Hewlett Packard HP 3000 Series

New Product Announcement

HP 3000 Series 44: In December 1980, Hewlett Packard introduced the HP 3000 Series 44, a new top-of-the-line model that offers up to 100 percent more throughput capability than the HP 3000 Series III, according to the company. The improved performance is the result of doubling the maximum main memory capacity, increasing the speed of the processor, and improving the multi-programming executive (MPE) operating system.

The basic Series 44 configuration includes one megabyte of main memory, four terminal ports, a system CRT console, a 50-megabyte disk, and a 1600-bpi magnetic tape drive. Various maximum configurations offer up to 4 megabytes of main memory in increments of 512K bytes, 1.92 billion bytes of disk storage, plus different combinations of 96 point-to-point and multipoint terminals, four line printers, a laser printer, 7 synchronous communication lines, 8 magnetic tape drives, and a 1.2-megabyte flexible disk drive.

A field exchange of system processor units makes it possible to upgrade from an HP 3000 Series 30, 33, II or III. All user programs written in COBOL, FORTRAN, RPG, or BASIC for the earlier systems are useable without recompilation on Series 44, and most HP peripherals used on the earlier models are transferable to the Series 44.

Like all HP 3000's, the Series 44 includes at no added initial fee the MPE operating system, IMAGE/3000, QUERY/3000, V/3000, and KSAM/3000. Full HP Distributed Systems Network (HP-DSN) capabilities are available, including virtual terminal access, remote data base access, file sharing, and program-to-program communications. Also supported are RJE/3000, MRJE/3000, Link/3000, the HP Multipoint Terminal Software subsystem, TDP/3000, and DSG/3000.

The latest version of MPE is a new forth-generation product that introduces a new memory-manager algorithm, a more efficient file system, and more effective ways to manage input/output operations. According to H-P, MPE-IV will later improve the work throughput of all HP 3000's, whether new or already-installed.

The base HP 3000 Series 44 system is priced at $109,445. Main memory is $20,000 per megabyte. Upgrade products to the Series 44 start at less than $45,000, after a credit for the return of a maximum memory configuration Series 33 system processor unit. Standard HP 3000 OEM and volume-end-user discount schedules apply.

GUARANTEED UPTIME SERVICE: A money-back maintenance agreement that specifies 99 percent hardware uptime is offered with the HP 3000 Series 44. Under the terms of this agreement, uptime of the system's critical elements will be evaluated monthly for the previous three months, and a month's service credit for the products covered will be given the user if 99 percent uptime during the three-month period was not achieved. The 99 percent uptime specification is associated with 24 hours-a-day/7 days-a-week coverage. Guaranteed Uptime Service is available for coverage of the system core, i.e., the HP 3000 Series 44 main processor and memory, and one or two system-domain disks.

Among the features of the Series 44 system that led to the Guaranteed Uptime Service offer is an intelligent Control and Maintenance Processor (CPM) that makes extensive diagnostics available and remotely accessible. The CPM is a one-board microcomputer with self-test procedures in firmware. The CMP controls warm starts, cold loads, memory dumps, and implements system self-test and a maintenance display. Its functions and responses are available remotely by telephone for maintenance purposes.

The Guaranteed Uptime Service will initially be available for systems in the U.S. installed within 100 miles of an H-P Primary-Service-Responsible Office (SRO). There are currently 43 of these offices, serving virtually all of the industrialized areas in the U.S. H-P expects to expand the new service offer to international support locations in the near future, and to other business systems introduced in the future.

Monthly maintenance charges depend upon the hours of coverage selected for service and the configuration of the system. With 99 percent Guaranteed Uptime Service on the critical system

Hewlett Packard HP 3000 Series

New Product Announcement

elements (computer and disk) only, a monthly maintenance charge, on an annualized basis, of 8.4 percent of list price would apply for 24 hours-a-day, seven-days-a-week coverage of a base-level HP 3000 Series 44. Without Guaranteed Uptime Service on the critical system elements, the charge would be 7.1 percent of total list price. Normal maintenance coverage, 8 a.m. to 9 p.m., five days a week, is 5.1 percent of total list price. An alternate Guaranteed Uptime Service is available for less than 24-hour-a-day, 7-days-a-week coverage.

HP 2680 LASER PRINTING SYSTEM: This new laser printer produces computer output that is tailored to the needs of individual users. Business forms are electronically generated and automatically merged with data during the printing operation. These forms are quickly created, using an H-P graphics terminal and new interactive H-P software that makes it easy for non-specialists to design characters, logos, signatures, and formats. Information may be from the data base of the associated HP 3000 computer or from any other HP 3000 networked to it.

The HP 2680 uses a laser-based, electrophotographic process to print 45 pages per minute of Z-fold paper. Character sets and electronic forms (up to 32 of each) may be used to organize page formats and highlight key information. Information can be rotated 90 degrees on the paper, printing across the 8.5-inch dimension.

The Interactive Design System (IDS) software defines and modifies character sets, logos, and special symbols. Characters up to 1.38 inches are created by placing dots on a grid that appears on the associated H-P graphics terminal. An HP 9874A Digitizer can be used to simplify the entry of complex symbols. With the interactive Formatting System (IFS) software, multiple parts of an electronic form can be merged to replace expensive multi-part forms.

The HP 2680 Laser Printing System operates with the HP 3000 Series 30, 33, and 44. Support for the Series III will be forthcoming, at a higher cost. The total price for the HP 2680 system is $121,000, including the printer and the IDS and IFS software. Initial deliveries in selected service areas in North America will begin in February 1981.

HP 2601A PRINTER: A new daisywheel printer that produces letter-quality output suitable for word processing, and text and document applications has been introduced. It is especially recommended for use with HP's Text and Document Processing (TDP/3000) software system. Enhancements that usually require additional applications software are built into the printer and are fully supported by TDP/3000. These include proportional spacing, automatic underlining, automatic centering, and right justification, all built into the printer's firmware. Bold and shadow print may be used as highlighting tools to accentuate key phrases in reports produced.

The HP 2601A operates either with a metal wheel, at 32 cps, or with a plastic wheel at 40 cps. The HP 2601A is supplied with an RS-232-C interface. It operates with all HP 3000 and HP 1000 computer systems, and with the HP 2645, 2647, 2642, 2626, and 2624 terminals. The printer is manufactured by Diablo Systems, Inc. for H-P. Priced at $4,500, first deliveries of the HP 2601A are scheduled to begin in February.□

Hewlett-Packard 3000 Series

Product Enhancement

Hewlett-Packard has revamped the HP 3000 product family with several major announcements. The HP 3000 product line now consists of the Series 40, Series 40SX, Series 44, and Series 64. The new procesors are balanced by HP's new Winchester disk storage units with an integral cartridge tape. The disks are available in 27- and 64-megabyte versions for use on the HP 3000. The HP 3000 can also support either eight or sixteen of HP's new 404 megabyte removable media disk units to provide 3.2 or 6.4 gigabytes of on-line storage.

	Series 40	Series 40SX	Series 44B	Series 64
Main Memory	2MB	2MB	4MB	8MB
Disk storage	3.2gb	3.2gb	6.4gb	6.4gb
Communications lines	3	3	2	16
Terminals	56	56	96	application dependent
Point-to-Point Terminals	32	32	64	144
System printers	2	2	4	8
Remote printers	4	4	4	8
Tape drives	4	4	8	8
Guaranteed uptime service	Yes	Yes	Yes	Yes

The Series 40 combines the same processor as the Series 44 with the Series 30 packaging. The differences are that the Series 40 has no integral floppy disks and has less expandability. The Series 40 is recommended for applications with 6 to 25 users, sharing 128 megabytes of disk storage, and with basically stable needs. An example of such a system would be a node in a distributed network environment.

The Series 40SX is a bundled system aimed at the small business market. The system includes the CPU, 27-megabyte disk, integral cartridge tape and two general I/O channels. The user need only add a console terminal and printer. The Series 40SX is recommended for 4 to 10 users sharing 64 megabytes of disk storage. A tape drive is required to backup more than 128 megabytes of fixed disk storage.

The Series 44B, featuring a new lower price, now utilizes 64K RAM main memory and easier I/O and memory expansion. The system now includes the I/O extender chassis. HP recommends the Series 44B for a 20 to 50 user system with 1.5 gigabytes of disk storage. This would probably be a host system with changing system requirements.

The Series 64 is based on Emitter-Coupled Logic (ECL) with a 32-bit data bus, a 32-bit memory word, and dual arithmetic logic for single-cycle 32-bit arithmetic. The dual I/O buses each have a throughput rate of 3 megabytes per second. Memory speed is increased through the use of an 8K byte cache memory which HP claims has a 95 percent hit rate for an effective memory access time of 145 nanoseconds. Dual arithmetic logic units can perform either simultaneous or tandem operation. The Series 64 utilizes the new Advanced Terminal Processor (ATP) to handle communications. The ATP's own microprocessors reduce system overhead and augment the system processing power. The Series 64 is recommended for systems with 50 to 100 users sharing 2.5 gigabytes of on-line storage. This configuration would still provide impressive upgrade capabilities.

The HP Multiprogramming Executive (MPE) Operating System is fully compatible with all old and new HP 3000 models. HP provides growth paths to existing customers through an upgrade program which consists of a field exchange of the processor units with a credit on returned equipment. The peripherals based on an HP-IB interface are immediately available for use on the new system. Non HP-IB based systems are either field-upgradeable or, in a few cases, may require a change of peripherals. HP's Guaranteed Uptime Service is available on all new HP 3000 models.

Current delivery for the Series 40, 40SX, and 64 systems are estimated at twenty weeks. The Series 44 computers are quoted with a fourteen week delivery.

Hewlett-Packard 3000 Series

Product Enhancement

EQUIPMENT PRICES

		Price	Standard Monthly Maint.
SYSTEMS			
32440B	Series 44B System Processor Unit	$69,900	$294
32445A	Series 40 System Processor Unit	38,900	250
-507	Memory expansion to 1024KB	10,000	16
32446A	Series 40SX System, with 7911P 27MB disk drive and integral cartridge tape	42,100	320
-012	upgrade 27MB disk to 64MB	2,500	2
32460A	Series 64 System Processor Unit	164,700	719
I/O EXPANSION			
30018A	Asynchronous Data Communications Controller (ADCC)-main	1,680	9
30019A	ADCC-extender	1,680	9
30079A	General I/O Channel (GIC)	1,890	13
30087A	Series 44 I/O Expansion Kit	8,930	25
30143A	I/O Adapter Model (Series 64)	10,000	34
30144A	DSN/ATP System Interface Board (SIB)	3,120	14
30145A	DSN/ATP Direct Connect Port Controller	6,480	25
30155A	DSN/ATP Modem Port Controller	8,010	31
MEMORY EXPANSION			
30092A	512KB memory module (Series 4x)	10,500	16
30094A	Add-on Series 44 memory controller	1,575	11
30142A	1MB memory module (Series 64)	16,000	75
30161A	1MB memory module (Series 4x)	16,000	75
30171A	256KB memory module (Series 40)	5,250	8
DISK DRIVES			
7906M	Master 20MB cartridge disk drive	17,000	129
-102	HP-IB interface and 2 cable	1,175	4
7911P	27MB disk drive, cartridge tape drive, and one controller	12,500	54
-001	adds second controller (1)	1,800	24
-140	deletes cartridge tape drive	-2,000	-11
7912P	64MB disk drive, cartridge tape drive, and one controller	15,000	56
-001	adds second controller (1)	1,800	24
-140	deletes cartridge tape drive	-2,000	-11
7920M	Master 50MB disk drive	19,000	115
-102	HP-IB interface and 2M cable	1,175	4
7925M	Master 120MB disk drive	22,050	104
-102	HP-IB interface and 2M cable	1,175	4
7906S	Add-on 20MB disk drive	13,000	93
7920S	Add-on 50MB disk drive	15,000	79
7925S	Add-on 120MB disk drive	17,850	68
7925T	Add-on 240MB disk storage system	31,450	136
7935H	404MB removable media disk drive	27,500	100
9895A	Flexible disk system	6,830	65
Upgrade Products			
30307A	Pre-Series II to Series III upgrade	60,900	300
30417A	Series II Upgrade to Series III upgrade	35,700	273
32445AH	Upgrade to the Series 40 with 512KB memory	35,120	224
32440BH	Upgrade to the Series 44B with 1 megabyte memory	66,120	268
32460AH	Upgrade to the Series 64 with 2 megabyte memory	160,920	693

Notes:
(1) Second controller required on HP3000s on cartridge tape to prevent user lock out.□