

Workstations

UltraSPARC Workstations Product Line Overview

Product Specifications	Sun Ultra 5	
	Model 360	Model 400 MHz
Processor	UltraSPARC-IIi	
Clock speed	360 MHz	400 MHz
On-chip cache size	16-KB I-cache + 16-KB D-cache	
External cache	256 KB	2 MB
SPECint95 ¹	12.1	14.1
SPECfp95 ¹	13.1	18.3
Main memory	64 MB–512 MB	128 MB-256 MB
Disk capacity – Internal Enhanced IDE hard disk – Internal Floppy	8.4 GB 5400 rpm 1.44-MB, manual eject	9.1 GB 7200 rpm 1.44-MB, manual eject
Graphics – Built In	On-board PGX24 Graphics	
I/O slots – Graphics (UPA) – PCi	N/A 3 slots (2 long, 1 short)	
Internal data interchange, software distribution, and backup	32X-speed CD-ROM (standard) 1.44 MB floppy (standard)	
External tape backup	9.2-GB SPARCstorage™ UniPack, 12.6-GB SPARCstorage MultiPack 12GB 4mm DDS-3, 20GB 8mm, 72GB 4mm DDS-3 autoloader, 20GB DLT4000, 35GB DLT7000 4–8-GB DDS-2 4mm tape, 12–24-GB 8mm DDS-3, 20–40-GB 8mm, 72–144-GB 4mm DDS-3 autoloader, SPARCstorage Library Model 8/140, 20–40-GB DLT4000, 35–70-GB DLT7000 (IMPORTANT: Appropriate PCi SCSI adapter card required to attach any SCSI device)	
Entry configuration	64-MB DRAM, 8.4-GB hard disk, floppy, 32X-speed CD-ROM, on-board PGX24 Graphics	128-MB DRAM, 9.1-GB hard disk, floppy, 32X-speed CD-ROM, on-board PGX24 Graphics
Software licenses ²	Solaris 8 (preinstalled)	
¹ Performance numbers are preliminary and subject to change.		
² Solaris 2.x system license is included.		

UltraSPARC Workstations Product Line Overview *(continued)*

Product Specifications	Sun Ultra 10	
	Model 333	Model 440
Processor	UltraSPARC-II <i>i</i>	
Clock speed	333 MHz	440 MHz
On-chip cache size	16-KB I-cache + 16-KB D-cache	
External cache	2 MB	
Main memory	128 MB–1 GB	
Disk capacity – Internal Enhanced IDE hard disk – Internal Floppy	Up to two 9.1 GB 1.44-MB, manual eject	
Graphics – Built In – Available	On-board PGX24 Graphics Creator3D	On-board PGX24 Graphics Elite3D m3, Elite3D m6
I/O slots – Graphics (UPA) – PCi	1 4 full-size slots	
Internal data interchange, software distribution, and backup	32X-speed CD-ROM (standard) 1.44-MB floppy (standard)	
External tape backup	2.5-GB QIC, 4- to 8-GB DDS-2 4mm tape, 12GB 4mm DDS-3, 20GB 8mm, 72GB 4mm DDS-3 autoloader, 20GB DLT4000, 35GB DLT7000 SPARCstorage Library Model 8/140, 35- to 70-GB DLT7000 (IMPORTANT: Appropriate PCi SCSI adapter card required to attach any SCSI device)	
Entry configuration	128-MB DRAM, 9.1-GB hard disk, floppy, on-board PGX24 Graphics	128-MB DRAM, 9.1-GB hard disk, floppy, Elite3D m3 Graphics
Software licenses ²	Solaris 7 3/99 (preinstalled)	
¹ Performance numbers are preliminary and subject to change. ² Solaris 2.x system license is included.		

UltraSPARC Workstations Product Line Overview *(continued)*

Product Specifications	Sun Ultra 60			
	Model 1360	Model 2360	Model 1450	Model 2450
Clock speed	360 MHz		450 MHz	
Processors	1 UltraSPARC-II	2 UltraSPARC-II	1 UltraSPARC-II	2 UltraSPARC-II
On-chip Cache size	16-KB I-cache + 16-KB D-cache			
External cache	4 MB			
SPECint95 ¹	16.1	16.1	19.7	19.7
SPECfp95 ¹	23.5	29.5	27.0	32.7
SPECint95rate	143	287	175	353
SPECfp95rate	205	382	231	456
Main memory	128 MB–2 GB	256 MB–2 GB		
Disk capacity (UltraSCSI) Base Configuration	18.2 GB Internal / 2-TB External			
Graphics ²	Creator3D Series 3 PCi-based add-on 8-bit PGX		Sun Elite3D m3, Sun Elite3D m6, Creator3D Series 3 PCi-based add-on 8-bit PGX	
Creator3D support	2 cards, vertical			
Elite3D-m3 support	2 cards, vertical			
Elite3D-m6 support	1 card, vertical			
Package slots	4 full-sized PCi 32-/64-bit slots (3 slots at 33 MHz, 5 volts; 1 slot at 33/66 MHz, 3.3 volts) 2 UPA Graphics (Creator and Sun Elite3D) slots			
Internal data interchange/ software distribution/ backup	12GB 4mm DDS-3 tape drive, 14GB 8mm tape drive, 3.5-inch floppy, 32x CD-ROM			
External tape backup	4-8GB SLR, 12-24GB 4mm DDS-3, 7-14GB 8mm, 20-40GB 8mm, 72-144GB 4mm DDS-3 autoloader, 20-40GB DLT4000, 35-70GB DLT7000, StorEdge L280, StorEdge L1000, StorEdge L1800, StorEdge L3500			
Audio	16 bit			
Entry configuration	128-MB RAM, 18.2-GB disk, Creator3D series 3 graphics	256-MB RAM, 18.2-GB disk, Creator3D series 3 graphics		
Software licenses ³	Solaris 7 Solaris 2.6 Hardware: 3/98 Solaris 2.5.1 Hardware: 11/97			
¹ SMCC SPEC95 results are based on SPARCompiler from Sun.				
² Check price list for system configurations.				
³ Solaris 2.x system license is included.				

UltraSPARC Workstations Product Line Overview *(continued)*

Product Specifications	Sun Ultra 80		
	Model 1450	Model 2450	Model 4450
Clock speed	450 MHz		
Processors	1 UltraSPARC-II	2 UltraSPARC-II	4 UltraSPARC-II
On-chip Cache size	16-KB I-cache + 16-KB D-cache		
External cache	4 MB		
SPECint95 ¹	19.7	19.7	19.7
SPECfp95 ¹	27.9	36.1	44.6
SPECint95rate	177	347	665
SPECfp95rate	233	455	799
Main memory	256 MB–4 GB	1024 MB–2 GB	
Disk capacity (UltraSCSI) Base Configuration	Up to 2 x 18.2 GB Internal / 2-TB External		
Graphics ²	PGX32 PCI Elite3D m6		
Elite3D m3 support	2 cards, vertical		
Elite3D m6 support	2 cards, vertical		
Package slots	4 PCI slots (1 slot at 33/66MHz, 32/64-bit, 3.3 volts; 2 slots at 33MHz, 32/64-bit, 5 volts; 1 slot at 33MHz 33-bit, 5 volts) 2 UPA graphics (Sun Elite3D) slots		
Internal data interchange/ software distribution/ backup	12GB 4mm DDS-3 tape drive, 14GB 8mm tape drive, 3.5-inch floppy, 32x CD-ROM		
External tape backup	4-8GB SLR, 12-24GB 4mm DDS-3, 7-14GB 8mm, 20-40GB 8mm, 72-144GB 4mm DDS-3 autoloader, 20-40GB DLT4000, 35-70GB DLT7000, StorEdge L280, StorEdge L1000, StorEdge L1800, StorEdge L3500		
Audio	16 bit		
Entry configuration	256-MB RAM, 18-GB disk, PGX32 PCI graphics	1024-MB RAM, 18-GB disk, PGX32 PCI graphics	1024-MB RAM, 18-GB disk, PGX32 PCI graphics
Software licenses ³	Solaris 7 8/99, Solaris 2.6 HW3, Solaris 2.5.1 HW3		

¹ SMCC SPEC95 results are based on SPARCompiler from Sun.

² Check price list for system configurations.

³ Solaris 2.x system license is included.

Sun Ultra 5 System Configurations

Sun Ultra 5 System

Ultra 5 is Sun's entry level workstation based on the UltraSPARC-IIi, microprocessor running at 360 MHz. Ultra 5 features industry-standard components, PCI I/O, and a low-profile, space-saving enclosure. The Ultra 5 will be offered with three memory configurations and 7 initial Country Kit choices. A simple Configure to Order worksheet is included to facilitate the ordering process:

Monitor Options

A Monitor is not required when ordering an Ultra 5 workstation or an upgrade to an Ultra 5 workstation. The Ultra 5 workstation supports the monitors listed below. The 21-inch monitor requires a video adapter.

		VIDEO ADAPTER REQUIRED
Part number	Monitor Option description	PGX24 Onboard 24-bit
X7143A	17-inch Entry color monitor	none
X7127A	18.1-inch TFT LCD color monitor	
X7135A	19-inch flat screen color monitor	not required
X7136A	21-inch flat screen color monitor	X471A

Country Kit

Unlike traditional Sun systems, the Ultra 5 has the Country Kit physically included within the System Ship Kit. The choice of Country Kit is specified by adding an additional character to the Ultra 5 Marketing Part Number. The eighth character (the tenth or eleventh character for upgrade part numbers) of the Ultra 5 Marketing Part Number (normally a dash in other workstation part numbers) specifies the choice of Country Kit. The single character Country Kit Codes are listed in the table below.

Code	Country Kit
A	North American UNIX
D	German Language
E	United Kingdom
F	French Language
G	Swedish Language
Y	Universal UNIX
Z	No Included Country Kit

To order a Country Kit that is not shown on the table, specify the code "Z" and order the Country Kit as a separate line item. Ultra 5 systems ordered with the "Z" code will be shipped to the customer in a separate box; in other words, the customer will receive the CPU system in one box and the Country Kit in a separate box. Customers who order Country Kit codes: A, B, D, E, F, G, and Y will receive the CPU system and Country Kit in a single box.

Sun Ultra 5 System Configurations *(continued)*

Country Kit *(continued)*

Three examples utilizing the same base Ultra 5 configuration (64-Mbyte, 4.3-Gbyte Disk, 24x CD-ROM) are:

1.) North American UNIX with 17-inch color monitor

A21UGE1A9P-C64CR (note that eighth character is "A" for North American UNIX)
X7143A 17-inch color monitor

2.) German Country Kit with 21-inch color monitor

A21UGE1D9P-C64CR (note that eighth character is "D" for German Country Kit)
X7136A 21-inch flat screen color monitor
X471A required video adapter cable

3.) No Ship Country Kit with 21-inch color monitor and Spanish Country Kit

A21UGE1Z9P-C64CR (note that eighth character is "Z" for No Country Kit)
X3572A Spanish Country Kit
X7136A 21-inch flat screen color monitor
X471A required video adapter cable

OS Software

Solaris 8 Ready-to-Run software is pre-installed on the system. Software media is not shipped with the Ultra 5. If you require media, order the Desktop Media Kit appropriate for your region. .

Options

The Ultra 5 supports the majority of Sun's offerings of X-options; however there are a few exceptions specific to the Ultra 5: Memory expansions, and the internal CD-ROM drive. Also, to connect any external SCSI device to the Ultra 5, a PCi SCSI Adapter card is required as SCSI is not a feature of the Ultra 5. Internal SCSI devices cannot be used.

Part number	Description
X7036A	64-Mbyte DRAM Expansion Kit (2 DIMMs)
X7037A	128-Mbyte DRAM Expansion Kit (2 DIMMs)
X7038A	256-Mbyte DRAM Expansion Kit (2 DIMMs)
X6171A	Internal CD-ROM drive EIDE, 32X-speed
X5236A	Internal 9-GB hard disk EIDE, 7200 RPM
X471A	13W3F to HD15M Video Adapter

Sun Ultra 5 Systems

Description	Order Number
Ultra 5 Model 360 with 360-MHz UltraSPARC-IIi Processor, with 256k Level II external cache <i>(continued)</i>	
Ultra 5 Systems with Onboard PGX24 Graphics, 64-Mbyte RAM and CD-ROM Drive	
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-IIi, 64-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, North American UNIX Country Kit Solaris 7 3/99 Installed OEM Ready- 5/99	A21UGE1A9P-C64CR
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-IIi, 64-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, German Country Kit Solaris 7 3/99 Installed	A21UGE1D9P-C64CR
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-IIi, 64-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, UK Country Kit Solaris 7 3/99 Installed	A21UGE1E9P-C64CR
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-IIi, 64-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, French Country Kit Solaris 7 3/99 Installed	A21UGE1F9P-C64CR
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-IIi, 64-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, No Included Country Kit Solaris 7 3/99 Installed OEM Ready 5/99 (Standard Configuration)	A21UGE1Z9P-C64CR ¹ , ²

Footnotes

1. This product is OEM-Ready, please refer to the "Ordering Policies and Guidelines" section page 1-1.
2. Standard Configurations are Sun's recommended configurations.

Sun Ultra 5 Systems *(continued)*

Description	Order Number
Ultra 5 Model 360 with 360-MHz UltraSPARC-IIi Processor, with 256KB Level II external cache	
Ultra 5 Systems with Onboard PGX24 Graphics, 128-Mbyte RAM and CD-ROM Drive	
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, North American UNIX Country Kit Solaris 7 3/99 Installed	A21UGE1A9P-C128CR
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, German Country Kit Solaris 7 3/99 Installed	A21UGE1D9P-C128CR
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, UK Country Kit Solaris 7 3/99 Installed	A21UGE1E9P-C128CR
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, French Country Kit Solaris 7 3/99 Installed	A21UGE1F9P-C128CR
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, No Included Country Kit Solaris 7 3/99 Installed OEM Ready 5/99	A21UGE1Z9P-C128CR ¹ , ²

Footnotes

1. This product is OEM-Ready, please refer to the "Ordering Policies and Guidelines" section page 1-1.
2. Standard Configurations are Sun's recommended configurations.

Sun Ultra 5 Systems *(continued)*

Description	Order Number
Ultra 5 Model 360 with 360-MHz UltraSPARC-III Processor, with 256KB Level II external cache <i>(continued)</i>	
Ultra 5 Systems with Onboard PGX24 Graphics, 256-Mbyte RAM and CD-ROM Drive	
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-III, 256-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, North American UNIX Country Kit Solaris 7 3/99 Installed	A21UGE1A9P-C256CR
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-III, 256-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, German Country Kit Solaris 7 3/99 Installed	A21UGE1D9P-C256CR
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-III, 256-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, UK Country Kit Solaris 7 3/99 Installed	A21UGE1E9P-C256CR
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-III, 256-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, French Country Kit Solaris 7 3/99 Installed	A21UGE1F9P-C256CR
Sun Ultra 5 Model 360 Workstation 360-MHz UltraSPARC-III, 256-Mbyte DRAM, 256-KB L2 Cache, 8-Gbyte Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, No Included Country Kit Solaris 7 3/99 Installed	A21UGE1Z9P-C256CR

Sun Ultra 5 Systems *(continued)*

Description	Order Number
Ultra 5 Model 400 with 400-MHz UltraSPARC-IIi Processor, with 2MB Level II external cache	
Ultra 5 Systems with Onboard PGX24 Graphics, 128-Mbyte and Floppy Drive	
Sun Ultra 5 Workstation System 400-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 2-MB L2 Cache, 9-Gbyte Internal Disk, 1.44-Mbyte floppy, 32X CD-ROM, Onboard PGX24 Graphics, North American UNIX Country Kit, Solaris 8 Installed	A21UJC1A9P-C128CP
Sun Ultra 5 Workstation System 400-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 2-MB L2 Cache, 9-Gbyte Internal Disk, 1.44-Mbyte floppy, 32X CD-ROM, Onboard PGX24 Graphics, No Included Country Kit, Solaris 8 Installed (Standard Configuration)	A21UJC1Z9P-C128CP
Ultra 5 Systems with Onboard PGX24 Graphics, 256-Mbyte and Floppy Drive	
Sun Ultra 5 Workstation System 400-MHz UltraSPARC-IIi, 256-Mbyte DRAM, 2-MB L2 Cache, 9-Gbyte Internal Disk, 1.44-Mbyte floppy, 32X CD-ROM, Onboard PGX24 Graphics, North American UNIX Country Kit, Solaris 8 Installed	A21UJC1A9P-C256CP
Sun Ultra 5 Workstation System 400-MHz UltraSPARC-IIi, 256-Mbyte DRAM, 2-MB L2 Cache, 9-Gbyte Internal Disk, 1.44-Mbyte floppy, 32X CD-ROM, Onboard PGX24 Graphics, No Included Country Kit Solaris 8 Installed (Standard Configuration)	A21UJC1Z9P-C256CP ¹

Footnote

1. *Standard Configurations are Sun's recommended configurations.*

Sun Ultra 5 Options

Description	Order Number
Monitors	
17-inch Entry color monitor, 15.7" diagonal viewable area, .28mm dot pitch, 1152x900 @ 66/76Hz, 1024x768 @ 60/77Hz, 30-75kHz, MPR-II, TCO'99, DDC1/2B, VESA DPMS, digital OSD, universal power supply ww agency compliances Standard version	X7143A
18.1" TFT LCD color monitor (20 CRT equivalent), IPS wide viewing angle, 1280x1024 @ 60/76Hz, analog RGB interface, standard captive 13W3 video output cable, Sun ID enclosure, Sun logo & color, Digital OSD controls, TCO'95, VESA DPMS, universal power supply, ww agency compliances Standard version	X7127A
19-inch Color monitor, 18.0" v.a. 0.24mm dot pitch aperture grille, 30-107kHz, WW agency compliance, 2m HD15-pin video cable, Sun logo and color TCO 99, 10-language users guide standard/Korean versions	X7135A
21-inch Color monitor, 19.8" v.a. 0.24mm dot pitch aperture grille, 30-121kHz, WW agency compliance, 2m DB13W3 captive video cable and HD15-pin connector Sun unique ID, logo and color TCO 99, 10-language users guide standard/Korean versions	X7136A
<i>Note: Monitors cannot be ordered as a standalone option.</i>	

Video Adapter

BAE VIDEO CONNECTOR 13W3F/HD15M,24"	X471A
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General Notes

- All systems ship with the appropriate Solaris Desktop or Server license. Read the Solaris licensing information before purchasing a system. See page 7-1.
- Requires Solaris 2.5.1 Hardware 11/97, Solaris 2.6 Hardware 5/98 or later or Solaris 7 3/99.
- Packages with internal disks are delivered with JumpStart pre-installed, allowing automatic, customized installation from the Solaris 2.x CD-ROM. All systems must have access to Solaris media, refer to the "Solaris 2.x Media" section for ordering information. See page 7-73.

Footnote

1. Does not include Windows license.

Sun Ultra 5 Options *(continued)*

Description	Order Number
Memory	
64-Mbyte (2 x 32MB DIMMs) 50ns DRAM expansion for Ultra 5 and Ultra 10	X7036A
128-Mbyte (2 x 64MB DIMMs) 50ns DRAM expansion for Ultra 5 and Ultra 10	X7037A
256-Mbyte (2 x 128MB DIMMs) 50ns DRAM expansion for Ultra 5 and Ultra 10	X7038A
Storage	
Optional Internal 9-Gbyte 7200RPM Hard Drive for Ultra 5, Ultra 10 Enhanced IDE	X5236A
CDROM	
Optional Internal 32X EIDE CD-ROM for Ultra 5 and Ultra 10 only	X6171A
SunPCi Processor Card	
SunPCi Co-processor PCI option card, AMD 400MHz CPU, WinNT suppt 64MB onboard memory (DIMM), 24-bit graphics onboard, docs, DR-DOS license (Windows license NOT included)	X1131A-64.2 ¹
64-Mbyte (1x64) DIMM memory expansion for SunPCi PCI opt card	X7041A
128-Mbyte (1x128) DIMM memory expansion for SunPCi PCI opt card	X7035A
General Notes	
<ul style="list-style-type: none">• All systems ship with the appropriate Solaris Desktop or Server license. Read the Solaris licensing information before purchasing a system. See page 7-1.• Requires Solaris 2.5.1 Hardware 11/97, Solaris 2.6 Hardware 5/98 or later or Solaris 7 3/99.• Packages with internal disks are delivered with JumpStart pre-installed, allowing automatic, customized installation from the Solaris 2.x CD-ROM. All systems must have access to Solaris media, refer to the "Solaris 2.x Media" section for ordering information. See page 7-73.	
Footnote	
<ol style="list-style-type: none">1. Does not include Windows license.	

Sun Ultra 10 System Configurations

Sun Ultra 10 System

Ultra 10 is Sun's entry-level workstation based on the UltraSPARC-IIi microprocessor running at 440 MHz. Ultra 10 features PCI I/O, Sun's Ultra Port Architecture interconnect slot and a minitower enclosure that allows for additional PCI card expansion, memory expansion, and optional Creator3D, Elite3D m3, and Elite3D m6 graphics

Monitor Options

The choice of monitors is not reflected in the Ultra 10 marketing part number. A monitor is required (except for upgrades) and is ordered as a separate line item. The Ultra 10 supports the monitors listed below. For some monitor and frame buffer combinations a video adapter cable may be required.

Part number	Monitor Option description	VIDEO ADAPTER REQUIRED			
		Onboard 24-bit	Creator	Creator3D	Elite3D m3
X7143A	17-inch color monitor	none	X3872A	X3872A	X3872A
X7127A	18.1-inch TFT LCD color monitor				
X7135A	19-inch flat screen color monitor	none	X3872A	X3872A	X3872A
X7136A	21-inch flat screen color monitor	X471A	none	none	none
X7124A	24-inch color monitor	n/a	n/a	none	n/a

Country Kit

Unlike traditional Sun systems, the Ultra 10 has the Country Kit physically included within the System Ship Kit. The choice of Country Kit is specified by adding an additional character to the Ultra 10 Marketing Part Number. The eighth character (the tenth or eleventh character for upgrade part numbers) of the Ultra 10 Marketing Part Number (normally a dash in other workstation part numbers) specifies the choice of Country Kit. The single character Country Kit Codes are listed in the table below.

Code	Country Kit
A	North American UNIX
D	German Language
E	United Kingdom
F	French Language
G	Swedish Language
Y	Universal UNIX
Z	No Included Country Kit

To order a Country Kit that is not shown on the table, specify the code "Z" and order the Country Kit as a separate line item. Ultra 10 systems ordered with the "Z" code will be shipped to the customer in a separate box; in other words, the customer will receive the CPU system in one box and the Country Kit in a separate box. Customers who order Country Kit codes: A, B, D, E, F, G, and Y will receive the CPU system and Country Kit in a single box.

Sun Ultra 10 System Configurations *(continued)*

Country Kit *(continued)*

Three examples utilizing the same base Ultra 10 configuration (128-Mbyte, 9-Gbyte Disk, 32x CD-ROM, Onboard PGX24 24-bit graphics) are:

1.) North American UNIX with 17-inch color monitor

A22UKC1A9P-C128CP (note that eighth character is "A" for North American UNIX)
X7143A 17-inch color monitor

2.) German Country Kit with 21-inch color monitor

A22UKC1D9P-C128CP (note that ninth character is "D" for German Country Kit)
X7136A 21-inch flat screen color monitor
X471A required video adapter cable

3.) No Ship Country Kit with 21-inch color monitor and Spanish Country Kit

A22UKC1Z9P-C128CP (note that ninth character is "Z" for No Country Kit)
X3572A Spanish Country Kit
X7136A 21-inch flat screen color monitor
X471A required video adapter cable

OS Software

Solaris 7 3/99 Ready-to-Run software is pre-installed on the system. Software media is not shipped with the Ultra 10. If you require media, order the Desktop Media Kit appropriate for your region.

Options

The Ultra 10 supports the majority of Sun's offerings of X-options; however there are a few exceptions specific to the Ultra 10: Memory expansions, and the internal CD-ROM drive as well as the internal hard disk. Also, to connect any external SCSI device to the Ultra 10, a PCi SCSI Adapter card is required as SCSI is not a feature of the Ultra 10. Internal SCSI devices cannot be used.

Part number	Description
X7036A	64-Mbyte DRAM Expansion Kit (2 DIMMs), 60ns
X7037A	128-Mbyte DRAM Expansion Kit (2 DIMMs), 60ns
X7038A	256-Mbyte DRAM Expansion Kit (2 DIMMs), 50ns
X7039A	512-Mbyte DRAM Expansion Kit (2 DIMMs), 50ns
X6171A	Internal CD-ROM drive EIDE, 32X-speed
X5236A	Internal 9-GB hard disk EIDE, 7200 RPM
X471A	13W3F to HD15M Video Adapter
X3872A	HD15F to 13W3M Video Adapter

Sun Ultra 10 Systems

Description	Order Number
Ultra 10 Model 440 with 1 x 440-MHz UltraSPARC-IIi Processor, with 2MB Level II external cache <i>(continued)</i>	
Ultra 10 Systems with Elite3D m3 series 2 Graphics 128-Mbyte RAM and CD-ROM Drive	
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, North American UNIX Country Kit Solaris 7 3/99 Installed	A22UKC1A9Y-C128CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, German Country Kit, Solaris 7 3/99 Installed	A22UKC1D9Y-C128CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, UK Country Kit, Solaris 7 3/99 Installed	A22UKC1E9Y-C128CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, French Country Kit, Solaris 7 3/99 Installed	A22UKC1F9Y-C128CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, No Included Country Kit, Solaris 7 3/99 Installed	A22UKC1Z9Y-C128CP

Sun Ultra 10 Systems *(continued)*

Description	Order Number
Ultra 10 Model 440 with 1 x 440-MHz UltraSPARC-IIi Processor, with 2MB Level II external cache <i>(continued)</i>	
Ultra 10 Systems with Elite3D m3 series 2 Graphics 128-Mbyte RAM and CD-ROM Drive	
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, North American UNIX Country Kit Solaris 7 3/99 Installed	A22UKC1A9Y-C128CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, German Country Kit, Solaris 7 3/99 Installed	A22UKC1D9Y-C128CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, UK Country Kit, Solaris 7 3/99 Installed	A22UKC1E9Y-C128CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, French Country Kit, Solaris 7 3/99 Installed	A22UKC1F9Y-C128CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 128-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, No Included Country Kit, Solaris 7 3/99 Installed	A22UKC1Z9Y-C128CP

Sun Ultra 10 Systems *(continued)*

Description	Order Number
Ultra 10 Model 440 with 1 x 440-MHz UltraSPARC-IIi Processor, with 2MB Level II external cache <i>(continued)</i>	
Ultra 10 Systems with Elite3D m3 series 2 Graphics 256-Mbyte RAM and CD-ROM Drive	
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 256-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, North American UNIX Country Kit, Solaris 7 3/99 Installed	A22UKC1A9Y-C256CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 256-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, German Country Kit, Solaris 7 3/99 Installed	A22UKC1D9Y-C256CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 256-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, UK Country Kit, Solaris 7 3/99 Installed	A22UKC1E9Y-C256CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 256-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, French Country Kit, Solaris 7 3/99 Installed	A22UKC1F9Y-C256CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 256-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, No Included Country Kit, Solaris 7 3/99 Installed	A22UKC1Z9Y-C256CP

Sun Ultra 10 Systems *(continued)*

Description	Order Number
Ultra 10 Model 440 with 1 x 440-MHz UltraSPARC-III Processor, with 2MB Level II external cache <i>(continued)</i>	
Ultra 10 Systems with Elite3D m3 series 2 Graphics 512-Mbyte RAM and CD-ROM Drive	
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-III, 512-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, North American UNIX Country Kit, Solaris 7 3/99 Installed	A22UKC1A9Y-C512CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-III, 512-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, German Country Kit, Solaris 7 3/99 Installed	A22UKC1D9Y-C512CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-III, 512-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, UK Country Kit, Solaris 7 3/99 Installed	A22UKC1E9Y-C512CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-III, 512-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, French Country Kit, Solaris 7 3/99 Installed	A22UKC1F9Y-C512CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-III, 512-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m3 Series II, No Included Country Kit, Solaris 7 3/99 Installed (Standard Configuration)	A22UKC1Z9Y-C512CP

Sun Ultra 10 Systems *(continued)*

Description	Order Number
Ultra 10 Model 440 with 1 x 440-MHz UltraSPARC-IIi Processor, with 2MB Level II external cache <i>(continued)</i>	
Ultra 10 Systems with Elite3D m6 series 2 Graphics 256-Mbyte RAM and CD-ROM Drive	
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 256-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m6 Series II, North American UNIX Country Kit, Solaris 7 3/99 Installed	A22UKC1A9Z-C256CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 256-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m6 Series II, German Country Kit, Solaris 7 3/99 Installed	A22UKC1D9Z-C256CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 256-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m6 Series II, UK Country Kit, Solaris 7 3/99 Installed	A22UKC1E9Z-C256CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 256-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m6 Series II, French Country Kit, Solaris 7 3/99 Installed	A22UKC1F9Z-C256CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 256-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m6 Series II, No Included Country Kit, Solaris 7 3/99 Installed	A22UKC1Z9Z-C256CP

Sun Ultra 10 Systems *(continued)*

Description	Order Number
Ultra 10 Model 440 with 1 x 440-MHz UltraSPARC-IIi Processor, with 2MB Level II external cache <i>(continued)</i>	
Ultra 10 Systems with Elite3D m6 series 2 Graphics 512-Mbyte RAM and CD-ROM Drive	
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 512-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m6 Series II, North American UNIX Country Kit, Solaris 7 3/99 Installed	A22UKC1A9Z-C512CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 512-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m6 Series II, German Country Kit, Solaris 7 3/99 Installed	A22UKC1D9Z-C512CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 512-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m6 Series II, UK Country Kit, Solaris 7 3/99 Installed	A22UKC1E9Z-C512CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 512-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m6 Series II, French Country Kit, Solaris 7 3/99 Installed	A22UKC1F9Z-C512CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-IIi, 512-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Elite3D m6 Series II, No Included Country Kit, Solaris 7 3/99 Installed	A22UKC1Z9Z-C512CP ¹

Footnote

1. Standard Configurations are Sun's recommended configurations.

Sun Ultra 10 Systems *(continued)*

Description	Order Number
Ultra 10 Model 440 with 1 x 440-MHz UltraSPARC-III Processor, with 2MB Level II external cache <i>(continued)</i>	
Ultra 10 Systems with Onboard PGX24 Graphics	
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-III, 128-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, North American UNIX Country Kit, Solaris 7 3/99 Installed	A22UKC1A9P-C128CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-III, 128-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, No Included Country Kit Solaris 7 3/99 Installed OEM ready - 05/99 (Standard Configuration)	A22UKC1Z9P-C128CP ¹
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-III, 256-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, North American UNIX Country Kit Solaris 7 3/99 Installed	A22UKC1A9P-C256CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-III, 512-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Onboard PGX24 Graphics, North American UNIX Country Kit Solaris 7 3/99 Installed	A22UKC1A9P-C512CP
Ultra 10 Systems with Creator3D Series 3 Graphics	
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-III, 128-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Creator3D Graphics North American UNIX Country Kit Solaris 7 3/99 Installed	A22UKC1A9L-C128CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-III, 256-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Creator3D Graphics North American UNIX Country Kit Solaris 7 3/99 Installed	A22UKC1A9L-C256CP
Sun Ultra 10 Model 440 Workstation 440-MHz UltraSPARC-III, 512-Mbyte DRAM, 2-MB L2 Cache, 9-GB 7200rpm Internal Disk, 1.44-Mbyte floppy, CD-ROM, Creator3D Graphics North American UNIX Country Kit Solaris 7 3/99 Installed	A22UKC1A9L-C512CP

Footnote

1. Standard Configurations are Sun's recommended configurations.

Sun Ultra 10 Options

Description	Order Number
Monitors	
17-inch Entry color monitor, 15.7" diagonal viewable area, .28mm dot pitch, 1152x900 @ 66/76Hz, 1024x768 @ 60/77Hz, 30-75kHz, MPR-II, TCO'99, DDC1/2B, VESA DPMS, digital OSD, universal power supply ww agency compliances Standard version	X7143A
18.1" TFT LCD color monitor (20 CRT equivalent), IPS wide viewing angle, 1280x1024 @ 60/76Hz, analog RGB interface, standard captive 13W3 video output cable, Sun ID enclosure, Sun logo & color, Digital OSD controls, TCO'95, VESA DPMS, universal power supply, ww agency compliances Standard version	X7127A
19-inch Color monitor, 18.0" v.a. 0.24mm dot pitch aperture grille, 30-107kHz, WW agency compliance, 2m HD15-pin video cable, Sun logo and color TCO 99, 10-language users guide standard/Korean versions	X7135A
21-inch Color monitor, 19.8" v.a. 0.24mm dot pitch aperture grille, 30-121kHz, WW agency compliance, 2m DB13W3 captive video cable and HD15-pin connector Sun unique ID, logo and color TCO 99, 10-language users guide standard/Korean versions	X7136A
The new Sun 24" wide screen color monitor is a high resolution display with digital multiscanning capabilities. The monitor features front panel controls with on-screen display in two modes (normal and expert), moire cancellation, VESA DDC interface, power management, tilt swivel capabilities, 13W3 and HD15-pin video connector	X7124A
<i>Note: Monitors cannot be ordered as a standalone option.</i>	

Video Adapters

BAE VIDEO CONNECTOR 13W3F/HD15M,24"	X471A
The video connector adapter is required for Sun's standard HD-15 pin monitors to use with existing workstation platforms that have a 13W3 video output. The video connector adapter HD-15 female to 13W3 male is needed for the SPARCSTATION 5 Model 7, ULTRA 1 Model 170, and TurboGX, PineApple 2 graphics, UPA graphics X-options.	X3872A

General Notes

- All systems ship with the appropriate Solaris Desktop or Server license. Read the Solaris licensing information before purchasing a system. See page 7-1.
- Requires Solaris 2.5.1 Hardware 11/97, Solaris 2.6 Hardware 5/98 or later or Solaris 7 3/99.
- Packages with internal disks are delivered with JumpStart pre-installed, allowing automatic, customized installation from the Solaris 2.x CD-ROM. All systems must have access to Solaris media, refer to the "Solaris 2.x Media" section for ordering information. See page 7-73.

Sun Ultra 10 Options *(continued)*

Description	Order Number
Memory	
64-Mbyte (2 x 32MB DIMMs) 50ns DRAM expansion for Ultra 5 and Ultra 10	X7036A
128-Mbyte (2 x 64MB DIMMs) 50ns DRAM expansion for Ultra 5 and Ultra 10	X7037A
256-Mbyte (2 x 128MB DIMMs) 50ns DRAM expansion for Ultra 5 and Ultra 10	X7038A
512-Mbyte (2 x 256MB DIMMs) 50ns DRAM expansion for Ultra 10 only	X7039A
Storage	
Optional Internal 9-Gbyte 7200RPM Hard Drive for Ultra 5, Ultra 10 Enhanced IDE	X5236A
CDROM	
Optional Internal 32X EIDE CD-ROM for Ultra 5 and Ultra 10 only	X6171A
SunPCi Processor Card	
SunPCi Co-processor PCI option card, AMD 400MHz CPU, WinNT suppt 64MB onboard memory (DIMM), 24-bit graphics onboard, docs, DR-DOS license (Windows license NOT included)	X1131A-64.2 ¹
64-Mbyte (1x64) DIMM memory expansion for SunPCi PCI opt card	X7041A
128-Mbyte (1x128) DIMM memory expansion for SunPCi PCI opt card	X7035A
General Notes	
<ul style="list-style-type: none">• All systems ship with the appropriate Solaris Desktop or Server license. Read the Solaris licensing information before purchasing a system. See page 7-1.• Requires Solaris 2.5.1 Hardware 11/97, Solaris 2.6 Hardware 5/98 or later or Solaris 7 3/99.• Packages with internal disks are delivered with JumpStart pre-installed, allowing automatic, customized installation from the Solaris 2.x CD-ROM. All systems must have access to Solaris media, refer to the "Solaris 2.x Media" section for ordering information. See page 7-73.	

Footnote

1. Does not include Windows license.

Sun Ultra 60 System Configurations

Sun Ultra 60 System

Ultra 60 is Sun's lowest cost power workstation offering based on the UltraSPARC-II microprocessor running at 450 MHz or 360 MHz. Ultra 60 features dual CPU capability, PCi I/O, two Ultra Port Architecture interconnect slots in a tower enclosure that allows for additional memory, graphics, and storage expansion.

Ultra 60 features are:

- 450-MHz or 360-MHz UltraSPARC-II, 4-MB Level II external cache
- 2-GB DRAM (maximum)
- Two UPA graphics slots (1 required)
- Dual UltraSCSI buses (1 internal/1 external)
- Up to 36.4-GB Internal Storage
- Four PCi slots (long), 1@32/64 bit, 66MHz, 3.3volt, and 3@32/64 bit, 33 MHz, 5 volt
- 10/100BASE-T Ethernet, self-sensing
- Internal 1.44-MB floppy drive, manual eject and 32X CD-ROM drive (both optional)

Graphics Options

The Ultra 60 supports up to 2 graphics adapters:

- Up to 2 Expert3D's are supported in the Ultra 60
- Up to 1 Elite3D m6 with any other 3D graphics board
- Up to 4 PGX32's

Monitor Options

The choice of monitors is not reflected in the Ultra 60 marketing part number. A monitor is required (except for upgrades) and is ordered as a separate line item. The Ultra 60 supports the monitors listed below. For some monitor and frame buffer combinations a video adapter cable may be required.

Part number	Monitor Option description	VIDEO ADAPTER REQUIRED				
		PGX32 (includes HD15 video connector)	Creator3D	Elite3D m3	Elite3D m6	Expert3D (includes 13W3 video connector)
X7143A	17-inch color monitor	none	X3872A	X3872A	X3872A	X3872A
X7127A	18.1-inch TFT LCD color monitor	none	none	none	none	none
X7135A	19-inch flat screen color monitor	none	X3872A	X3872A	X3872A	X3872A
X7136A	21-inch flat screen color monitor	X471A (PGX32 inc)	none	none	none	none
X7124A	24-inch color monitor	X471A (PGX32 inc)	none	n/a	n/a	none

Country Kits

The appropriate Country Kits can be selected from the Options - Workstation and Server Country Kits section of the pricebook.

OS Software

The Ultra 60 requires Solaris 2.5.1 Hardware 11/97, Solaris 2.6 Hardware 3/98, or Solaris 7.

Options

The Ultra 60 supports the majority of Sun's offerings of X-options. Memory must be added in groups of 4 SIMMS, please order 2 of each for memory expansion.

Part number	Description
X7003A	128-Mbyte Memory Expansion Kit (2 DIMMs)
X7043A	128-Mbyte Memory Expansion Kit (2 DIMMs)
X7004A	256-Mbyte Memory Expansion Kit (2 DIMMs)
X6004A	Manual-eject floppy drive
X6166A	Internal 32X CD-ROM drive
X5234A*	Internal 9-GB hard disk, 10K RPM, UltraSCSI
X5237A	Internal 18.2GB hard disk, 10K RPM, UltraSCSI
X3872A	HD15F to 13W3M Video Adapter
X1131A-64.2	SunPCi Co-processor PCi option card

* Installation of this device increases the U60 accoustics above system specification.

Sun Ultra 60 Systems

Description	Order Number
Model 1360 with 1 x 360-MHz UltraSPARC-II Processor, with 4-Mbyte cache	
Creator3D series, 3 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 60 Model 1360, 1x360-MHz UltraSPARC-II, 4-MB L2 Cache, 512-MB Memory, Creator3D, series 3 Graphics, 18.2-GB 10K RPM Internal Drive (Standard Configuration)	A23-UGD1-9L-512AQ ¹
Model 2360 with 2 x 360-MHz UltraSPARC-II Processor, with 4-Mbyte cache each	
Creator3D series 3, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 60 Model 2360, 2x360-MHz UltraSPARC-II, 4-MB L2 Cache, 512-MB Memory, Creator3D, series 3 Graphics, 18.2-GB 10K RPM Internal Drive	A23-UGD2-9L-512AQ

Footnote

1. *Standard Configurations are Sun's recommended configurations.*

Sun Ultra 60 Systems *(continued)*

Description	Order Number
Model 1450 with 1 x 450-MHz UltraSPARC-II Processor, with 4-Mbyte cache	
Creator3D series 3, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 60 Model 1450, 1x450-MHz UltraSPARC-II, 4-MB L2 Cache, 512 MB Memory, Creator3D, series 3 Graphics, 18.2-GB 10K RPM Internal Drive (Standard Configuration)	A23-ULD1-9L-512AQ ¹
Elite3D m3 series 2, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 60 Model 1450, 1x450-MHz Ultra SPARC-II, 4-Mbyte L2 Cache, 512-MB Memory, Elite3Dm3, series 2 Graphics, 18.2-Gbyte 10K RPM Internal Drive	A23-ULD1-9Y-512AQ
Elite3D m6 series 2, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 60 Model 1450, 1x450-MHz UltraSPARC-II, 4-Mbyte L2 Cache, 512-MB Memory, Elite3Dm6, series 2 Graphics, 18-Gbyte 10K RPM Internal Drive	A23-ULD1-9Z-512AQ
Expert3D, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 60 Model 1450, 1x450-MHz UltraSPARC-II, 4-Mbyte L2 Cache, 512-MB Memory, Expert3D Graphics, 18-Gbyte 10K RPM Internal Drive	A23-ULD1-9V-512AQ
Model 2450 with 2 x 450-MHz UltraSPARC-II Processor, with 4-Mbyte cache each	
Creator3D series 3, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 60 Model 2450, 2x450-MHz UltraSPARC-II, 4-MB L2 Cache, 512-MB Memory, Creator3D, series 3 Graphics, 18.2-GB 10K RPM Internal Drive (Standard Configuration)	A23-ULD2-9L-512AQ ¹
Elite3D m3 series 2, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 60 Model 2450, 2x450-MHz UltraSPARC-II, 4-MB L2 Cache, 512-MB Memory, Elite3Dm3, series 2 Graphics, 18.2-GB 10K RPM Internal Drive	A23-ULD2-9Y-512AQ
Elite3D m6 series 2, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 60 Model 2450, 2x450-MHz UltraSPARC-II, 4-MB L2 Cache, 512-MB Memory, Elite3Dm6, series 2 Graphics, 18.2-GB 10K RPM Internal Drive	A23-ULD2-9Z-512AQ
Expert3D, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 60 Model 2450, 2x450-MHz UltraSPARC-II, 4-MB L2 Cache, 512-MB Memory, Expert3D Graphics, 18.2-GB 10K RPM Internal Drive	A23-ULD2-9V-512AQ

Footnote

1. Standard Configurations are Sun's recommended configurations.

Sun Ultra 60 Options

Description	Order Number
Ultra 60 CPU Modules	
UltraSPARC-II 360MHz processor module w/ 4MB L2 cache for Ultra 60	X1192A
UltraSPARC-II 450MHz processor module with 4MB cache	X1195A

Monitors

17-inch Entry color monitor, 15.7" diagonal viewable area, .28mm dot pitch, 1152x900 @ 66/76Hz, 1024x768 @ 60/77Hz, 30-75kHz, MPR-II, TCO'99, DDC1/2B, VESA DPMS, digital OSD, universal power supply ww agency compliances Standard version	X7143A
18.1" TFT LCD color monitor (20 CRT equivalent), IPS wide viewing angle, 1280x1024 @ 60/76Hz, analog RGB interface, standard captive 13W3 video output cable, Sun ID enclosure, Sun logo & color, Digital OSD controls, TCO'95, VESA DPMS, universal power supply, ww agency compliances Standard version	X7127A
19-inch Color monitor, 18.0" v.a. 0.24mm dot pitch aperture grille, 30-107kHz, WW agency compliance, 2m HD15-pin video cable, Sun logo and color TCO 99, 10-language users guide standard/Korean versions	X7135A
21-inch Color monitor, 19.8" v.a. 0.24mm dot pitch aperture grille, 30-121kHz, WW agency compliance, 2m DB13W3 captive video cable and HD15-pin connector Sun unique ID, logo and color TCO 99, 10-language users guide standard/Korean versions	X7136A
The new Sun 24" wide screen color monitor is a high resolution display with digital multiscanning capabilities. The monitor features front panel controls with on-screen display in two modes (normal and expert), moire cancellation, VESA DDC interface, power management, tilt swivel capabilities, 13W3 and HD15-pin video connector	X7124A

Notes

- The 19" and 21" monitors can be used with either the Creator3D or the Elite graphics adapters. The 24" monitor can only be used with the Creator3D graphics adapter.
- In order to use the 17" or 19" monitor with the Ultra 60 systems, you need to order the HD15F to 13W3M (X3872A) Video Adapter Cable.
- Monitors cannot be ordered as a standalone option.

Video Adapter

The video connector adapter is required for Sun's standard HD-15 pin monitors to use with existing workstation platforms that have a 13W3 video output. The video connector adapter HD-15 female to 13W3 male is needed for the SPARCSTATION 5 Model 7, ULTRA 1 Model 170, and TurboGX, PineApple 2 graphics, UPA graphics X-options.	X3872A
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Sun Ultra 60 Options *(continued)*

Description	Order Number
Memory	
Sun Ultra Systems Memory 128-Mbyte Memory Expansion (2 x 64-Mbyte DIMMs) OEM ready - 04/97	X7003A ^{1,2}
Sun Ultra 5V Memory 128-Mbyte Memory Expansion (2 x 64-Mbyte DIMMs)	X7043A ³
Sun Ultra Systems Memory 256-Mbyte Memory Expansion (2 x 128-Mbyte DIMMs) OEM ready - 04/97	X7004A ²
<i>Notes</i>	
<ul style="list-style-type: none"> • Maximum discount may apply; contact your local Sun sales representative for details. • Order two each for Sun Ultra 60 Systems. SIMMs must be upgraded in groups of four. • SPARCstation 20 memory is supported on Sun Ultra 60 systems if it is configured in groups of four identical SIMMs. 	

SunPCi Processor Card

SunPCi Co-processor PCI option card, AMD 400MHz CPU, WinNT suppt 64MB onboard memory (DIMM), 24-bit graphics onboard, docs, DR-DOS license (Windows license NOT included)	X1131A-64.2 ⁴
64-Mbyte (1x64) DIMM memory expansion for SunPCi PCI opt card	X7041A
128-Mbyte (1x128) DIMM memory expansion for SunPCi PCI opt card	X7035A

No-Noise kit

Ultra 60/Ultra 30 No-Noise Kit	X2087A
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General Notes

- Systems will not be sold without monitor.
- All Ultra 60 systems ship with a Solaris Desktop License. For Ultra 60 server use, please purchase SOL-DTWG-LU. Please read the Solaris licensing information before purchasing a system. See page 7-1.
- Requires Solaris 2.5.1 Hardware 11/97, Solaris 2.6 Hardware 3/98 or later Solaris 2.x release.
- Packages with internal disks are delivered with JumpStart pre-installed, allowing automatic, customized installation from the Solaris 2.x CD-ROM. All systems must have access to Solaris media, refer to the "Solaris 2.x Media" section for ordering information. See page 7-73.
- For available Configure to order options for these systems, please refer to the CTO Options pages in this chapter. See page 3-36.

Ordering Notes

- The Ultra 60 systems are equipped with FastEthernet (100BaseT) or 10BaseT via twisted-pair. If connecting to other media with an external transceiver, it will need to connect to the MII connector.
- The Ultra 60 systems have a wide SCSI connector on the back panel (68-pin). If narrow SCSI devices are to be connected to the onboard SCSI interface a wide-to-narrow conversion cable (50-68 pin) is needed (X903A or X904A). See "Accessories" section for ordering information. See page 6-149.

Footnotes

1. SPL Fixed Leadtime - 1 week.
2. This product is OEM-Ready, please refer to the "Ordering Policies and Guidelines" section page 1-1.
3. This expansion kit is available to customers that may want to move the memory to an Ultra 80 at some time.
4. Does not include Windows license.

Sun Ultra 80 System Configurations

Sun Ultra 80 System

Ultra 80 is Sun's most power workstation offering based on the UltraSPARC-II microprocessor running at 450 MHz. Ultra 80 features quad CPU capability, PCI I/O, two Ultra Port Architecture interconnect slots in a tower enclosure that allows for additional memory, graphics, and CPU expansion.

Ultra 80 features are:

- 450-MHz UltraSPARC-II, 4-MB Level II external cache
- 4-GB DRAM (maximum)
- Two UPA graphics slots for Elite3D graphics
- Up to 4 PGX32 PCI graphics board
- Dual UltraSCSI buses (1 internal/1 external)
- Up to 36-GB Internal Storage
- Four PCI slots, 1@32/64 bit, 66MHz, 3.3 volts; 2@32/64 bit, 33 MHz, 5 volts; 1@32 bit, 33MHz, 5 volts
- 10/100BASE-T Ethernet, self-sensing
- Internal 1.44-MB floppy drive and 32X CD-ROM drive (both optional)

Graphics Options

The Ultra 80 supports up to 2 Elite3D(m3 and/or m6) graphics adapters or up to 4 PGX32 PCI graphics adapters or up to two Expert3D PCI graphics adapters. See chart below:

Expert3D	Elite3D	PGX32	Creator3D
2	0	0	N/A
1	1	0	N/A
1	0	1	N/A
0	1 (m3 or m6)	1	N/A
0	2 (m3)	0	N/A

Monitor Options

The choice of monitors is not reflected in the Ultra 80 marketing part number. A monitor is required (except for upgrades) and is ordered as a separate line item. The Ultra 80 supports the monitors listed below. For some monitor and frame buffer combinations a video adapter cable may be required..

Part number	Monitor Option description	VIDEO ADAPTER REQUIRED			
		PGX32 (includes HD15 video connector)	Elite3D m3	Elite3D m6	Expert3D (includes 13W3 video connector)
X7143A	17-inch color monitor	none	X3872A	X3872A	X3872A
X7127A	18.1-inch TFT LCD color monitor	none	none	none	none
X7135A	19-inch flat screen color monitor	none	X3872A	X3872A	X3872A
X7136A	21-inch flat screen color monitor	X471A (PGX32 inc)	none	none	none
X7124A	24-inch color monitor	X471A (PGX32 inc)	n/a	n/a	none

Country Kits

The appropriate Country Kits can be selected from the Options - Workstation and Server Country Kits section of the pricebook.

OS Software

The Ultra 80 requires Solaris 2.5.1 HW3, Solaris 2.6 HW3, or Solaris 7 8/99.

Sun Ultra 80 System Configurations *(continued)*

Options

The Ultra 80 supports the majority of Sun's offerings of X-options. Memory must be added in groups of 4 DIMMS, please order 2 of each for memory expansion.

Part number	Description
X7043A	128-Mbyte Memory Expansion Kit (2 x 64MB DIMMs)
X7005A	512-Mbyte Memory Expansion Kit (2 x 256MB DIMMs)
X6004A	Manual-eject floppy drive
X6166A	Internal 32X CD-ROM drive
X5237A	Internal 18.2-GB hard disk, 10000 RPM, UltraSCSI
X1131A-64.2	SunPCi Co-processor PCi option card

Sun Ultra 80 Systems

Description	Order Number
Model 1450 with 1 x 450-MHz UltraSPARC-II Processor, with 4-Mbyte cache	
PGX32 PCI, 8-bit and 24-bit Color Graphics Workstation	
Sun Ultra 80 Model 1450, 1x450-MHz UltraSPARC-II, 4-MB L2 Cache, 1-GB Memory, PGX32 Graphics, 18.2-GB 10K RPM Internal Drive (Standard Configuration)	A27-ULD1-9T-1024AQ ¹
Elite3D m6 series 2, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 80 Model 1450, 1x450-MHz UltraSPARC-II, 4-MB L2 Cache, 1-GB Memory, Elite3Dm6, series 2 Graphics, 18.2-GB 10K RPM Internal Drive	A27-ULD1-9Z-1024AQ
Expert3D, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 80 Model 1450, 1x450-MHz UltraSPARC-II, 4-Mbyte L2 Cache, 1-GB Memory, Expert3D Graphics, 18-Gbyte 10K RPM Internal Drive	A27-ULD1-9V-1024AQ
Model 2450 with 2 x 450-MHz UltraSPARC-II Processor, with 4-Mbyte cache	
PGX32 PCI, 8-bit and 24-bit Color Graphics Workstation	
Sun Ultra 80 Model 2450, 2x450-MHz UltraSPARC-II, 4-MB L2 Cache, 1-GB Memory, PGX32 Graphics, 18.2-GB 10K RPM Internal Drive (Standard Configuration)	A27-ULD2-9T-1024AQ ¹
Elite3D m6 series 2, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 80 Model 2450, 2x450-MHz UltraSPARC-II, 4-MB L2 Cache, 1-GB Memory, Elite3Dm6, series 2 Graphics, 18.2-GB 10K RPM Internal Drive (Standard Configuration)	A27-ULD2-9Z-1024AQ
Expert3D, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 80 Model 2450, 2x450-MHz UltraSPARC-II, 4-Mbyte L2 Cache, 1-GB Memory, Expert3D Graphics, 18-Gbyte 10K RPM Internal Drive	A27-ULD2-9V-1024AQ

Footnote

1. Standard Configurations are Sun's recommended configurations.

Sun Ultra 80 Systems *(continued)*

Description	Order Number
Model 4450 with 4 x 450-MHz UltraSPARC-II Processor, with 4-Mbyte cache	
PGX32 PCI, 8-bit and 24-bit Color Graphics Workstation	
Sun Ultra 80 Model 4450, 4x450-MHz UltraSPARC-II, 4-MB L2 Cache, 1-GB Memory, PGX32 Graphics, 18.2-GB 10K RPM Internal Drive	A27-ULD4-9T-1024AQ
Elite3D m6 series 2, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 80 Model 4450, 4x450-MHz UltraSPARC-II, 4-MB L2 Cache, 1-GB Memory, Elite3Dm6, series 2 Graphics, 18.2-GB 10K RPM Internal Drive	A27-ULD4-9Z-1024AQ
Expert3D, 24-bit Color Accelerated 3-D Graphics Workstation	
Sun Ultra 80 Model 4450, 4x450-MHz UltraSPARC-II, 4-Mbyte L2 Cache, 1-GB Memory, Expert3D Graphics, 18-Gbyte 10K RPM Internal Drive	A27-ULD4-9V-1024AQ

Sun Ultra 80 Options

Description	Order Number
Ultra 80 CPU Modules	
UltraSPARC-II 450MHz processor module with 4MB cache	X1195A

Monitors

17-inch Entry color monitor, 15.7" diagonal viewable area, .28mm dot pitch, 1152x900 @ 66/76Hz, 1024x768 @ 60/77Hz, 30-75kHz, MPR-II, TCO'99, DDC1/2B, VESA DPMS, digital OSD, universal power supply ww agency compliances Standard version	X7143A
19-inch Color monitor, 18.0" v.a. 0.24mm dot pitch aperture grille, 30-107kHz, WW agency compliance, 2m HD15-pin video cable, Sun logo and color TCO 99, 10-language users guide standard/Korean versions	X7135A
21-inch Color monitor, 19.8" v.a. 0.24mm dot pitch aperture grille, 30-121kHz, WW agency compliance, 2m DB13W3 captive video cable and HD15-pin connector Sun unique ID, logo and color TCO 99, 10-language users guide standard/Korean versions	X7136A
The new Sun 24" wide screen color monitor is a high resolution display with digital multiscanning capabilities. The monitor features front panel controls with on-screen display in two modes (normal and expert), moire cancellation, VESA DDC interface, power management, tilt swivel capabilities, 13W3 and HD15-pin video connector	X7124A

Note: Monitors cannot be ordered as a standalone option.

Memory

Sun Ultra 5V Memory 128-Mbyte Memory Expansion (2 x 64-Mbyte DIMMs)	X7043A
512-Mbyte Memory Expansion (2 x 256-Mbyte DIMMs) for Enterprise 450 Only	X7005A

Notes

- Ultra 80 systems have 16 memory DIMM slots, and the memory DIMMs must be added in sets of four.
- Maximum discount may apply; contact your local Sun sales representative for details.

General Notes

- Systems will not be sold without monitor.

Sun Ultra 80 Options *(continued)*

Description	Order Number
Storage	
Internal 18.2-Gbyte, 10000 RPM UltraSCSI disk drive, 1" high	X5237A
Internal SCSI Cable	
Sun Ultra 80 Internal SCSI cable; Required for second internal tape drive	X939A
SunPCi Processor Card	
SunPCi Co-processor PCI option card, AMD 400MHz CPU, WinNT suppt 64MB onboard memory (DIMM), 24-bit graphics onboard, docs, DR-DOS license (Windows license NOT included)	X1131A-64.2 ¹
64-Mbyte (1x64) DIMM memory expansion for SunPCi PCI opt card	X7041A
128-Mbyte (1x128) DIMM memory expansion for SunPCi PCI opt card	X7035A

General Notes

- *Systems will not be sold without monitor.*
- *All Ultra 60 systems ship with a Solaris Desktop License. For Ultra 60 server use, please purchase SOL-DTWG-LU. Please read the Solaris licensing information before purchasing a system. See page 7-1.*
- *Requires Solaris 2.5.1 Hardware 11/97, Solaris 2.6 Hardware 3/98 or later Solaris 2.x release.*
- *Packages with internal disks are delivered with JumpStart pre-installed, allowing automatic, customized installation from the Solaris 2.x CD-ROM. All systems must have access to Solaris media, refer to the "Solaris 2.x Media" section for ordering information. See page 7-73.*
- *For available Configure to order options for these systems, please refer to the CTO Options pages in this chapter. See page 3-36.*

Footnote

1. *Does not include Windows license.*

Sun Configure-to-Order (CTO) Ordering Flow Chart

Each step (1-11) represents a line item on a Sales Order

Step 1 - required

**Order Configure to Order Installation Service
(one per system package)**

CTO-INSTALL - *Configure to Order Installation Service*



Step 2 - required

Order Ultra 2, Ultra 60 or Enterprise 2 base system package or upgrade

Please refer to the respective Workstations or System Upgrade pricebook pages for complete listing of available system packages



Step 3a - required

Order Country Kit or Power Cord Kit at no additional charge (one per system package)
Enterprise Servers without monitors require X3xxL.
Ultra Workstations and Servers with monitors require X35xxA. See page 5-109.

Choose either:

X3500A - *Country Kit & Power Cord, North American*
..
X3579A - *Country Kit & Power Cord, French Canada*



Step 3b - required

Order monitor(s) as required
One required for Enterprise 2 and Ultra 60 system packages. See Options section for Monitor compatibility matrices

Choose from:

X7143A - *17-inch entry color monitor*
X7127A - *18-inch TFT LCD screen color monitor*
X7135A - *19-inch flat screen color monitor*
X7136A - *21-inch flat screen color monitor*
X7124A - *24-inch color monitor*



Step 4 - optional

Order an additional Graphics Card

For complete listing of available Graphics Cards see the Options section



Step 5 - optional

Order additional Memory
Maximum of six (three sets) per system packages with 128MB, 256MB, or 512MB of base memory.
Order in sets of two for Ultra 2, Ultra 60 and Enterprise 2 system packages.

Choose from:

C7003A - *128 MB Memory Expansion*
C7043A - *128 MB Memory Expansion*
C7004A - *256MB Memory Expansion*

Sun Configure-to-Order (CTO) Ordering Flow Chart *(continued)*

Each step (1-11) represents a line item on a Sales Order

Step 6 - optional

Order additional internal Disk Drive

Maximum of one.

Note: 18.2-Gbyte Disk Drive available only with Ultra 30 and Ultra 60 system packages.

**Choose from:**

C5234A - 9.1-Gbyte Internal 10000RPM Disk

C5237A - 18.2-Gbyte Internal 10000RPM Disk

Step 7 - optional

Order internal Tape Drive OR CD-ROM (if not included in base system package)

Maximum of one.

Customers have to choose between internal Tape or CD-ROM.

**Choose either:**

C6166A - Int. 32x SunCD Drive for Ultra 30, Ultra 60

OR:

C6212A - Internal 7-GB 8mm Tape Drive

C6282A - Internal 12-GB 4mm DDS-3 Tape Drive

C6295A - Internal 20-GB 4mm DDS-4 Tape Drive



Step 8 - optional

Order internal Floppy Drive (if not included in base system package)

Maximum of one.

**Choose from:**

C6004A - Internal Floppy Disk Drive for Ultra 30, Ultra 60



Step 9 - optional

Order PCi Bus Options

Maximum of six for Ultra 30 and Ultra 60 system packages only.



For complete listing of available PCi Bus options see the Options section



Step 10 - optional

Order the appropriate Solaris Media Kit, Promotional Software Kit, or other Sun Software as desired. See Chapters 6 and 7 of the SMCC Enduser Pricebook. Software is NOT installed.

Sun CTO Options

Description	Order Number
CTO Install Option	
Factory Install Service of internal options	CTO-INSTALL
Memory	
Sun Ultra Systems Memory 128-Mbyte Memory Expansion (2 x 64-Mbyte DIMMs) installed in system chassis	C7003A
Sun Ultra Systems Memory 256-Mbyte Memory Expansion (2 x 128-Mbyte DIMMs) installed in system chassis	C7004A
Sun Ultra 5V Memory 128-Mbyte Memory Expansion (2 x 64-Mbyte DIMMs) installed in system chassis	C7043A
512-Mbyte Memory Expansion (2 x 256-Mbyte DIMMs) installed in Ultra 80 only	C7005A
<i>Note: Order two each for Sun Ultra 2 and SUN Ultra 60 systems. SIMMs need to be upgraded in groups of four.</i>	
Mass Storage	
Internal Disk	
Internal 18.2-Gbyte, 10000 RPM UltraSCSI disk drive, 1" high Configured Hard Drive installed in system chassis	C5237A
Internal Tape	
7-Gbyte 8mm internal tape installed in system chassis.	C6212A
12GB 4mm DDS-3 Internal tape drive for Ultra 60 and Ultra 80, installed in system chassis.	C6282A
20GB 4mm DDS-4 internal tape for Narrow SCSI interface CTO option	C6295A
Internal CD	
32x internal CD-ROM drive for Ultra 60/80, Installed in system chassis	C6166A
Internal Floppy	
Manual-eject floppy drive for Ultra 60 and 80 systems installed in system chassis	C6004A

Sun CTO Options *(continued)*

Description	Order Number
Internal PCI Host Adapters and Network Interface Cards	
PCI Host Adapters	
Dual-channel differential UltraSCSI host adapter, PCI, includes two 2m SCSI cables, installed in system chassis	C6541A
SBus Ultra Differential F/W Intelligent SCSI Host Adapter. installed in system chassis	C1065A
PCI Ethernet NIC	
10/100BaseT FastEthernet PCI Adapter 2.0 with MII installed in system chassis	C1033A
PCI Gigabit Ethernet Network Interface Card which provides Sun customers with the next generation Gigabit Ethernet product. The adapter has a single multimode fiber interface which supports 1000Base-T. It is a half size PCI form factor for 5 and 3.3 volt options.	C1141A
10/100BaseT F/W UltraSCSI PCI Adapter 1.0 installed in system chassis	C1032A
PCI FDDI	
FDDI Single-Attach PCI Bus Interface Adapter 2.0 CTO	C1152A
FDDI Dual-Attach PCI Bus Interface Adapter 2.0 CTO	C1153A
PCI Serial Asynchronous	
Serial Asynchronous Interface PCI Bus Adapter 3.0 (PCI card, cable and external eight-port I/O box with RS-232 connectors, Media, and Docs) for Solaris 8 and earlier releases. - CTO	C2156A
Sun GigabitEthernet	
Gigabit Ethernet + FC-AL Adapter Combo Card. Desktop Configured Option	C2069A
Internal SCSI Cable - Ultra 80	
Sun Ultra 80 Internal SCSI cable; Required for second internal tape drive, Configured in the system chassis	C939A
Graphics Frame Buffer	
Expert3D, 24-bit color, Super High resolution 2D & 3D graphics accelerator with on-board texture mapping acceleration, PCI based 64bit/66MHz or 64bit/33MHz Configure to Order (multiple brds)	C3678A
Ordering Notes	
<ul style="list-style-type: none"> • <i>C-options must be ordered with the CTO-INSTALL part number.</i> • <i>Each unique CTO configuration must be ordered in a separate (partialled) shipment or order.</i> 	