

SUN NETRA 6000 CHASSIS

MAXIMUM EFFICIENCY WITH CARRIER GRADE RELIABILITY

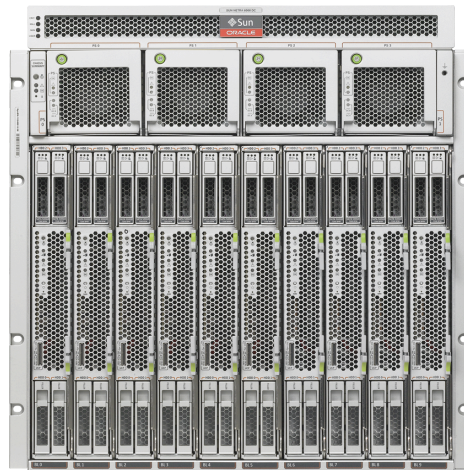
KEY FEATURES

- Space efficient form factor: 10 RU - AC version and 11 RU- DC version
- Up to ten server modules
- Up to 20 PCIe Express Modules (EMs)
- Up to two Network Express Modules (NEMS)
- Chassis Monitoring Module (CMM) with Integrated Lights Out Manager (ILOM)
- NEBS™ Level 3 certification and ETSI compliance
- Choice of AC or DC power
- Choice of SPARC and Intel-processor based modules
- Hot-pluggable, hot-swappable and redundant AC or DC power supply and fan modules

KEY BENEFITS

- High availability and reliability for telecom customers
- Reliable operation in severe environmental conditions
- Modular design allows easy upgrade and expansion
- Power and cooling efficiencies cut costs
- Fewer qualifications and simpler maintenance planning with longer product life cycles

Oracle's Sun Netra 6000 modular system is a highly reliable blade server system designed for customers who need a cost-efficient platform for delivering IP services over Telecom Networks. The Sun Netra 6000 chassis, can be filled with a combination of SPARC or Intel processor based server modules and 10Gb Ethernet switching to handle the most demanding workloads, including advanced IP-based Telecom/Web services and Operations and Business Support Systems (OSS/BSS) applications.



The Sun Netra 6000 modular system is designed for telecom customers

Sun Netra 6000 Chassis

The Sun Netra 6000 combines the benefits of the Sun Blade 6000 modular system with the ruggedness and reliability of the Sun Netra server family.

The Sun Netra 6000 chassis fits in a compact form factor - only 10 RU (11RU for DC) while supporting up to 10 full-featured, top-performance blade server modules. The innovative modular design allows easy upgrade and expansion, high flexibility with a breadth of compute, storage, and networking options. The externally accessible, hot-pluggable Express Modules give each blade a unique I/O personality, while the network switch options dramatically help cut cabling, simplify inter-chassis storage and Ethernet connectivity, and redundancy reduces downtime.

As with other Sun Netra servers, the Sun Netra 6000 is NEBS Level 3 certified and ETSI compliant—making it ideal for the most demanding applications in the toughest environments.

Sun Netra 6000 Chassis Specifications

Architecture
Form Factor
10 rack units high (AC chassis), 11 rack units high for the DC chassis (11U), holding up to 10 server modules per chassis.
I/O Interfaces
The Sun Netra 6000 chassis midplane supports the following protocols: PCI Express, SAS, and Gigabit Ethernet (GbE) Each server module has a direct connection to two PCIe EMs for discrete I/O connectivity and two PCIe Network Express modules for aggregate I/O connectivity.
I/O Modules
Up to two industry-standard (PCI-SIG), hot-pluggable PCIe EMs per server module, maximum 20 per chassis Up to two hot-pluggable NEMs per Sun Netra 6000 chassis
Manageability
Chassis Monitoring Module (CMM)
Helps enable direct remote connection to the service processor on each blade server Reduces cabling by providing a single management connection to the chassis Helps ensure complete remote lights-out manageability of the whole chassis Provides an optional aggregate point for monitoring of chassis fans and power supplies with the CMM's own Integrated Lights Out Manager (iLOM) module
Environment
Temperature
Operating: 5°C to 45°C (41°F to 113°F) NEBS Short Term: -5°C to 55°C (23°F to 131°F) Non-operating: -40°C to 70°C (-40°F to 158°F)
Relative Humidity
Operating: 5%–85% RH, noncondensing, but not to exceed 0.024 kg water/kg dry air (0.053 lb. water/2.205 lbs. dry air) Short Term: 5%–90% RH, noncondensing, but not to exceed 0.024 kg water/kg dry air (0.053 lb. water/2.205 lbs. dry air) Nonoperating: 93%, noncondensing, 40°C (104°F)
Altitude
Operating: Meets NEBS 4000m (13,123 ft.) requirement Nonoperating: Up to 12,000 m (39,370 ft.)
Additional Specifications
ETSI: EN 300-019-2-1, 2, 3, Class 1.2, 2.3, 3.1E (except condensing humidity and rain) NEBS: NEBS Level 3 certified by Telcordia Seismic: GR-63-CORE requirements for Earthquake Zone 4
Acoustic Noise
LwAd (1 B = 10 dB) 7.5 B at or below 25°C, 9.2 B at max. ambient
AC Power
AC Power (1+1) high-efficiency, hot-swappable, load-sharing, load-balancing power supplies AC input power: 1+1 PSU rating, 6,272 W, or 6,400 VA each power supply

<p>module</p> <p>AC Voltage: 200–240 V AC</p> <p>AC Frequency: 50 Hz–60 Hz</p> <p>AC Current: 16 A per power supply input, total four AC inputs (two per power supply)</p>
<p>DC Power</p> <p>DC Power: Four high-efficiency, hot-swappable, load-sharing, load-balancing power supplies</p> <p>DC input power: 3+1 power supply redundancy, DC input rating of 8,640W total for the chassis</p> <p>DC Input Voltage -48 VDC or -60VDC nominal</p> <p>DC Input Current: 60 A maximum per power supply input, total of 200A maximum for eight DC inputs (two per power supply)</p>
<p>AC / DC Input Connection</p> <p>Americas/domestic: NEMA L6-20P to IEC 320-C19</p> <p>International: IEC 309, 250 V, 16 A, 3Pin to IEC 320-C19</p> <p>DC input connection is lug and post. See Install Guide for specifications.</p>
<p>Regulations and Certifications</p> <p>Safety:</p> <p>EN 60950-1:2006 + A11:2009</p> <p>IEC 60950-2005, 2nd Edition (Evaluated to all CB countries)</p> <p>UL 60950-1, 2nd Edition</p> <p>CSA C22.2 No. 60950-1-07</p> <p>EMC and Certifications:</p> <p>EN55022:2006 + A1:2007 Class A (European Union)</p> <p>EN55024:2010 (Immunity)</p> <p>EN61000-3-2:2006 + A1:2009 + A2:2009</p> <p>EN61000-3-3: 2008</p> <p>47CFR15 Subpart B (FCC) Class A (US)</p> <p>EN300-386:2010 (V1.5.1) for Telecommunications Centers and for Other Than Telecommunications Centers EU.</p> <p>ICES-003 Class A (Canada)</p> <p>AS/NZS CISPR22:2006 Class A (Australia/New Zealand)</p> <p>CISPR22:2008: Class A</p> <p>KN-22 KC Certification (Korea)</p> <p>VCCI:2008 Class A (Japan)</p> <p>CNS-13438:2006 Class A (Taiwan)</p> <p>GOST-R Certifications Russia</p> <p>NEBS Level 3 (Netra 6000 AC and DC)</p> <p>2004/108/EC (89/336/EEC) EMC Directive</p> <p>2006/95/EC (73/23/EEC) Low Voltage Directive</p> <p>Other:</p> <p>2002/96/EC Waste Electrical and Electronic Equipment (WEEE) Directive</p> <p>2002/95/EC Restriction of Hazardous Substances (RoHS) Directive</p>
<p>Chassis Dimensions and Weight</p> <p>Height: AC chassis 10U, DC chassis 11U (AC chassis / DC chassis)</p> <p>Height: 441.0mm (17.4 in.) 485.5 mm (19.1 in.)</p> <p>Depth: 748.3 mm (29.5 in.) / 748.3 mm (29.5 in.)</p> <p>Width: 445.0 mm (17.5 in.) / 445.0 mm (17.5 in.)</p> <p>Weight of a fully configured system: 148.4 kg (327.1 lb) / 158 kg (348.3 lb)</p>

Weight of an empty system (no fillers): 56.1 kg (123.6 lb) / 65.7 kg (144.8 lb)
Subassembly Weights
(AC chassis / DC chassis)
Power supply module: 8.1 kg (17.8 lb.) / 3.9 kg (8.5 lb.)
Front fan module: 0.88 kg (1.95 lb.) (AC only)
NEM: 1.75 kg (3.85 lb.)
PCIe EM: 0.41 kg (0.90 lb.)
Rear fan module: 1.04 kg (2.31 lb.)
CMM: 0.52 kg (1.15 lb.)
Front indicator module: 0.34 kg (0.75 lb.)

For more information about Sun Netra 6000 Modular System visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.



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