SUN 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 services, the high-end Sun 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 Solaris 10 operating system, the Sun 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.

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

Investment Protection, Mainframe RAS, and Scalability

Oracle's Sun SPARC Enterprise M8000 server provides the highest reliability and unmatched investment protection. With no forklift upgrades, the Sun 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 Sun SPARC Enterprise M8000 server—features like automatic recovery with instruction retry, up to 1TB 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. Oracle Solaris 10 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 Sun 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 Sun SPARC Enterprise M8000 server to support thousands of software partitions.

Sun SPARC Enterprise M8000 Server Specifications

Processor	
CPU	Choice of up to 16 SPARC64 VII+/ VII quad-core or 16 SPARC VI dual-core processors SPARC V9 Architecture, ECC protected
Cache per SPARC64 Level 1	• 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	• SPARC64 VII+: 12 MB on-chip • SPARC64 VII: 6 MB on-chip • SPARC64 VI: 5 MB to 6 MB on-chip
Clock speed	• SPARC64 VII+: 3.0 GHz • SPARC64 VII: 2.88 GHz • SPARC64 VI: 2.28 GHz to 2.4 GHz
System	
CPU	• 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	• Up to 1 TB per system
I/O	• 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	• High-speed, low-latency interconnect with redundant data, address, and response crossbar
System bus bandwidth (memory)	• 184 GB/sec peak, 60.3 GB/sec stream (copy)
System bus bandwidth (I/O)	• 61 GB/sec peak Note: Calculated theoretical maximum value
Two redundant service processors	
Up to 16 Dynamic Domains	

Storage	
Boot device	• Up to 16 internal, 2.5 in. SAS boot disks/four per IOU
External boot devices supported	• Sun StorageTek 2540, 3120, 3510FC, 9980, 9985

External	• 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	
• Dynamic Domains	
• Oracle Solaris 10 Resource Manager including Oracle Solaris Containers	
Software	
Operating system	• 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
Languages	• C, C++, Pascal, FORTRAN, Java
Networking	• ONC/NFS, TCP/IP, Oracle's SunLink, Netware
System monitoring	• Sun Management Center • Oracle Solaris Web Start • Sun Solstice Domain Manager • Sun Solstice Enterprise Manager • Sun Solstice Backup • Oracle Enterprise Manager Ops Center 11g
Value added software	• VERITAS File System • VERITAS Volume Manager • Sun Cluster • Sun HPC ClusterTools • Sun Java Enterprise System
Environmental	
Power Option 1	• 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	• 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	• 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	• 5°C to 32°C (41°F to 89.6°F), 20% to 80% relative humidity, noncondensing
Nonoperating temperature	• 0°C to 50°C (32°F to 122°F) 8% to 80% relative humidity, noncondensing
Altitude	• Up to 3000 m (9843 ft.)

Regulations	
Safety	• CSA/UL-60950, EN60950, IEC950 CB Scheme with all

	national deviations
RFI/EMC	• EN55022/CISPR22 Class A, FCC CFR 47 Part 15 Class A, EN61000-3-2, EN61000-3-3
Immunity	• EN55024, EN61000-4-2, -4-3, -4-5, -4-6, -4-8, and -4/11
Regulatory markings	• CE, FCC, ICES, C-Tick, VCCI, GOST-R, BSMI, MIC, CSA/UL
Other marks	• 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.)

Services

Complete Portfolio of Services from Installation to Operations Management

Oracle Advanced Customer Services offers complete lifecycle management from installation, configuration, management and support for your Sun SPARC Enterprise M8000 servers. Oracle product experts configure, integrate and test your new server technology using Oracle's implementation best practices. To increase the efficiency of your IT team, Oracle services experts offer Oracle Operations Management that provides 24x7 monitoring and management services across the entire IT infrastructure. And, Oracle Premier Support provides the award-winning support you need to maximize the return on your Sun SPARC Enterprise M8000 server investment. From unlimited 24/7 access to Sun system specialists, to critical patches, essential product updates, and exclusive online resources — only Oracle provides integrated support for your entire stack, applications to disk

Visit oracle.com/acs for information on Oracle Advanced Customer Services offerings for Oracle server products.

Warranty

Visit oracle.com/sun/warranty for Oracle's global warranty support information on Sun products.

Contact Us

For more information about Oracle's Sun SPARC Enterprise M8000 server, please visit oracle.com/sun or call +1.800.786.0404 to speak to an Oracle representative

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Hardware and Software, Engineered to Work Together