

SPARC T5-4 SERVER

KEY FEATURES

- 2x throughput performance and 1.2x single-thread performance increase over previous generation accelerates application performance and improves scalability
- Enterprise-class availability enables system upgrades without downtime
- Built-in, no-cost virtualization technology with Oracle VM Server for SPARC and Oracle Solaris Zones simplifies server consolidation, improves utilization, and reduces operational overhead
- Runs Oracle Solaris 11 and Oracle Solaris 10 with guaranteed binary compatibility and support for legacy applications
- Massive I/O capacity supports up to 16 hot-pluggable low-profile PCIe 3.0 slots
- Integrated on-chip cryptographic acceleration provides high levels of security without sacrificing application performance
- 100 percent binary compatibility with earlier versions of your applications

KEY BENEFITS

- Deploy enterprise workloads more quickly and easily
- Reduce business risk
- Lower management costs



Oracle's SPARC T5-4 server combined with Oracle Solaris delivers extreme performance on a highly scalable, secure, and integrated platform optimized for enterprise software. With a 1.2x improvement in single-thread performance, 2x throughput improvement, and 2x

increase in I/O bandwidth — combined with support for up to 2 TB of memory and massive I/O capacity — the SPARC T5-4 server is ideal for large-scale applications, enterprise-wide consolidation, and database projects that require extreme performance, availability, and security.

Product Overview

The SPARC T5-4 server is a high-performing four-socket server based on the SPARC T5 processor and optimized for data-intensive and enterprise workloads. The SPARC T5-4 server delivers unsurpassed single-thread and multithread throughput performance, built-in no-cost encryption, and enterprise availability features, all in a modular and compact 5U design. It is an optimal server platform for demanding enterprise applications, server and application consolidation, and Oracle Database applications requiring the highest availability and performance.

Utilizing modular design architecture, the SPARC T5-4 server is powered by four SPARC T5 processors—Oracle's most powerful SPARC chip ever—delivering a 1.2x improvement in single-thread performance and a 2x improvement in throughput performance over the previous generation. With 16 cores and 16 memory slots per SPARC T5 processor, the SPARC T5-4 server provides extreme compute density with up to 64 cores and 2 TB of system memory, all within its 5U enclosure.

The SPARC T5-4 server comes integrated at no additional cost with Oracle VM Server for SPARC and Oracle Solaris.

The SPARC T5-4 server provides enterprise-class RAS features including redundant, hot-plug fans, disks, and power supplies. Additionally, all 16 PCIe slots can accommodate hot-plug PCIe cards utilizing a PCIe hot-plug carrier. All these features contribute to increased uptime and ease of system serviceability in the case of hardware failure.

All Oracle servers ship with full-function server management tools at no additional cost. Oracle Integrated Lights Out Manager (Oracle ILOM) utilizes industry-standard protocols to provide secure and comprehensive local and remote management. Oracle ILOM features also include power management and monitoring, fault detection, and notification. The integrated Oracle System Assistant guides system administrators through rapid server deployment, firmware updates, hardware configuration, and operating system installation with Oracle certified hardware drivers.

The SPARC T5-4 server is part of Oracle's most powerful and efficient SPARC-based server family ever. Based on SPARC T5, SPARC T4, and SPARC M5 processors—which all share the same processor core—the SPARC-based server family provides seamless scalability from 1 up to 32 processors and is designed with mission-critical applications in mind. All of the servers in the SPARC-based family run the Oracle Solaris operating system—the best UNIX system for Oracle deployments. They share the same virtualization capabilities through Oracle VM Server for SPARC and leverage the same systems management framework through Oracle Enterprise Manager Ops Center. This leads to unprecedented simplicity in the deployment of all enterprise workloads, enabling reduction of business risk, delivering savings in management costs, and unlocking flexibility to grow your business to any scale, while maximizing reliability and uptime.

Oracle Premier Support customers have access to My Oracle Support and multiserver management tools in Oracle Enterprise Manager Ops Center. Oracle Enterprise Manager Ops Center, a critical-to-disk system management tool, coordinates servers, storage, and networking for a complete cloud infrastructure as a service (IaaS). Oracle Enterprise Manager Ops Center also features an automated service request capability, whereby potential issues are detected and reported to Oracle's support center without user intervention, assuring the maximum service levels and simplified support.

SPARC T5-4 Server Specifications

Key Applications
<ul style="list-style-type: none"> Enterprise Applications: Oracle E-Business Suite; Oracle's Siebel Customer Relationship Management (Siebel CRM); Oracle Business Intelligence Suite Enterprise Edition; Oracle's PeopleSoft applications; JD Edwards Enterprise One applications from Oracle; SAP ERP Middleware: Oracle WebLogic Server, Oracle WebCenter Suite, IBM WebSphere, JBoss, Apache Database: Oracle Database 11g Release 2, IBM DB2, Sybase IQ
Architecture
Processor
<ul style="list-style-type: none"> Sixteen-core 3.6 GHz SPARC T5 processor Up to 128 threads per processor for a maximum 512 threads per system Sixteen floating-point units per SPARC T5 processor Sixteen cryptography units per SPARC T5 processor On-chip Encryption Instruction Accelerators with direct nonprivileged support for 16 industry-standard cryptographic algorithms plus random number generation in each of the sixteen 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
<ul style="list-style-type: none"> Shared 8 MB, 8 banked, Level 3 Cache; 128 KB Level 2 unified cache per core
Main Memory
Two memory configurations supported: <ul style="list-style-type: none"> 1 TB (using 64x 16 GB 1,066 MHz DDR3 DIMMs) 2 TB (using 64x 32 GB 1,066 MHz DDR3 DIMMs)
System Architecture
<ul style="list-style-type: none"> SPARC V9 architecture, ECC protected
Standard/Integration Interfaces
<ul style="list-style-type: none"> Network: Four 10 GbE (100 Mbps/1 Gbps/10 Gbps) Expansion bus: Sixteen low-profile PCIe 3.0 (x8 wired) slots accessed via a PCIe hot-plug carrier

<ul style="list-style-type: none"> Ports: Four external USB 3.0 ports (two front, two rear), one internal USB 2.0 port, one RJ45 serial management port, Console 10/100 network port, VGA port 	
Mass Storage and Media	
Internal disk	Up to eight 300 GB or 600 GB 2.5 in. 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"> Two hot-swappable AC 3,000 W redundant (1 + 1) power supplies Maximum operating input current at 200-240 V AC: 16 A (16 A per cord) (<i>Actual amperage draw may exceed rating by no more than 10%</i>) Maximum operating input power at 200-240 V AC: 3,000 W (<i>Actual power draw may exceed rating by no more than 10%</i>) 	
Key RAS Features	
<ul style="list-style-type: none"> Hot-pluggable disk drives Hot-pluggable PCIe cards Redundant, hot-swappable power supplies and fans Environmental monitoring Extended ECC, error correction, and parity checking memory Easy component replacement Integrated dual disk controllers with RAID 0, 1, and 1E Electronic prognostics Fault Management Architecture including Predictive Self Healing, a feature of Oracle Solaris 	
Software	
Operating System	
<ul style="list-style-type: none"> Preinstalled: Oracle Solaris 11.1 Supported options as control domain: Oracle Solaris 11.1 and Oracle Solaris 10 1/13 Minimum version of Oracle Solaris supported as a guest domain: Oracle Solaris 10 9/10 plus Oracle Solaris 10 1/13 SPARC Bundle 	
Software Included	
<ul style="list-style-type: none"> Oracle Solaris 11.1 which includes Oracle VM Server for SPARC 3.0 and Oracle Electronic Prognostics Oracle Solaris ZFS (default file system) 	
Virtualization	
<ul style="list-style-type: none"> Built-in, no-cost Oracle VM Server for SPARC and Oracle Solaris Zones provide the flexibility and power of 128 virtual systems in a single SPARC T5-4 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 900 m (2,952 ft.) 1° C/300 m (1.8° F/984 ft.)
Nonoperating temperature	<ul style="list-style-type: none"> -40° C to 65° C (-40° F to 149° F)
Operating relative humidity	<ul style="list-style-type: none"> 10% to 90% relative humidity, noncondensing, 27° C (81° F) wet bulb
Nonoperating relative humidity	<ul style="list-style-type: none"> 93% relative humidity, noncondensing, 38° C (100° F) wet bulb
Operating altitude	<ul style="list-style-type: none"> 0 m to 3,000 m (0 ft. to 9,840 ft.) except in China markets where regulations may limit installations to

	a maximum altitude of 2,000 m
Nonoperating altitude	<ul style="list-style-type: none"> 0 m to 12,000 m (0 ft. to 39,370 ft.)
Acoustic noise	Operating at idle: <ul style="list-style-type: none"> 7.8 B (LwAd 1 B = 10 dB) 61.8 dBA (LpAm: bystander positions)
	Operating at peak power: <ul style="list-style-type: none"> 9.4 B (LwAd 1 B = 10 dB) 79.7 dBA (LpAm: bystander positions)
Cooling	<ul style="list-style-type: none"> 10,717 BTU/hr / 387 cfm max
Regulations (Meets or Exceeds the Following Requirements)	
<ul style="list-style-type: none"> Safety: UL/CSA 60950-1 (2nd Ed), EN 60950-1(2nd Ed), IEC 60950-1(2nd Ed) CB Scheme with all country deviations, CNS 14336-1 EMI/EMC: EN 55022 Class A, 47 CFR 15B Class A, ICES-003 Class A, VCCI Class A, CISPR22 Class A, CNS 13438 Class A, KN22 Class A, EN 61000-3-2, EN 61000-3-3 Immunity: EN 55024 and KN24 Regulatory markings: CE, FCC, ICES-003, C-Tick, VCCI, GOST-R, BSMI, KC, cULus, S-Mark European Union directives: Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU 	
Dimensions and Weight	
<ul style="list-style-type: none"> Height: 215 mm (8.5 in); 5U Width: 445 mm (17.5 in.) Depth: 800 mm (31.5 in.) Weight: Approx. 75.4 kg (166 lbs.), without rackmount kit 	

Warranty

The SPARC T5-4 server comes with a one-year warranty. Visit <http://www.oracle.com/us/support/policies/index.html> 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's SPARC T5-4 server, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.



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Hardware and Software, Engineered to Work Together