

DEC VAX 8000 Systems

Product Enhancement

Sustaining the momentum built with the introduction of new VAX 8000 systems in January and April 1986, Digital Equipment Corporation has rolled out two more members of that product family—the VAX 8550 and VAX 8700, positioned directly below the top-of-the-line VAX 8800. Also, the company has introduced VAX 8550 and 8700 options, along with enhancements, including expanded memory and new configurations, for other members of the VAX 8000 family. Digital has also announced the VAXmate, the company's long-awaited, IBM-compatible, networkable personal computer.

VAX 8550 and 8700

The VAX 8550 and 8700 both reportedly deliver up to six times the performance of the VAX-11/780. They employ emitter-coupled logic (ECL) circuitry and five-stage pipeline processing; each achieves a 45-nanosecond CPU cycle time. Each system includes a 64KB cache memory. Like all newer VAX 8000 systems (8200, 8300, 8500, and 8800), the VAX 8550 and 8700 include an integral floating-point accelerator and an Ethernet port, and employ the VAX Bus Interconnect (VAXBI) I/O bus.

The two new systems are software-compatible with other VAX systems, and share the VAXclustering capabilities common to all VAX 8000 and VAX-11 systems. Also, they are covered under Digital's two-hour service response guarantee for high-end systems within 50 miles of a Digital field service location.

The VAX 8550 is intended as a high-performance companion to the general-purpose VAX 8500, for use in computation- and resource-intensive applications, such as office information systems, MIS, realtime and data acquisition, process control, imaging, simulation, electronic publishing, and funds transfer. Its footprint of 5.6 square feet is only about one third that of the VAX-11/780, reportedly allowing the VAX 8550 to deliver 18 times the performance per square foot provided by the old VAX-11 machine.

Using new 16MB memory arrays, the VAX 8550 supports up to 80MB of main storage. Up to two VAXBIs can be configured (one standard, one optional) for a total system bandwidth of over 16MB per second. Local disk support is provided through up to four KDB50 controllers for a total of 7.2GB. According to Digital, the number of workstations supported in typical environments ranges from 72 to 320, depending upon the application. The VAX 8500 is upgradable to the VAX 8550.

The VAX 8550 is available in four configurations. The basic VAX/VMS System Building Block includes the CPU, 20MB of main memory, Ethernet port, four-port KDB50 disk controller, VAX/VMS and DECnet monthly software licenses for one year, and a one-year hardware warranty. The VAXcluster SBB includes a VAXcluster port and all aforementioned components except the KDB50. A preconfigured VAX 8550 system comprises the VAX/VMS SBB and a 456MB RA81 fixed disk drive, a TU81-Plus streaming tape drive and controller, a DMB32 multifunction communications controller, and a 90-day warranty for disk and tape.

A VAX 8550 ALL-IN-1 office system SBB is also available. It includes the CPU; 48MB of main memory; Ethernet port; KDB50 disk controller; one year of VAX/VMS, DECnet, and ALL-IN-1 monthly software licenses; and a one-year hardware warranty. According to Digital, this configuration can support up to 108 ALL-IN-1 users. All configurations are currently available.

The VAX 8700 is a lower performance companion to the VAX 8800. Employing the same cabinetry as that top-of-the-line system, the VAX 8700 is intended for use in the same applications as the VAX 8550, providing greater I/O capacity and memory expandability (up to 128MB in 16MB arrays), as well as upgradability to the VAX 8800.

One VAXBI is standard on the VAX 8700; the larger cabinetry allows up to three more to be configured, making possible an overall I/O rate in excess of 30MB per second. Up to eight four-port KDB50 disk controllers can be attached to the system, permitting local fixed disk support up to 14.5GB. According to Digital, the workstation parameters for this system are the same as those for the VAX 8550. Company officials state that a VAX 8700 ALL-IN-1 system with 64MB of main memory can support up to 116 ALL-IN-1 users.

The VAX 8700 is available in three configurations: a VAX/VMS SBB, a VAXcluster SBB, and a preconfigured system. All three configurations are available immediately. All have the same components as their VAX 8550 counterparts, except that each comes with 32MB of memory.



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- ▷ Prices for the VAX 8550 and 8700 configurations are provided in the price list at the end of this Product Enhancement.

Digital Equipment officials claim that the two new systems do not directly replace the similarly powered VAX 8600 and VAX 8650, which employ the older Unibus and Massbus I/O schemes. The older systems, they said, provide features that some constituents of Digital's customer base want. Moreover, Digital has announced a VAXBI Bridge for the VAX 8600 and 8650, allowing those systems to access VAXBI options through VAXclusters. (Pricing for the VAXBI Bridge is given in the list at the end of this Product Enhancement.) Still, one can see the handwriting on the wall for the 8600 and 8650, primarily because they are not intrinsically compatible in I/O architecture with the VAXBI-based systems. Digital's claims aside, the VAX 8550 and 8700 are unquestionably replacements for the VAX 8600 series.

Digital is explicitly targeting the two new systems against IBM's 4381 Model Group 13—the top uniprocessor system in the 4300 series. Certainly, the Digital systems' main storage capacities provide an edge in memory-intensive applications; the 4381-13 only supports up to 32MB. (The 2903GB disk capacity of the 4381-13 provides the IBM system with an edge in applications requiring large data bases, providing far more storage than the Digital systems' local capacities and the 218.8GB available in a VAXcluster.) Other competition for the VAX 8550 and 8700 is supplied by Data General's Eclipse MV/20000 Model 1 and Prime Computer's 9955 II.

VAX 8200 and 8300 Configurations

Digital has also announced new configurations of the VAX 8200 and VAX 8300 systems based solely on the VAXBI bus; previous configurations included a Unibus adapter, which required additional cabinetry and expanded the system footprint. The new configurations use the TU81-Plus tape drive and DMB32 communications controller announced with the VAX 8500 in April 1986. The VAX 8200 VAXBI configurations include a VAX/VMS SBB, a VAXcluster SBB, and a preconfigured system, each with 8MB of memory. The same types of configurations, with 12MB of main memory each, are available for the VAX 8300. All VAX 8200 and VAX 8300 configurations are available immediately. Prices for these configurations are provided in the price list following this Product Enhancement.

VAX 8000 Options

A memory expansion package comprising two 16MB arrays is available for the VAX 8550 and 8700. The arrays feature double-sided surface mounting of 256K-bit DRAM chips. The memory arrays are subject to a no-cost lifetime service scheme as long as they are installed in a system covered under a Digital Field Service Maintenance contract. The expansion package is currently available.

Similarly, Digital has added a memory expansion package that allows the main memory capacities of the VAX 8200 and 8300 to grow to 24MB with new 4MB memory arrays employing 256K-bit chips. The 4MB memory expansion package is covered under the same service scheme as the 16MB expansion package and is currently available.

Prices for these options are provided in the price list at the end of this Product Enhancement.

VAX 8500 and 8800 Memory Expansion

Main memory on the VAX 8500 can be expanded to 80MB through Digital's new 16MB arrays; those arrays also increase the memory capacity of the VAX 8800 to 128MB.

VAXmate PC

Designed specifically for networking, the IBM PC AT-compatible VAXmate includes DECnet/Thinwire Ethernet support. Through a server, the new PC can store and access files on VAX and MicroVAX systems. The VAXmate can participate in networks including VAXs, MicroVAXs, other VAXmates, DEC Rainbows, and IBM PC ATs and PC XTs running Digital's DECnet software; through DECnet/SNA Gateway software, IBM mainframe systems can be accessed.



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▷ The VAXmate comprises a one-piece monitor/system unit with 1MB of memory, a built-in 5¼-inch diskette drive, Ethernet tranceiver, video controller, communications and printer ports, keyboard, and mouse. A math co-processor board, a 300-/1200-/2400-baud modem, and 2MB more of memory can be configured. A 20MB, half-height hard disk can be added in an expansion box. System software for the VAXmate includes MS-DOS Version 3.1 and the MS-Windows application interface, MS-Network client software, and Digital VT220 and VT240 terminal emulators. The system hardware is priced at \$4,045; the software license costs \$250. The VAXmate is available immediately. Network integration kits for IBM PCs and Rainbows will be available in 1987, according to Digital.

Announced with the VAXmate was VAX/VMS Services for MS-DOS, a software product that allows a VAX or a MicroVAX to act as a server for a group of VAXmate PCs in a DECnet Thinwire network. The product allows resource-sharing between VMS and MS-DOS, and permits server-based licensing of applications. (Through server-based licensing, Digital will license MS-DOS applications for a specific number of users on a single server; only one license per server need be purchased, rather than one license per user.) VAX/VMS Services for MS-DOS, available immediately, come in three configurations: for VAX, MicroVAX, and VAXmate systems. Prices range from \$650 to \$19,500. Digital says that Rainbow and IBM support will be available in 1987. □

EQUIPMENT PRICES

		Purchase Price (\$)	Basic Service (Monthly) (\$)	DECserv. (Monthly) (\$)
VAX 8550 CONFIGURATIONS				
855BA-AE(AJ)	System Building Block (SBB); includes CPU, 20MB of 256K-bit main memory, hot floating-point, VAXBI channel, KDB50 disk controller, Ethernet interface, console terminal, one-year hardware warranty, and paid-up VAX/VMS and DECnet licenses	411,000	*	*
855BA-DE(DJ)	Same as 855BA-AE(AJ), but with one-year VAX/VMS and DECnet licenses	364,000	*	*
855BB-HE(HJ)	ALL-IN-1 system; includes CPU, 48MB of 256K-bit main memory, hot floating-point, VAXBI channel, KDB50 disk controller, Ethernet interface, console terminal, one-year hardware warranty, and paid-up ALL-IN-1, VAX/VMS, and DECnet licenses	521,000	*	*
855BB-JE(JJ)	Same as 855BB-HE(HJ), but with one-year ALL-IN-1, VAX/VMS, and DECnet licenses	441,000	*	*
855CA-AP(AT)	VAXcluster SBB; includes CPU, 20MB of 256K-bit main memory, hot floating-point, VAXBI channel, Computer Interconnect port, Ethernet interface, console terminal, one-year hardware warranty, and paid-up VAX/VMS and DECnet licenses	429,000	*	*
855CA-DP(DT)	Same as 855CA-AP(AT), but with one-year VAX/VMS and DECnet licenses	378,000	*	*
SV-8EEEE-EK(EN)	Preconfigured System; includes CPU, 20MB of main memory, hot floating-point, VAXBI channel, KDB50 disk controller, RAB1 456MB disk drive, TU81-Plus streaming tape drive, Ethernet interface, console terminal, DMB32 communications controller, one-year hardware warranty (90-day warranty for disk and tape drives), and paid-up VAX/VMS and DECnet licenses	444,000	*	*
SV-8EEEE-EL(EM)	Same as SV-8EEEE-EK(EN), but with one-year VAX/VMS and DECnet licenses	398,000	*	*
VAX 8700 CONFIGURATIONS				
871BA-AE(AJ)	SBB; includes CPU, 32MB of 256K-bit main memory, hot floating-point, battery backup unit, VAXBI channel, KDB50 disk controller, Ethernet interface, console terminal, one-year hardware warranty, and paid-up VAX/VMS and DECnet licenses	479,000	*	*
871BA-DE(DJ)	Same as 871BA-AE(AJ), but with one-year VAX/VMS and DECnet licenses	433,000	*	*
871CA-AP(AT)	VAXcluster SBB; includes CPU, 32MB of 256K-bit main memory, hot floating-point, battery backup unit, VAXBI channel, Computer Interconnect port, Ethernet interface, console terminal, one-year hardware warranty, and paid-up VAX/VMS and DECnet licenses	492,000	*	*
871CA-DP(DT)	Same as 871CA-AP(AT), but with one-year VAX/VMS and DECnet licenses	442,000	*	*

Note: A dash (—) for an entry indicates that the information is unavailable from the vendor.

*Contact vendor.

**Eligible for lifetime service at no extra charge when installed in a system under a Digital Field Service Maintenance contract.

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		Purchase Price (\$)	Basic Service (Monthly) (\$)	DECserv. (Monthly) (\$)
SV-87EEA-EK(EN)	Preconfigured System; includes CPU, 32MB of main memory, hot floating-point, VAXBI channel, KDB50 disk controller, RA81 456MB disk drive and TU81-Plus streaming tape drive, Ethernet interface, console terminal, DMB32 communications controller, one-year hardware warranty (90-day warranty for disk and tape drives), and paid-up VAX/VMS and DECnet licenses; also includes battery backup unit	529,000	*	*
SV-87EEA-EL(EM)	Same as SV-87EEA-EK(EN), but with one-year VAX/VMS and DECnet licenses	483,000	*	*
VAX 8200 NATIVE VAXBI CONFIGURATIONS				
821BB-DE(DJ)	SBB; includes CPU, 8MB of 256K-bit main memory, hot floating-point, Ethernet interface, KDB50 disk controller, one-year hardware warranty, and one-year VAX/VMS and DECnet licenses	79,000	394	469
821CB-DP(DT)	VAXcluster SBB; same as 821BB-DE(DJ), but includes Computer Interconnect port and excludes KDB50 disk controller	91,000	569	677
SV-82EEE-GL(GM)	Preconfigured System; includes CPU, 8MB of main memory, hot floating-point, one-year hardware warranty, Ethernet interface, KDB50 disk controller, LA100 console terminal and stand, DMB32 communications controller, RA81 456MB disk drive and TU81-Plus streaming tape drive, 90-day hardware warranty on disk and tape, and one-year VAX/VMS and DECnet licenses	127,000	656	781
VAX 8300 NATIVE VAXBI CONFIGURATIONS				
831BB-DE(DJ)	SBB; includes CPU, 12MB of 256K-bit main memory, hot floating-point, Ethernet interface, KDB50 disk controller, one-year hardware warranty, and one-year VAX/VMS and DECnet licenses	109,000	484	576
831CB-DP(DT)	VAXcluster SBB; same as 831BB-DE(DJ), but includes Computer Interconnect port and excludes KDB50 disk controller	119,000	659	785
SV-83EEA-GL(GM)	Preconfigured System; includes CPU, 12MB of main memory, hot floating-point, one-year hardware warranty, Ethernet interface, KDB50 disk controller, LA100 console terminal and stand, DMB32 communications controller, RA81 456MB disk drive and TU81-Plus streaming tape drive, 90-day hardware warranty on disk and tape, and one-year VAX/VMS and DECnet licenses	157,000	746	888
VAX 8000 OPTIONS				
—	VAX 8550/8700 memory expansion package; includes two 16MB memory arrays with double-sided mounting of 256K-bit DRAM chips; also includes trade-in credit on two 4MB main memory arrays	48,000	**	**
—	VAX 8200/8300 memory expansion package; includes a 4MB memory array with 256K-bit DRAM chips	12,900	**	**
—	VAXBI Bridge for VAX 8600/8650	110,000	*	*

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