

## Sun SPARC Enterprise® T5220 Server

Maximum security, speed, and scale  
for Web infrastructure



### Highlights

- Designed for the most reliable, scalable Web build-outs, including taking MySQL deployments to new levels
- World's first 64-thread, general-purpose server powered by the ground-breaking UltraSPARC® T2 “system on a chip” processor
- Record-breaking performance, maximum energy and space efficiency with great I/O and internal storage expandability
- Drive up utilization, drive down costs, and massively consolidate workloads with built-in, no-cost virtualization technology with Logical Domains (LDoms) and Solaris™ Containers
- Integrated on-chip cryptographic acceleration and 10 Gigabit Ethernet enable secure computing at wire speed
- The industry's most open platform, built on open-source technologies and open standards
- Massive I/O performance and expandability with the Sun External I/O Expansion Unit, supporting up to 16 PCI Express (PCIe) slots
- Accelerate application response times and slash energy consumption with Flash SSDs



For a high-performance and secure web infrastructure, start with the Sun SPARC Enterprise® T5220 server. With integrated on-chip 10GbE and cryptographic acceleration, the T5220 server can deliver safe transactions and a fast, reliable web experience to millions of users.

The Sun SPARC Enterprise T5220 server is the first 64thread, general-purpose server powered by the UltraSPARC T2 “system on a chip” processor. It packs up to eight cores and up to 64 simultaneous threads onto a single piece of silicon, together with the key functions of an entire system on a single chip—computing, networking, security, and I/O. All that power and functionality is packaged in a 2 RU form factor, with highly expandable internal storage and network connectivity. Better integration means fewer parts, which in turn deliver higher reliability through the reduced risk of component failures. With the Sun SPARC Enterprise T5220 server's innovation in processor and server design, you can deploy your most critical workloads with confidence.

The Sun SPARC Enterprise T5220 server offers the industry's only builtin and nocost virtualization technologies with a choice of Solaris Containers and Logical Domains (LDoms). By enabling up to 64 isolated domains per server, you can deploy more than 1,250 isolated domains per rack—for ultimate server virtualization and consolidation.

You can maximize your investment in the Sun SPARC Enterprise T5220 server by leveraging the SunSM Eco Services Suite to optimize your datacenter power, space, and cooling, or Sun Consolidation and Virtualization Services to help you architect and deploy your consolidation and virtualization projects.

# Sun SPARC Enterprise T5220 Server Specifications

## Key applications

- Consolidation and virtualization
- Web serving
- Streaming media
- Security applications
- Java™ application servers and virtual machines
- OLTP databases
- ERP, CRM, SCM
- SOA and business integration platforms
- Multithreaded floating-point applications for manufacturing, pharmaceutical, and financial services industries

## Architecture

### Processor

Four-core 1.2 GHz, eight-core 1.4 GHz, or eight-core 1.6 GHz UltraSPARC T2 processors; one processor per system, maximum 64 threads

### Cache

4 MB integrated L2

### Main memory

16 FB DIMM slots, system maximum of 128 GB; support for 1 GB, 2 GB, 4 GB, and 8 GB DIMMs; minimum of 4 GB (4x 1 GB)

## System architecture

- SPARC® V9 architecture, ECC protected

## Other processor key features

- Under 95 W (nominal) and fewer than 2 W per thread
- Dual, multithreaded, 10 GbE PCIe integrated onto chip
- Eight floating-point units
- Onboard cryptography supporting 10 embedded security industry-standard ciphers including: DES, 3DES, AES, RC4, SHA1, SHA256, MD5, RSA to 2048 key, ECC, CRC32

## 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

## Standard integrated interfaces

- Network: Four 10/100/1000Mb/sec Ethernet ports; Up to 2x optional 10GbE XAUI connections
- Expansion bus: Two eight-lane PCIe and two four-lane PCIe or XAUI
- USB: Four 2.0 USB ports

## Software

### Operating system

- Solaris 10 8/07, Solaris 10 10/08, and Solaris 10 5/09

## Software Included

- Solaris 10 5/09 Preloaded
- Sun LDOMs Manager and MIB 1.2 Pre-install
- ILOM 3.0
- CMT Tools 1.0 Pre-install
- GCC 4 for SPARC Systems 4.0.4 Pre-install
- Sun Studio™ 12 Pre-install
- SYS, FW, Download UTIL Pre-install
- MAI, 10 GbE ETC SYS CFG
- Live Upgrade, ABE Pre-install

## Mass Storage and Media

- Internal disk: Up to sixteen 73 GB, 146 GB, 300 GB 2.5 in. SAS drives or up to eight 32 GB 2.5 in. SATA solid-state drives (SSD)
- Internal DVD: One slimline CD-RW/DVD-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— along with renowned world-class service and support. For more information, go to [sun.com/storagetek](http://sun.com/storagetek).

## Virtualization

- Built-in, no-cost virtualization technology providing the flexibility and power of 64 virtual systems in a single server
- Pre-install software: Sun Logical Domains Manager and MIB 1.2

## Environment

- Operating temperature: Sea level to 900m (2953 ft.): 5°C to 35°C (41°F to 95°F); above 900m (2953 ft.): decrease the maximum allowable temperature by 1°C/300m (1.6°F/1000 ft.); IEC 60068-2-1 Test Ad, and 60068-2-2 Test Bd
- Nonoperating temperature: -40°C to 65°C (-40°F to 149°F); IEC 60068-2-1 Test Ab and 60068-2-2 Test Bb
- Operating relative humidity: 10% to 90% RH, 27°C maximum wet bulb (noncondensing); IEC 60068-2-56 Test Cb
- Nonoperating relative humidity: 93% RH, 35°C maximum wet bulb (noncondensing); IEC 60068-2-56 Test Cb
- Operating altitude: 3,000m (10,000 ft.); IEC 60068-2-13 Test M, and 60068-2-41 Test Z/BM
- Nonoperating altitude: 12,000m (40,000 ft.); IEC 60068-2-13 Test M
- Acoustic noise: Operating/idling acoustic noise 7.4B (LwAd, 1B = 10 dB), operating/idling acoustic noise 63 dB (LpAm, bystander positions)

## Power

- Two hot-swappable AC 750 W or 1100 W power supply units (PSUs), providing N+1 redundancy. Also available are DC 1200 W power supply units.

## Regulations

- Safety: UL/CSA-60950-1, EN60950-1, IEC60950-1 CB Scheme with all country deviations, IEC825-1, 2, CFR21 part 1040, CNS14336, GB4943
- RFI/EMC: EN55022 Class A, 47 CFR 15B Class A, ICES-003 Class A, VCCI Class A, AS/NZ3548 Class A, CNS 13438 Class A, KSC 5858 Class A, GB9254 Class A, EN61000-3-2, GB17625.1, EN61000-3-3
- Immunity: EN55024, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11

## Learn More

For more information on the Sun SPARC Enterprise T5220 server, go to [sun.com/t5220](http://sun.com/t5220)

To try the Sun SPARC Enterprise T5220 server risk-free for 60 days, go to [sun.com/tryandbuy](http://sun.com/tryandbuy)

- Regulatory: CE, FCC, ICES-003, C-tick, VCCI, GOST-R, BSMI, MIC, UL/cUL, UL/DEMKOLVD, UL/S-mark, CCC
- Ergonomics: EK1-ITB-2000

## Dimensions and weight

- Height: 88 mm (3.49 in.); 2 RU
- Width: 425 mm (16.75 in.)
- Depth: 714 mm (28.125 in.)
- Weight: Approximately 25 kg (55 lb.)

## Upgrades

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

## Warranty

- Hardware support: 1 year
- Operating system support: 90-day warranty provided for installation telephone support and defective media replacement
- Call response: 8 hours
- Delivery: Next business day onsite or parts exchange for customer replaceable units

## Customer Ready program

Take advantage of the Sun Customer Ready program and have your system tailored to your specific requirements by our factory experts. Learn more at [sun.com/crs](http://sun.com/crs).