

## SPARC T3-1 SERVER

MAXIMUM SECURITY, SPEED, AND SCALE FOR WEB INFRASTRUCTURE

### KEY FEATURES AND BENEFITS

- World's first 128-thread, general-purpose 2RU server powered by the ground breaking SPARC T3 processor.
- Increase your application performance and tackle the most demanding workloads with a 2x throughput, 2x the memory and 4x the I/O bandwidth improvement of its record-breaking predecessor.
- Consolidate from one virtual machine per core all the way to 128 virtual machines on one single server with built-in, no cost, Oracle VM Server for SPARC and Oracle Solaris Containers.
- Integrated on-chip cryptographic acceleration and 10 Gigabit Ethernet (GbE) enable secure computing at wire speed.
- Sleek, compact, well integrated design with highly expandable internal storage and network connectivity.
- Upgrade from any other legacy UltraSPARC based system at minimal cost and effort thanks to the unique binary compatibility features of Solaris.

*Oracle's SPARC T3-1 server is the platform of choice for Web infrastructure, Middleware workloads, and Application development. Delivering the world's first 16-core processor with unsurpassed throughput, the SPARC T3-1 server boasts speed, security, and unmatched availability to data in a sleek, compact design. Oracle's SPARC T3-1 server is a fully integrated system capable of running many virtual servers, helping drive up utilization, lower IT costs and keep server sprawl to a minimum.*



Figure 1: The SPARC T3-1 server offers maximum security, speed, and scale for your Web infrastructure.

### Product Overview

The SPARC T3-1 server, powered by the industry's first 16-core SPARC T3 processor and running the industry leading Oracle Solaris operating system, is the first 128-thread, general-purpose server offered in a 2 RU enclosure. It packs up to 16 cores and up to 128 simultaneous threads onto a single piece of silicon, together with the key functions of an entire system on a single chip—computing, networking, security, and I/O.

Moreover, SPARC T3-1 delivers highly expandable internal storage and network connectivity: the server can be configured with up to 16 disk drives and six PCI Express cards including the optional Oracle Sun Flash Accelerator F20 PCIe card and many other I/O options.

The SPARC T3-1 server offers Oracle VM for SPARC 2.0 and Oracle Solaris Containers enabling ultimate server virtualization and consolidation at a fraction of the cost of other vendors.

Finally, with integrated on-chip 10 Gigabit Ethernet and cryptographic acceleration, as well as smart integrated design using fewer parts, the SPARC T3-1 server offers a very safe and reliable platform to help you deploy applications.

## SPARC T3-1 Server Specifications

Key Applications	
<ul style="list-style-type: none"> <li>• Web Infrastructure</li> <li>• Middleware</li> <li>• Application Development</li> <li>• Multithreaded Applications</li> <li>• Java Applications</li> <li>• Virtualization and consolidation</li> </ul>	
Architecture	
Processor	
<ul style="list-style-type: none"> <li>• One 16-core 1.65 GHz SPARC T3 processor, SPARC V9 architecture, ECC protected</li> <li>• 6 MB integrated Level 2 (L2) cache</li> <li>• Dual multithreaded 10 Gigabit Ethernet PCI integrated on the chip</li> <li>• On-board cryptography supporting embedded security industry-standard cryptographic algorithms: AES, CRC32c, DES, 3DES, DH, DSA, ECC, Kasumi, MD5, RSA, SHA-1, SHA-256, SHA-384, SHA-512, plus random number generation <i>(Note: CRC32c and Kasumi not currently supported by Solaris)</i></li> </ul>	
Main Memory	
<ul style="list-style-type: none"> <li>• 16 DIMM slots</li> <li>• System maximum of 128 GB</li> <li>• Support for 2 GB, 4 GB, and 8 GB DDR3 DIMMs</li> </ul>	
Interfaces	
<ul style="list-style-type: none"> <li>• Four 10/100/1000 Mb/sec Ethernet ports</li> <li>• Up to 2x optional 10 GbE XAUI connections</li> <li>• Six PCI Express 2.0 slots</li> <li>• One RJ-45 serial management port and one RJ-45 network port for remote management</li> <li>• Four USB 2.0 ports</li> <li>• One HD15 VGA port</li> <li>• One optional front accessible slim line SATA DVD+/-RW drive</li> </ul>	
Mass Storage	
<b>Internal disk:</b>	<p>Up to eight or sixteen 2.5" SAS-2/SATA-2 front accessible hot pluggable disk drive bays, depending on selected backplane</p> <p>All bays can be populated with 300 GB or 600 GB SAS-2 hard disk drives. 32 GB SATA-2 Solid state drives are supported in the 8 disk backplane only.</p> <p>Optional Sun Flash Accelerator F20 PCIe adapter card</p>
<b>External storage</b>	<p>Oracle offers a complete line of best-in-class, innovative storage hardware, software, and solutions— including tape drives, tape libraries, disk storage systems, data management software, and more—along with renowned world-class service and support.</p>

<b>Power</b>
<ul style="list-style-type: none"> <li>• Two hot-swappable AC 1200W redundant (N+1) power supplies</li> <li>• Maximum operating input current at 100 VAC: 9.4 A</li> <li>• Maximum operating input current at 200 VAC: 4.7 A</li> <li>• Maximum operating input power at 100 VAC: 896W</li> <li>• Maximum operating input power at 200 V AC: 888W</li> </ul>
<b>Key RAS Features</b>
<ul style="list-style-type: none"> <li>• Hot pluggable disk drives</li> <li>• Redundant, hot swappable power supplies and fans</li> <li>• Environmental monitoring</li> <li>• Error correction and parity checking</li> <li>• Easy component replacement</li> <li>• Electronic Prognostics</li> <li>• Internal hardware drive mirroring (RAID 1)</li> <li>• RAID 0 and RAID 1 support</li> </ul>
<b>Software</b>
<b>Operating System</b>
<ul style="list-style-type: none"> <li>• Oracle Solaris 10 9/10</li> <li>• Support for Solaris 10 10/09 + Oracle Solaris 10 9/10 Patch Bundle</li> </ul>
<b>Virtualization</b>
<ul style="list-style-type: none"> <li>• Oracle VM Server for SPARC 2.0</li> </ul>
<b>Environment</b>
<b>Temperature</b>
<ul style="list-style-type: none"> <li>• Operating temperature: Sea level to 900 m (3,000 ft.): 5°C to 35°C (41°F to 95°F); above 900 m (2,953 ft.): decrease the maximum allowable temperature by 1°C/300 m (1.6°F/1,000 ft.); IEC 60068-2-1 Test Ad and 60068-2-2 Test Bd</li> <li>• Nonoperating temperature: -40°C to 65°C (-40°F to 149°F); IEC 60068-2-1 Test Ab and 60068-2-2 Test Bb</li> </ul>
<b>Relative Humidity</b>
<ul style="list-style-type: none"> <li>• Operating relative humidity: 10% to 90% RH, 27°C maximum wet bulb (noncondensing); IEC 60068-2-56 Test Cb</li> <li>• Nonoperating relative humidity: 93% RH, 35°C maximum wet bulb (noncondensing); IEC 60068-2-56 Test Cb</li> </ul>
<b>Altitude</b>
<ul style="list-style-type: none"> <li>• Operating altitude: 3,000 m (10,000 ft.); IEC 60068-2-13 Test M, and 60068-2-41 Test Z/BM</li> <li>• Nonoperating altitude: 12,000 m (40,000 ft.); IEC 60068-2-13 Test M</li> </ul>
<b>Acoustic Noise</b>
<ul style="list-style-type: none"> <li>• Operating/idling acoustic noise 7.1 B (LwAd, 1 B = 10 dB), operating/idling acoustic noise 63 dB (LpAm, bystander positions)</li> </ul>
<b>Cooling</b>
<ul style="list-style-type: none"> <li>• Maximum heat dissipation at 100 VAC: 3057 BTU/hr</li> <li>• Maximum heat dissipation at 200 VAC: 3030 BTU/hr</li> <li>• 140 cfm maximum</li> </ul>
<b>Regulations</b>

<b>Safety:</b> UL/CSA-60950-1, EN60950-1, IEC60950-1 CB Scheme with all country deviations, IEC825-1, 2, CFR21 part 1040, CNS14336, GB4943
<b>RFI/EMC:</b> EN55022 Class A, 47 CFR 15B Class A, ICES-003 Class A, VCCI Class A, AS/NZ3548 Class A, CNS 13438 Class A, KSC 5858 Class A, GB9254 Class A, EN61000-3-2, GB17625.1, EN61000-3-3
<b>Immunity:</b> EN55024, 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
<b>Regulatory:</b> CE, FCC, ICES-003, C-tick, VCCI, GOST-R, BSMI, MIC, UL/cUL, UL/DEMKOLVD, UL/S-mark, CCC
<b>European Union Directives:</b> 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
<b>Dimensions and Weight</b>
<b>Height:</b> 88.65 mm (3.49 in.); 2 RU
<b>Width:</b> 447 mm (17.6 in.)
<b>Depth:</b> 673.1 mm (26.5 in.)
<b>Weight:</b> Approximately 27.2 kg (60 lb.)

## Warranty

Visit <http://www.oracle.com/us/support/policies/index.html> for Oracle's global warranty support information for the SPARC T3-2 server.

## Services

Visit <http://www.oracle.com/us/support/index.html> for Oracle's service program offerings for the SPARC T3-2 server.

## Contact Us

For more information about the Oracle SPARC T3-2 server, visit [oracle.com](http://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

Copyright © 2011, 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.

AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. 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. UNIX is a registered trademark licensed through X/Open Company, Ltd. 1010

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