



SUN ULTRA™ 10 WORKSTATION

The powerful, expandable Ultra system that's easy to afford.

For demanding technical and commercial applications such as 3-D modeling, workstations are the best solution. And the Sun Ultra™ 10 system sets high standards for performance and value in a desktop workstation. With a 440-MHz UltraSPARC™-IIi processor and a large 2-MB external cache, you get the scalable performance you need. Sun's 3-D graphics accelerators—Sun™ Creator3D, Sun Elite3D m3, and Sun Elite3D m6—provide the throughput and processing power for high-performance 3-D

graphics computing. Additionally, with the available SunPCi™ coprocessor card you can now run your PC productivity applications at native speeds alongside your UNIX® technical applications for unmatched versatility and productivity. And with the preinstalled 64-bit Solaris™ 7 and Solaris 8 Operating Environment software and powerful desktop tools for simple setup and management, all that power is easy to use. A better solution, and a better value—the Sun Ultra 10 workstation.

HIGHLIGHTS

- 440-MHz UltraSPARC-IIi processor with large 2-MB cache for industry-leading performance.
- Up to 1-GB DRAM, up to two 20-GB hard disks, and four PCI slots for maximum flexibility and expandability.
- Great for 2-D and 3-D digital content creation, software and Java™ application development, financial analysis, EDA, MCAD, MCAE, and GIS applications.
- SunClient™ support offers flexible, low-cost service and support options.
- Sun Elite3D m6, Sun Elite3D m3, and Sun Creator3D graphics accelerator options for the most demanding graphics applications.
- Web-enhanced Common Desktop Environment (CDE) is easy to use, customize, and manage.
- Robust, scalable Solaris Operating Environment software provides 100% binary compatibility across the entire product line—protecting your investment.

Sun Ultra™ 10 Workstation Series

The Ultra 10 workstation provides workstation-class features, such as large amounts of memory and Ecache, 64-bit hardware and operation system, and high-performance 3-D graphics at a very affordable price.

SPECIFICATIONS

PROCESSOR

Architecture 440-MHz UltraSPARC-IIi with 2-MB external cache

MEMORY

1 GB maximum, ECC error-correction
Four DIMM slots, 50-ns 168-pin JEDEC DIMMs
Note: Install DIMMs in pairs

STANDARD INTERFACES

Expansion bus Four 32-bit PCI slots, full-size, 33 MHz, 5 volt
UPA graphics slot One UPA graphics slot, supports Sun Creator3D and Sun Elite3D high-performance graphics options
Network Ethernet/Fast Ethernet, twisted pair standard (10-BaseT and 100-BaseT), self-sensing
Serial One D-Sub 25-pin connector, synchronous/asynchronous
One D-Sub 9-pin connector, asynchronous
Parallel One D-Sub 25-pin connector, IEEE 1284 (bidirectional)
Audio One line-in/line-out
One microphone-in/speaker-out

MASS STORAGE AND MEDIA

Internal disk 20-GB, 7200-rpm, 3.5-in. Enhanced IDE HDD
Internal CD 48X-speed CD-ROM
Internal floppy disk One 3.5-in. 1.44-MB floppy
PCMCIA One front-access bay for third-party options
Expansion One empty full-height storage device bay

GRAPHICS AND IMAGING

Standard

Onboard 8- or 24-bit user configurable frame buffer with accelerated text, windowing, 2-D and 3-D wireframe, 1152 x 900 in 24-bit mode or 1280 x 1024 in 8-bit mode at 76 Hz, high-resolution support.

Sun Creator3D

All the imaging features of Sun Creator plus accelerated 24-bit double-buffered 3-D graphics with 28-bit Z-buffer and 8-bit overlay plane. Gouraud shading, alpha-blending and screen-door transparency, line antialiasing, depth-cueing, 4-bit stencil support with hardware acceleration of OpenGL® stencil functions, four 256-entry colormaps for dynamic colormap segment allocation and adjustable gamma correction. NTSC/PAL video timing support. 1280 x 1024 at 76 Hz resolution standard, stereo 960 x 680 at 112 Hz supported with 21-in. monitor. Option to reconfigure frame buffer to high-resolution single-buffered Sun Creator Graphics for imaging applications supporting 24-in. high-resolution wide-screen monitors, up to 1920 x 1200 at 70 Hz.

Sun Elite3D m3

Three on-board graphics floating-point engines with all the imaging features of Sun Creator plus higher performance accelerated 24-bit double-buffered 3-D graphics with 28-bit Z-buffer and 8-bit overlay plane. Gouraud shading, alpha-blending and screen-door transparency, line and dot antialiasing, per-pixel depth-cueing, per-pixel alpha interpolation, 4-bit stencil support with hardware acceleration of OpenGL stencil functions, four 256-entry colormaps for dynamic colormap segment allocation and adjustable gamma correction. NTSC/PAL video timing support. 1280 x 1024 at 76 Hz resolution standard, stereo 960 x 680 at 112 Hz supported with 21-in. monitor.

Sun Elite3D m6

Highest performance Sun graphics with the integrated imaging features of Sun Creator3D, plus very high-performance accelerated 24-bit double-buffered 3-D graphics with 28-bit Z-buffer and 8-bit overlay plane. Gouraud shading, alpha-blending and screen-door transparency, line and dot-antialiasing, per-pixel depth-cueing, per-pixel alpha interpolation, 4-bit stencil support with hardware acceleration of OpenGL stencil functions, four 256-entry colormaps for dynamic colormap segment allocation and adjustable gamma correction, NTSC/PAL video timing support. 1280 x 1024 at 76 MHz resolution standard, stereo 960 x 680 at 112 Hz supported with 21-in. monitor.

MONITOR OPTIONS

| | 17-in. color | 21-in. color | 24-in. wide screen color | Flat panel |
|--|--------------|--------------|--------------------------|------------|
| 1600 x 1200 resolution, 75-Hz refresh rate | | • | | |
| 1280 x 1024 resolution, 60-, 76- or 67-Hz refresh rate | | • | | • |
| 1152 x 900 resolution, 76- or 66-Hz refresh rate | • | • | | • |
| 1024 x 768 resolution, 76-Hz refresh rate | • | • | | |
| 960 x 680 resolution, 112-Hz refresh rate | | | • | |
| 1920 x 1200 resolution, 70-Hz refresh rate | | | • | |
| 1600 x 1000 resolution, 76- or 66-Hz refresh rate | | | • | |
| 1440 x 900 resolution, 76-Hz refresh rate | | | • | |
| 1280 x 800 resolution, 76-Hz refresh rate | | | • | |

SOFTWARE

Operating system Solaris™ 8 Operating Environment, 10/00 preinstalled
Solaris 7 Operating Environment, 3/99 preinstalled
Solaris 2.6, Hardware: 3/98 or later releases
Solaris 2.5.1, Hardware: 11/97 or later releases

ENVIRONMENT

AC power 100-120; 220-240 VAC, 47-63 Hz, 0.4 K VA
Operating 10° C to 35° C (50° F to 95° F) 40% to 80% relative humidity, noncondensing
Nonoperating -20° C to 60° C (-4° F to 140° F) 30% to 90% relative humidity, noncondensing
Operating acoustic noise 5.2 bels
Idling acoustic noise 5.2 bels
Declared noise emissions in accordance with ISO 9296, measured at 23° C

REGULATIONS

Meets or exceeds the following requirements:

Safety UL/CSA-60950, EN 60950, IEC950, CB Scheme with all country deviations, IEC825-1, 2, and CFR21 Part 1040
Ergonomics EK1-HTB-2000
RFI/EMI EN 55022/CISPR22 Class B, FCC CFR47 Part 15 Class B, EN 61000-3-2, EN 61000-3-3
Immunity EN 55024
X-ray (for Monitors) DHHS 21 Subchapter J; PTB German X-ray Decree
Power management Energy Star compliant on some configurations
Regulatory markings CE, FCC, ICES-003, C-tick, VCCI, GOST-R, BSMI, EK, UL/cUL, TUV-GS, E-Star

DIMENSIONS AND WEIGHTS

| | Sun Ultra 10 chassis | 17-in. color monitor | 24-in. wide-screen color monitor |
|-----------------|--|----------------------|---|
| Height | 40.2 cm (15.8 in.) | 421 mm (16.6 in.) | 50.0 cm (19.7 in.) |
| Width | 17.6 cm (6.9 in.) | 420 mm (16.6 in.) | 58.0 cm (22.8 in.) |
| Depth | 43.5 cm (17.1 in.) | 425 mm (16.8 in.) | 54.8 cm (21.6 in.) |
| Shipping weight | 20.0 kg (44 lb.) | 16.5 kg (36.3 lb.) | 41.4 kg (91.0 lb.) |
| | 18.1-in. flat panel (complete assembly) | | 21-in. flat screen premium monitor |
| Height | 459.8 mm (18.1 in.) | | 498 mm (19.6 in.) |
| Width | 449.5 mm (17.7 in.) | | 501 mm (19.7 in.) |
| Depth | 32.9 mm (1.3 in.) | | 498 mm (19.6 in.) |
| Shipping weight | 8.8 kg (19.5 lb.) | | 32.5 kg (71.6 lb.) |

UPGRADES

Upgrades are available for SPARCstation™ and Ultra systems.

To purchase this or other products from the **Sun™ Store**, go to **store.sun.com**, or contact an authorized Sun reseller in your area.

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