



## Sun SPARC® Enterprise T5220 Server

Big savings on power and cooling costs.  
And virtualization comes free. Go green.



### Highlights

- Designed for secure Web-scale and virtualized computing, and data-intensive applications
- World's first 64-thread, general-purpose server powered by the groundbreaking UltraSPARC® T2 “system on a chip” processor
- Record-breaking performance, maximum energy and space efficiency with great I/O and internal storage expandability, delivering the industry's best performance per watt
- World's first server with integrated, open-source, no-cost virtualization technology, enabling more than 1,250 isolated domains per rack
- 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
- Industry-standard systems management and no-cost development and deployment tools to speed time to service
- Extreme levels of reliability through integrated and simplified design — resulting in fewest parts in class



Meet the world's ultimate virtualization server. The Sun SPARC® Enterprise T5220 server is the fastest server designed for virtualization, providing the flexibility and power of 64 virtual systems in a single server — that's more than 1,250 systems per rack — and maximum energy efficiency, with the industry's best performance per watt. This much virtualization power and functionality has never before been available in such a compact server and can save you millions of dollars in power and cooling costs. And the result is a dramatic improvement in energy efficiency and service-level predictability, with greatly reduced power and cooling costs.

The Sun SPARC Enterprise T5220 server is the first 64-thread, 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 2RU 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 integrated, open-source, and no-cost virtualization technologies with a choice of Solaris Containers and Logical Domains (LDMs). 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 Sun<sup>SM</sup> 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
- Network infrastructure
- SOA and business integration platforms
- Multithreaded floating-point applications for manufacturing, pharmaceutical, and financial services industries

## Processor

Processor	Four-, six-, and eight-core 1.2-GHz or eight-core 1.4-GHz UltraSPARC T2 processors; one processor per system, maximum 64 threads
Architecture	SPARC® V9 architecture, ECC protected
Cache per processor	4-MB integrated L2

## Other processor key features

- Under 95 W (nominal), and fewer than 2 W per thread
- Dual, multithreaded, 10-Gb Ethernet 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

## Main memory

16 FB-DIMM slots, system maximum of 64 GB; support for 1-GB, 2-GB, and 4-GB DIMMs; minimum of 4 GB (4 x 1 GB)

## Standard integration interfaces

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

## Mass storage and media

Internal disk	Up to eight 73- or 146-GB SAS disks
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).

## Software

Operating system	Solaris 10 OS 8/07
Preloaded	<ul style="list-style-type: none"> <li>• Solaris 10 OS 8/07</li> <li>• Sun Java™ Enterprise System Release 5 (90-day evaluation)</li> <li>• Logical Domains Manager 1.0.1</li> <li>• Logical Domains MIB 1.0.1</li> <li>• Sun Studio™ 12</li> <li>• CoolTools for CoolThreads™ servers</li> </ul>

## Virtualization

- Integrated, open-source, no-cost virtualization technology providing the flexibility and power of 64 virtual systems in a single server
- Preloaded software: Logical Domains Manager 1.0.1 and Logical Domains MIB 1.0.1

## Power supplies

Two hot-swappable AC 750 W power supply units (PSUs), providing N + 1 redundancy

## Environment

Operating temperature	<ul style="list-style-type: none"> <li>• Sea level to 900 m (3,000 ft.) 5° to 35° C (41° F to 95° F)</li> <li>• Above 900 m (3,000 ft.), decrease maximum temperature as altitude increases by 1° C/300 m (1.6° F/1,000 ft.)</li> </ul>
Nonoperating temperature	<ul style="list-style-type: none"> <li>• Above 900 m (3,000 ft.) -40° to 65° C</li> </ul>
Relative humidity	<ul style="list-style-type: none"> <li>• 10 to 90 percent RH, noncondensing, 27° C wet bulb, IEC 60068-2-3&amp;56</li> </ul>
Nonoperating relative humidity	<ul style="list-style-type: none"> <li>• 93 percent RH 35° C, noncondensing</li> </ul>
Operating altitude	<ul style="list-style-type: none"> <li>• 0–3,000 m (0–10,000 ft.), IEC 60068-2-13</li> </ul>
Nonoperating altitude	<ul style="list-style-type: none"> <li>• 0–12,000 m (0–40,000 ft.), IEC 60068-2-3&amp;56</li> </ul>
Declared acoustics	<ul style="list-style-type: none"> <li>• Operating/idling acoustic noise 7.4 B (LwAd, 1 B = 10 dB)</li> <li>• Operating/idling acoustic noise 63 dB (LpAm, bystander positions)</li> </ul>

## Regulations (meets or exceeds the following requirements)

Safety	UL/CSA-60950-1, EN60950-1, IEC60950-1 CB Scheme with all country deviations, IEC825-1, 2, CFR21 part 1040, CNS14336, GB4943
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## Learn more

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

Ergonomics	EK1-ITB-2000
RFI/EMC	EN55022 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, 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
Telecommunications	EN 300 386
Regulatory markings	CE, FCC, ICES-003, C-tick, VCCI, GOST-R, BSMI, MIC, UL/cUL, UL/DEMKO, UL/S-mark, CCC

## Dimensions and weight

Height	88 mm (3.49 in.); two-rack unit
Width	425 mm (16.75 in.)
Depth	714 mm (28.125 in.)
Weight	Approximately 23.58 kg (52 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	One year
Operating system support	90-day warranty provided for installation telephone support and defective media replacement
Call response	Eight hours
Delivery	Next business day onsite or parts exchange for customer-replaceable units

## Customer Ready Systems

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