

# Sun SPARC Enterprise® T5240 Server

Scale more with less



## Highlights

- World's first dual-socket, general-purpose server powered by the 3rd generation UltraSPARC® T2 Plus “system on a chip” processor delivering massive throughput of up to 128 compute threads in just 2 RU of space
- Up to 5x higher performance, 2.5x higher performance per watt, and 2-4x higher memory and internal storage expandability—all in half the space than comparable x86 systems
- 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 on-board 10-gigabit Ethernet for secure computing and high-speed networking
- 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
- Instantly speed up I/O intensive application performance with Flash technology



Introducing the world's most innovative server, designed with up to 128 threads and maximum security, expandability, virtualization, and availability features. The Sun SPARC Enterprise® T5240 server is one of the fastest 2-socket server available with up to five times the performance in less than half the space and 2.5 times better performance per watt than comparable x86 systems. Enhance your competitive position with the Sun SPARC Enterprise T5240 server. You can stay ahead of ever-expanding application services, while significantly reducing operational costs, and bring new services to market faster and with higher levels of availability.

The Sun SPARC Enterprise T5240 server is the first dual-socket, general-purpose server powered by the third generation UltraSPARC® T2 Plus “system on a chip” processor, featuring up to 128 compute threads and running on the free and open source Solaris™ Operating System (OS). Each processor 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, security, and I/O.

The innovative design and reliability features of the Sun SPARC Enterprise T5240 server significantly increase uptime and reduce unplanned service actions. Extreme integration at both the processor and system level deliver a part count reduction of up to 53 percent compared to competitive 2-socket x86 platforms and 12x compared to legacy mid-range server platforms, directly reducing service interruptions due to component failure.

The Sun SPARC Enterprise T5240 server delivers up to 128 GB of memory, up to 16 internal disks, industry-standard systems management, no-cost development and deployment tools, and integrated cryptographic acceleration—all in a compact two-rack unit (2 RU) form factor.

Maximize your server capacity, utilization, and infrastructure agility while minimizing energy, space, and cooling requirements, as well as reducing administrative overhead. The Sun SPARC Enterprise T5240 server offers the industry's only built-in and no-cost virtualization technologies, with a choice of Solaris Containers and Sun Logical Domains (LDoms). By enabling up to 128 isolated domains per server, you can deploy up to 2,500 isolated domains per rack, for ultimate server virtualization and consolidation.

You can maximize your investment in the Sun SPARC Enterprise T5240 server by leveraging the Sun™ Eco Services Suite to optimize datacenter power, space, and cooling, or Sun Consolidation and Virtualization Suite of Services to help architect and deploy consolidation and virtualization projects. In addition, Sun offers a range of services to help you upgrade to Solaris 10. You may also purchase Sun System Packs, which provide world-class hardware and operating system support, or, alternatively, consider purchasing support for the Solaris OS, which entitles you to the latest Solaris Updates, Solaris Named Releases, Software Updates, and other Sun support.

# Sun SPARC Enterprise T5240 Server Specifications

## Key applications

- Virtualization and consolidation
- Data-intensive applications
- Security applications
- Web, middleware, and application tier workloads, especially Java™ environments
- OLTP databases
- Multithreaded HPC workloads with large instruction and data sets
- New Web services deployments
- SOA infrastructure implementations
- Deployments requiring memory and hard drive expandability

## Architecture

### Processor

- Four-, six-, and eight-core 1.2 GHz or eight-core 1.4 GHz UltraSPARC T2 Plus processors, two processors per system, maximum 128 threads

### Cache

- 4 MB integrated L2

### Main memory

- 32 FB DIMM slots, system maximum of 256 GB; support for 1 GB, 2 GB, 4 GB, and 8 GB low voltage (1.55V) DIMMs; minimum of 8 GB (8 x 1 GB)

## System architecture

- SPARC® V9 architecture, ECC protected

## Other processor key features

- One floating-point unit per core, up to eight per processor
- Onboard cryptography supporting 10 embedded security industry-standard ciphers: DES, 3DES, AES, RC4, SHA1, SHA256, MD5, RSA to 2048 key, ECC, CRC32

## Key RAS features

- Hot-pluggable disk drives
- Redundant hot-swappable fans
- Redundant hot-swappable AC power supplies
- Up to six hot-swappable system fan modules
- Environmental monitoring
- Error correction and parity checking
- Easy component replacement
- Internal hardware drive mirroring (RAID 1)
- RAID 0 and 1 support
- Ultra-low part count with 53% fewer parts than competitive 4-socket x86 systems

## Standard integrated interfaces

- Network: Four 10/100/1000 Mb/sec Ethernet ports; Up to 2x optional 10 GbE XAUI connections
- Expansion bus: Four dedicated eight-lane PCIe expansion slots, two eight-lane PCIe or XAUI expansion slots

- Ports: Four USB 2.0 ports, one RJ-45 serial management port, one 10/100 Mb/sec ethernet network management port, one DB-9 serial port

## Software

### Operating system

- Solaris 10 8/07 and Solaris 10 10/08

### Preloaded software

- Solaris 10 10/08 OS plus patches or later
- Logical Domains Manager 1.0.3
- Logical Domains MIB 1.0.1 U1
- Sun Studio 12
- GCC for SPARC Systems Version 4.0.4
- CMT Developer Tools Version 1.0

### 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 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/storageetek](http://sun.com/storageetek).

## Virtualization

- Built-in, no-cost Logical Domains (LDoms) and Solaris Containers provides the flexibility and power of 128 virtual systems in a single server
- Preloaded software: Logical Domains 1.0.3 and Logical Domains MIB 1.0.1 U1, Solaris 10 10/08 OS plus patches or later

## Environment

- Operating temperature: Sea level to 900m (3,000 ft.), 5°C to 35°C (41°F to 95°F), above 900 m (3,000 ft.), decrease maximum temperature as altitude increases by 1°C/300 m (1.6°F/1,000 ft.)
- Nonoperating temperature: Sea level to 900m (3,000 ft.) -40°C to 65°C (-40°F to 149°F), above 900m (3,000 ft.) -40°C to 60°C (-40°F to 140°F) (maximum altitude 40,000 ft.)
- Operating relative humidity: 10 to 90% RH, 27°C maximum wet bulb, noncondensing
- Nonoperating relative humidity: 93% RH, 35°C maximum wet bulb, noncondensing
- Operating altitude: 3,000m (10,000 ft.)
- Nonoperating altitude: 12,000m (40,000 ft.)
- Acoustic noise: Operating/idling sound power level, 7.7 B (LwAd, 1 B = 10 dB), operating/idling sound pressure level 66 dB (LpAm, bystander positions)

## Power

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

## Learn More.

For more information on the Sun SPARC Enterprise T5240 server, go to [sun.com/t5240](http://sun.com/t5240).

To try the Sun SPARC Enterprise T5240 server risk-free for 60 days, go to [sun.com/tryandbuy](http://sun.com/tryandbuy).

## 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/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
- Regulatory: CE, FCC, ICES-003, C-tick, VCCI, GOST-R, BSMI, MIC, UL/cUL, UL/LVD, UL/S-mark, CCC

## Dimensions and weight

- Height: 88 mm (3.49 in.); 2 RU
- Width: 425 mm (16.75 in.)
- Depth: 714 mm (28.125 in.)
- Weight: 23.81 kg (52.5 lb.)

## Upgrades

Sun SPARC Enterprise T5240 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 T5240 servers. 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).

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