



Sun SPARC® Enterprise T5440 Server

Change your midrange computing economics



Highlights

- World's first quad-socket, general-purpose server powered by the UltraSPARC® T2 Plus processor — delivering massive throughput of up to 256 compute threads and 512 GB of memory in just 4 RU of space
- As little as one-fifth the cost of the latest competitive systems, while delivering up to four times higher performance and up to four times higher performance per watt
- Massive I/O performance and expandability with the Sun External I/O Expansion Unit, supporting up to 28 PCI Express (PCIe) slots
- Integrated, flexible, open-source, no-cost virtualization technology, and over 2,000 threads and 4 TB of memory per rack, enabling breakthrough virtualization and consolidation
- Integrated on-chip cryptographic acceleration and on-board 10 Gigabit Ethernet for secure computing and high-speed networking
- Industry-standard systems management and no-cost development and deployment tools to speed time to service
- Solaris™ 8 and 9 OS applications will run unchanged on the Solaris 10 OS



Redefining midrange computing — for the first time, you get the reliability, availability, and scalability of traditional midrange systems while achieving the breakthrough performance, eco-efficiency, and cost savings of Sun's proven open-source chip multithreading (CMT) design. The Sun SPARC® Enterprise T5440 server provides up to four times higher performance and up to four times higher performance per watt, yet is as little as one-fifth the cost of competitive servers.

The Sun SPARC Enterprise T5440 server is the first quad-socket, general-purpose server powered by the first true “system on a chip” — the UltraSPARC T2 Plus processor — running the free and open-source Solaris OS. Each processor packs eight cores and 64 simultaneous threads onto a single piece of silicon, together with the key functions of an entire system. Integrated, flexible, open-source, and no-cost Logical Domains (LDoms) virtualization technology provides up to 128 isolated domains per server.

The Sun SPARC Enterprise T5440 server offers massive I/O and memory expandability, enabling you to easily and cost-effectively add more capacity. With the Sun External I/O Expansion Unit, the number of I/O slots available can be expanded to 28 PCIe slots. The innovative design and reliability features

of the Sun SPARC Enterprise T5440 server significantly increase uptime and reduce unplanned service actions. System integration reduces component count by up to 36% compared to x86 platforms and up to 900% compared to legacy midrange server platforms.

You can maximize your investment in the Sun SPARC Enterprise T5440 server by leveraging the SunSM Virtualization Suite of Services to help architect and deploy consolidation and virtualization projects, and the Sun Eco Services Suite to optimize datacenter power, space, and cooling. In addition, Sun offers a range of services to help you upgrade to the Solaris 10 OS, as well as award-winning support services.

Sun SPARC Enterprise T5440 Server Specifications

Processor

One to four UltraSPARC T2 Plus processors at 1.2 GHz or 1.4 GHz, eight cores per processor

Other processor key features

Eight floating-point units per processor, one per core

On-board cryptography supporting 10 embedded security industry-standard ciphers: DES, 3DES, AES, RC4, SHA1, SHA256, MD5, RSA to 2048 key, ECC, CRC32

Main memory

System maximum of 512 GB; support for 2 GB, 4 GB, and 8 GB FB-DIMMs

System architecture

SPARC V9 architecture, ECC protected

Cache per processor

4 MB integrated L2

Standard/integration interfaces

Network: Four 10/100/1000 Mb/sec Ethernet; two optional 10 Gb/sec Ethernet connections

Expansion bus: Eight eight-lane PCIe slots, two shared with 10 Gb/sec Ethernet slots

USB: Four USB 2.0 ports

Serial: RJ-45

System controller running Integrated Lights Out Manager (iLOM) software with one 10/100 Mb/sec Ethernet port and one DB-9 serial port

Mass storage and media

Internal disk

Up to four 73 GB 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, and software solutions, along with renowned world-class service and support. For more information, please refer to sun.com/storageetek

Software

Operating system

Solaris 10 OS 8/07 plus patches or later

Preloaded

- Solaris 10 OS 5/08 plus patches or later
- Sun Java™ Enterprise System Release 5 Update 1 (90-day evaluation)
- 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

Virtualization

Integrated, open-source, no-cost LDOMs and Solaris Containers provide the flexibility and power of 128 virtual systems in a single server

Power supplies

Four hot-swappable AC 1,120 W redundant (2 + 2) power supplies

Maximum operating input current: 26.3 A @ 100–120 V AC; 12.6 A @ 200 V AC

Maximum operating input power at 100 V AC: 2,629 W

Environment

- Operating temperature
 - 5° C to 35° C (41° F to 95° F)
 - Decrease in maximum temperature: 1° C/300m (1.6° F/1,000 ft.)
- Nonoperating temperature
 - -40° C to 65° C (-40° F to 149° F), maximum altitude 40,000 ft.
- Operating relative humidity
 - 10–90%, noncondensing, 27° C wet bulb
- Nonoperating relative humidity
 - 93%, noncondensing, 35° C (95° F)
- Operating altitude
 - 0 to 3,000m (0 to 10,000 ft.)
- Nonoperating altitude
 - 0 to 12,000m (0 to 40,000 ft.)

Learn More

To learn more about the Sun SPARC Enterprise T5440 server, go to: sun.com/t5440.

- Acoustic noise
 - 7.4 B idle, 8.9 B operating maximum (LwAd: 1 B = 10 dB)
 - 6.3 B idle, 8.0 B operating maximum (LpAm: bystander positions)
- Power and cooling
 - Maximum heat dissipation: 8,970.5 BTU/hr or 9,464.4 KJ/hr

Dimensions and weight

Height: 176mm (6.92 in.) 4 RU

Width: 445mm (17.5 in.)

Depth: 633mm (24.9 in.)

Weight: Approx. 40 kg (88 lbs.) max., without PCI adapters, rackmount kit, etc.

Regulations (meets or exceeds the following requirements)

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

EMI/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, EN 61000-3-2, EN 61000-3-3

Immunity: EN 55024, 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 markings: CE, FCC, ICES-003, C-Tick, VCCI, GOST-R, BSMI, MIC, UL/cUL, UL/S-Mark

Key RAS features

Hot-pluggable disk drives

Redundant, hot-swappable power supplies and fans

Environmental monitoring

Error correction and parity checking memory

Easy component replacement

Integrated disk controller with RAID 0 and 1