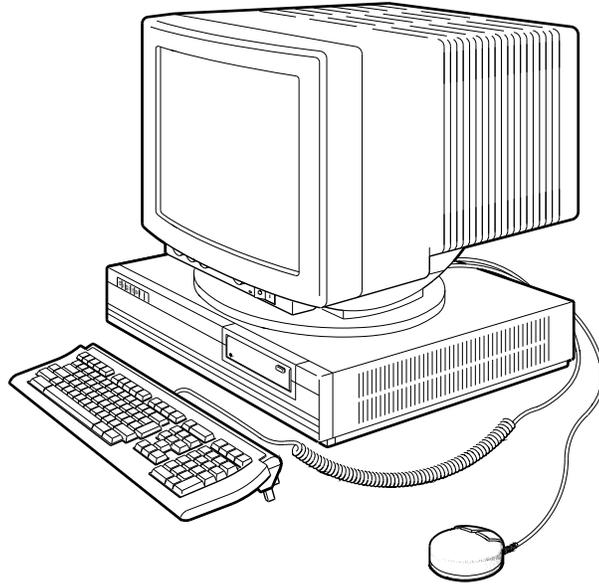


## DECstation 5000/100 Series Workstations

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**Flexible, Powerful, and Upgradeable.**



The DECstation 5000/100 Series workstations are the mid-range of Digital's UNIX-based RISC desktop systems.

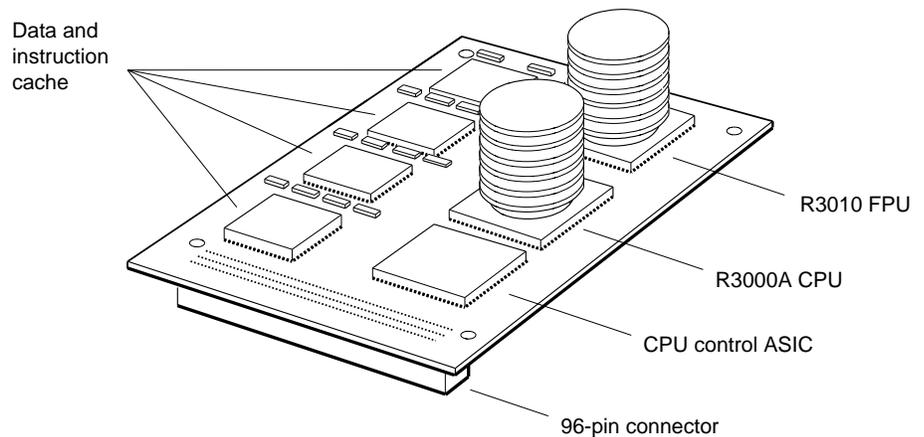
To protect you against technological obsolescence, the DECstation 5000/100 Series, along with the entire DECstation 5000 family, uses a CPU daughter card design. By placing the CPU on a removable 3-inch x 5-inch daughter card, you can easily upgrade your system to higher performance CPUs, such as future R4000 processors.

The DECstation 5000/133, the newest member of the DECstation 5000/100 Series, is available as a complete workstation or as an upgrade for your existing DECstation 5000 Model 120 or Model 125 workstations. The DECstation 5000/133 provides much higher performance than previous models, almost doubling the CPU performance of the DECstation 5000 Model 120 system.

The DECstation 5000/133 workstation offers a low cost of entry combined with the memory expansion and internal disk storage capacity generally found only in more expensive workstations. With the new HX graphics option, the Model 133 delivers excellent performance for any application requiring fast 2D drawing speeds, such as ECAD and MCAD. In addition to the HX option, the DECstation 5000/133 supports a full range of graphics options, from the greyscale MX option through accelerated 3D color with the PXG Turbo+ option.

More than 2800 applications are available on the DECstation family. And, all DECstation 5000 family workstations are ACE compatible. So, applications developed today on DECstation 5000/100 Series workstations will run on ARC-compliant systems in the future.

The DECstation 5000/100 Series  
Removable Daughter Card: *Small  
Enough to Fit in Your Hand, Large  
Enough to Run Your Business.*



## Features

## Benefits

R3000A CPU/R3010 FPU chipset

- o Leadership RISC architecture provides from MIPS Computer Systems excellent price/performance, scalability, and compatibility
- o Full binary compatibility with all of Digital's RISC systems

3-inch x 5-inch removable  
CPU daughter card

- o Allows upgrade of the CPU easily and economically
- o Protects you against technological obsolescence like no other RISC workstation

Three models:

- Model 133 running at 33 MHz  
25.5 SPECmark  
34.4 MIPS (Dhrystone)  
5.9 MFLOPS (double precision)

- o Choose the system that meets your price and performance needs
- o Leading graphics performance for design automation and low-end visualization
- o Cost-effective performance for applications such as software development and electronic publishing
- o Performance to drive the most demanding business applications

- Model 125 running at 25 MHz  
16.4 SPECmark  
26.8 MIPS (Dhrystone)  
3.0 MFLOPS (double precision)

- Model 120 running at 20 MHz  
13.9 SPECmark  
21.7 MIPS (Dhrystone)  
2.6 MFLOPS (double precision)

4-Mbit DRAM-based memory:  
16 to 128 Mbytes

- o Large system memory capacity for demanding applications

1-Mbit DRAM-based memory:  
8 to 32 Mbytes

- o Allows you to use memory from your DECstation 2100 and DECstation 3100 workstations in the DECstation 5000/100 Series

## Features

## Benefits

On-board I/O interfaces:  
Thick wire Ethernet  
SCSI controller  
Two RS-232 serial ports

- o No need for expensive add-ons to create a working system
- o Built-in networking; ready to connect directly to your existing network
- o Access to industry-standard devices at no additional cost; supports up to seven devices
- o Offers support for printers, modems, and 3D dial box and button box devices; supports synchronous WAN and asynchronous X.25

TURBOchannel I/O Bus

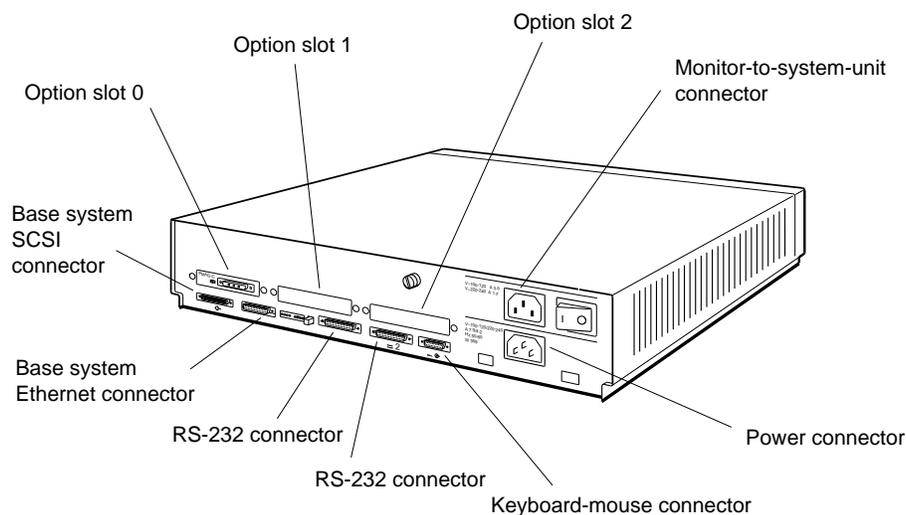
- o High-performance, open desktop I/O channel
- o Provides 3 option slots for system expansion
- o Option cards are user installable; no jumpers or switches
- o Open bus options available from many vendors

Up to 852 Mbytes of internal storage

- o Up to two disks (426 Mbytes each maximum) provide large local storage for applications and data
- o Allows you to run as a satellite system in an NFS™ environment using local disks for swapping

Internal removable media:  
600-Mbyte CD reader  
525-Mbyte QIC tape  
2.88-Mbyte diskette

- o Enables access to on-line ULTRIX documentation, CD-based binary distribution, and applications from CD-ROM, the new generation of distribution media
- o Industry-standard interchange and low-cost backup tape (0.25-inch)
- o Provides access to thousands of PC-based applications with SoftPC software



**Features****Benefits**

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Maximum internal and external storage capacity (combined) of up to 24.1 Gbytes

o Largest storage capacity of any mid-range workstation

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Multiscreen displays

o Offers increased end-user productivity by providing 2 or 3 simultaneous displays (monitors) for either color (HX or TX ) or high-resolution monochrome (MX) environments  
o Provides multiscreen support in conjunction with the industry-standard X Window System and the leading Graphical User Interface (GUI) standard - OSF/Motif<sup>®</sup>

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ULTRIX operating system

o An enhanced UNIX<sup>®</sup> operating system bringing together the best of BSD 4.2/4.3 and AT&T<sup>®</sup> System V<sup>®</sup>  
o The most open and complete UNIX environment, Digital is evolving ULTRIX to comply with new, emerging standards such as OSF/1<sup>®</sup>, the OSF<sup>®</sup>-developed operating system

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ULTRIX Worksystem Software (UWS)

o No other vendor includes as much software with the operating system as Digital's DECstation workstations  
o UWS includes: - ULTRIX Version 4.2A  
- Optimizing C compiler  
- DEC C ANSI-compliant compiler  
- DECwindows and OSF/Motif  
- TCP/IP, NFS, and DECnet/ULTRIX (optional)  
- Display PostScript<sup>®</sup>  
- SQL (Standard Query Language)  
- PHIGS through PEX (on PXG, PXG+, and PXG Turbo+ systems)

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ULTRIX standards compliance

o IEEE POSIX 1003.1 standard  
o X/Open<sup>™</sup> Portability Guide 3 (XPG3) Base System Branded  
o OSF Application Environment Specification  
o Specifications of the POSIX Federal Information Processing Standard (FIPS 151-1)  
o The X Window System Version 11R4  
o OSF/Motif 1.1  
o AT&T's System V Interface Definition Issue 2, Volume 1 and Berkeley Software Distribution (BSD) 4.2/4.3  
o ANSI SQL with ULTRIX/SQL - a standard relational database engine included with the operating system at no extra cost

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<b>Features</b>	<b>Benefits</b>
Graphical user interfaces	o Provides a consistent, easy-to-use, graphical user interface and application development environment
OSF/Motif	o Support for industry standards - Open Software Foundation's specification for an open graphical user interface
DECwindows	o Based on the industry-standard X Window System; the leading implementation of X since 1986

Graphics architecture based on standards:	o Support for industry standards provides interoperability and portability
- GKS/GKS-3D	o Highest performance graphics architecture that uses industry standards
- PHIGS	o 3D applications utilize the client/server model in a distributed environment to increase productivity
- PEX	
- X Window System	
- Display PostScript	

Graphics	<b>MX</b>	<b>HX</b>	<b>TX</b>	<b>PXG+/8</b>	<b>PXG+/24</b>	<b>PXG Turbo+</b>
Graphics Planes						
1, Mono	X					
8, Greyscale		X				
8, Color		X		X		
24, True Color			X		X	X
Multiscreen	X	X	X			
Full-page Double Buffering				X	X	X
PixelStamp Rendering Processor				X	X	X <sup>1</sup>
Intel™ i860 (44 MHz) Geometry Accelerator				X	X	X
24-bit Z Buffer				X <sup>2</sup>	X	X
24-planes Image Memory						X
1280 x 1024 Resolution	X	X	X	X	X	X
Total Planes	1	8	24	16/40 <sup>3</sup>	72	96

<sup>1</sup> The PXG Turbo+ contains an additional scan-converter chip.

<sup>2</sup> The 24-bit Z buffer is optional on the PXG+/8-plane model.

<sup>3</sup> 40 planes achieved with the optional 24-bit Z buffer.

**Features**

**Benefits**

Ethernet

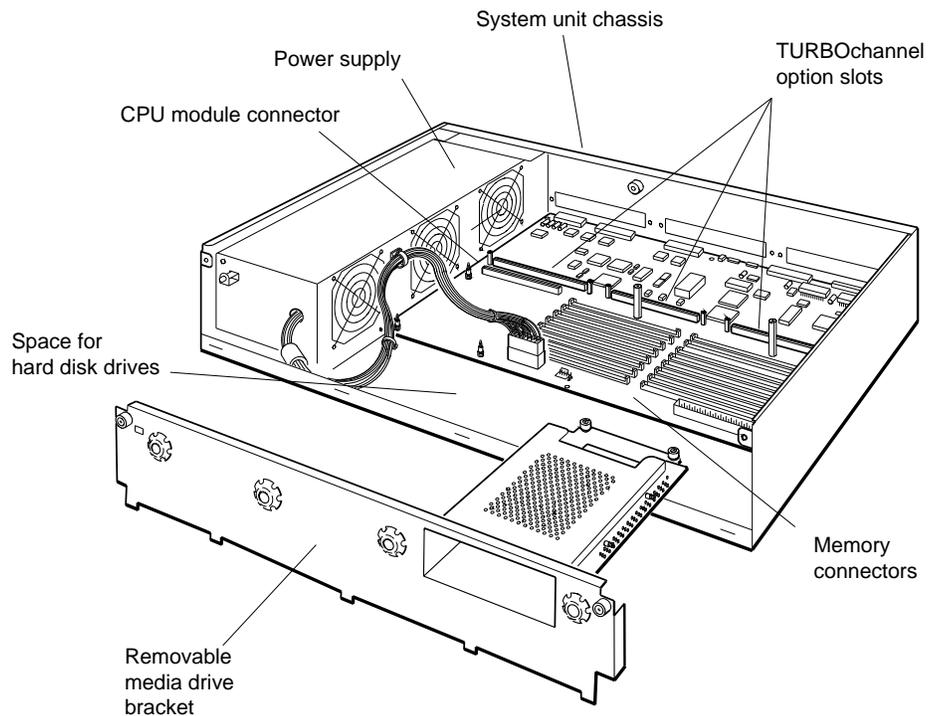
- o Provides standard, thick wire 802.3/Ethernet support
- o DECstation 5000/100 Series supports up to two additional Ethernet option cards
- o Optional inexpensive adapters connect to ThinWire and twisted-pair (10BaseT)

SCSI

- o Provides external expansion through industry-standard SCSI peripherals
- o Each SCSI option card supports up to seven devices
- o System supports up to two additional SCSI option cards

DEC FDDIcontroller 700

- o Provides a compact, low-cost, very high-performance SAS connection to 100 Mbits-per-second FDDI LANs
- o Plugs directly into the TURBOchannel bus without limiting adapter throughput
- o Complies with ANSI FDDI standards to ensure interoperability within multivendor networks
- o FDDI - copper connect



### Commitment to World-Class Service

When you buy from Digital, you're backed by one of the largest service and support organizations in the world. Digital offers flexible warranty and service plans tailored to meet your needs.

### The Next Step is Easy

To learn more about the DECstation 5000/100 Series workstations and Digital's service offerings, contact your local Digital sales representative, or, in

the United States only, call the Technical Consulting Center for pre-purchase assistance (800-343-4040).

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Specifications	DECstation 5000/120	DECstation 5000/125	DECstation 5000/133
CPU/FPU	R3000A/R3010	R3000A/R3010	R3000A/R3010
Clock speed	20 MHz	25 MHz	33 MHz
SPECmark	13.9	16.4	25.5
MIPS (Dhrystone V1.1)	21.7	26.8	34.4
FPU performance	2.6 double-precision	3.0 double-precision	5.9 double-precision
Linpack (MFLOPS)			
TURBOchannel	50 Mbytes/sec burst speed		
Cache			
- Model 120 & 125	128 Kbytes of system cache: 64 Kbytes of data cache and 64 Kbytes of instruction cache		
- Model 133	192 Kbytes of system cache: 64 Kbytes of data cache and 128 Kbytes of instruction cache		
SCSI bus	5 Mbytes/sec transfer rate		
Ethernet	10 Mbits/sec		
FDDI	100 Mbits/sec		
Data types	Little-endian integer format IEEE-compatible floating point format		
<b>Power Requirements</b>			
Line voltage: 120 V/240 V	Voltage tolerance-RMS: 88-132 V/194-264 V		
Frequency/single phase: 60 Hz/50 Hz	Frequency tolerance: 47-63 Hz		
Max. running current: 4.5 A/2.3 A	Max. power consumption: 302 W		
<b>Operating Environment</b>			
Temperature	10°-40° C (50°-104° F)		
Relative humidity	10-90% noncondensing		
Max. operating altitude	2.4 km (8000 feet)		
<b>Physical Characteristics</b>			
Height: 10.2 cm (4.0 in)	Width: 51.0 cm (20.1 in)		
Depth: 43.5 cm (17.1 in)	Weight: 12.7 kg (28.0 lb)		

## Storage Devices

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Internal Devices	RZ25: 426-Mbyte hard disk drive RZ24: 209-Mbyte hard disk drive RZ23L: 121-Mbyte hard disk drive TZK10: 525-Mbyte Quarter-Inch Cartridge tape RRD42: 600-Mbyte compact disc drive
External Devices	RX23: 1.4-Mbyte 3.5-inch diskette drive RZ58: 1.38-Gybyte hard disk drive RZ57: 1-Gbyte hard disk drive RZ56: 665-Mbyte hard disk drive TZ30: 95-Mbyte streaming tape drive TLZ04: 1.2-Gbyte 4mm digital audio tape (DAT) TKZ08: 2.2-Gbyte 8mm helical scan tape TSZ05: 1600 BPI 9-track tape TSZ07: 40/140-Mbyte 9-track tape at 1600/6250 bits/inch TZK10: 525-Mbyte Quarter-Inch Cartridge tape RX33: 1.2-Mbyte 5.25-inch diskette drive

## Display Monitors

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19-inch color Trinitron™ (VRT19)	Height: 47.5 cm (18.7 in); Width: 49.9 cm (19.6 in) Depth: 47.0 cm (18.5 in); Weight: 34.0 kg (75.0 lb)
16-inch color Trinitron (VRT16)	Height: 40.9 cm (16.1 in); Width: 10.6 cm (16.0 in) Depth: 45.3 cm (17.8 in); Weight: 25 kg (56 lb)
19-inch monochrome (VR319)	Height: 45.7 cm (18.0 in); Width: 49.5 cm (19.5 in) Depth: 40.1 cm (15.8 in); Weight: 22.7 kg (50.0 lb)
Resolution	1280 x 1024
Refresh (noninterlaced)	72 Hz

## Input Devices

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LK401 keyboard	105 sculptured keys, 20 special-function keys, built-in angle adjustment, customer-selectable routing
Mouse	Three button, 200 pulses per inch
Graphics tablet	27.9 cm x 27.9 cm (11 in x 11 in) active area
Programmable Function Dial Box	8 individually programmable function dials with 360-degree rotation (256-bit resolution) arranged in 2 vertical rows of 4 dials
Lighted Programmable Function Keyboard	32 individually programmable function keys in 4-6-6-6-6-4 array