

# Sun Fire™ T2000 Server



Combining breakthrough throughput and high-end RAS features with dramatic energy and space savings



## Highlights

- World's first eco-responsible server
- Up to 32 simultaneous execution threads using CoolThreads™ chip multithreading (CMT) technology
- Industry-leading server efficiency as defined by space, watts, and performance (SWaP)<sup>1</sup> metric
- Drive up utilization, drive down costs, and massively consolidate workloads with built-in, no-cost virtualization technology with Logical Domains (LDoms) and Solaris™ Containers
- Investment protection with SPARC® V9 binary application compatibility
- Enhanced system uptime supported by high on-chip RAS, redundant power supplies and fans, hot-pluggable disk drives, hardware RAID (0+1), and low component count
- Exceptional expandability and I/O performance from five PCI slots and four Ethernet interfaces
- Preloaded with the Solaris 10 OS and Cool Tools for CoolThreads servers to enable fast application development and deployment
- Runs many Linux distributions, so you can choose the best operating system for your environment



With the growing demand for network services, datacenter managers are caught between competing requirements: building server capacity and deploying applications quickly on the one hand, while managing complexity and server sprawl and coping with burgeoning energy costs and real estate limitations on the other. So companies are looking for systems that can deliver on all the requirements of the next-generation datacenter—for compute density, for price/performance, and for energy and space efficiency. That's the whole idea behind the Sun Fire™ T2000 server.

The Sun Fire T2000 server is powered by the UltraSPARC® T1 processor, which delivers four or eight cores for a maximum of 32 simultaneous software threads per chip. The result? Up to five times the throughput-optimized performance of competitors' systems—performance that's ideal not only for Web-tier applications, but for critical OLTP databases and ERP, CRM, and SCM applications as well.

For these types of applications, your systems have to be up, online, and available. And the Sun Fire T2000 server delivers enhanced uptime capabilities you can rely on: hot-pluggable disk drives, redundant and hot-swappable power supplies and fans, environmental monitoring, RAID 0+1 monitoring, and much more. Plus the component count itself is extremely low—and fewer components mean better reliability and less system downtime.

Sun delivers all this performance and reliability in a low-profile, 2U design ideal for rackmount deployments, while it draws about one-fifth the power of other systems. The combination of high performance and RAS features with minimal energy costs and physical footprint is so innovative that we had to develop a new space, watts, and power (SWaP) metric to describe its true cost-and-environmental impact on the datacenter.

Plus it comes preinstalled with the highly available, secure, reliable Solaris 10 OS. With the Solaris Application Guarantee, we ensure binary compatibility between Solaris OS releases. Plus, Logical Domains (LDoms) and Solaris Containers enable you to safely consolidate dozens of applications onto a single system to virtualize your environment, increase utilization rates, and cut system and licensing costs.

# Sun Fire T2000 Server Specifications

## Architecture

### Processor

Four- or eight-core 1.0 GHz, or eight-core 1.2 GHz UltraSPARC T1 processor

### Cache

- 16 KB instruction processor
- 8 KB primary data cache
- 3 MB integrated L2

### Main memory

16 DIMM slots, DDR2 with Chipkill and DRAM sparing, ECC Registered DIMMs, system maximum of 64 GB; support for 1 GB, 2 GB, and 4 GB DIMMs

### Key RAS features

- Hot-pluggable disk drives
- Redundant, hot-swappable power supplies
- Redundant, hot-swappable fans
- Environmental monitoring
- Error correction and parity checking
- Easy component replacement
- Internal hardware drive mirroring (RAID 1)
- RAID 0 and 1 support

## System architecture

SPARC V9 architecture, ECC protected

## Standard integrated interfaces

- Network: Four 10/100/1000 Mb/sec Ethernet
- Serial management: One DB-9 serial port
- USB: Four 1.1 USB ports
- Expansion bus: Three PCI Express (PCIe) slots for low-profile cards (support x1, x4 and x8 width cards); two PCI-X slots for 64-bit 133 MHz low-profile cards (Note: On earlier models, one PCI-X slot might be occupied with a disk controller card)

## Software

### Operating system

- Solaris 10 OS 11/06

### Preloaded software

- Solaris 10
- Cool Tools for CoolThreads servers (includes CoolTuner, Sun Studio 11, GCC for SPARC systems)

### Management

- Advanced Lights Out Manager (ALOM)
- Management system controller with RJ-45 serial and 10/100 Mb/sec Ethernet ports

### Mass storage and media

- Internal disk: Up to four 73 GB or 146 GB 2.5 in., 10,000 rpm SAS disks, providing a maximum capacity of 584 GB; internal hardware RAID 1 (mirroring) and RAID 0 (striping) supported
- Internal DVD: One slimline DVD-ROM/CD-RW
- External storage: Sun offers a complete line of best-in-class, innovative storage hardware, software, and solutions—including tape drives, tape libraries, disk storage systems, data management software, and more. For more information, go to: [sun.com/storagetek](http://sun.com/storagetek).

## Environment

- Operating temperature:
  - Sea level to 900m (3,000 ft.): 5°C to 35°C
  - Above 900m (3,000 ft.): Decrease maximum temperature as altitude increases, 1°C/300m (1.6°F/1,000 ft.)
  - 5°C to 35°C
- Nonoperating temperature:
  - Sea level to 900m (3,000 ft.): -40°C to 60°C
  - Above 900m (3,000 ft.): -40°C to 60°C
- Operating relative humidity: 20-80%, noncondensing, 27°C wet bulb
- Nonoperating relative humidity: 98%, noncondensing
- Operating altitude: Up to 3,000m (10,000 ft.)
- Nonoperating altitude: Up to 12,000m (40,000 ft.)
- Acoustic noise
  - Operating/idling: 7.7 B (LwAd: 1 B = 10 dB)
  - Operating/idling: 62 dB (LpAm, bystander positions)

## Power

- Dual-redundant, hot-swappable power supplies
- Typical operating power: 275W (note: earlier models containing 550W power supplies have a typical operating power of 325W)
- AC power: 100-240 V AC, 50-60 Hz (4.5 A at 100-120 V AC, 2.25 A at 200-240 V AC)

## Learn More

To learn more about the Sun Fire T2000 server, go to: [sun.com/T2000](http://sun.com/T2000).

## Regulations

Safety: UL/CSA 60950-1, EN 60950-1, IEC 60950-1 CB Scheme with all country deviations, IEC 825-1, 2, and CFR 21 part 1040, CNS 14336, GB 4943

Ergonomics: EK1-ITB-2000

RFI/EMC: EN 55022 Class A, 47 CFR 15B Class A, ICES-003 Class A, VCCI Class A, AS/NZ 3548 Class A, CNS 13438 Class A, KSC 5858 Class A, GB 9254 Class A, EN 61000-3-2, EN 61000-3-3, GB 17625.1

Immunity: EN 55024/CISPR 24, IEC 6100-4-2, IEC 6100-4-3, IEC 6100-4-4, IEC 6100-4-5, IEC 6100-4-6, IEC 6100-4-8, IEC 6100-4-11

Telecommunications: EN 300 386

Regulatory markings: CE, FCC, ICES-003, C-Tick, VCCI, GOST-R, MIC, UL/cUL, UL/DEMKO/GS, UL/S-Mark, BSMI, CCC

## Dimensions and weight

Height: 89 mm (3.5 in.) 2U

Weight: 425 mm (16.7 in.)

Depth: 621 mm (24.4 in.)

Weight: 18.2 kg (40 lbs.) approximate — includes two power supplies, two disk drives, one DVD

## Warranty

Hardware support: One year

Software install: 90 days

Call response: Eight hours

Delivery: Next business day

## Upgrades

Customers can trade in their old Sun or non-Sun servers and receive a discount toward the price of their new Sun Fire T2000 server. For more details on the Sun Upgrade Advantage Program, go to: [sun.com/ibb/coolthreads](http://sun.com/ibb/coolthreads).

<sup>1</sup> SWaP = space, watts, and performance as defined by the formula performance/space/power.



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