

## SPARC T4-1B SERVER MODULE

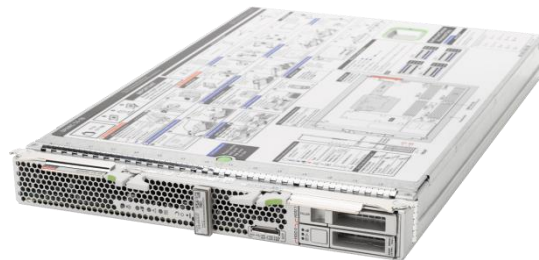
### EXTREME SCALABILITY AND DENSITY IN EFFICIENT BLADE FORM FACTOR

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

**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

**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>

## Warranty

The SPARC T4-1B comes with a one-year warranty. Visit [oracle.com/us/support/policies/](http://oracle.com/us/support/policies/) for more information about Oracle's hardware warranty.

## Complete Support

With Oracle Premier Support, you'll get the services you need to maximize the return on your Oracle SPARC server investment—our complete system support includes 24/7 hardware service, expert technical support, proactive tools, and updates to Oracle Solaris, Oracle VM, and integrated software (such as firmware) – all for a single price. Learn more at [oracle.com/support](http://oracle.com/support).

## Contact Us

For more information about SPARC T4-1B, visit [oracle.com](http://oracle.com) or call +1.800.ORACLE1 to speak to an Oracle representative.



Copyright © 2012, Oracle and/or its affiliates. All rights reserved.

This document is provided for information purposes only and the contents hereof are subject to change without notice. This document is not warranted to be error-free, nor subject to any other warranties or conditions, whether expressed orally or implied in law, including implied warranties and conditions of merchantability or fitness for a particular purpose. We specifically disclaim any liability with respect to this document and no contractual obligations are formed either directly or indirectly by this document. This document may not be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without our prior written permission.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark licensed through X/Open Company, Ltd. 0611

**Hardware and Software, Engineered to Work Together**

