

SPARC T4-1B SERVER MODULE

EXTREME SCALABILITY AND DENSITY IN EFFICIENT BLADE FORM FACTOR

KEY FEATURES AND BENEFITS

- 5x single-thread performance increase accelerates application performance and improves scalability
- SPARC T4-1B base server equipped with an 8-core, 64 thread SPARC T4 processor
- Extreme density with up to 10 SPARC T4-1B blades in a network integrated, highly efficient Sun Blade 6000 infrastructure
- 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
- Onboard 10 Gigabit Ethernet (GbE) for secure computing and high-speed networking
- Massive I/O performance and expandability with the Sun Blade 6000 with up to 6.4 Terabit-per-second I/O throughput

Oracle's SPARC T4-1B and Oracle's Sun Blade 6000 chassis deliver an integrated platform with a high degree of scalability, density, deployment flexibility, and energy efficiency to meet the high demands of secure, high availability, enterprise data center applications.

The highest-density SPARC T4 server available in a compact blade form factor, the SPARC T4-1B delivers a 5x improvement in single-thread performance, massive throughput, and no-cost virtualization running on the proven, mission-critical Oracle Solaris operating system.



SPARC T4-1B

Product Overview

The single-socket SPARC T4-1B server module delivers massive compute density with 8 cores and 64 simultaneous threads in a highly efficient blade server design.

The SPARC T4 processor is designed for a broad range of data center application workloads including database, middleware, and web tier applications. With a 5x single-thread performance improvement over the previous generation, the SPARC T4 systems now provide infrastructure for secure end-to-end data center deployments.

The SPARC T4-1B features one SPARC T4 processor, 16 DIMM slots for up to 256GB memory, and two drive slots for hot-pluggable 2.5 inch drives. The SPARC T4-1B blade is both compact and powerful. With integrated 10 GbE networking and built-in PCI Express Generation 2 expansion, the SPARC T4-1B has the power required to drive computing requirements for database, middleware, and web based applications.

The SPARC T4-1B, Oracle Solaris, and Oracle VM Server for SPARC are optimized for the enterprise for demanding workloads. The SPARC T4-1B comes ready with Oracle Solaris Containers and Oracle VM technology, for faster and more-reliable consolidation and virtualization in your IT infrastructure at no extra cost.

The Sun Blade 6000 and SPARC T4-1B are enterprise ready. Combining the chassis-based RAS features with Oracle Integrated Lights Out Management (ILOM), the Sun Blade 6000 and SPARC T4-1B are designed to maximize uptime and simplify system management in a highly cost-efficient blade infrastructure.

Sun Blade 6000 Modular Architecture – Optimized Efficiency

The SPARC T4-1B installs in the highly efficient Sun Blade 6000 chassis supporting up to 10 full-featured, top-performance Oracle blade server modules, and PCIe Gen2, in a compact 10U chassis, with I/O throughput up to 302Gb/sec. The Sun Blade 6000 provides up to 6.4 terabit-per-second headroom for future CPU and I/O architectures.

Designed for high reliability and efficiency, the Sun Blade 6000 provides a flexible, modular network infrastructure. With the Sun Blade 6000 chassis and SPARC T4-1B blade server, customers are able to greatly reduce their time-to-revenue and virtually eliminate downtime for I/O upgrades.

SPARC T4-1B Specifications

Key Applications
<ul style="list-style-type: none"> Virtualization and consolidation Single-threaded workloads including database, OLTP, batch applications Multi-threaded workloads with high concurrency Web, middleware, and application tier workloads, especially Java environments
Architecture
Processor <ul style="list-style-type: none"> One eight-core 64 thread 2.85GHz SPARC T4 processor 8 floating point units, 64 simultaneous threads 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 Oracle SPARC V9 architecture, ECC protected Cache <ul style="list-style-type: none"> Level 1 caches: 16KB instruction cache and 16K data cache per core 128KB level 2 cache per core Shared 4MB level 3 cache Main Memory <ul style="list-style-type: none"> Supports 4GB, 8GB, or 16GB DDR3 DIMMs 16 DIMM slots, supporting a maximum of 256GB Extended ECC, error correction and parity checking memory
Interfaces
Network <ul style="list-style-type: none"> Two 10/100/1000 Base-T Ethernet ports using the Intel 82571ED GbE transceiver One dedicated 10/100 Base-T Ethernet port for the management network which can be optionally shared with the main network ports if desired Two optional 10GB XAUI Ethernet ports through dual channel 10 GbE fabric expansion module Storage <ul style="list-style-type: none"> Six SAS2.0 interfaces using LSI SAS2008 Controller <ul style="list-style-type: none"> One SAS2.0 interface to each of the two small form factor (SFF) SAS drive bays with RAID 0,1 support Up to 2 optional internal 300GB or 600GB 10,000 rpm SAS disk drives, or 100GB SATA solid state drive Midplane I/O <ul style="list-style-type: none"> Four x8 PCIe busses: Two dedicated to NEMs, two dedicated to EMs Four 3.0Gb/sec SAS interfaces, two per NEM Two 10/100/1000 GbE interfaces, one per NEM 10/100 Ethernet management port to Chassis Monitoring Module (CMM)

Front Panel I/O Exposed via dongle cable:

- One RJ-45 serial console to server module ILOM
- Three USB 2.0 ports (2 external via dongle and 1 internal accepting USB drive)
- One VGA port

Software**Operating Systems**

- Oracle Solaris 10 8/11 Update 10
- Oracle Solaris 11
- Support for Solaris 10 9/10 Update 9 and Solaris 10 10/09 Update 8 + Oracle Solaris 10 8/11 Patch Bundle

Software Included

- Oracle Solaris 10 8/11 Update 10 or Oracle Solaris 11
- Oracle VM Server for SPARC 2.1
- Electronic Prognostics 1.2
- ZFS

Networking

ONC, ONC+, NFS, WebNFS, TCP/IP, SunLink, OSI, MHS, IPX/SPX, SMB technologies, and XML

Management

Built-in Oracle Integrated Lights Out Manager service processor delivers check

- Direct manageability—same as Oracle rack-mounted SPARC T4 servers
- Full monitoring of blade by SNMP
- Graphical user interface (GUI) and comprehensive command-line interface (CLI)
- Secure access and control
- Full-featured virtual console through remote KVMS feature
- Oracle Enterprise Manager, an advanced hardware management enabling discovery, grouping, bare metal provisioning, hardware and OS monitoring, and integrated LDoms management

Dimensions and Weight

- Height: 327.2 mm (12.9 in.)
 - Width: 44.5 mm (1.8 in.)
 - Depth: 511.7 mm (20.1 in.)
- Weight: 7.4 kg (16.4 lb.) fully configured

Power and Cooling

SunBlade 6000 chassis power and cooling:

<http://www.oracle.com/us/products/servers-storage/servers/blades/033613.pdf>

Contact Us

For more information about SPARC T4-1B, 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