ORACLE DATA SHEET

Netra SPARC S7-2 Server

Oracle's Netra SPARC S7-2 is a resilient Netra SPARC dual-socket, carrier-grade rackmount server.

Designed for scale-out architectures, Netra SPARC S7-2 is a compact 2U footprint that offers efficiency, security, and simplicity.

This new generation of carrier-grade system leverages Oracle's Software in Silicon features—implemented initially in Oracle's SPARC M7 processor and extended in SPARC S7—that allow acceleration capabilities, integrated near-zero overhead security, and ease of management. The server supports the most advanced and secure operating system, making it ideal for telecommunications- embedded industrial, public sector, cloud and on-premises infrastructures.

KEY BUSINESS BENEFITS

- Reliable operation in severe environmental conditions
- Superior per-core and overall performance in cloud environments, minimizing software licensing costs
- Hardware security validation and end-to-end encryption of data with near-zero performance impact
- Extreme performance and database acceleration by using Data Analytics Accelerator

KEY FEATURES

- NEBS Level 3 certification and ETSI compliance
- Configured with one or two processors per server and up to 9.6 TB SAS-3 storage storage

Product Overview

Telecommunications customers have to innovate rapidly, scale their infrastructures efficiently, bring services to market and grow their business quickly, while reducing their TCO with industry-standard technologies.

Oracle's Netra SPARC S7-2 is designed to address these needs optimally by offering the most secure, efficient, and reliable server for mission-critical deployments.

Software in Silicon features are breakthroughs in microprocessor and server design. They enable databases and applications to run fast, with unprecedented security and reliability, by implementing encryption, hardware security features, and software acceleration.

The SPARC S7 processor is the most advanced engineered microprocessor for efficient cloud infrastructure and distributed computing applications. It combines eight powerful fourth generation cores that leverage the superior SPARC M7 processor, and each handles up to eight threads using unique dynamic threading technology. The processor is designed to maximize efficiency by integrating most of the hardware interfaces on the processor, thereby allowing the server to achieve unmatched per-core utilization levels. This translates into optimal performance and minimum software licensing costs.

All Oracle servers ship with comprehensive server management tools at no additional cost. Oracle Integrated Lights Out Manager (Oracle ILOM) utilizes industry-standard protocols to provide secure and comprehensive local and remote management, including power management and monitoring, fault detection, and notification. Oracle

- Resilient server system with high level of reliability, availability, and serviceability (RAS) in a compact, energy-efficient footprint
- Hardware-implemented security and analytics acceleration with Software in Silicon features
- Redundant hot-swappable AC or DC power supplies and hot-pluggable disk drives
- Runs the Oracle Solaris 11 OS for secure, compliant application deployment through single-step patching and immutable zones
- Guaranteed binary compatibility and support for legacy applications that run under Oracle Solaris 10, 9, and 8

Premier Support customers have access to My Oracle Support and multi-server management tools in Oracle Enterprise Manager Ops Center, a system management tool which, in conjunction with Oracle Enterprise Manager, coordinates servers, storage, and networking for a complete cloud infrastructure as a service (IaaS). Oracle Enterprise Manager Ops Center also features an automated service request capability, whereby potential issues are detected and reported to Oracle's support center without user intervention, assuring the maximum service levels and simplified support.

Netra SPARC S7-2 and Oracle Solaris offer a superior and easy-to-manage platform for developers and users. Oracle Solaris 11 is a secure, integrated, and open platform for mission-critical environments. It provides extraordinary uptime and offers capabilities that enable customers to accelerate time to new services, lower business risks, and improve business agility.

NETRA SPARC S7-2 SERVER SPECIFICATIONS

ARCHITECTURE	
Processor	• *Eight-core, 3.33GHz (NEBS mode)/4.27GHz (Non NEBS mode) SPARC S7 processor* • *Up to 64 threads per processor (up to eight threads per core)* • *Four instances of Data Analytics Accelerator, a feature of SPARC M7. per processor, each supporting four concurrent in-memory query operations with decompression* • *Eight on-chip encryption instruction accelerators with direct nonprivileged support for 15 industry-standard cryptographic algorithms: AES, Camellia, CRC32c, DES, 3DES, DH, DSA, ECC, MD5, RSA, SHA-1, SHA-224, SHA-256, SHA-384, SHA-512 (one per core)* • *Eight floating-point units per processor (one per core)* • *One random number generator (one per processor)*
Cache per processor	• *Level 1: 16 KB instruction and 16 KB data per core* • *Level 2: 256 KB L2 I$ per four cores, 256 KB L2 D$ per core pair* • *Level 3: 16 MB L3$ on the chip*
System architecture	• *Oracle's SPARC V9 architecture, ECC protected*
SYSTEM CONFIGURATIONS	
Processors	Configured with one or two SPARC S7 processors, not expandable
Memory capacity	• *Eight dual inline memory module (DIMM) slots per processor supporting half and fully populated memory configurations using 16, 32 and 64GB DDR4 DIMMs* • *1,024 GB maximum memory configuration with 64 GB DIMMs and two processors*
Interfaces	• *Network: four 10GBase-T ports (100 Mb/sec,1Gb/sec, 10Gb/sec, full duplex only, auto-negotiating* • *Expansion bus: six low-profile PCIe 3.0 x8 slots (4 x8, 2 x16 mechanical)* • *Ports: two front USB 2.0 ports and one rear USB 3.0 port* • *Management ports: one RJ45 serial port, one 1000Base-T (100 Mb/sec, 1 Gb/sec) network port*

Internal storage	• *Controllers: one 12 Gb/sec SAS-3 controller*
	• *Eight 2.5-inch SAS-3 drives*
	• *Choice of two 2.5-inch drives:*
	  ◦ *1,200 GB SAS-3 hard disk drives*
	  ◦ *800 GB SAS-3 solid-state drives*

External storage	Oracle offers a complete line of best-in-class, innovative storage, hardware, and software solutions, along with renowned world-class service and support. For more information, please refer to oracle.com/storage.

POWER SUPPLIES

- *Two hot-swappable AC or DC 1,200 W redundant (1 + 1) power supplies*
- *AC power supplies: Voltage: 100 to 240 VAC frequency 50/60 Hz*
- *Maximum operating input current at 100/200 VAC: 8.6/4.1 A*
  Maximum operating input power at 100/200 VAC: 851/819 W
- *DC power supplies: Voltage: -48/-60 V DC*
- *Maximum operating input current at -48V/-60 DC: 18/14 A*
- *Maximum operating input power at -48V/-60 DC: 850 W*

For more information on power consumption, go to: Netra SPARC S7-2 Power Calculator

KEY RELIABILITY, AVAILABILITY, SERVICEABILITY (RAS) FEATURES

- *Hot-pluggable disk drives*
- *Redundant, hot-swappable power supplies. Fans are redundant.*
- *Environmental monitoring*
- *Extended ECC, error correction, and parity checking*
- *Oracle Solaris ZFS support for RAID levels*
- *Fault Management Architecture including Predictive Self Healing—both are features of Oracle Solaris*

SOFTWARE

Operating system	Oracle recommends Oracle Solaris 11.3 or later for enhanced performance and functionality, including technologies enabled by Software in Silicon features:
	• *Control domain: Oracle Solaris 11.3 or later*
	• *The following versions are supported within guest domains:*
	  ◦ *Oracle Solaris 11.3 or later*
	  ◦ *Oracle Solaris 10 1/13**
	** Plus required patches*
	Applications certified for Oracle Solaris 9 or 8 only may run in an Oracle Solaris 9 or 8 branded zone running within an Oracle Solaris 10 guest domain.

Software included	• *Oracle Solaris 11.3 or later, which includes Oracle VM Server for SPARC* • *Oracle Solaris ZFS (default file system)*
Virtualization	Built-in, no-cost Oracle VM Server for SPARC provides the flexibility and power of running multiple logical domains in a single server. Multiple Oracle Solaris Zones may be run within a single Oracle VM Server for SPARC logical domain.

ENVIRONMENT

Operating temperature	5° C to 45° C (41° F to 113° F); short term: 5° C to 55° C (23° C to 131° F)
Nonoperating temperature	-40° C to 70° C (-40° F to 158° F)
Operating relative humidity	5% to 85% relative humidity, noncondensing, but not to exceed 0.024 Kg water/Kg dry air (0.053 lb. water/2.205 lb. dry air)
Nonoperating relative humidity	5% to 93% relative humidity, noncondensing, 40° C (104° F) max wet bulb
Short-term relative humidity	5% to 90% relative humidity, noncondensing, but not to exceed 0.024 Kg water/Kg dry air (0.053 lb. water/2.205 lb. dry air)
Operating altitude	Meets NEBS requirement: 400 m to 4,000 m (5905 ft. to 13,123 ft.) at 30° C (86° F).
Nonoperating altitude	Up to 12,000 m (39,370 ft.)
Acoustic noise	Acoustic noise: operating/idling less than 72 dB @ 23° C (LwAd: 1 B = 10 dB)

REGULATIONS (MEET OR EXCEED THE FOLLOWING REQUIREMENTS)

Safety: UL/CSA 60950-1, EN 60950-1, IEC 60950-1 2006, IEC60950-1 CB scheme with all country differences

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

Certifications: North America Safety (NRTL), European Union (EU), International CB Scheme, BIS (India), BSMI (Taiwan), RCM (Australia), CCC (PRC), MSIP (Korea), VCCI (Japan), EAC (Russia)

European Union directives: Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU, Low Voltage Directive 2014/35/EU, EMC Directive 2014/30/EU, and WEEE Directive 2012/19/EU

All standards and certifications referenced are to the latest official version. For additional detail, please contact an Oracle sales representative.

Other country regulations/certifications may apply.

Emissions: FCC CFR 47 Part 15, ICES-003, EN55024, EN6100-3-2 and EN61000-3-3, EN300-386

Immunity : EM55024

DIMENSIONS AND WEIGHT

- *Height: 88 mm (3.46 in.); 2U*
- *Width: 445 mm (17.52 in.)*
- *Depth: 640 mm (25.2 in.) with power supplies, or 609.45 mm (24 in.) without power supplies*

Weight (approximate):

- *21.5 Kg (47.3 lb.), fully populated*

The Netra SPARC S7-2 server comes with a one-year warranty. Visit oracle.com/us/support/policies/ for more information about Oracle's hardware warranty.

Complete Support

With Oracle Premier Support, customers get the services they need to maximize their return on investment in Oracle's SPARC server. 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.

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CONTACT US

For more information about Oracle's Netra SPARC S7-2 server, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

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