SPARC T4-4 SERVER

IDEAL FOR LARGE-SCALE CONSOLIDATION AND DATABASE WORKLOADS

KEY FEATURES AND BENEFITS

- Outstanding performance and systems throughout in an affordable 5U rack enterprise class design
- Optimized to accelerate Oracle database, business applications and middleware software with outstanding performance and scale
- Built-in, no-cost virtualization technology with Oracle VM Server for SPARC and Oracle Solaris Containers improves utilization and reduces operational overhead.
- Integrated on-chip cryptographic acceleration provides high levels of security without sacrificing application performance.
- Runs Oracle Solaris 10 and 11 with guaranteed binary compatibility and support for legacy applications.
- Provides the most comprehensive lifecycle management framework available today through a unified portfolio for systems and the cloud
- Smart, simple, and eco friendly designs offer greater energy and space optimization, increasing asset utilization while reducing operating costs.
- The compute node building blocks for Oracle SPARC SuperCluster – powerful, versatile and fault tolerant, engineered systems combining T4-4 with optimized storage and software
- Oracle's unique advantage of engineering the hardware and software to work together delivers best-in-class products that are optimized to solve unique business challenges with world-record performance, unmatched value and investment protection

Oracle's SPARC T4-4 server is a highly efficient platform ideal for large-scale applications and enterprise-wide consolidation projects, delivering outstanding performance, scalability, and security. Optimized for enterprise application, database and middleware deployments, this mid-range powerhouse provides unmatched value and investment protection.

Figure 1: The SPARC T4-4 server combines high single-threaded performance with massive system throughput and I/O making it uniquely qualified for demanding applications and large-scale server consolidation.

Product Overview

The SPARC T4-4 running Oracle Solaris is a versatile, high performance, highly scalable, two or four-socket server based on the SPARC T4 processor. Powered by the SPARC T4 processor, it delivers outstanding single and multi-thread throughput performance and offers a combination of speed, security, and availability in a compact 5 RU design. It is an optimal server platform for demanding enterprise applications, server and application consolidation and Oracle database applications.

The SPARC T4-4 server comes integrated at no additional cost with Oracle VM Server for SPARC and Oracle Solaris. Oracle VM Server for SPARC helps lower total cost of ownership by virtualizing and consolidating business-critical applications, reducing administrative expenses. Protect your application software investment by moving existing Solaris applications unchanged to the SPARC T4-4 server using the guaranteed binary compatibility of Oracle Solaris.

SPARC T4-4 server nodes are also the building blocks for fault tolerant Oracle SPARC SuperCluster servers – engineered systems for deploying a wide array of business critical and performance sensitive workloads on Oracle Solaris.

SPARC T4-4 Server Specifications

Key Applications

- Enterprise Applications - Oracle e-Business Suite, Siebel CRM, Siebel Analytics, PeopleSoft, JD Edwards Enterprise One, SAP R/3
- Middleware - Oracle WebLogic Server, Oracle WebCenter, IBM WebSphere, JBoss, Apache
- Database - Oracle 11g R2, IBM DB2, Sybase IQ

Architecture

Processor

- Eight-core 3.0GHz SPARC T4 processor
- Four processors per system, maximum 256 threads
- Eight floating-point units
- New on-chip Encryption Instruction Accelerators with direct non-privileged support for 16 industry-standard cryptographic algorithms plus random number generation in each of the eight cores: AES, Camellia, CRC32c, DES, 3DES, DH, DSA, ECC, Kasumi, MD5, RSA, SHA-1, SHA-224, SHA-256, SHA-384, SHA-512

Cache Per Processor

Shared L3, 4MB cache and eight cores with a private L2 128K cache

Main Memory

System maximum of 2 TB with 32 GB DIMMs

4 GB, 8 GB, 16 GB and 32 GB DIMMs are supported

System Architecture

SPARC V9 architecture, ECC protected

Standard/Integration Interfaces

- **Network**. Two QSFP ports (10G XAUI network), four 1G network ports
- **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 GB or 600 GB, 2.5 in., 10,000 RPM SAS drives, or 100 GB, 300GB or 400 GB SSDs.
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: 14.6A
- Maximum operating input power at 200 VAC: 2770W

Key RAS Features

- Hot-pluggable disk drives
- Redundant, hot-swappable power supplies and fans
- Environmental monitoring
- Extended ECC, error correction and parity checking memor
- Easy component replacement
- Integrated disk controller with RAID 0 and 1
- Electronic prognostics

Software	
Operating system	• Solaris 11.1 or later • Oracle Solaris 11 11/11 • Oracle Solaris 10 1/13 • Oracle Solaris 10 8/11 • Support for Solaris 10 9/10 or Solaris 10 10/09 with Oracle Solaris 10 8/11 Patch set
Software included	• Oracle Solaris 11, including Oracle VM Server for SPARC
Remote Management	
Remote management features and facilities	• Oracle Integrated Lights Out Manager (ILOM) • One dedicated 10/100base-T Ethernet management port • In-band, out-of-band, and sideband network management access via any one of the four main Ethernet ports of the server • One RJ-45 serial management port • DTMF-style command-line interface • Support for access via SSH 2.0, HTTPS, RADIUS, LDAP, and Microsoft Active Directory • Browser-based GUI for control of the system through a graphical interface • IPMI 2.0, SNMP v1, v2c, and v3 • Remote management with full keyboard, video, mouse, storage (KVMS) redirection and remote media capability (floppy, DVD, CD, and more) • Ability to monitor and report system and component status on all FRUs
Virtualization	
Built-in, no-cost Oracle VM Server for SPARC and Oracle Solaris Containers provide the flexibility and power of 128 virtual systems in a single SPARC T4-4 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	• Up to 9,840 feet (3,000 m*) maximum ambient temperature is derated by 1° C per 300 m above 900 m. **Note:** except in China markets where regulations may limit installations to a maximum altitude of 2,000 m
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	• 9554 Btu/hr / 408 cfm max

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.

Warranty

The SPARC T4-4 comes with a one-year warranty. Visit http://www.oracle.com/goto/sun/warranty for more information about Oracle's hardware warranty.

Support

With Oracle Premier Support, our customers get complete, integrated support to maximize the return on their Oracle investment—from software updates and operational best practices to proactive support tools and rapid problem resolution.

For more information visit http://www.oracle.com/support

Contact Us

For more information about Oracle SPARC T4-4 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