

## Sun Ultra 20 Workstation

Breakthrough price/performance



### Highlights

- One AMD Opteron™ processor (up to 2.6 GHz)
- Developer-ready with Sun's award-winning developer tools— Sun Java™ Studio Creator, Sun Java™ Studio Enterprise, and Sun™ Studio Software included standard
- Two professional graphics accelerators available: NVIDIA® Quadro® NVS280 PCI-Express, NVIDIA Quadro FX1400
- RAID 0 for high performance and RAID 1 for redundancy\*
- Pre-loaded with Solaris 10 OS and certified to run Solaris, Linux, and Windows
- Three PCI-Express slots, including one x16 for graphics only, and four 32-bit PCI slots (33 MHz)
- Up to two SATA, 7200-RPM hard drives, 500 GB maximum: 80, 250 GB
- Up to four GB of PC3200 memory, four unbuffered DIMM slots, ECC (1 GB, 512 MB) or non-ECC (256 MB)

\* RAID 0/1 has been tested on Windows XP Professional and Windows XP Professional x64 only.



The Sun Ultra 20 Workstation achieves exceptional performance: The ability to run the Solaris™ Operating System, Linux®, and Windows; binary compatibility for 32-bit and 64-bit applications; and developer-ready with Sun's award-winning, enterprise-class development tools—starting at only \$895.

### Performance, power, and expandability

The Sun Ultra 20 Workstation is the only x64 workstation with Solaris 10 pre-installed, delivering the highest performance available on a one-processor system, with the ability to write and deploy Solaris-based and Java-based applications. Created for electronic design automation (EDA), event-driven architecture, mechanical computer-aided design, software development, and academic research, the Sun Ultra 20 Workstation delivers more power and expandability for the demanding user. It offers the flexibility needed to run a wide range of applications within the same architecture, minimizing support and training costs.

The combination of competitive pricing and support delivered by our world-class services organization, from basic warranty to same business-day service, places the Sun Ultra 20 Workstation among the best for low total cost

of ownership. Developed by Sun, the inventor of the workstation, the Sun Ultra 20 Workstation delivers high quality, reliability, and stability.

While offering the option to use error-correcting code (ECC) memory, the Sun Ultra 20 Workstation also offers cost-saving options such as non-ECC memory and unbuffered dual in-line memory modules (DIMMs). In addition, RAID 0 and 1 safeguard mission-critical data through data striping and disk mirroring.

Serial ATA makes it possible to locally store and quickly retrieve large amounts of data. These features, along with the choice of two excellent graphics accelerators, make this workstation ideal for software development, MCAD, education, financial trading, EDA, or any task that requires high performance and low cost from a workstation.

## Sun Ultra 20 Workstation Specifications

### Architecture

#### Processor

One AMD Opteron™ processor (up to 2.6 GHz)

#### Memory

4-GB PC3200 ECC (1 GB, 512 MB) or non-ECC (256 MB) unbuffered DIMMs; four DIMM slots, unbuffered DIMMs only

### Standard interfaces

#### Network

One Gigabit Ethernet Port

#### USB

Six USB 2.0 ports, two in front and four in back

#### FireWire

Two IEEE 1394a FireWire ports in front

#### Audio

5 AC '97 ports, two in front and three in back

#### Expansion slots

- One PCI-Express x16 slot (reserved for graphics accelerator)
- Two PCI-Express x1 slots
- Four conventional PCI slots (32-bit, 33Mhz)

### Mass storage and media

- Up to two SATA hard drives
- One optical drive: DVD-ROM or DVD+R/RW
- Ultra320 SCSI support via X-Option

### Software

#### Operating System

- Solaris 10 (pre-loaded)
- Linux: Red Hat Enterprise Linux WS version 3-x86, 3-AMD64, 4-x86, 4-AMD64 and SUSE LINUX Enterprise Server 9-AMD64

- Windows: Windows XP Professional, XP Professional x64 Edition

#### Pre-loaded developer tools

- Sun Java™ Studio Creator 2004Q2
- Sun Java™ Studio Enterprise 7
- Sun™ Studio 10

### Graphics

Available with a choice of NVIDIA graphics accelerators

NVIDIA Quadro™ NVS280 PCI-Express Graphics Accelerator

- Dedicated 64 MB of DDR graphics memory
- Cost-effective workstation-class 2-D graphics accelerator for EDA, software development, and education

NVIDIA Quadro FX 1400 PCI-Express Graphics Accelerator

- Dedicated 128 MB of DDR graphics memory
- Midrange 3-D performance workstation graphics solution for professional CAD, MCAD applications

### Environment

- Power supply: 400 watts
- Operating temp./humidity: 5° C to 35° C (41° F to 95° F); 20% to 93% relative humidity, non-condensing
- Nonoperating temp./humidity: -40° C to 65° C (-40° F to 158° F); 93% relative humidity, non-condensing
- Operating acoustic noise: 4.7 bels
- Idling acoustic noise: 4.3 bels

### Regulations (meets or exceeds the following requirements)

- Safety: UL/CSA-60950, EN 60950, IEC 60950 CB
- Ergonomics: EK1-1TB-2000
- RFI/EMC: EN 55022/CISPR22 Class B, FCC CFR47 Part 15 Class B; EN 6100-3-2, EN 61000-3-3

### Learn More

Learn more about the Sun Ultra 20 Workstation by visiting [sun.com/ultra20](http://sun.com/ultra20).

- Immunity: EN 55024
- Regulatory Markings: UL/cUL, TUV-GS, CE FCC, ICES-003, C-Tiek, VCCI, GOST-R, BSMI CCC, S-Mark

### Dimensions and weights

- Height: 433.6mm (17.07 in.)
- Width: 199.6mm (7.86 in.)
- Depth: 467.45mm (18.40 in.)
- Weight: 15.4 kg (34 lbs.)

### Security features

- Chassis security features: Kensington lock support
- BIOS security features: Write protect for EEPROM, boot protection for USB flash drive, system and setup password

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