
Digital Equipment Corp. DECstations 3100, 5000: Product Profile

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System Overview

The DECstation product line is comprised of entry-level (DECstation 3100), midrange (DECstation 5000/100 Series), and high-end (DECstation 5000/200) UNIX workstations based on reduced instruction set computing (RISC). All models can be used with DECsystem servers or as standalone workstations.

All models are well suited for desktop publishing, artificial intelligence, computer-aided software engineering (CASE), scientific simulation, and other general purpose commercial or technical applications. The 5000/100 Series and 5000/200 provide the CPU power, resolution, and graphics processing necessary for complex 2-D and 3-D applications. The high-end DECstation 5000/200 offers better performance for the most graphics intensive applications, such as 3-D solids modeling and animation.

The DECstation 5000 Models 120 and 125 employ a MIPS R3000A chipset mounted on a CPU daughter card, allowing the processor to be easily upgraded in the future. In addition, applications written for these new models will also run on future Advanced Computing Environment (ACE) RISC workstations.

Competition

Competes with a variety of technical workstations, including products from Sun Microsystems, Hewlett-Packard Apollo.

Vendor

Digital Equipment Corp.
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Price

Preconfigured systems—\$4,998 to \$52,600.

GSA Schedule

Yes.

—By Mark S. Wietz
Associate Editor/Analyst

Table 1. System Comparison

Model	DECstation 3100	DECstation 5000 Model 120	DECstation 5000 Model 125	DECstation 5000 Model 200
System Characteristics				
Min/Max Memory (bytes)	8M/24M	8M/128M	8M/128M	8M/480M
Expansion Increments (bytes)	4M	4M, 16M	4M, 16M	8M, 32M
Min/Max Internal Mass Storage (bytes)	0/418M	0/418M	0/418M	None
Max Ext. Mass Storage (bytes)	2G	18.2G Depending on configuration	18.2G Depending on configuration	24G Depending on configuration
Number of Processors	1	1	1	1
Date First Installed	January 1989	April 1991	April 1991	April 1990
Central Processing Unit & Memory				
Computer Type	32 bits	32 bits	32 bits	32 bits
Processor Model	MIPS R2000	MIPS R3000A	MIPS R3000A	MIPS R3000
Memory Type	Parity check	Parity check	Parity check	ECC
Floating Point Co-processor	MIPS R2010	MIPS R3010	MIPS R3010	MIPS R3010
Cache Memory Instruction/Data (bytes)	64K/64K	64K/64K	64K/64K	64K/64K
General Performance				
Multiprocessing Capability (Yes/No)	No	No	No	No
MIPS	16.2	21.7	26.8	27.3
SPECmarks	11.7	13.9	16.4	19.9
Proc. Clock Speed (MHz)	16.67	20	25	25
I/O Transfer Rate (bytes/sec.)	4M	43M	43M	93M

Characteristics

See Table 1 for a comparison of system characteristics for the DECstation 3100 and 5000 models.

Peripherals

All DECstations feature a SCSI port for connection of peripheral devices. In addition DECstation 5000/100 Series and 5000/200 models provide up to three slots, connected to a high-speed 32-bit TURBOchannel I/O bus, for connecting VME- and SCSI-compatible peripherals, high performance graphics systems, and LAN interfaces.

Mass Storage

DECstation 3100 models support up to two internal hard drives, one diskette drive, and four external drives—for a system maximum of seven drives. The DECstation 5000/100 Series supports up to two internal 3.5-inch hard disks and one removeable media device, such as a 1.4M-byte diskette drive, a 600M-byte CD-ROM drive, or a

525M-byte 1/4-inch tape drive. DECstation 5000/200 models require disk and tape drives to be connected externally. Up to six devices can be connected to the standard SCSI controller. With all DECstation 5000 models up to six additional storage devices can be connected to each available TURBOchannel slot.

See Table 2 and the price list at the end of this report for specifications on available storage devices.

Tape Drives

An internal 525M-byte 1/4-inch tape drive is available on DECstation 5000/100 models. Internal tape drives are not available on other DECstation models; however, Digital supports a number of external tape and tape/disk options in several formats.

A complete list of the tape drives, their formats, and capacities is contained in the price list at the end of this report.

Displays/Graphics Options

DECstation 3100 workstations are available in single-plane monochrome and eight-plane color configurations. Digital offers 19-inch monochrome CRT and electroluminescent flat panel displays, both with 1,024- by 864-pixel resolutions. Color

Table 2. Mass Storage Devices

Model	RZ23	RZ23L	RZ24
Type	Internal Disk (Not available on DS 5000/200 models)	Internal Disk (Not available on DS 5000/200 models)	Internal Disk (Not available on DS 5000/200 models)
Size (inches)	3.5	3.5	3.5
Formatted capacity (bytes)	104M	121M	209M
Interface/controller	SCSI II	SCSI II	SCSI II
Average access time (ms.)	33.3	27.0	24.3
Data transfer rate (bytes/sec.)	1.25M	1.5M	1.5M

Table 2. Mass Storage Devices (Continued)

Model	SZ12B-XA/XB & BA/BB	SC12C-XA/XB & CA/CB	SZ12A-XA/XB & AA/AB
Type	Ext. Exp. Box w/1 or 2 drives	Ext. Exp. Box w/1 or 2 drives	Ext. Exp. Box w/1 or 2 drives
Size (inches)	5.25	5.25	5.25
Formatted capacity (bytes)	332M or 664M	665M or 1.33G	1G or 2G
Interface/controller	SCSI II	SCSI II	SCSI II
Average access time (ms.)	24.3	24.3	22.8
Data transfer rate (bytes/sec.)	1.25	1.5	2.0

systems can be configured with either a 16- or 19-inch color display, both featuring 1,024 by 864 resolution.

Digital offers five graphics options—MX, CX, PX, PXG, and PXG Turbo—for the DECstation 5000/100 Series and 5000/200 systems. The MX option is a single-slot TURBOchannel card that provides single-plane monochrome graphics. Since the MX option contains no specialized graphics hardware, the workstation's CPU performs all graphics pipeline operations. The MX option supports Digital's VR319 19-inch 1,280- by 1,024-pixel monochrome display which provides a 72-Hz refresh rate.

The CX option is also a single-slot TURBOchannel card offering eight-plane color. Like the MX, the CX option provides no special graphics co-processor, therefore, the workstation CPU must perform all graphics operations. The CX option supports Digital's 16-inch VR297 and 19-inch VR299 color monitors, both offering 1,024- by 864-pixel resolution with a 60-Hz refresh rate. The VR262 display can also be used with the CX option to provide eight gray levels with a 60-Hz refresh rate.

The PX option is an eight-plane color system with an additional eight planes for double buffering and a PixelStamp accelerator for enhanced

graphics performance. Occupying a single TURBOchannel slot, the PX option supports Digital's VRT16 and VRT19 16- and 19-inch Trinitron displays offering 1,280- by 1,024-pixel resolution and a 66-Hz refresh rate. The PX option also supports the VR319 monochrome monitor with a 66-Hz refresh rate for eight-plane grayscale graphics.

The PXG graphics option provides a PixelStamp accelerator with one scan-converter chip and a 40MHz i860-based geometry accelerator. The dual-slot card is available in entry-level and midrange versions. The entry-level version supports eight image planes, while the midrange version supports 24 image planes. Both versions support full page double buffering. An optional Z buffer is also available. The PXG graphics option supports Digital's VRT16 and VRT19 16- and 19-inch Trinitron displays offering 1,280- by 1,024-pixel resolution and a 66-Hz refresh rate.

The most powerful graphics option available for the DECstation 5000 line is the PXG Turbo. This three-slot card contains a PixelStamp accelerator with two scan-converter chips operating in parallel and a 44MHz i860-based geometry accelerator. This graphics option has 24 image planes, 24 planes for double buffering, a 24-bit Z buffer, and 24 planes of additional offscreen memory for pixmaps. The PXG Turbo's resolution is 1,280 x

1,024 pixels and it supports Digital's VRT16 and VRT19 16- and 19-inch displays.

Communications

Protocols Supported: DECnet, TCP/IP.

Network Applications Supported: NFS, Kerberos, and Hesiod.

LANs Supported: Ethernet, FDDI (optional).

Operating Environment

The DECstations can operate between 50 and 104 degrees Fahrenheit and within a humidity range of 10 to 80 percent noncondensing (10 to 90 percent for DECstation 5000 Models 120 and 125). The DECstations require standard power of 120/240 V AC at 50 to 60 Hz. Physical specifications are highlighted in the following table.

Model	Height (in.)	Width (in.)	Depth (in.)	Weight (lb.)
3100	4.1	18.3	15.8	25.0
5000/100	4.0	20.1	17.1	28.0
5000/200	3.6	20.1	17.1	30.0

Software

Operating System

ULTRIX, Digital's UNIX implementation, is based on Berkeley 4.2 BSD UNIX. It includes extensions from 4.3 BSD and AT&T UNIX System V. It complies fully with AT&T's System V Interface Definition (SVID) Issue 2 Volume 1. It also is XPG3 branded and complies with the IEEE's 1003.1 standard for a portable environment (POSIX) and with the National Institute of Standards and Technology's interim Federal Information Processing Standard (FIPS).

DECstations support the OSF/Motif GUI and DECwindows, which are based on an enhanced X Window System Version 11 and provide network-transparent interactions with applications across ULTRIX, VMS, MS-DOS, and other operating systems.

Communications

The DECstations come with TCP/IP, DECnet, and NFS networking software, and Digital offers a range of DECnet products that provide application access, business communications, and information/resource sharing services across VMS and ULTRIX.

SoftPC, a software package, allows a DECstation to run MS-DOS programs with no added hardware.

Other Software

DECstations come bundled with the a C compiler. The Personal Visualizer, a 3-D visualization tool from Wavefront Technologies, comes packaged and free of charge with all DECstation 5000 PXG and PXG Turbo models. A Fortran compiler is optional. All models include the OSF Motif graphical user interface. There are almost 2000 applications available.

Pricing

The DECstations come in various packaged system configurations. Customers may also configure their own customized systems, however, packaged systems are generally priced less than the individual components. Pricing for DECstation packaged systems and options follow.

Equipment Prices

		U.S. List Price (\$)
DECstation 3100 Workstations		
Model PM200-AC (Monochrome)	Includes 8MB of RAM, no diskette or hard drives, U.S. keyboard and mouse, two RS-232C ports, ThinWire and thick wire Ethernet ports with a T-connector, two terminators, an Ethernet loopback connector, an SCSI port, an ULTRIX two-user license, a DECnet-ULTRIX license, single-plane monochrome graphics, a 19-inch monochrome display (landscape orientation) offering 1024 x 864 resolution and a 60-Hz refresh rate.	4,998
Model PM200-AT (Color)	Includes 8MB of RAM, no diskette or hard drives, U.S. keyboard and mouse, two RS-232C ports, ThinWire and thick wire Ethernet ports with a T-connector, two terminators, an Ethernet loopback connector, an SCSI port, an ULTRIX two-user license, a DECnet-ULTRIX license, eight-plane color graphics, a 16-inch color display (landscape orientation) offering 1024 x 864 pixel resolution and a 60-Hz refresh rate.	7,495
Model PM200-LC (Monochrome)	Includes 16MB of RAM, 1 3.5-inch 1.4MB diskette drive, 121MB and 209MB internal hard disks, U.S. keyboard and mouse, two RS-232C ports, ThinWire and thick wire Ethernet ports with a T-connector, two terminators, an Ethernet loopback connector, an SCSI port, an ULTRIX two-user license, a DECnet-ULTRIX license, eight-plane monochrome graphics, a 19-inch monochrome display (landscape orientation) offering 1024 x 864 pixel resolution and a 60-Hz refresh rate. ULTRIX software comes factory installed.	8,995
Model PM200-LH (Color)	Includes 16MB of RAM, one 3.5-inch 1.4MB diskette drive, 121MB and 209MB internal hard disks, U.S. keyboard and mouse, two RS-232C ports, ThinWire and thick wire Ethernet ports with a T-connector, two terminators, an Ethernet loopback connector, an SCSI port, an ULTRIX two-user license, a DECnet-ULTRIX license, eight-plane color graphics, a 19-inch color display (landscape orientation) offering 1024 x 864 pixel resolution and a 60-Hz refresh rate. ULTRIX software comes factory installed.	12,995
DECstation 5000 Model 120 and 125 Workstations		
Model 120MX (Monochrome)	Includes 8MB of RAM, no hard disk storage, U.S. keyboard and mouse, TurboChannel I/O interconnect, a thick wire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, single-plane nonaccelerated monochrome graphics, a 19-inch monochrome display offering 1280 x 1024 pixel resolution and a 72-Hz refresh rate. The graphics card occupies one TURBOchannel slot.	6,495
Model 120MX (Monochrome)	Includes 8MB of RAM, 121MB and 209MB hard disks, a 600MB CD-ROM reader, U.S. keyboard and mouse, TURBOchannel I/O interconnect, a thick wire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, single-plane nonaccelerated monochrome graphics, a 19-inch monochrome display offering 1280 x 1024 pixel resolution and a 72-Hz refresh rate. The graphics card occupies one TURBOchannel slot.	7,995
Model 120CX (Color)	Includes 8MB of RAM, 121MB and 209MB hard disks, a 600MB CD-ROM reader, U.S. keyboard and mouse, TURBOchannel I/O interconnect, a thick wire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, eight-plane nonaccelerated color graphics and a 16-inch color display offering 1280 x 864 pixel resolution and a 60-Hz refresh rate. The graphics card occupies one TURBOchannel slot. Graphics performance: 94K 2-D vectors/sec.	9,995
Model 120CX (Color)	Includes 8MB of RAM, 121MB and 209MB hard disks, a 600MB CD-ROM reader, U.S. keyboard and mouse, TURBOchannel I/O interconnect, a thick wire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, eight-plane nonaccelerated color graphics and a 19-inch color display offering 1280 x 864 resolution and a 60-Hz refresh rate. The graphics card occupies one TURBOchannel slot. Graphics performance: 94K 2-D vectors/sec.	11,995

**U.S.
 List
 Price
 (\$)**

DECstation 5000 Model 120 and 125 Workstations (Continued)

Model 120PX (Color)	Includes 8MB of RAM, 121MB and 209MB hard disks, a 600MB CD-ROM reader U.S. keyboard and mouse, TURBOchannel I/O interconnect, a thick wire Ethernet portwith a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window SystemVersion 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIXlicense, eight graphics planes with an additional eight planes for double buffering, PixelStamp-accelerated color graphics and a 19-inch color display offering 1280 x 1024 resolution and a 66-Hz refresh rate. The graphics card occupies one TURBOchannel slot. Graphics performance: 277K 2-D vectors/sec.	14,995
Model 120PXG Turbo (3-D Color)	Includes 16MB of RAM, two 209MB hard disks, a 600MB CD-ROM reader U.S. keyboard and mouse, TURBOchannel I/O interconnect, a thick wire Ethernet portwith a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window SystemVersion 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), and a DECnet ULTRIX license. The PXG Turbo option provides 24 visible planes, 24 backgroundplanes, 24 additional planes for overlays and a 24-bit Z buffer, a 44MHz i860-based geometry accelerator and a PixelStamp accelerator, a 19-inch color display offering 1280 x 1024 resolution and a 66-Hz refresh rate. The PXG Turbographics option occupies two TURBOchannel slots. Graphics performance: 439K 2-D vectors/sec, 285K 3-D vectors/sec, 100K 3-D polygons/sec.	43,375
Model 125MX (Monochrome)	Includes 8MB of RAM, no hard disk storage, U.S. keyboard and mouse, TURBO-channel I/O interconnect, a thick wire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, single-plane nonaccelerated monochrome graphics, a 19-inch monochrome display offering 1280 x 1024 pixel resolution and a 72-Hz refresh rate. The graphics card occupies one TURBOchannel slot.	8,495
Model 125MX (Monochrome)	Includes 16MB of RAM, two 209MB hard disks, a 600MB CD-ROM reader, U.S. keyboard and mouse, TURBOchannel I/O interconnect, a thick wire Ethernet portwith a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window SystemVersion 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, single-plane nonaccelerated monochrome graphics, a 19-inch monochrome display offering 1280 x 1024 pixel resolution and a 72-Hz refresh rate. Thegraphics card occupies one TURBOchannel slot.	12,995
Model 125PX (Color)	Includes 16MB of RAM, two 209MB hard disks, a 600MB CD-ROM reader U.S. keyboard and mouse, TURBOchannel I/O interconnect, a thick wire Ethernet portwith a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window SystemVersion 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, eight graphics planes with an additional eight planes for double buffering, PixelStamp-accelerated color graphics and a 19-inch color display offering 1280 x 1024 resolution and a 66-Hz refresh rate. The graphics card occupies one TURBOchannel slot. Graphics performance: 278K 2-D vectors/sec.	17,995
Model 125PXG (3-D Color)	Includes 16MB of RAM, two 209MB hard disks, a 600MB CD-ROM reader U.S. keyboard and mouse, TURBOchannel I/O interconnect, a thick wire Ethernet portwith a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window SystemVersion 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, eight graphics planes with an additional eight planes for double buffering, a 40MHz i860-based geometry accelerator and a PixelStamp accelerator, a 19-inch color display offering 1280 x 1024 resolution and a 66-Hz refresh rate. The PXG graphics option occupies two TURBOchannel slots. Graphics performance: 260K 2-D vectors/sec, 292K 3-D vectors/sec, 51K 3-D polygons/sec.	19,995

		U.S. List Price (\$)
DECstation 5000 Model 120 and 125 Workstations (Continued)		
Model 125PXG Turbo (3-D Color)	Includes 16MB of RAM, two 209MB hard disks, a 600MB CD-ROM reader U.S. keyboard and mouse, TURBOchannel I/O interconnect, a thick wire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), and a DECnet-ULTRIX license. The PXG Turbo option provides 24 visible planes, 24 background planes, 24 additional planes for overlays and a 24-bit Z buffer, a 44MHz i860-based geometry accelerator and a PixelStamp accelerator, a 19-inch color display offering 1280 x 1024 resolution and a 66-Hz refresh rate. The PXGTurbographics option occupies three TURBOchannel slots. Graphics performance: 439K 2-D vectors/sec, 300K 3-D vectors/sec, 100K 3-D polygons/sec.	45,375
DECstation 5000 Model 200 Workstations		
Model 200MX (Monochrome)	Includes 8MB of RAM, no hard disk storage, U.S. keyboard and mouse, TURBO-channel I/O interconnect, a ThinWire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, single-plane monochrome graphics, a 19-inch monochrome display offering 1280 x 1024 resolution and a 66-Hz refresh rate.	12,495
Model 200CX (Color)	Includes 8MB of RAM, no hard disk storage, U.S. keyboard and mouse, TurboChannel I/O interconnect, a ThinWire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, eight-plane color graphics (256 colors), a 16-inch color display offering 1024x 864 resolution and a 60-Hz refresh rate. Graphics performance: 130K 2-D vectors/sec, 35K 3-D vectors/sec, 10K 3-D polygons/sec.	15,000
Model 200CX (Color)	Includes 8MB of RAM, 332MB hard disk (ext.), U.S. keyboard and mouse, TURBOchannel I/O interconnect, a ThinWire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, eight-plane color graphics (256 colors), a 16-inch color display offering 1024x 864 resolution and a 60-Hz refresh rate. Graphics performance: 130K 2-D vectors/sec, 35K 3-D vectors/sec, 10K 3-D polygons/sec.	18,500
Model 200CX (Color)	Includes 8MB of RAM, 332MB hard disk (ext.), keyboard and mouse, TURBOchannel I/O interconnect, a ThinWire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, eight-plane color graphics (256 colors), a 19-inch color display offering 1024 x 864 resolution and a 60-Hz refresh rate. Graphics performance: 130K 2-D vectors/sec, 35K 3-D vectors/sec, 10K 3-D polygons/sec.	21,000
Model 200PX (Color)	Includes 16MB of RAM, 332MB hard disk (ext.), keyboard and mouse, TURBOchannel I/O interconnect, a ThinWire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, eight-plane color graphics (256 colors) with full-page double buffering, accelerated 2-D vector and pixel rendering operations, a 16-inch color display offering 1024 x 824 resolution and a 60-Hz refresh rate. Graphics performance: 300K 2-D vectors/sec, 70K 3-D vectors/sec, 20K 3-D polygons/sec.	21,500
Model 200PX (Color)	Includes 8MB of RAM, 332MB hard disk (ext.), keyboard and mouse, TURBOchannel I/O interconnect, a ThinWire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, eight-plane color graphics (256 colors) with full-page double buffering, accelerated 2-D vector and pixel rendering operations, a 19-inch color display offering 1280 x 1024 resolution and a 66-Hz refresh rate. Graphics performance: 300K 2-D vectors/sec, 70K 3-D vectors/sec, 20K 3-D polygons/sec.	23,500

		U.S. List Price (\$)
DECstation 5000 Model 200 Workstations (Continued)		
Model 200PX (Color)	Includes 16MB of RAM, 332MB hard disk (ext.), keyboard and mouse, TURBOchannel/I/O interconnect, a ThinWire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a DECnet-ULTRIX license, eight-plane color graphics (256 colors) with full-page double buffering, accelerated 2-D vector and pixel rendering operations, a 19-inch color display offering 1280 x1024 resolution and a 66-Hz refresh rate. Graphics performance: 300K 2-D vectors/sec, 70K 3-D vectors/sec, 20K 3-D polygons/sec.	26,300
Model 200PXG (3-D Color)	Includes 16MB of RAM, no hard disk, U.S. keyboard and mouse, TURBOchannel I/O interconnect, a ThinWire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DEC Windows, TCP/IP and NFS software), a PHIGS runtime license, and a DECnet-ULTRIX license. The PXG graphics option provides eight graphics planes with an additional eight planes for double buffering, a 40MHz i860-based geometry accelerator and a PixelStamp accelerator, a 16-inch color display offering 1024 x 864 resolution and a 60-Hz refresh rate. The PXG graphics option occupies two TURBOchannel slots. Graphics performance: 300K 2-D vectors/sec, 300K 3-D vectors/sec, 65K 3-D polygons/sec.	23,500
Model 200PXG (3-D Color)	Includes 16MB of RAM, 332MB hard disk (ext.) keyboard and mouse, TURBOchannel/I/O interconnect, a ThinWire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DECWindows, TCP/IP and NFS software), a PHIGS runtime license, a DECnet-ULTRIX license, eight graphics planes with an additional eight planes for double buffering, a 40MHz i860-based geometry accelerator and a PixelStamp accelerator, a 19-inch color display offering 1280 x 1024 resolution and a 66-Hz refresh rate. The PXG graphics option occupies two TURBOchannel slots. Graphics performance: 300K 2-D vectors/sec, 300K 3-D vectors/sec, 65K 3-D polygons/sec.	28,300
Model 200PXG (3-D Color)	Includes 16MB of RAM, 332MB hard disk (ext.) keyboard and mouse, TURBOchannel/I/O interconnect, a ThinWire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DECWindows, TCP/IP and NFS software), a PHIGS runtime license, a DECnet-ULTRIX license, eight graphics planes with an additional eight planes for double buffering, a 40MHz i860-based geometry accelerator and a PixelStamp accelerator, a 19-inch color display offering 1280 x 1024 resolution and a 66-Hz refresh rate. The PXG graphics option occupies two TURBOchannel slots. Graphics performance: 300K 2-D vectors/sec, 300K 3-D vectors/sec, 65K 3-D polygons/sec.	35,300
Model 200PXG Turbo (3-D Color)	Includes 24MB of RAM, no hard disk, U.S. keyboard and mouse, TURBOchannel I/O interconnect, a ThinWire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DECWindows, TCP/IP and NFS software), a PHIGS runtime license, a DECnet-ULTRIX license. The PXG Turbo option provides 24 visible planes, 24 background planes, 24 additional planes for overlays and a 24-bit Z buffer, a 44MHz i860-based geometry accelerator and a PixelStamp accelerator, a 19-inch color display offering 1280 x 1024 resolution and a 66-Hz refresh rate. The PXGTurbo graphics option occupies three TURBOchannel slots. Graphics performance: 400K 2-D vectors/sec, 400K 3-D vectors/sec, 100K 3-D polygons/sec.	49,100
Model 200PXG Turbo (3-D Color)	Includes 24MB of RAM, 332MB hard disk (ext.), keyboard and mouse, TURBOchannel/I/O interconnect, a ThinWire Ethernet port with a T-connector and two terminators, an SCSI port, ULTRIX Worksystem Software two-user licenses (includes an optimizing C compiler, X Window System Version 11, OSF/Motif, DECWindows, TCP/IP and NFS software), a PHIGS runtime license, a DECnet-ULTRIX license. The PXG Turbo option provides 24 visible planes, 24 background planes, 24 additional planes for overlays and a 24-bit Z buffer, a 44MHz i860-based geometry accelerator and a PixelStamp accelerator, a 19-inch color display offering 1280 x 1024 resolution and a 66-Hz refresh rate. The PXG-Turbo graphics option occupies three TURBOchannel slots. Graphics performance: 400K 2-D vectors/sec, 400K 3-D vectors/sec, 100K 3-D polygons/sec.	52,600
Mass Storage Options		
RZ23	104MB internal hard disk for DECstation 3100 and 5000/100 models.	1,500
RZ23L	121MB internal hard disk for DECstation 3100 and 5000/100 models.	1,500
RZ24	209MB internal hard disk for DECstation 3100 models.	2,500

		U.S. List Price (\$)
Mass Storage Options (Continued)		
TZK10	525MB internal Quarter-inch Tape Drive for 5000/100 models.	1,800
RRD42	600M internal CD-ROM drive for 5000/100 models.	850
External Storage Options		
SZ12A-XA/XB	One RZ55 332MB hard disk in a dual drive expansion box.	4,000
SZ12A-AA/AB	Two RZ55 332MB hard disks in a dual drive expansion box.	7,500
SZ12B-XA/XB	One RZ56 665MB hard disk in a dual drive expansion box.	5,400
SZ12B-BA/BB	Two RZ56 665MB hard disks in a dual drive expansion box.	10,300
SZ12C-XA/XB	One RZ57 1.0GB hard disk in a dual drive expansion box.	7,500
SZ12C-CA/CB	Two RZ57 1.0GB hard disks in a dual drive expansion box.	14,500
SZ12A-LA/LB	One RZ55 332MB hard disk and one RX23 1.44MB diskette drive in a dual drive expansion box.	4,600
SZ12A-MA/MB	One RZ55 332MB hard disk and one RX33 1.2MB diskette drive in a dual drive expansion box.	4,600
SZ12A-HA/HB	One RZ55 332MB hard disk and one TZ30 95MB tape drive in a dual drive expansion box.	5,800
SZ12B-HA/HB	One RZ56 665MB hard disk and one TZ30 95MB tape drive in a dual drive expansion box.	7,200
SZ12A-EA/EB	One RZ55 332MB hard disk and one TZK10 525MB ¼-inch tape drive in a dual drive expansion box.	5,800
SZ12B-EA/EB	One RZ56 665MB hard disk and one TZK10 525MB ¼-inch tape drive in a dual drive expansion box.	7,200
SZ12C-EA/EB	One RZ57 1.0GB hard disk and one TZK10 525MB ¼-inch tape drive in a dual drive expansion box.	9,300
SZ12X-LA/LB	One RX23 1.44MB diskette drive in a dual drive expansion box.	1,100
SZ12X-MA/MB	One RX33 1.2MB diskette drive in a dual drive expansion box.	1,100
SZ12X-HA/HB	One TZ30 95MB tape drive in a dual drive expansion box.	2,300
SZ12X-EA/EB	One TZK10 525MB ¼-inch tape drive in a dual-drive expansion box.	2,300
TKZ08-AA	2.2GB 8-mm. tape drive in a single drive expansion box.	6,695
TLZ04-FA	1.2GB 4-mm. DAT tape drive in a single drive expansion box.	5,500
TSZ07-CA	40MB/140MB SCSI 9-track tape at 1600/6250 bpi.	13,000
RRD40-FA/F3	600MB Compact disk drive in a single drive expansion box.	1,600
Memory Options		
MS01-AA	4MB memory module for DECstation 3100 and 5000/100 models.	1,000
MS01-CA	16MB memory module for DECstation 3100 and 5000/100 models.	4,000
MS02-AA	8MB ECC memory module for DECstation 5000 Model 200.	2,800
MS02-CA	32MB ECC memory module for DECstation 5000 Model 200.	12,800
Printers		
LPS20	PrintServer 20 (Laser 20 ppm simplex, 16 sides duplex)	25,247
LPS40	PrintServer 40 (Laser 40 ppm)	39,900
LN03Q	LN03 Image Printer (Laser 8 ppm)	5,770
LN07	DEClaser 1100 (Laser 8 ppm)	1,649
LN07R	DEClaser 1150 (Laser 4 ppm)	3,199
LN05	DEClaser 2100 (Laser 8 ppm)	2,649
LN05R	DEClaser 2150 (Laser 8 ppm)	4,199
LN06R	DEClaser 2250 (Laser 8 ppm)	5,849
LJ250	Color Ink-jet 3 ppm (text)	1,549
LJ252	Color Ink-jet (167 cps)	1,549
LF01R	Colormate PS Color thermal transfer (3 ppm monochrome, 1 ppm color)	9,450
LG01	Line dot-matrix (600 lpm)	11,539
LG31	Line dot-matrix (300 lpm)	8,390
LA324	24-wire dot-matrix (300 cps LQ)	1,995
LA70	9-wire dot-matrix (200 cps)	499
LA75/LA75P	9-wire dot matrix (250 cps)	835
LA210	9-wire dot matrix (240 cps)	1,675

Software Prices

		U.S. List Price (\$)
QL-VV1A8-B5	3- to 8-user ULTRIX upgrade license.	1,180
QL-VV1A8-B6	9- to 16-user ULTRIX upgrade license.	1,570
QL-VV1A8-BS	17- to 32-user ULTRIX upgrade license.	3,150
QL-VV1A8-BT	33- to 64-user ULTRIX upgrade license.	7,540
QL-VV1A8-B9	65- to unlimited-user ULTRIX upgrade license.	7,540

