

Product Description

1.1 Ultra 2 Series Overview

The Ultra 2 series desktop workstation and the Ultra Enterprise 2 server are multi-processor devices that use the UltraSPARC™ family of processors. Both the desktop workstation and the server offer super-scalar processor technology, multiprocessing, high-performance memory interconnection, and high-bandwidth input/output (I/O). In addition, the desktop workstation provides accelerated graphics.

FIGURE 1-1 illustrates the Ultra 2 series desktop workstation. Major components include:

- I/O devices:
 - Monitor
 - Keyboard
 - Mouse
 - Microphone (not illustrated)
 - Color camera (optional, not illustrated)
- External cables (not illustrated)
- System unit

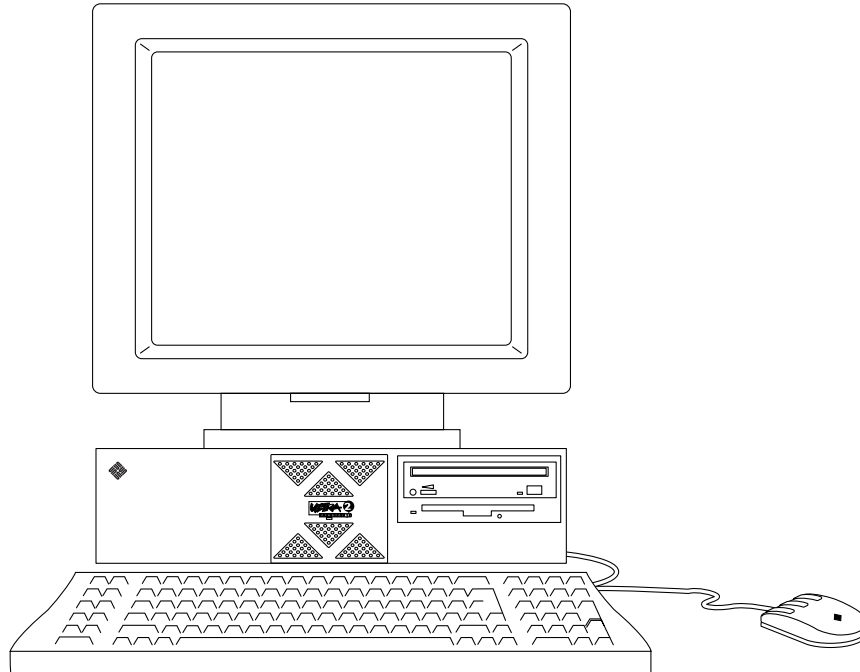


FIGURE 1-1 Ultra 2 Series Desktop System

FIGURE 1-2 illustrates the Ultra Enterprise 2 server. The major components include:

- External cables (not illustrated)
- System unit

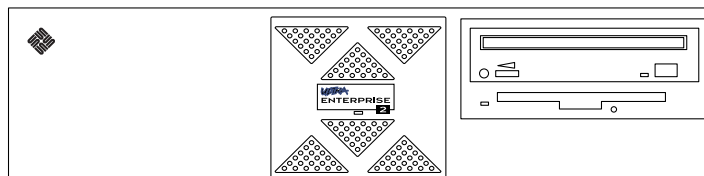


FIGURE 1-2 Ultra Enterprise 2 Server

The following sections provide a brief description of the Ultra 2 series desktop workstation I/O devices. Also included is a detailed overview of the Ultra 2 series and the Ultra Enterprise 2 system unit.

1.2 I/O Devices (Ultra 2 Series Desktop)

The Ultra 2 series desktop workstation uses the following I/O devices:

- Keyboard
- Optical mouse
- Multimedia speaker system
- Microphone
- Color camera
- One of several types of monitors

TABLE 1-1 lists the supported I/O devices and provides a brief description of each device.

TABLE 1-1 Supported I/O Devices

I/O Device	Description
17-inch (43-cm) entry-level monitor	1152 x 900 resolution, 76- or 66-Hz refresh rate, 100 dots per inch (dpi)
	1280 x 1024 resolution, 76- or 66-Hz refresh rate, 110 dpi
	960 x 680 resolution, 112-Hz refresh rate, 81 dpi
19-inch (48-cm) color monitor	1280 x 1024 resolution (mode 1 or mode 3)
	1152 x 900 resolution (mode 2 or mode 4)
21-inch (53-cm) color monitor	1152 x 900 resolution, 76- or 66-Hz refresh rate, 84 dpi
	1280 x 1024 resolution, 76- or 66-Hz refresh rate, 93 dpi
	960 x 680 resolution, 112-Hz refresh rate, 79 dpi
24-inch (61-cm) color monitor (with Creator3D)	1920 x 1200 resolution, 70-Hz refresh rate, 103 dpi
	1600 x 1000 resolution, 76- or 66-Hz refresh rate, 86 dpi
	1400 x 900 resolution, 76-Hz refresh rate, 77 dpi
	1280 x 800 resolution, 76-Hz refresh rate, 69 dpi
Microphone	SunMicrophone™ II

TABLE 1-1 Supported I/O Devices (Continued)

I/O Device	Description
Color camera	Optional SunVideo™ and SunCamera™
Keyboard	Sun Type 5; AT 101 or UNIX layout available
Optical mouse	Optomechanical, three-button

1.3 System Unit Features

System unit components are located in a Sun Ultra 2 chassis. Overall chassis dimensions (width x depth x height) are 450 mm x 444 mm x 130 mm (17.70 inches x 17.50 inches x 5.10 inches). The chassis contains (or may be upgraded to contain) electrical components with the following features:

- SPARC™ V9 64-bit UltraSPARC processor on the module
 - One to two 167-Megahertz (MHz) processor modules with 512-Kilobyte (Kbyte) external caches each
 - One to two 200-MHz processor modules with 1-Megabyte (Mbyte) external cache each
- Solaris™ 2.5.1 operating system

Note – Sun Ultra 2 Series systems are supported by Solaris 2.5.1 or later.

- High performance Ultra Port Architecture™ (UPA)
- High bandwidth memory system using 144-bit, 60-nanosecond (ns) dynamic random access memory (DRAM) single in-line memory module (SIMM)
- 16 DRAM SIMM (DSIMM) sockets providing from 64 Mbytes to 2 Gigabytes (Gbytes) of memory using 16-Mbyte, 32-Mbyte, 64-Mbyte, and 128-Mbyte DSIMMs
- Fast frame buffer UPA graphics (67-MHz graphics clock) with 24-bit color and 8-bit overlay: single buffer graphics, double buffer graphics (Ultra 2 series desktop only). Double buffer graphics with 75-MHz graphics clock (200-MHz Ultra 2 series desktop only), and horizontal UPA graphics with 100-MHz graphics clock
- 16-bit CD quality audio with support for line in/out, headphone, and stereo microphone
- 20-Mbyte-per-second small computer system interface (SCSI)

- 10-Megabits-per-second (Mbps)/100-Mbps twisted-pair Ethernet (TPE) networking
- 100-Mbps Media-Independent Interface (MII) networking
- Four IEEE 1496-compliant 25-MHz SBus I/O slots
- Two DB25-type standard connector serial ports

Note – Each serial port supports synchronous and asynchronous communication.

- DB25-type connector parallel port (Centronics compatible)
- Standard Sunness

Note – Standard Sunness includes the time of day (TOD)/nonvolatile random-access memory (NVRAM), and boot programmable read-only memory (PROM) or FlashPROM for Power-On Self-Test/OpenBoot PROM (POST/OBP)

- Built-in speaker
- Diagnostic LED
- Power conservation support

1.4 System Unit Components

System unit components are listed in TABLE 1-2. FIGURE 1-3 illustrates the system unit interior. FIGURE 1-4 illustrates the system unit rear panel.

Note – Consult your authorized Sun sales representative or service provider prior to ordering a replacement part.

TABLE 1-2 System Unit Replaceable Components

Component	Description	Model
Motherboard	Motherboard	All
CPU module	167-MHz CPU module (UltraSPARC-I), 512-Kbyte external cache	Model 2170 only
CPU module	200-MHz CPU module (UltraSPARC-I), 1-Mbyte external cache	Models 1200 and 2200 only
CPU module	300-MHz CPU module (UltraSPARC-II), 2-Mbyte external cache	Models 1300 and 2300 only
DSIMM	16-Mbyte DSIMM, 60-nanosecond (ns)	All
DSIMM	32-Mbyte DSIMM, 60-ns	All
DSIMM	64-Mbyte DSIMM, 60-ns	All
DSIMM	128-Mbyte DSIMM, 60-ns	All
UPA graphics card	UPA graphics card, 67-MHz, DBZ	All
UPA graphics card	UPA graphics card, 67-MHz, SFB	All
UPA graphics card	UPA graphics card, 75-MHz, DBZ speed sort	All
UPA graphics card	Horizontal UPA graphics card, 100-MHz	All
Power supply	350-watt (W) power supply	All
Diskette drive	Diskette drive, 3.5-inch, 3D, black bezel	All
4x CD-ROM drive	4x CD-ROM drive	All
12x CD-ROM drive	12x CD-ROM drive	All
Speaker	Speaker (P/O shroud assembly)	All
4-mm tape drive	4-Gbyte/8-Gbyte, 4-mm DDS-2 tape drive	All
8-mm tape drive	8505XL 8-mm tape drive 7/14 Gbytes	All
TOD, 48T59Y, with carrier	TOD/NVRAM, 48T59Y, with carrier	All

TABLE 1-2 System Unit Replaceable Components (Continued)

Component	Description	Model
SCSI cable assembly	SCSI cable	All
Diskette drive cable assembly	Floppy cable	All
Hard drive	535-Mbyte, 4500 RPM, wide	All
Hard drive	1-Gbyte, 5400 RPM, wide	All
Hard drive	2.1-Gbyte SCA, 7200 RPM, wide	All
Hard drive	4.2-Gbyte SCA, 7200 RPM, wide	All
Hard drive	9.1-Gbyte SCA, 7200 RPM, wide	All
Shroud assembly	Shroud assembly	All

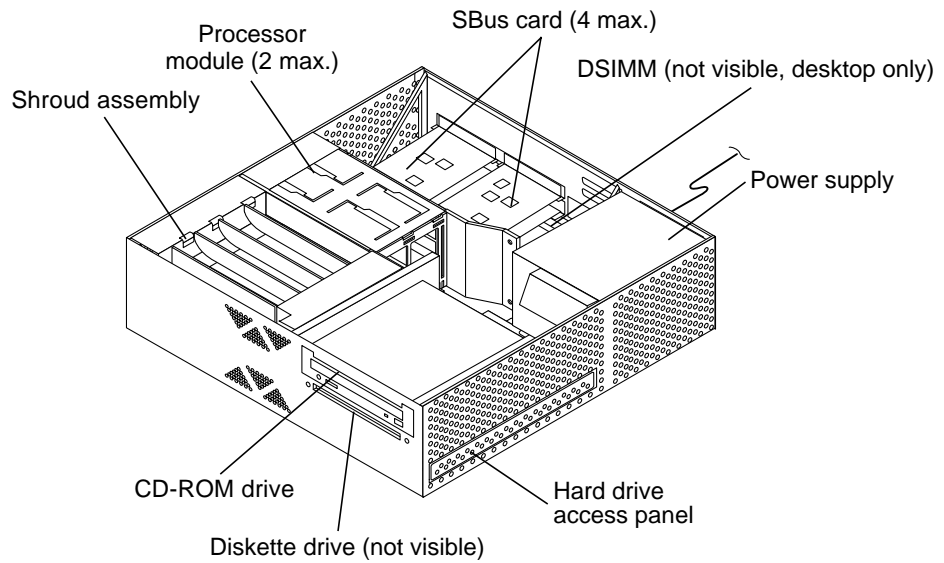


FIGURE 1-3 System Unit Interior

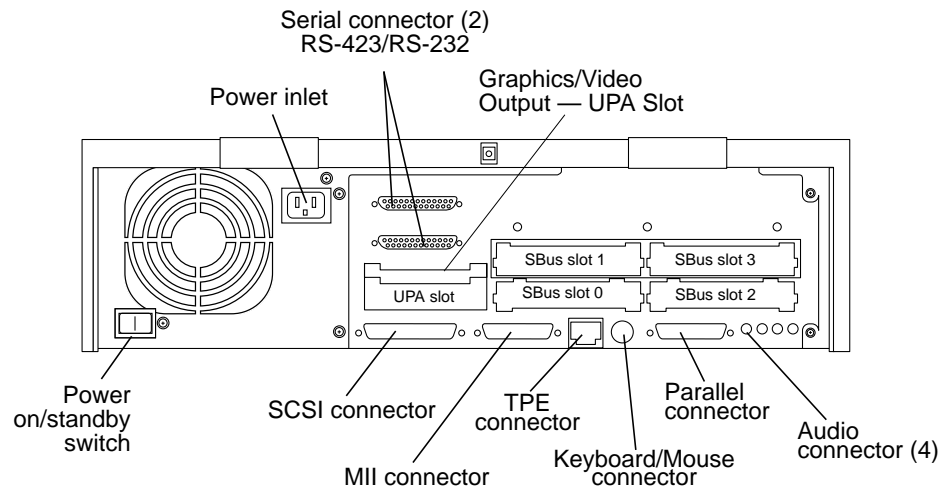


FIGURE 1-4 System Unit Rear Panel