

Sun SPARC Enterprise® T5140 Server

Scale more with less



Increase the eco-efficiency of your datacenter without sacrificing performance with the Sun SPARC Enterprise T5140 server, which offers the highest compute density available (128 threads in only one rack unit!).

Highlights

- World's first dual-socket, general-purpose server powered by the 3rd generation UltraSPARC® T2 Plus processor
- Highest compute density available with up to 128 simultaneous compute threads per server and 5,120 threads per rack
- 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
- Accelerate application response times and slash energy consumption with Flash SSDs
- Massive I/O performance and expandability with the Sun External I/O Expansion Unit, supporting up to 13 PCI Express (PCIe) slots

The Sun SPARC Enterprise T5140 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. 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 T5140 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 20 percent compared to competitive 2-socket x86 platforms and 13x compared to legacy mid-range server platforms, directly reducing service interruptions due to component failure.

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 T5140 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 5,120 isolated domains per rack, for ultimate server virtualization and consolidation.

The Sun SPARC Enterprise T5140 server is the industry's most open platform, built on open source technologies and open standards, packaging the only mainstream processor and virtualization hypervisor offered under the GPL, and offering a choice of open source operating systems and pre-loaded Sun Java™ Enterprise System middleware.

You can maximize your investment in the Sun SPARC Enterprise T5140 server by leveraging the Sun™ Eco Services Suite to optimize data-center 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 T5140 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

Architecture

Processor

Four-, six-, and eight-core 1.2 GHz or eight-core 1.4 GHz UltraSPARC T2 Plus processors

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 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 and DC power supplies
- 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 20% fewer parts than competitive 2-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: One dedicated eight-lane PCIe expansion slot, 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 OS, Solaris 10 10/08 OS, and Solaris 10 5/09 OS

Preloaded software

- Solaris 10 5/09 OS Preloaded
- 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 eight 73 GB, 146 GB, 300 GB 2.5 in. SAS drives or up to four 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.

Virtualization

- Built-in, no-cost Logical Domains 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, 7.3 B (LwAd, 1 B = 10 dB), operating/idling sound pressure level 62 dB (LpAm, bystander positions)

Power

- Two hot-swappable AC 760 W power supply units (PSUs), providing N + 1 redundancy come standard. Also available are DC 660 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

Learn More

For more information on the Sun SPARC Enterprise T5140 server, go to sun.com/t5140

To try the Sun SPARC Enterprise T5140 server risk-free for 60 days, go to sun.com/tryandbuy

- 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/DEMKOLVD, UL/S-mark, CCC
- Ergonomics: EK1-ITB-2000

Dimensions and weight

- Height: 44 mm (1.746 in.); 1 RU
- Width: 425 mm (16.75 in.)
- Depth: 714 mm (28.125 in.)
- Weight: Approximately 16.78 kg (37 lb.)

Upgrades

Sun SPARC Enterprise T5140 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 T5140 servers. For more details on the Upgrade Advantage Program, visit 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.