rack-mountable device.*

§ *With 26010A Tractors, height increases to 30.4 cm (12 in).*

HP 1000 Peripherals Environmental Specifications

Product Number and Name	Ambient temperature, °C (°F)		Relative Humidity (Non condensing)	Maximum altitude, metres (feet)	
	Operating	Non-operating		Operating	Non-operating
12925A Punched Tape Reader Subsys.	10-40 (50-104)	−40-60 (−40-140)	20% - 80%	4572 (15,000)	15240 (50,000)
12926A Tape Punch Subsystem	10-40 (50-104)	−40-60 (−40-140)	20% - 80%	4572 (15,000)	15240 (50,000)
12985A Card Reader Subsystem	10-50 (50-104)	−40-57 (−40-134)	20% - 80%	4572 (15,000)	15240 (50,000)
1351S Graphics Display System	0-55 (32-131)	−40-70 (−40-158)	5% - 95%	4572 (15,000)	15240 (50,000)
2382A (2389B OEM) Office Display Terminal	0-55 (32-131)	−40-60 (−40-140)	5% - 95%	4572 (15,000)	15240 (50,000)
2601A Daisywheel Printerl	7-41 (45-105)	−29-57 (−20-135)	10% - 80%	2438 (8,000)	7620 (25,000)
2608A/S Line Printer	0-55 (32-131)	−40-75 (−40-167)	5% - 95%	4572 (15,000)	15240 (50,000)
2617A Line Printer	0-40 (32-104)	−40-60 (−40-140)	30% - 80%	4572 (15,000)	15240 (50,000)
2619A Line Printer	0-40 (32-104)	−40-60 (−40-140)	20% - 80%	4572 (15,000)	15240 (50,000)
262x Terminals without printer	0-55 (32-131)	−40-60 (−40-140)	5% - 95%	4572 (15,000)	15240 (50,000)
262x Terminals with printer	5-40 (41-104)	−40-60 (−40-140)	5% - 80%	4572 (15,000)	15240 (50,000)
2631B Printer	10-40 (50-104)	−40-75 (−40-167)	10% - 90%	4572 (15,000)	15240 (50,000)
2635B Printing Terminal	10-40 (50-104)	−40-75 (−40-167)	10% - 90%	4572 (15,000)	15240 (50,000)
2642A Enhanced Display Station	10-40 (50-104)	−10-50 (−14-122)	20% - 80%	4572 (15,000)	7620 (25,000)
Other 264x Terminal w/o Minicartridge I/O	5-40 (41-104)	−10-60 (−14-140)	5% - 95%	4572 (15,000)	7620 (25,000)
Other 264x Terminal w/Minicartridge I/O	5-40 (41-104)	−40-60 (−40-140)	20% - 80%	4572 (15,000)	7620 (25,000)
2671A/G or 2673A Printer	0-55 (32-131)	−40-75 (−40-167)	20% - 95%	4572 (15,000)	15240 (50,000)
Thermal paper for 2671A/G or 2673A	0-40 (50-104)	−40-40 (−40-104)	20% - 90%	4572 (15,000)	15240 (50,000)
3074A/M Data Link Adapter	0-55 (32-131)	−10-75 (−40-167)	5% - 95%	4572 (15,000)	7620 (25,000)
307x Data Capture Terminals	0-55 (32-131)	−40-75 (−40-167)	5% - 95%	4572 (15,000)	7620 (25,000)
3075A/6A Opt 010/014 Bar Code Reader	0-55 (32-131)	−20-55 (−4-131)	5% - 95%	4572 (15,000)	7620 (25,000)
37203A HP-IB Extender	0-55 (32-131)	−40-75 (−40-167)	20% - 95%	4572 (15,000)	15240 (50,000)
7220/1C/T Graphics Plotter	0-55 (32-131)	−30-75 (−22-167)	5% - 95%	4572 (15,000)	15240 (50,000)
7225B Graphics Plotter	0-55 (32-131)	−30-75 (−22-167)	5% - 95%	4572 (15,000)	15240 (50,000)
7245B Plotter/Printer	0-55 (32-131)	−30-75 (−22-167)	5% - 95%	4572 (15,000)	15240 (50,000)
7470A Graphics Plotter	0-55 (32-131)	−30-75 (−22-167)	5% - 95%	4572 (15,000)	15240 (50,000)
7580A Drafting Plotter	0-55 (32-131)	−30-75 (−22-167)	5% - 95%	4572 (15,000)	15240 (50,000)
7906H ICD Disc (Note A)	5-55 (41-131)	−40-75 (−40-167)	8% - 80%	4572 (15,000)	15240 (50,000)
7906M/7920M/7925M MAC Disc (Notes A & B)	5-55 (41-131)	−40-75 (−40-167)	8% - 80%	4572 (15,000)	15240 (50,000)
7908P/R CS/80 Fixed Disc (Note C)	10-40 (50-104)	−40-65 (−40-149)	20% - 80%	4572 (15,000)	15240 (50,000)
7911P/R CS/80 Fixed Disc (Note D)	10-40 (50-104)	−40-65 (−40-149)	20% - 80%	4572 (15,000)	15240 (50,000)
7912P/R CS/80 Fixed Disc (Note D)	10-40 (50-104)	−40-65 (−40-149)	20% - 80%	4572 (15,000)	15240 (50,000)
7933H Fixed Disc (Note D)	10-40 (50-104)	−40-65 (−40-149)	8% - 80%	3048 (15,000)	15240 (50,000)
7970B/E or 7971A Magnetic Tape Unit	0-55 (32-131)	−40-75 (−40-167)	20% - 80%	4572 (15,000)	15240 (50,000)
82905B Impact Printer	5-35 (41-95)	−30-65 (−22-149)	10% - 80%	3048 (10,000)	15240 (50,000)
9111A Graphics Tablet	0-55 (32-131)	−30-65 (−22-149)	5% - 90%	4572 (15,000)	15240 (50,000)
9134A Winchester Disc (Note E)	10-40 (50-104)	−40-65 (−40-140)	8% - 80%	3048 (10,000)	15240 (50,000)
9872C/T Graphics Plotter	0-55 (32-131)	−30-75 (−22-167)	5% - 95%	4572 (15,000)	15240 (50,000)
9874A Digitizer	10-40 (50-104)	−40-75 (−40-167)	5% - 50%	4572 (15,000)	15240 (50,000)
9876A Thermal Graphics Printer	0-55 (32-131)	−40-75 (−40-167)	20% - 95%	4572 (15,000)	15240 (50,000)
9895A Flexible Disc Memory	10-40 (50-104)	−40-60 (−40-140)	20% - 80%	4572 (15,000)	15240 (50,000)

NOTE A: Before any cartridge or disc pack is placed into operation, it must be conditioned for a minimum of two hours in the same environment in which the disc is operating. The rate of change of temperature must not exceed 20°C (36°F) per hour.

NOTE B: 7906M/7920M/7925M environmental specifications also apply to 7906S/7920S/7925S MAC Slave discs.

NOTE C: The rate of change of temperature must not exceed 10°C (18°F) per hour.

NOTE D: The rate of change of temperature must not exceed 10°C (18°F) per hour.

Supersedes 5953-4283

HEWLETT PACKARD

For more information call the HP Sales Office listed in the White Pages. Or write or phone Hewlett-Packard, Data Systems Division, 11000 Wolfe Rd., Cupertino, CA 95014, (408) 257-7000.

Printed in U.S.A. July 1982
5953-2891