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SPARC T-SERIES

SPARC T3-1 SERVER

MAXIMUM SECURITY, SPEED, AND
SCALE FOR WEB INFRASTRUCTURE

KEY FEATURES AND BENEFITS

- World's first 128-thread, general-purpose 2RU server powered by the ground breaking SPARC T3 processor.
- Increase your application performance and tackle the most demanding workloads with a 2x throughput, 2x the memory and 4x the I/O bandwidth improvement of its record-breaking predecessor.
- Consolidate from one virtual machine per core all the way to 128 virtual machines on one single server with built-in, no cost, Oracle VM Server for SPARC and Oracle Solaris Containers.
- Integrated on-chip cryptographic acceleration and 10 Gigabit Ethernet (GbE) enable secure computing at wire speed.
- Sleek, compact, well integrated design with highly expandable internal storage and network connectivity.
- Upgrade from any other legacy UltraSPARC based system at minimal cost and effort thanks to the unique binary compatibility features of Solaris.

Oracle's SPARC T3-1 server is the platform of choice for Web infrastructure, Middleware workloads, and Application development. Delivering the world's first 16-core processor with unsurpassed throughput, the SPARC T3-1 server boasts speed, security, and unmatched availability to data in a sleek, compact design. Oracle's SPARC T3-1 server is a fully integrated system capable of running many virtual servers, helping drive up utilization, lower IT costs and keep server sprawl to a minimum.

Figure 1: The SPARC T3-1 server offers maximum security, speed, and scale for your Web infrastructure.

Product Overview

The SPARC T3-1 server, powered by the industry's first 16-core SPARC T3 processor and running the industry leading Oracle Solaris operating system, is the first 128-thread, general-purpose server offered in a 2 RU enclosure. It packs up to 16 cores and up to 128 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.

Moreover, SPARC T3-1 delivers highly expandable internal storage and network connectivity: the server can be configured with up to 16 disk drives and six PCI Express cards including the optional Oracle Sun Flash Accelerator F20 PCIe card and many other I/O options.

The SPARC T3-1 server offers Oracle VM for SPARC 2.0 and Oracle Solaris Containers enabling ultimate server virtualization and consolidation at a fraction of the cost of other vendors.

Finally, with integrated on-chip 10 Gigabit Ethernet and cryptographic acceleration, as well as smart integrated design using fewer parts, the SPARC T3-1 server offers a very safe and reliable platform to help you deploy applications.

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SPARC T3-1 Server Specifications

Key Applications
• Web Infrastructure
• Middleware
• Application Development
• Multithreaded Applications
• Java Applications
• Virtualization and consolidation

Architecture
Processor
• One 16-core 1.65 GHz SPARC T3 processor, SPARC V9 architecture, ECC protected
• 6 MB integrated Level 2 (L2) cache
• Dual multithreaded 10 Gigabit Ethernet PCI integrated on the chip
• On-board cryptography supporting embedded security industry-standard cryptographic algorithms: AES, CRC32c, DES, 3DES, DH, DSA, ECC, Kasumi, MD5, RSA, SHA-1, SHA-256, SHA-384, SHA-512, plus random number generation *(Note: CRC32c and Kasumi not currently supported by Solaris)*
Main Memory
• 16 DIMM slots
• System maximum of 128 GB
• Support for 2 GB, 4 GB, and 8 GB DDR3 DIMMs

Interfaces
• Four 10/100/1000 Mb/sec Ethernet ports
• Up to 2x optional 10 GbE XAUI connections
• Six PCI Express 2.0 slots
• One RJ-45 serial management port and one RJ-45 network port for remote management
• Four USB 2.0 ports
• One HD15 VGA port
• One optional front accessible slim line SATA DVD+/-RW drive

Mass Storage	
Internal disk:	Up to eight or sixteen 2.5" SAS-2/SATA-2 front accessible hot pluggable disk drive bays, depending on selected backplane
	All bays can be populated with 300 GB or 600 GB SAS-2 hard disk drives. 32 GB SATA-2 Solid state drives are supported in the 8 disk backplane only.
	Optional Sun Flash Accelerator F20 PCIe adapter card
External storage	Oracle 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.

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Power

- Two hot-swappable AC 1200W redundant (N+1) power supplies
- Maximum operating input current at 100 VAC: 9.4 A
- Maximum operating input current at 200 VAC: 4.7 A
- Maximum operating input power at 100 VAC: 896W
- Maximum operating input power at 200 V AC: 888W

Key RAS Features

Hot pluggable disk drives
- Redundant, hot swappable power supplies and fans
- Environmental monitoring
- Error correction and parity checking
- Easy component replacement
- Electronic Prognostics
- Internal hardware drive mirroring (RAID 1)
- RAID 0 and RAID 1 support

Software

Operating System

• Oracle Solaris 10 9/10 or Solaris 11 included with each sever

• Support for Solaris 10 10/09 + Oracle Solaris 10 9/10 Patch Bundle

Virtualization

- Oracle VM Server for SPARC

Environment

Temperature

- Operating temperature: Sea level to 900 m (3,000 ft.): 5°C to 35°C (41°F to 95°F); above 900 m (2,953 ft.): decrease the maximum allowable temperature by 1°C/300 m (1.6°F/1,000 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

Relative Humidity

- 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

Altitude

- Operating altitude: 3,000 m (10,000 ft.); IEC 60068-2-13 Test M, and 60068-2-41 Test Z/BM
- Nonoperating altitude: 12,000 m (40,000 ft.); IEC 60068-2-13 Test M

Acoustic Noise

- Operating/idling acoustic noise 7.1 B (LwAd, 1 B = 10 dB), operating/idling acoustic noise 63 dB (LpAm, bystander positions)

Cooling

- Maximum heat dissipation at 100 VAC: 3057 BTU/hr
- Maximum heat dissipation at 200 VAC: 3030 BTU/hr
- 140 cfm maximum

Regulations

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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	
Regulatory: CE, FCC, ICES-003, C-tick, VCCI, GOST-R, BSMI, MIC, UL/cUL, UL/DEMKOLVD, UL/S-mark, CCC	
European Union Directives: 2006/95/EC (73/23/EEC) Low Voltage Directive, 2004/108/EC (89/336/EEC) EMC Directive, 2002/96/EC Waste Electrical and Electronic Equipment (WEEE) Directive, 2002/95/EC Restriction of Hazardous Substances (RoHS) Directive	
Dimensions and Weight	
Height: 88 mm (3.49 in); 2 RU	
Width: 425 mm (16.75 in)	
Depth: 714 mm (28.13 in)	
Weight: Approximate 27.2 kg (60 lb)	

Warranty

The SPARC T3-1 comes with a one-year warranty. Visit oracle.com/us/support/policies/ for more information about Oracle's hardware warranty.

Complete Support

With Oracle Premier Support, you'll get the services you need to maximize the return on your Oracle SPARC server investment—our complete system support includes 24/7 hardware service, expert technical support, proactive tools, and updates to Oracle Solaris, Oracle VM, and integrated software (such as firmware) – all for a single price. Learn more at oracle.com/support.

Contact Us

For more information about the Oracle SPARC T3-1 server, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

Oracle is committed to developing practices and products that help protect the environment

Hardware and Software, Engineered to Work Together

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