

# NETRA SPARC T4-1

EXTREME SCALABILITY AND DENSITY WITH CARRIER-GRADE AVAILABILITY

**KEY FEATURES**

- NEBS Level 3 certification and ETSI compliance
- SPARC T4 processor is the industry's first processor designed for application network infrastructure workloads
- Enables up to 64 simultaneous execution threads using the SPARC T4 processor
- Redundant hot-swappable AC or DC power supplies and hot-pluggable disk drives
- Massive I/O performance

**KEY BENEFITS**

- Reliable operation in severe environmental conditions
- Built in no-cost virtualization technology with Oracle VM Server for SPARC and Oracle Solaris Zone
- Integrated on-chip cryptographic acceleration offers security for telecommunications data centers
- High reliability with an enhanced system uptime
- Cost efficiencies with reduced overall system power and cooling demands



*Oracle's Netra SPARC T4-1 server is the first SPARC T4 processor based system with throughput offering 2x the I/O bandwidth and 5x improvement in single threaded performance over the previous generation Netra SPARC server, all in a compact 20 inch deep 2 RU chassis. Designed to meet the most demanding telecommunication Web, media services, OSS/BSS, and BRM workloads, the Netra SPARC T4-1 is the ideal platform for consolidation and virtualization of the data center.*

**Product Overview**

The Netra SPARC T4-1 server is powered by the SPARC T4 processor (8-core and 4-core) featuring integrated on-chip cryptographic support, providing wire speed encryption capabilities.

This server offers 16 DIMM slots, which can support a total of 256GB of memory, four hot-pluggable 2.5 inch drives or SSD plus DVD, integrated 10GbE networking, and built-in PCI Express Generation 2 expansion. Oracle Solaris and virtualization software such as the Oracle Solaris Zones and Oracle VM Server for SPARC technology make the Netra SPARC T4-1 a cost effective platform for large-scale telecommunication data center consolidation.

The Netra SPARC T4-1 provides a network infrastructure solution with carrier-grade reliability leveraging the chassis from previous generation, hot swappable components such as high efficiency AC or DC power supplies and disk drives. The Netra SPARC T4-1 comes integrated at no additional cost with Integrated Lights Out Manager (ILOM) service processor that offers industry-standard protocols for standalone system management as well as integration with many industry leading management systems.

**Netra SPARC T4-1 Specifications**

<b>Architecture</b>	
<b>Processor</b>	
<ul style="list-style-type: none"> <li>• One 8-core 64 thread or one 4-core 32 threads 2.85GHz SPARC T4 processor</li> <li>• Up to 64 simultaneous threads per processor</li> <li>• Up to 8 floating point units</li> <li>• New 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: AES, Camellia, CRC32c, DES, 3DES, DH, DSA, ECC, Kasumi, MD5, RSA, SHA-1, SHA-224, SHA-256, SHA-384, SHA-512</li> <li>• Oracle SPARC V9 architecture, ECC protected</li> </ul>	
<b>Cache</b>	
<ul style="list-style-type: none"> <li>• Dedicated 128KB level 2 cache per core</li> <li>• Shared 4MB level 3 cache</li> </ul>	
<b>Main Memory</b>	
<ul style="list-style-type: none"> <li>• Supports 8 GB and 16 GB DDR3 DIMMs</li> <li>• 16 DIMM slots, supporting a maximum of 256GB</li> </ul>	
<b>Interfaces</b>	
<b>Network</b>	
<ul style="list-style-type: none"> <li>• Four 10/100/1000 Base-T Ethernet ports</li> <li>• Up to two optional XAUI 10Gb Ethernet ports through optional 10 GbE Network Module</li> </ul>	

<b>USB</b>
<ul style="list-style-type: none"> <li>• Four 2.0 USB ports (rear and front)</li> </ul>
<b>Expansion Bus</b>
<ul style="list-style-type: none"> <li>• Five PCIe Gen 2 x8 slots, 2x full-height/half-length, 3x low profile</li> </ul>
<b>Storage</b>
<ul style="list-style-type: none"> <li>• Support for up to four optional internal 2.5-inch SAS disk drives, 10Krpm</li> <li>• Support for up to four optional internal SATA SSD</li> <li>• Internal DVD: one slim line SATA DVD+/-RW</li> <li>• RAID level 0, 1</li> </ul>
<b>Alarms</b>
<ul style="list-style-type: none"> <li>• Four fail-safe, dry contact alarms—critical, major, minor, and user—DB-15</li> </ul>
<b>Software</b>
<b>Operating System</b>
<ul style="list-style-type: none"> <li>• Oracle Solaris 10 8/11</li> <li>• Oracle Solaris 11</li> <li>• Support for Solaris 10 9/10 and Solaris 10 10/09 with Oracle Solaris 10 8/11 Patch Bundle</li> </ul>
<b>Software Included</b>
<ul style="list-style-type: none"> <li>• Oracle Solaris 11</li> <li>• Oracle VM Server for SPARC</li> </ul>
<b>Virtualization</b>
<ul style="list-style-type: none"> <li>• Built-in, no-cost Oracle VM Server for SPARC and Oracle Solaris Zones provide the flexibility and power of 64 virtual systems in a single Netra SPARC T4-1 server</li> </ul>
<b>Remote Management</b>
<ul style="list-style-type: none"> <li>• Oracle Integrated Lights Out Manager (ILOM)</li> <li>• Dedicated 10/100Base-T Ethernet network management port</li> <li>• In-band, out-of-band and sideband network management access via any one of the four main Ethernet ports of the server</li> <li>• One RJ-45 serial management port</li> <li>• DTMF-style command-line interface</li> <li>• Support for access via SSH 2.0, HTTPS, RADIUS, LDAP, and Microsoft Active Directory</li> <li>• Browser-based GUI for control of the system through a graphical interface</li> <li>• IPMI 2.0, SNMP v1, v2c, and v3</li> <li>• Remote management with full keyboard, video, mouse, storage (KVMS) redirection and remote media capability (floppy, DVD, CD, and more)</li> <li>• Ability to monitor and report system and component status on all FRUs</li> </ul>
<b>Power Supplies</b>
<ul style="list-style-type: none"> <li>• Two 1+1 redundant AC or DC hot-swappable power supplies</li> <li>• Maximum DC power supply rating of 1200 W</li> <li>• Maximum AC power supply rating of 1200 W</li> </ul>
<b>Environment</b>
<ul style="list-style-type: none"> <li>• DC Power: -48V DC or -60 V DC</li> <li>• AC Power: 100-240 V AC, 50-60 Hz</li> <li>• Operating Temperature: 5°C to 45°C (41°F to 113°F), short term -5°C to 55°C (23°F to 131°F)</li> <li>• Operating Relative Humidity: 5%- 85% RH, non condensing, but not to exceed 0.024 kg water/kg dry air (0.053 lb. water/2.205 lbs. dry air)</li> <li>• Short-Term Relative Humidity: 5%- 90% RH, non condensing, but not to exceed 0.024 kg water/kg dry air (0.053 lb. water/2.205 lbs. dry air)</li> </ul>

- Operating Altitude: Meets NEBS 4,000 m (13,123 ft.) requirement
- Non-Operating Temperature: -40°C to 70°C (-40°F to 158°F)
- Non-Operating Relative Humidity: 93%, non condensing, 40°C (104°F)
- Non-Operating altitude: Up to 12,000 m (39,370 ft)
- Acoustic Noise: Operating/idling less than 7.2 B @ 23°C (LwAd: 1 B=10 dB)
- ETSI: EN 300019-2-1,2,3, Class 1.2, 2.3, 3.1E (except condensing humidity and rain)
- NEBS: NEBS Level 3 certified by Telecordia
- Seismic: GR-63-CORE requirements for earthquake Zone 4

#### Dimensions and Weight

- Height: 87.1 mm (3.43 in)
- Width: 445 mm (17.52 in) including mounting ears
- Depth: 526 mm (20.71 in) maximum to PSU handles
- Depth: 501 mm (19.72 in) maximum to rear I/O
- Weight: 18.6 kg (41 lbs) fully configured without PCI cards

#### Regulations

- Safety: EN 60950-1, IEC 60950-1 (Evaluated to all CB countries), UL 60950-1, CSA C22.2 No. 60950-1-07, IEC 825-1, 2 and CFR21 Part 1040
- EMI: EN55022 Class A, 47CFR15 Subpart B (FCC) Class A, ICES-003 Class A, AS/NZS CISPR22 Class A, CISPR22 Class A, EN300386 for Telecommunications Centers and for Other Than Telecommunications Centers
- EMC (immunity): EN55024, EN61000-3-2, EN61000-3-3, EN300386:2010 for Telecommunications Centers and for Other Than Telecommunications Centers
- Regulatory markings: CE, FCC, ICES-003, C-Tick, VCCI, GOST-R, KCC, UL/cUL, S-Mark, BSMI, CCC
- Other: Restriction of Hazardous Substances (RoHS) Directive and Waste Electrical and Electronics Equipment (WEEE) Directive

#### Warranty

The Netra SPARC T4-1 comes with a one-year warranty. For more information visit [oracle.com/sun/warranty](http://oracle.com/sun/warranty) for Oracle's global warranty support.

#### Services

Only Oracle offers single point of accountability and complete, integrated support for the entire Oracle stack including 24/7 hardware service, expert technical support, proactive tools, and software updates. In addition to award-winning system support, Oracle also offers a portfolio of services that help install, configure, monitor and support your new Oracle Sun Netra servers utilizing Oracle best practices for higher availability and optimized system performance.

Visit [oracle.com/support](http://oracle.com/support) for information on Oracle's service program offerings for Sun products.

#### Contact Us

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