

## SPARC T3-1 Server

### Frequently Asked Questions

#### Overview

Today, server sprawl is an insidious problem facing not only small to medium size businesses but also large enterprise data centers. In an increasingly data-driven world, companies find themselves deploying multiple servers to handle the growing need for new business applications, oftentimes assigning one application or workload per server. The result – poor utilization, high energy and cooling costs, and overcrowded data centers. The SPARC T3-1 server is not just a server, it's a fully integrated system with the ability to run many virtual servers, helping drive up utilization, lower IT costs and keep server sprawl to a minimum. 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.

The newest addition to Oracle's Chip Multithreading technology, the SPARC T3-1 server is the platform of choice for Web Infrastructure, Middleware workloads and Application development.

#### Customer Benefits

The SPARC T3-1 server provides the following key customer benefits.

##### **Accelerated Application Performance and Scalability**

A recognized, innovative leader in the development of cutting edge systems technology, Oracle's SPARC T3-1 server boasts the industry's first 16-core SPARC T3 server processor, offering world-class performance with a 2x throughput improvement to tackle the most demanding workloads. With up to 128 computing threads packed in a compact, 2 rack mount unit (RU) design, a single system can now run more applications and reduce the number of required servers, adding up to very significant savings in data center operations.

In addition to processor scaling, the flexible design of the SPARC T3-1 offers 2x the amount of memory and 4x the IO bandwidth than its predecessor to easily meet increased business demands.

##### **Enterprise Class Virtualization to Capture Business Value**

The SPARC T3-1 server offers built-in, no cost virtualization technologies that enable organizations to extract maximum value from IT assets while creating an infrastructure capable of rapidly adapting to today's dynamic business environment. Oracle VM Server for SPARC provides highly efficient, enterprise-class virtualization capabilities by creating partitions called logical (or virtual) domains. Each logical domain can run an independent operating system. While customers may achieve the optimal results with 16 logical domains, the SPARC T3-1 server supports a maximum of 128 logical domains, allowing organizations to consolidate workloads and maximize their use of compute platforms, simplifying their IT infrastructure and bringing new levels of efficiency, manageability, and agility to the data center.

##### **Outstanding Security to Protect Your Assets**

Web applications continue to present one of the greatest risks to any organization, since the business value they deliver attracts hackers and cyber criminals, threatening a company's existence. The advanced SPARC T3 processor supports industry standard security ciphers available via on-chip, integrated cryptographic accelerators. These accelerators provide wire speed encryption capabilities for secure data center operation and allow customers to encrypt large amounts of data without sacrificing performance. And best of all, they come standard at no extra cost with SPARC T3-1 servers.

In addition to the cryptographic features of the SPARC T3 processor and built on more than 20 years of experience, Oracle Solaris security provides all the unmatched enterprise-class features that you depend on to protect your applications. Coupled with this operating system, Oracle Solaris with trusted

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extensions enhances existing Oracle Solaris security, preserves application investment, and provides for IT flexibility.

#### **Efficient and Flexible Design**

Smart and simple designs offer greater energy and space optimization, increasing asset utilization while reducing operating costs. The SPARC T3-1 server packs the most cores and threads of any general-purpose 1-socket rack mount server available. With up to two times the throughput of previous generation servers, the SPARC T3 processor consumes half the power, helping to alleviate power and cooling issues seen in data centers. Occupying just 2 RU of rack space, the SPARC T3-1 server supports a 16-core 1.65 GHz processor, up to sixteen hard disk drives and 128 GB memory.

#### **Award Winning Oracle Solaris Operating System**

The hardware features of the SPARC T3-1 server are only half the story. Oracle Solaris is the #1 Enterprise operating system for datacenters, developers, and service providers and is shipped pre-installed with every server. It's the only open operating system that has delivered proven results, running everything from mission-critical enterprise databases to high performance Web farms. Its innovative, built-in features deliver breakthrough virtualization, high availability, advanced security, and industry-leading performance. Best of all, the transition to the SPARC T3-1 server is streamlined for existing Oracle Sun customers because the new T3 processor is binary compatible with legacy SPARC processors at the instruction level. Oracle Solaris 8 and 9 applications run unchanged on Oracle Solaris 10, thus no recompilation of software is needed. This equates to savings that can be realized immediately!

For a complete integrated business system, the SPARC T3-1 server allows companies seeking simplicity to avoid increasing IT infrastructure costs while accelerating business growth. The SPARC T3-1 server is a powerful system you can trust to tackle the most demanding Web Infrastructure, Middleware workloads and Application development.

To learn more about specific Oracle optimized solutions featuring the SPARC T3-1 server, visit:

<http://www.oracle.com/us/solutions/optimized-solutions-171609.html>

## Frequently Asked Questions

### What is the SPARC T3-1 server?

The SPARC T3-1 server is the next generation T-series server based on the SPARC T3 processor. It offers world-class performance, scalability and virtualization capabilities ideal for web, middleware, and application workloads.

### How does the new SPARC T3-1 server compare with the Sun SPARC Enterprise T5220 server?

The new SPARC T3-1 server has twice the number of processing cores and boasts the industry's first 16-core chip. Customers can expect up to two times the throughput, enhanced on-chip cryptographic acceleration, up to four times the I/O throughput helping to accelerate application performance and maximize customer investments. For details regarding T3-series performance benchmarks, please visit:

<http://www.oracle.com/us/solutions/performance-scalability/sun-sparc-enterprise-t-servers-078532.html>

### What is Chip Multithreading Technology?

Chip Multithreading (CMT) Technology is a processor and architecture design approach that maximizes computational throughput and delivered performance by implementing hardware multithreaded processor cores on a single chip. This innovative approach is redefining the way IT managers solve complex business issues. With large memory support and the breakthrough performance of the SPARC T3 processor, the SPARC T3-1 server is ideally suited for compute, data, and transaction-intensive applications, making it an ideal platform for web, network, and security servers.

### What Virtualization technologies are available for the SPARC T3-1 server?

Oracle offers the most complete portfolio of end-to-end virtualization solutions available today that can be used separately or together to tackle specific deployment challenges.

Oracle Solaris Containers

Oracle VM for SPARC

### What are the memory, storage, and expansion options supported on the SPARC T3-1 server?

The SPARC T3-1 server supports sixteen DDR3 memory DIMM slots (which can be populated with 4GB or 8GB DIMMs),

six low-profile PCI-Express Gen2 slots, and up to sixteen 2.5-inch hard disk drives.

### What is Sun Flash technology and how can it help application performance?

Flash helps accelerate applications by reducing storage latency and eliminating I/O bottlenecks, allowing for greater productivity and improved business response. The SPARC T3-1 server supports the Oracle Sun Flash Accelerator F20 PCI Express card. This flash storage option can turbo-charge the server to run I/O intensive applications more rapidly and efficiently while consuming vastly less power.

### What are the operating systems that have been certified to run on the SPARC T3-1 server?

The SPARC T3-1 server supports Oracle Solaris 10 and Oracle Solaris 11. Oracle Solaris 11 is the strategic platform for today's demanding enterprise, delivering proven results on everything from mission-critical enterprise databases to high-performance Web farms, and from Chip Multithreading systems to industry-standard x86 systems. Oracle Solaris 11 has technologies such as Dtrace, ZFS, Containers and Predictive Self-Healing, making it the most safest and scalable UNIX operating system available.

### What software is pre-installed on the SPARC T3-1 server?

The SPARC T3-1 server comes pre-installed the Oracle Solaris operating system, Oracle VM for SPARC and Electronic Prognostics.

### What are the system management options available for the SPARC T3-1 server?

The SPARC T3-1 server includes the Oracle Integrated Lights Out Manager (ILOM), which is driven by an integrated system service processor that also has power management and power capping capability to help reduce energy cost. ILOM provides full remote KVMS (Keyboard, Video, Mouse, Storage) support together with remote media functionality.

ILOM is an integral part of the Oracle Enterprise Ops Center, which provides the most comprehensive management across Oracle servers, operating systems, and Solaris virtualization technologies, and dramatically improves the efficiency of IT operations with its integrated lifecycle management and built-in automation.

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### **What are the power and cooling requirements for the SPARC T3-1 server?**

The SPARC T3-1 server's online power calculator provides guidance for estimating the electrical and heat loads for typical operating conditions. For more information, visit:

<http://www.oracle.com/us/products/servers-storage/sun-power-calculators-067884.html>

The SPARC T3-1 server data sheet provides additional detailed information about this server and can be found here:

<http://www.oracle.com/us/products/servers-storage/servers/sparc-enterprise/t-series/sparc-t3-1-ds-173098.pdf>

### **Is there a choice in system configurations?**

Yes, the SPARC T3-1 server can be fully customized to the configuration specified through our factory's Assemble to Order (ATO) process.

### **Can I order the SPARC T3-1 server today?**

Yes, this product is shipping in volume today.

### **Where can I find out more?**

Contact your Oracle Sales representative directly or call 1-800-Oracle1.

For more information about the SPARC T3-1 server on the web, go to:

<http://www.oracle.com/us/products/servers-storage/servers/sparc-enterprise/index.html>

<http://www.oracle.com/store>



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