

Ultra™ Creator Family
Sun™ Ultra™ 1

Redefine
high-performance
with an
uncompromising
desktop
series.

The Ultra™ 1 series with Creator3D technology brings you all the fast image processing and MPEG video decompression of Creator graphics, plus accelerated 24-bit, double- and Z-buffered 3-D rendering. Sun's 24-bit, single-buffered 2-D graphics and imaging enables you to pan, zoom, rotate, convolve, and perform color conversion at unprecedented speeds.

The UltraSPARC Port Architecture (UPA) is a crossbar-switched interconnect that enables multiple simultaneous data transfers.

All the Ultra 1 systems are built around the same core technology, the Ultra

Sun Ultra 1 Series Specifications

Processor Options

Architecture	Superscalar SPARC™ Version 9, UltraSPARC
Memory management	MMU with 64 I-TLB entries and 64 D-TLB entries, 8192 hardware supported contexts
Cache	16-KB data and 16-KB instruction on chip Secondary: 512-KB external

Main Memory

Total of 8 SIMM memory slots available (1GB maximum)
 16-, 32-, 64-, and 128-MB SIMM expansion
 128MB maximum (with 16-MB SIMMs, in pairs)
 256MB maximum (with 32-MB SIMMs, in pairs)
 512MB maximum (with 64-MB SIMMs, in pairs)
 1GB maximum (with 128-MB SIMMs, in pairs)

Standard Interfaces

Network	Model 170 entry configurations: Ethernet, twisted pair standard (10-BaseT) or AUI for external transceiver Model 170E/200E Creator/Creator3D: Ethernet/Fast Ethernet, twisted pair standard (10-BaseT and 100-BaseT) or MII for external transceiver
I/O	Model 170 entry configurations: 10-MB/sec fast SCSI-2 (synchronous) Model 170E/200E Creator/Creator3D: 20-MB/sec fast/wide SCSI-2 (synchronous)
Serial	Two RS-232C/RS423 serial ports (DB25)
Parallel	Centronics-compatible parallel port (DB25)
Audio	16-bit audio, 8 kHz to 48 kHz; internal speaker and external microphone
Expansion Bus	SBus (IEEE 1496) Model 170 entry configurations: Three SBus expansion slots; 32/64-bit data bus width Model 170E/200E Creator/Creator3D: Two SBus expansion slots; 32/64-bit data bus width

Mass Storage and Media

Internal floppy disk	Optional 3.5-in. MS-DOS/IBM compatible (720 KB, 1.2 MB, 1.44 MB formatted)
Internal CD	Optional 644 MB SunCD™, 12X-speed, Photo CD compatible
Internal tape	Optional 12- to 24-GB DDS3 4-mm or 14-GB 8-mm
Internal disk	Up to two 3.5- x 1-in. (2.1 GB, 4.2 GB formatted)
External desktop storage	Disk: 2.1- to 4.2-GB SPARCstorage™ UniPack™, 12.6- to 25.2-GB SPARCstorage MultiPack™; 31.5- to 126-GB SPARCstorage Array Tape: 2.5-GB QIC; 20- to 40-GB 8-mm, 4- to 8-GB 4-mm DDS2, 12- to 24-GB 4-mm DDS3, 72- to 144-GB 4-mm DDS3 auto-loader; 140-GB SPARCstorage Library Model 8/140

Sun Ultra 1 Graphics and Imaging

TurboGX	8-bit 2-D/3-D wireframe, up to 1152 x 900 at 76 Hz
Creator	Accelerated 24-bit 2-D/3-D graphics and imaging with 8-bit overlay plane, high-speed convolution, rotation, panning, zooming, color conversion, up to 1280 x 1024 at 76 Hz, stereo 960 x 680 at 112 Hz
Creator3D	High-performance 3-D graphics, 24-bit double buffering with 8-bit overlay planes, 28-bit Z-buffer, 4-bit stencil support, transparency, Gouraud shading, anti-aliasing, depth-cueing, up to 1280 x 1024 at 76 Hz, stereo 960 x 680 at 112 Hz
Ultra 1 with Freedom Series	Very high performance 3-D graphics, Gouraud shading, with Phong shading, anti-aliasing, depth-cueing, alpha blending, high-speed hardware texture mapping and mip mapping, dynamic pixel allocation, stereo viewing option, video in/out option, up to 1536 x 1280 at 60 Hz

Monitor Options

17-in. color	1152 x 900 resolution, 76- or 66-Hz refresh rate, 100 dots per inch 1280 x 1024 resolution, 76- or 66-Hz refresh rate, 110 dots per inch 960 x 680 resolution, 112-Hz refresh rate, 81 dots per inch
20-in. color	1152 x 900 resolution, 76- or 66-Hz refresh rate, 84 dots per inch 1280 x 1024 resolution, 76- or 66-Hz refresh rate, 93 dots per inch 960 x 680 resolution, 112-Hz refresh rate, 70 dots per inch

Input Devices

Keyboard	Sun Type 5; AT 101 or UNIX® layout available More than 18 international keyboards available
Mouse	Opto-mechanical, 3-button
Microphone	SunMicrophone™ II
Color camera	Optional SunVideo and SunCamera™

Software

Operating system	Solaris™ 2.5 operating environment, Solaris NEO™ 2.0, Solaris OpenStep 1.0
Windowing system	OpenWindows™ Version 3.5, Common Desktop Environment Version 1.0.1
Development environments	Sun Workshop™; Internet Workshop 1.0, Workshop OpenStep 1.0
Languages	C, C++, Pascal, FORTRAN, Java™
Networking	ONC™ NFS™ TCP/IP, SunLink™ OSI, MHS, IPX/SPX, DCE
Graphics	XGL™, XIL™, OpenGL, Xlib, PostScript™

Environment

AC power	100-240 VAC, 47-63 Hz, 0.4 K VA
Operating	5° C to 40° C (41° F to 104° F) 20% to 80% relative humidity, noncondensing
Nonoperating	-40° C to 60° C (-4° F to 140° F) 5% to 93% relative humidity, noncondensing
Operating acoustic noise	5.4 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 1950, CSA C22.2 No. 950, TUV EN 60950, CB Scheme with Nordic deviations EMKO-TSE (74-SEC) 203, ZH1/618
RFI/EMI	FCC Class B, DOC Class B, VCCI Class 2, EN 55022 Class B, EN61000-3-2
Immunity	EN 50082-1
X-ray	DHHS 21 Subchapter J; PTB German X-ray Decree

Dimensions and Weights

Sun Ultra 1 chassis	
Height	10.25 cm (4.03 in.)
Width	41.75 cm (16.44 in.)
Depth	44.30 cm (17.44 in.)
Shipping weight	9.55 to 12.50 kg (21.0 to 27.5 lb.)
17-in. color monitor	
Height	41.4 cm (16.4 in.)
Width	40.6 cm (16.0 in.)
Depth	45.0 cm (17.7 in.)
Shipping weight	25.9 kg (57.0 lb.)
20-in. color monitor	
Height	47.1 cm (18.5 in.)
Width	47.5 cm (18.7 in.)
Depth	49.5 cm (19.5 in.)
Shipping weight	36.5 kg (80.3 lb.)

Upgrades

Upgrades are available from SPARCstation systems.



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