Sun ORACLE | SPARC T-SERIES

SPARC T3-4 SERVER

KEY FEATURES AND BENEFITS

- Delivers high-throughput performance with the scalability and reliability of a midrange system
- Delivers massive throughput of up to 512 simultaneous compute threads and 512 GB (with 8GB DIMMs) of memory, which is 2x its predecessor.
- Highly dense delivery of compute power with 8 T3-4 servers in a standard data center rack.
- Drives utilization, reduces costs, and consolidates workloads via built-in virtualization technology with Oracle VM Server for SPARC (previously called Sun Logical Domains) and Oracle Solaris Containers
- Delivers outstanding performance and availability for mission-critical, back-office applications
- Integrated on-chip cryptographic acceleration
- Oracle Solaris 8 and 9 OS applications run unchanged on Oracle Solaris 10
- Massive I/O performance supporting up to 16 PCI Express Module slots and expandability with I/O Expansion Unit with 4x the IO throughput of its predecessor

Oracle's SPARC T3-4 server delivers midrange computing capabilities through a large memory capacity and extreme reliability, availability and security based on a highly integrated design that supports virtualization and consolidation of mission critical applications. The SPARC T3-4 server provides high throughput and computing density along with built-in virtualization and extreme scalability and is a highly efficient platform for deploying large scale, mission critical applications.

Figure 1: The SPARC T3-4 server changes your midrange computing economics.

Product Overview

The SPARC T3-4 server is Oracle's new four-socket, modular T-series server. The SPARC T3-4, powered by the industry's first 16-core SPARC T3 processor, is the first 512-thread general-purpose server offered in a dense, five-rack unit (5RU) enclosure.

With 64 cores, 512 threads, 512 GB Memory (8 GB DIMMs) and 16 PCIe Gen 2 Express Module slots, this system delivers exceptional throughput and efficiency for customer environments in web serving, application layer, and enterprise applications. The SPARC T3-4 is optimized for customers looking to consolidate SPARC workloads, particularly CRM, ERP and SCM workloads and supporting database, application server and web services.

Built-in, flexible, and no-cost Oracle VM Server for SPARC (previously called Sun Logical Domains) virtualization technology provides up to 128 isolated domains per server.

With the innovative design, the reliability features, and the smart integrated design using fewer parts such as integrated on-chip 10 Gigabit Ethernet, disk controllers and cryptographic acceleration - the SPARC T3-4 server offers a very safe and reliable platform by significantly increasing uptime and reducing unplanned service actions.

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SPARC T3-4 Server Specifications

Key Applications

- Enterprise applications such as CRM, ERP and SCM
- Consolidation of enterprise web and application tier infrastructure
- Media applications
- Web serving
- Java Applications and virtualization

Architecture

Processor

Two or four SPARC T3 processors at 1.65 GHz, 16 cores per processor. Other key processor features include the following:

- Sixteen floating-point units per processor, one per core
- On-board cryptography with new Kasumi Bulk algorithm, supporting 12 embedded security industry-standard ciphers: DES, 3DES, AES, RC4, SHA1, SHA256, SHA384, SHA512, MD5, RSA to 2048 key, ECC, CRC32

Cache Per Processor

6 MB integrated L2

Main Memory

System maximum of 512 GB with 8 GB DIMMs

4 GB and 8 GB DIMMs are supported

System Architecture

SPARC V9 architecture, ECC protected

Standard/Integration Interfaces

- **Network**. Two optional QSFP ports (10G XAUI network), four 1G network ports (two Kawela NICs)
- **Expansion bus**. Sixteen x8 PCIe Gen 2 express module slots
- **Ports.** Four USB 2.0 ports, one RJ45 serial management port, Console serial port (duplicate of front), Console 10/100 network port, VGA port

Mass Storage and Media	
Internal disk	Up to eight 300 or 600 GB 2.5 in. SAS drives
External storage	Oracle 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 oracle.com/storage.

Power Supplies

- Four hot-swappable AC 2,060 W redundant (2 + 2) power supplies
- Maximum operating input current at 200 VAC: 12.6 A
- Maximum operating input power at 200 VAC: 2400W

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
- Electronic prognostics

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Software	
Operating system	• Oracle Solaris 10 9/10 (U9) • Support for Solaris 10 10/09 (U8) + Oracle Solaris 10 9/10 Patch Bundle
Software included	• Oracle Solaris 10 09/10 Preloaded • Oracle VM Server for SPARC 2.0 • Electronic Prognostics V1.1

Virtualization
Built-in, no-cost Oracle VM Server for SPARC (previously called Sun Logical Domains) and Oracle Solaris Containers provide the flexibility and power of 128 virtual systems in a single server

Environment	
Operating temperature	• 5°C to 35°C (41°F to 95°F) • Decrease in maximum temperature: above 900m 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% to 90%, noncondensing, 27°C wet bulb
Nonoperating relative humidity	• 93%, noncondensing, 38°C (100.4°F) wet bulb
Operating altitude	• 0 m to 3,000 m (0 ft. to 10,000 ft.)
Nonoperating altitude	• 0 m to 12,000 m (0 ft. to 40,000 ft.)
Acoustic noise	• 8.2 B (LwAd: 1 B = 10 dB) • 68.2 dBA operating max (LpAm: bystander positions)
Cooling	• 7030 Btu/hr

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
• **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:** 219mm (8.62 in.); 5RU
• **Width**: 445 mm (17.5 in.)
• **Depth**: 700 mm (27.6 in.)
• **Weight**: Approx. 79 kg (175 lbs.) max., without rackmount kit.

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Warranty

Visit oracle.com/sun/warranty for Oracle's global support warranty information on Sun products.

Services

Visit oracle.com/sun/services for Oracle's service program offerings on Sun products.

Contact Us

For more information about Oracle's SPARC T3-4, 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

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