SPARCstation IPX

With the SPARCstation™ IPX, our lowest-priced accelerated graphics desktop system, Sun continues its tradition of leadership in RISC workstation price/performance. The SPARCstation IPX offers fast color graphics, windowing, and text scrolling at an affordable price, making it an ideal solution for mechanical, electrical and architectural design, computer-aided software engineering (CASE), financial analysis, and technical electronic publishing applications.

The compact SPARCstation IPX features the powerful new SPARC® integrated integer and floating-point unit and up to 64 MB of memory. It also comes standard with a GX accelerator built onto a chip, freeing up valuable SBus slots for system expansion—providing power and accelerated graphics for the most demanding applications. GX acceleration allows interactive manipulation of complex 2-D and 3-D wireframe animated models in realtime and provides 8-bit color and grayscale monitor support.

Expandable and fully configurable into any network—from PCs to mainframes—the SPARCstation IPX is an excellent platform for groups of people working concurrently. With built-in networking, true multitasking, and more than 3300 available SPARCware™ solutions, the affordable SPARCstation IPX increases productivity—for professionals and novices alike.

And when combined with a SPARCserver™ system, the SPARCstation IPX delivers a powerful solution for businesses today—reaffirming Sun as the leader in client-server computing.

SPARCstation IPX

Features	Benefits
40-MHz SPARC integrated integer and floating-point unit; 20.6 SPECmarks (28.5 MIPS and 4.2 MFLOPS)	▪ Provides powerful, low-cost processing performance ▪ Cost-effective power for demanding technical and commercial applications, particularly those requiring multitasking, windows, and graphics
Integrated GX graphics accelerator	▪ Superior graphics, window, and scrolling performance at no additional cost ▪ 480,000 2-D vector/sec and 310,000 3-D vector/sec ▪ Color and grayscale monitor frame buffer doesn't require SBus slot
Variety of monitors: 16- or 19-inch color, 19-inch grayscale 76-Hz vertical refresh rate	▪ Choose monitors to fit application needs ▪ Allows up to three monitors per system ▪ High-resolution, compact displays ▪ Quality display of multiple windows, entire pages ▪ Simultaneous display of up to 256 colors on color monitor and shades of gray on grayscale monitor ▪ Flicker-free display ▪ Compliant with the most stringent EMI and ergonomic standards
16-MB onboard RAM (64-MB maximum RAM)	▪ Supports 4- or 16-MB SIMMs in any combination
Two SBus slots	▪ High-bandwidth input/output to enable fast transfer of large amounts of data ▪ Users can create custom applications ▪ Open bus; add-in cards available from many vendors (graphics, networking, specialized I/O, multimedia, etc.) ▪ User-installable cards; no jumpers or switches
207-MB internal hard disk	▪ Large internal storage capacity lets users store SunOS,™ applications, and/or data locally
Internal 3.5-inch MS-DOS-compatible floppy disk drive (1.44 MB/720 KB format)	▪ Enables convenient, easy transfer of data and applications, including MS-DOS files when used with Sun DOS Windows
Five built-in industry-standard I/O ports: – Ethernet port (standard Ethernet; can be connected to thick wire, thin wire, or twisted pair with appropriate transceiver) – Two RS-423 serial ports – SCSI-2 port – Audio I/O port	▪ Allow connection to other computers and popular peripherals without using SBus expansion slots ▪ Allows quick and easy connection with computers on a standard, high-performance network ▪ RS-232C compatible; for easy integration of modems, printers, scanners, and other serial devices ▪ Allow X.25 synchronous hookup with accessory cable and SunNet™ X.25 7.0 or higher ▪ Provides access to CD-ROM drives, hard disks, tape devices, and other I/O peripherals ▪ Allows sound capabilities for applications where audio is desired, such as multimedia mail
SunOS environment	▪ UNIX® power for multitasking and high performance for network-based applications

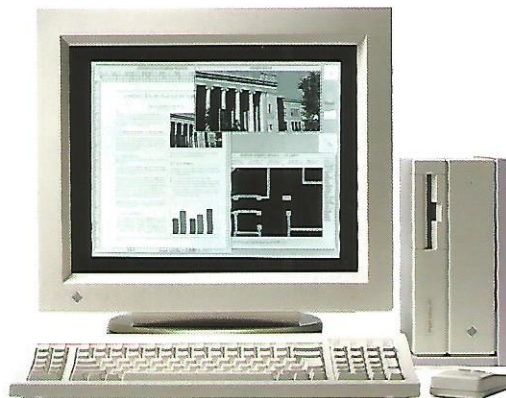| Features	Benefits
Advanced ease-of-use features: – OPEN LOOK® graphical user interface	▪ Graphical, mouse-driven user interface with multitasking windows and pull-down/pop-up menus makes full-featured UNIX applications intuitive and easy to learn
– OpenWindows™ DeskSet™ environment preinstalled on all diskfull systems – Preinstalled SunOS 4.1.1 Rev. B or higher on all diskfull systems – Easy-to-use manuals	▪ Powerful set of networked group productivity tools, including File Manager, Mail Tool, and Calendar Manager ▪ Simplifies installation ▪ Quickly configurable into any network ▪ Timesaving step-by-step installation and use guidelines
External hard disk capacity of up to 15.6 GB	▪ Provides very large high-performance storage capacity when needed
Compact packaging	▪ Small footprint saves desk space ▪ System chassis can stack with Desktop Storage Packs
Sun's ONC™ distributed computing environment and NFS® distributed computing filesystem	▪ Powerful networking capabilities for small to large networks, including support for connectivity to all PC and mainframe systems
Print and File Server Option Packs	▪ Allow SPARCstation IPX to be configured as a low-cost, powerful server for small workgroups

Upgrades

Sun is committed to providing an easy migration path to the latest technologies. Both board- and chassis-level upgrades from customers' existing platforms are available.
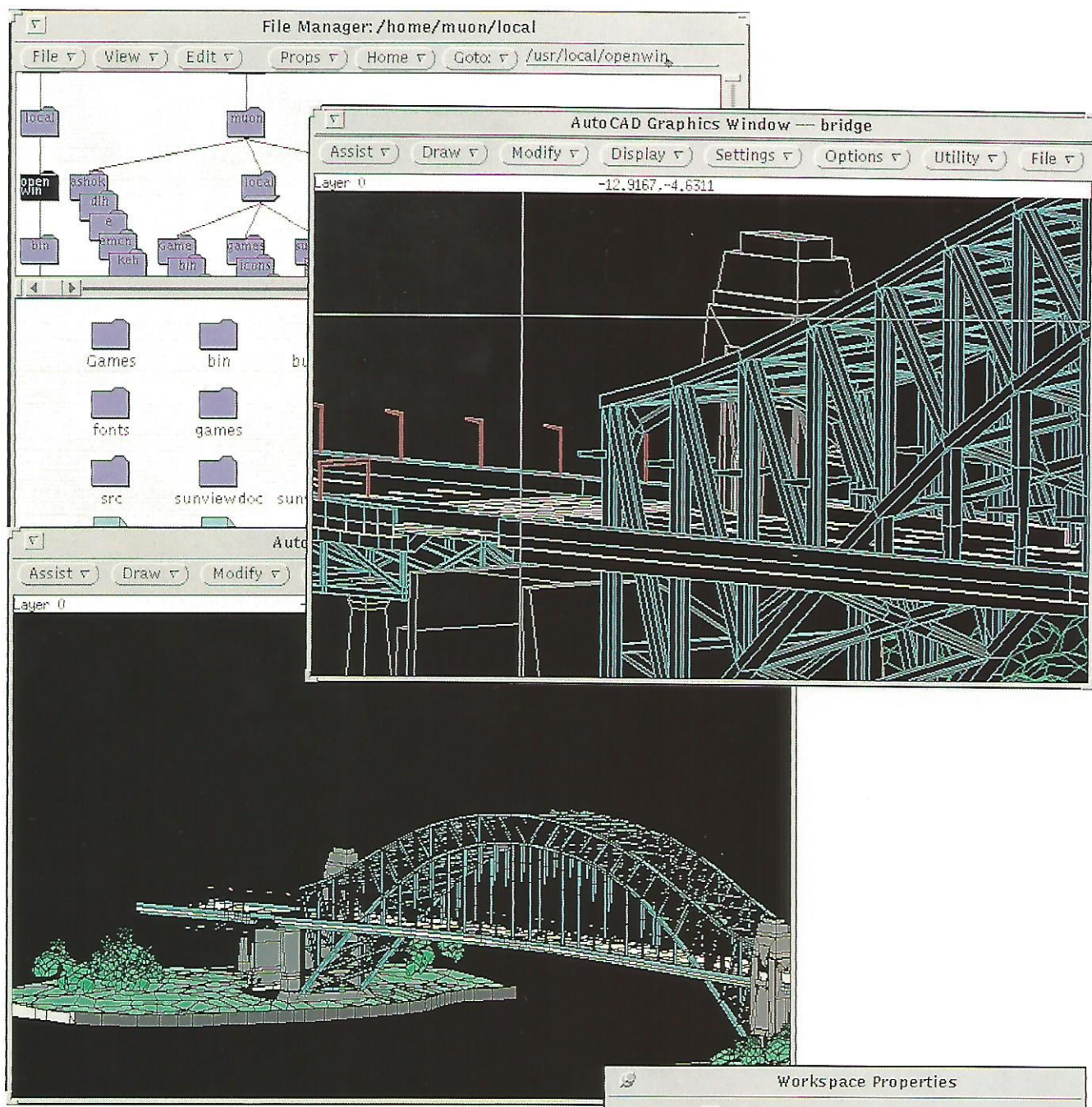
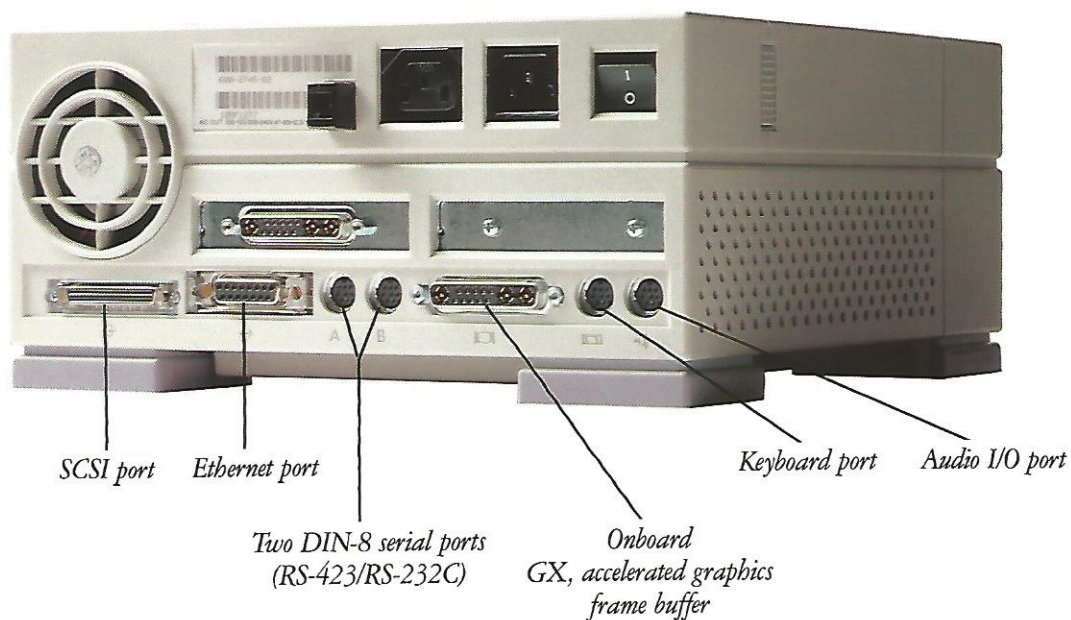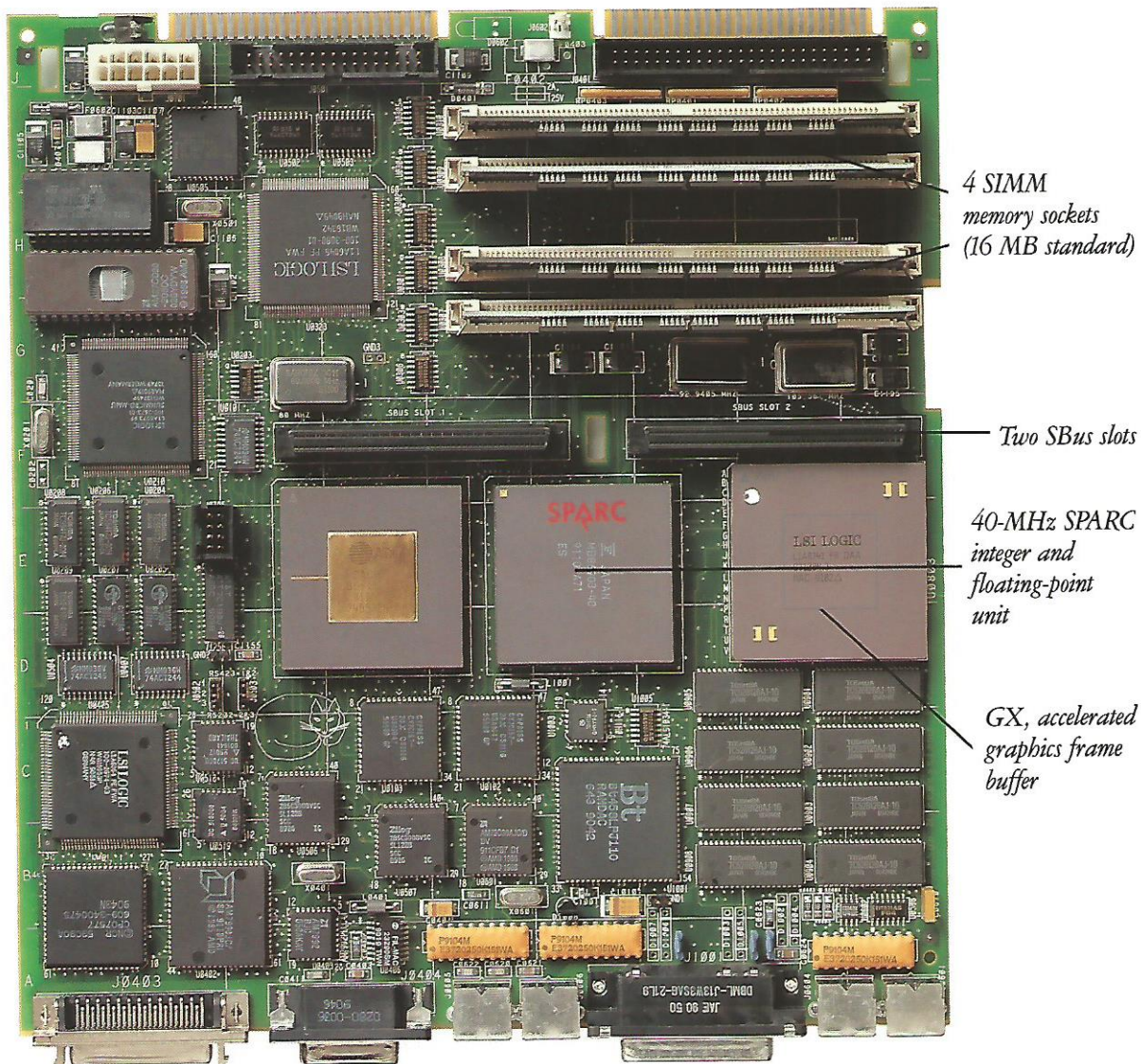|	
– Simple board-level upgrade to SPARCstation IPX from SPARCstation IPC	▪ Nearly doubles compute performance ▪ Enhances graphics performance ▪ Customer-installable in minutes ▪ Protects original hardware investment
– Chassis-level upgrade to SPARCstation IPX from color Sun-3™/60, Sun-3/80, and Sun386i	▪ Cost-effective path to SPARC platform ▪ From five to nineteen times the performance ▪ Customer-installable in minutes

You can nearly double the compute performance of your SPARCstation IPC and get accelerated graphics capabilities with a simple board-level upgrade to a SPARCstation IPX.

The SPARCstation IPX is also available with a 19-inch grayscale monitor, ideal for desktop publishing applications.

File Manager: /home/muon/local

File ▽ View ▽ Edit ▽ Props ▽ Home ▽ Goto: ▽ /usr/local/openwin

AutoCAD Graphics Window — bridge

Assist ▽ Draw ▽ Modify ▽ Display ▽ Settings ▽ Options ▽ Utility ▽ File ▽

Layer 0 -12.9167,-4.6311

Games bin
fonts games
src sunviewdoc sun

Auto

Assist ▽ Draw ▽ Modify ▽

Layer 0

The powerful SPARCstation IPX accelerates the most demanding applications and offers true multitasking, increasing everyone's productivity. Built-in GX acceleration allows interactive manipulation of complex 2-D and 3-D wireframe animated models in realtime.

Workspace Properties

Category: ▽ Color

Workspace
Windows

Palette
Custom

Apply Reset

4 SIMM memory sockets (16 MB standard)

Two SBus slots

40-MHz SPARC integer and floating-point unit

GX, accelerated graphics frame buffer

SCSI port

Ethernet port

Two DIN-8 serial ports (RS-423/RS-232C)

Onboard GX, accelerated graphics frame buffer

Keyboard port

Audio I/O port

Specifications

Processor	
Performance	20.6 SPECmarks (28.5 MIPS and 4.2 MFLOPS)
Integrated integer and floating-point unit	SPARC RISC processor and SPARC IEEE standard 764
Cache	64 KB
Memory Management	
Type	Sun-4™ MMU
Contexts	8 in hardware
I/O interface	DVMA
Page-mapped entry groups	256 PMEGS
Main Memory	
Standard RAM	16 MB
Expansion RAM	4- or 16-MB SIMMs
Maximum RAM	64 MB (using 16-MB SIMMs)
Ethernet Interface	
Interface type	AUI
Data rate	10 MB/sec
Connector	15 pin
SCSI Interface	
Connector	SCSI-2 (synchronous SCSI)
I/O Ports	
Serial (asynchronous)	Two (DIN-8) RS-423 serial (RS-232C-compatible standard); synchronous X.25 supported using optional cable
Audio	8 KHz, 8 bits with low-pulse code modulation; internal speaker and I/O port
System Expansion Bus	
Type	SBus
Address bus width	25 bits
Data bus width	32 bits
Number of expansion slots	2 (support masters or slaves)
Monitor Options*	
Type	Color
Monitor format	16 and 19 in.
Resolution	1152 (h) × 900 (v) pixels
Dots per inch	100 (16 in.), 84 (19 in.)
Pixel aspect ratio	1:1
Colors displayed	256
Color palette	More than 16.7 million
Refresh rate	76 Hz, noninterlaced
Bandwidth	93 MHz
Controls	Easily accessible contrast, power, vertical centering, vertical and horizontal static convergence
Connector	13W3
Power supply	100-120/200-240 VAC
Compliance	FCC-B, VDE-B, VCCI-2, GS-mark, Swedish MPR1990; 10 magnetic emissions

*Additional monitor options are available. See your Sun sales representative for details.

Keyboard	Sun standard Type 4, 107 keys, low profile
Mouse	Optical, 3-button
Software	
Operating system	SunOS 4.1.1 or higher
Language options	C, Pascal, Modula-2, COBOL, FORTRAN, Sun Common Lisp
Communications standards	Ethernet, NFS, TCP/IP
Supported graphics libraries	SunVision,™ SunPHIGS,™ XGL,™ SunGKS,™ Xlib, PostScript,® Pixwin
Window system	OpenWindows (X11/NeWS™), SunView™
IBM/DEC connectivity	SunLink® products
Internal Storage	
Floppy disk drive:	MS-DOS/IBM compatible, 3.5 in., 1.44 MB/720 KB
Hard disk drive:	
Format	3.5-in. disk
Formatted capacity	207 MB
Average seek time	16 msec
Burst transfer rate (synchronous)	4 MB/sec
Raw disk data rate	1.6 MB/sec

Desktop Storage Packs		
Hard disk drive:		
Format	3.5-in. disk	3.5-in. disk
Formatted capacity	207 MB	424 MB
Average seek time	16 msec	14 msec
Burst transfer rate (synchronous)	4 MB/sec	5 MB/sec
Raw disk data rate	1.6 MB/sec	2.5-3 MB/sec

Tape drive:	
Format	.25-in. tape, QIC-150
Formatted capacity	150 MB
CD-ROM:	
Format	5.25-in. CD-ROM
Formatted capacity	Up to 644 MB
Burst transfer rate	1.2 MB/sec
Desktop Storage Modules	
Hard disk drive:	
Format	5.25-in. disk
Formatted capacity	1.3 GB
Average seek time	12 msec

Burst transfer rate (synchronous)	5 MB/sec
Raw disk data rate	3-4.5 MB/sec
Tape drive:	
Format	8-mm helical scan tape
Formatted capacity	2.3 GB
Environment	(per 950-1316-03)
Operating temperature	0° C to 40° C (32° F to 104° F)
Nonoperating temperature	-40° C to 75° C (-40° F to 167°F)
Operating humidity	5% to 95% RH, noncondensing
Nonoperating humidity	95% RH, noncondensing
Operating acoustic noise	4.9 bels
Idle acoustic noise	4.9 bels
Noise power emission level per ANSI Std. S12.10-1985	
Regulations	
Safety	UL 478/UL 1950, CSA 22.2 no. 950-M89, TUV EN 60950
RFI/EMI	FCC Class B (47 CFR, Part 15); DOC Class B (CSA-C108.8); VDE Class B (VDE 0871, Vfg. 1046/1984); VCCI Class 2
X-ray emissions	DHHS 21 CFR, Subchapter J; PTB German X-ray Decree
Static discharge	15 KV—no hard errors
Electrical	
AC voltage	100-120/200-240 VAC
AC frequency	47-63 Hz
Power	5/2.5 A

Dimensions and Weights	
SPARCstation IPX Chassis	
Height	11.7 cm (4.6 in.)
Width	24.4 cm (9.6 in.)
Depth	26.4 cm (10.4 in.)
Net weight (with internal disk)	5.45 kg (12 lbs.)
Desktop Storage Pack	
Height	7.1 cm (2.8 in.)
Width	24.4 cm (9.6 in.)
Depth	26.4 cm (10.4 in.)
Net weight	16.9 kg (7 lbs.)
Monitors	
16-in. color	
Height	41.6 cm (16.4 in.)
Width	40.6 cm (16 in.)
Depth	45.3 cm (17.8 in.)
Shipping weight	27.3 kg (60 lbs.)
19-in. color	
Height	47.4 cm (18.7 in.)
Width	48 cm (18.9 in.)
Depth	50.5 cm (19.9 in.)
Shipping weight	38.6 kg (85 lbs.)

Sun Microsystems

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