

SPARC ENTERPRISE M8000 SERVER

MAINFRAME RELIABILITY WITH
INDUSTRY-LEADING VIRTUALIZATION

KEY FEATURES

- Optimized for 24x7 mission critical computing and large shared memory applications
- Mainframe class reliability, availability, serviceability (RAS)
- Unmatched investment protection with no forklift upgrades - upgrade individual components, not the whole system
- 100% binary compatibility with earlier versions of your applications
- Mix and match up to sixteen quad-core SPARC64 VII/VII+ processors and/or dual-core SPARC64 VI processors in the same system
- Built-in, no-cost, and flexible virtualization technology
- Ideal consolidation platform with up to 16 dynamic domains and support for thousands of Oracle Solaris Containers

Designed for large organizations and demanding applications that require 24/7 mission-critical, the high-end SPARC Enterprise M8000 server from Oracle delivers world record performance, unmatched reliability, availability, and serviceability (RAS), and extensive expansion and virtualization capabilities. Customize it with mix-and-match configurability using the latest high-performance SPARC64 VII/VII+ quad-core and SPARC64 VI dual-core processors and Oracle's Solaris 10 Operating System, the SPARC Enterprise M8000 server is optimized for enterprise-class applications such as ERP, CRM, BIDW, large databases, HPC/scientific/engineering, and large-scale OLTP applications.



SPARC Enterprise M8000 Server delivers mainframe reliability with industry-leading virtualization capabilities.

Investment Protection, Mainframe RAS, and Scalability

Oracle's SPARC Enterprise M8000 server provides the highest reliability and unmatched investment protection. With no forklift upgrades, the SPARC Enterprise M8000 server protects your IT investment. The option to mix and match different speeds/generations of SPARC64 processors in existing and new M-Series servers provide the level of investment protection and reliability not offered by IBM or HP.

In addition, RAS features come standard in the SPARC Enterprise M8000 server—features like automatic recovery with instruction retry, up to 1 TB of system memory error-correcting code (ECC) protection with extended ECC support, guaranteed data-path integrity, total SRAM and register protection, and configurable memory mirroring. Major system components are redundant and hot-swappable, providing the superior reliability and availability required by a 24x7 compute infrastructure.

Oracle Solaris: The World's Most Advanced Operating System

Only Oracle legally assures investment protection with Oracle Solaris with 100% binary compatibility for the past 15 years and counting. The SPARC Enterprise M8000 server is preinstalled with Oracle Solaris 10 OS. The Oracle Solaris 10 OS also delivers revolutionary features, including Dynamic Tracing (DTrace), Solaris ZFS, crypto- graphic infrastructures,

IP filter, and User and Process Rights Management.

Advanced Consolidation and Virtualization

Industry-leading virtualization features make the SPARC Enterprise M8000 server one of Oracle's most advanced consolidation systems. It supports up to 16 Dynamic Domains, enabling massive server consolidation and data center virtualization. Each physical domain can also be further optimized through the use of Oracle Solaris Containers, enabling each SPARC Enterprise M8000 server to support thousands of software partitions.

Sun SPARC Enterprise M8000 Server Specifications

Processor	
CPU	Up to 16 SPARC64 VII+/ VII quad-core or 16 SPARC VI dual-core processors SPARC V9 Architecture, ECC protected
Currently available	<ul style="list-style-type: none"> • SPARC64 VII+ • SPARC64 VII – 2.88GHz
Also Supported	<ul style="list-style-type: none"> • SPARC64 VI – 2.52Ghzl • SPARC64 VI
Cache per SPARC64 Level 1	<ul style="list-style-type: none"> • SPARC64 VII+/VII: 64 KB D-cache and 64 KB I-Cache • SPARC64 VI: 128 KB D-cache and 128 KB I-Cache
Cache per SPARC64 Level 2	<ul style="list-style-type: none"> • SPARC64 VII+: 12 MB on-chip • SPARC64 VII: 6 MB on-chip • SPARC64 VI: 5 MB to 6 MB on-chip
Clock speed	<ul style="list-style-type: none"> • SPARC64 VII+: 3.0 GHz • SPARC64 VII: 2.88 GHz or 2.52GHz • SPARC64 VI: 2.28 GHz to 2.4 GHz
System	
CPU	<ul style="list-style-type: none"> • Up to four CPU memory boards (CMU), with up to four processors per board; up to 256 GB of memory per board based on 8 GB DIMMs
Main memory	<ul style="list-style-type: none"> • Up to 1 TB per system
I/O	<ul style="list-style-type: none"> • Up to four I/O units (IOU) with eight PCIe slots each/32 PCIe slots per system • Up to 112 PCIe and PCI-X slots with the optional External I/O Expansion Unit
System bus	<ul style="list-style-type: none"> • High-speed, low-latency interconnect with redundant data, address, and response crossbar
System bus bandwidth (memory)	<ul style="list-style-type: none"> • 184 GB/sec peak, 60.3 GB/sec stream (copy)
System bus bandwidth (I/O)	<ul style="list-style-type: none"> • 61 GB/sec peak • Note: Calculated theoretical maximum value
Two redundant service processors	
Up to 16 Dynamic Domains	

Storage	
Boot device	<ul style="list-style-type: none"> • Up to 16 internal, 2.5 in. SAS boot disks/four per IOU
External boot devices	<ul style="list-style-type: none"> • Sun StorageTek 25XX/M2, 3120, 3510FC, J4500, 6180, 6580, 6780, 7120, 7320, 7420, J4400, J4200,

supported	9980, 9985
External	<ul style="list-style-type: none"> Direct, SAN or NAS attached to Sun StorageTek compatible tape libraries and disk arrays, including Sun StorageTek 3X00, 5X00, 6X00, and 9X00 families
Resource Management	
<ul style="list-style-type: none"> Dynamic Domains 	
<ul style="list-style-type: none"> Oracle Solaris 10 Resource Manager including Oracle Solaris Containers 	
Software	
Operating system	<ul style="list-style-type: none"> SPARC64 VII+ (3.0 GHz): Oracle Solaris 10 (9/10), (10/09), or Solaris 10 versions (5/09), (10/08), (5/08) and (8/07) with Oracle Solaris 10 10/09 Patch Bundle and the Sun Alert Patch Cluster SPARC64 VII (2.88GHz): Oracle Solaris 10 (9/10), (10/09) or Oracle Solaris 10 versions (5/09), (10/08), (5/08), and (8/07) with Oracle Solaris 10 10/09 Patch Bundle and the Sun Alert Patch Cluster SPARC64 VI (2.28GHz, 2.4GHz): Oracle Solaris 10 (11/06) or later
Management Software	<ul style="list-style-type: none"> XSF monitoring/control facility XSCF software manages hardware configuration and health, domain configuration and status, error monitor, and notification
Environmental	
Power Option 1	<ul style="list-style-type: none"> AC power: 200–240 VAC 1-phase (50/60 Hz), 30 A Power cords: Three (Six with the optional dual power feed) Plug: NEMA-L6-30P (U.S.) or EN60309 (32A) (INTL)
Power Option 2	<ul style="list-style-type: none"> AC power: 208 VAC 3-phase DELTA (50/60 Hz), 50 A Power cords: Two direct wired power connections; includes dual power feed
Power Option 3	<ul style="list-style-type: none"> AC power 415 VAC 3-phase STAR (50/60 Hz), 30 A Power cords: Two direct wired power connections; includes dual power feed
Operating temperature	<ul style="list-style-type: none"> 5°C to 32°C (41°F to 89.6°F), 20% to 80% relative humidity, noncondensing
Nonoperating temperature	<ul style="list-style-type: none"> 0°C to 50°C (32°F to 122°F) 8% to 80% relative humidity, noncondensing
Altitude	<ul style="list-style-type: none"> Up to 3000 m (9843 ft.)

Regulations

Safety	<ul style="list-style-type: none"> CSA/UL-60950, EN60950, IEC950 CB Scheme with all national deviations
RFI/EMC	<ul style="list-style-type: none"> EN55022/CISPR22 Class A, FCC CFR 47 Part 15 Class A, EN61000-3-2, EN61000-3-3
Immunity	<ul style="list-style-type: none"> EN55024, EN61000-4-2, -4-3, -4-5, -4-6, -4-8, and -4/11
Regulatory markings	<ul style="list-style-type: none"> CE, FCC, ICES, C-Tick, VCCI, GOST-R, BSMI, MIC, CSA/UL
Other marks	<ul style="list-style-type: none"> WEEE and Chinese RoHS

Key RAS Features

End-to-end ECC protection; guaranteed data-path integrity; automatic recovery with instruction retry; total SRAM and register protection; ECC and Extended ECC protection for memory, memory mirroring, and Predictive Self-Healing; full hardware redundancy; fault-isolated Dynamic Domains; Dynamic Reconfiguration; Auto Diagnosis and Recovery; online upgrades; concurrent maintenance; redundant network connections; redundant storage connections; live operating system upgrades; journaling file system; hardened I/O drivers; CPU offlining; memory page retirement; and cluster support.

Dimensions and Weight

Height: 180 cm (70.9 in.)
 Width: 75 cm (29.5 in.)
 Depth: 126 cm (49.6 in.)
 Weight: 700 kg (1,540 lb.)

Optional Power Expansion Cabinet Required for 3-phase Power Distribution

Height: 180 cm (70.9 in.)
 Width: 31.7 cm (12.5 in.)
 Depth: 124.4 cm (49 in.)
 Weight: 350 kg (770 lb.)

Warranty

The SPARC Enterprise M8000 Server comes with a one-year warranty. Visit <http://www.oracle.com/us/support/policies/index.html> for more information about Oracle's hardware warranty.

Support

With Oracle Premier Support, our customers get complete, integrated support to maximize the return on their Oracle investment—from software updates and operational best practices to proactive support tools and rapid problem resolution. For more information visit <http://www.oracle.com/support>

Contact Us

For more information about SPARC Enterprise M8000 Server, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.



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Hardware and Software, Engineered to Work Together