

SPARC T4-4 SERVER

KEY FEATURES AND BENEFITS

- 5x single-thread performance increase accelerates application performance and improves scalability
- Built-in, no-cost virtualization technology with Oracle VM Server for SPARC and Oracle Solaris Containers simplifies server consolidation, improves utilization and reduces operational overhead
- Runs Oracle Solaris 10 and 11 with guaranteed binary compatibility and support for legacy applications
- Massive I/O performance supporting up to 16 PCI Express Module slots
- Integrated on-chip cryptographic acceleration provides high levels of security without sacrificing application performance
- The compute node building blocks for Oracle SPARC SuperClusters – powerful, versatile and fault tolerant, engineered systems combining T4-4 with optimized storage and software
- SPARC T4-4 delivers the best-in-class performance among competing solutions as demonstrated by the [record-breaking result](#) on the TPC-H data-warehousing benchmark.

Oracle's SPARC T4 servers running Oracle Solaris delivers world record performance on a highly scalable secure and integrated platform optimized for enterprise software. With a 5x improvement in single-thread performance, 1TB of memory capacity, and massive system throughput and I/O capacity, the SPARC T4 is ideal for large scale applications, enterprise-wide consolidation and database projects that require extreme reliability, availability and security.



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 and optimized for a wide range of enterprise workloads. Powered by the new SPARC T4 processor it delivers unsurpassed single and multi-thread throughput performance and boasts an unmatched 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, requiring high reliability, availability and security and high single-thread performance.

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	
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> 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 1 TB with 16 GB DIMMs 4 GB and 8 GB and 16 GB DIMMs are supported	
System Architecture	
SPARC V9 architecture, ECC protected	
Standard/Integration Interfaces	
<ul style="list-style-type: none"> 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 or 300 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	
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> • Oracle Solaris 10 8/11 • Solaris 11 • Support for Solaris 10 9/10 or Solaris 10 10/09 with Oracle Solaris 10 8/11 Patchset
Software included	<ul style="list-style-type: none"> • Oracle Solaris 10 8/11 or Solaris 11 • Oracle VM Server for SPARC 2.1 • Electronic Prognostics 1.2 • Oracle Solaris ZFS
Remote Management	
Remote management features and facilities	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • -40°C to 65°C (-40°F to 149°F), maximum altitude 40,000 ft.
Operating relative humidity	<ul style="list-style-type: none"> • 10% to 90%, noncondensing, 27°C wet bulb
Nonoperating relative humidity	<ul style="list-style-type: none"> • 93%, noncondensing, 38°C (100.4°F) wet bulb
Operating altitude	<ul style="list-style-type: none"> • 0 m to 3,000 m (0 ft. to 10,000 ft.)
Nonoperating altitude	<ul style="list-style-type: none"> • 0 m to 12,000 m (0 ft. to 40,000 ft.)
Acoustic noise	<ul style="list-style-type: none"> • 8.2 B (LwAd: 1 B = 10 dB) • 68.2 dBA operating max (LpAm: bystander positions)
Cooling	<ul style="list-style-type: none"> • 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

EM/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.



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