Sun SPARC® Enterprise M8000 Server

Mainframe reliability with industry-leading virtualization

Designed for large organizations and demanding applications that require mission-critical, 24x7 performance, the high-end Sun SPARC® Enterprise™ M8000 server delivers performance world records, reliability, availability, and serviceability, but without the expense, complexity, and vendor lock-in. Built on the advanced SPARC64 VII quad-core processor or the SPARC64 VI dual-core processor and the 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.

Highlights

- Mix and match the boards with earlier versions of the SPARC processor in a single system for continued investment protection
- Binary compatibility with earlier versions of your applications
- Scalable,mainframe-class computing for the open systems market
- Sun's advanced virtualization technologies plus proven methodologies and services make Sun SPARC Enterprise servers the ultimate consolidation systems
- Maximum investment protection with the Solaris Application Guarantee
- Choice of up to 16 quad-core SPARC64 VII or dual-core SPARC64 VI processors
- Maximum performance, utilization, and speed to implementation through Sun's high availability, Solaris 10 Adoption, and Consolidation services, combined with a global support network

Investment protection, mainframe-RAS and scalability

The unique "in-box" upgrades offered by the Sun SPARC Enterprise M8000 server protect your IT investment. The option to mix and match different speeds/generations of SPARC64 processors in existing and new M-series servers "future-proofs" your investments and enables easy and low-cost scalability.

In addition, RAS features come standard in the Sun SPARC Enterprise M8000 server—features like automatic recovery with instruction retry, up to 512 GB 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.

Solaris 10: the world's most advanced OS

The foundation of the Sun SPARC Enterprise M8000 server is the Solaris 10 OS, which comes preinstalled on every system. The Solaris 10 OS supports Dynamic Tracing (DTrace), the Solaris Zettabyte File System (ZFS), cryptographic infrastructures, IP filter, and User and Process Rights Management.

Unique Solaris 10 features further enhance system reliability, including Predictive Self-Healing, which automatically identifies and isolates faults and provides specific guidance when action is required.

Advanced consolidation and virtualization

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

Sun SPARC Enterprise M8000 Server

Processor

CPU	Choice of up to 16 SPARC64 VII quad-core or 16 SPARC VI dual-core processors SPARC V9 Architecture, ECC protected
Cache per SPARC64 Level 1	• SPARC64 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: 6 MB on-chip • SPARC64 VI: 5 MB to 6 MB on-chip
Clock speed	• SPARC64 VII: 2.52 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 128 GB of memory per board based on 4 GB DIMMs
Main memory	• Up to 512 GB 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, 60.314 GB/sec stream (copy)
System bus bandwidth (I/O)	• 61 GB/sec peak

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 StorageTek 3X00, 5X00, 6X00, and 9X00 families

Resource management

Dynamic Domains

Solaris 10 Resource Manager including Solaris Containers

Software

Operating system	• SPARC64 VII: Solaris 10 (8/07) • SPARC64 VI: Solaris 10 (11/06)
Languages	• C, C++, Pascal, FORTRAN, Java™
Networking	• ONC™/NFS™, TCP/IP, SunLink™, Netware
System monitoring	• Sun Management Center • Solaris Web Start • Solstice Domain Manager • Solstice Enterprise Manager™ • Solstice Backup™ • xVM Ops Center
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 (meets or exceeds the following requirements)

Safety	• CSA/UL-60950, EN60950, IEC950 CB Scheme with all national deviations
RFI/EMC	• EN55022/CISPR22 Class A, FCC CFR47 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 filesystem; hardened I/O drivers; CPU off-lining; memory page retirement; and cluster support.

Learn More

The Sun SPARC Enterprise M8000 server belongs to a family of servers designed to satisfy a large range of workloads and applications. For more information, visit **sun.com/m8000** or talk to a local Sun sales representative.

Sun Upgrade Advantage Program

The Sun Upgrade Advantage Program (UAP) offers investment protection programs to migrate customers from Sun and competitor platforms, with discounts for trade-in of qualified Sun and competitive servers toward new Sun SPARC Enterprise servers. For more information visit sun.com/ibb/enterprise.

Dimensions and weight

H:	180 cm (70.9 in.)
W:	75 cm (29.5 in.)
D:	126 cm (49.6 in.)
Weight:	700 kg (1540 lb.)

Optional power expansion cabinet required for 3-phase power distribution

H:	180 cm (70.9 in.)
W:	31.7 cm (12.5 in.)
D:	124.4 cm (49 in.)
Weight:	350 kg (770 lb.)

Remote services

Sun Connect

Services

Sun provides an end-to-end portfolio of services designed to accelerate the alignment of IT infrastructure with business needs, optimize usage of IT assets, and contain costs. Sun's expertise helps you address key datacenter challenges, including consolidation, availability, clustering, optimization, and disaster recovery. Leverage Sun's more than 25 years of relentless innovation and depth of expertise to help you architect and deploy a reliable, high-performance Sun SPARC Enterprise M8000 solution that gives you a competitive edge.

Sun System Performance Packs combine top-rated SunSpectrum℠ support with your Sun SPARC Enterprise M8000 server to provide optimized services that save you money compared to purchasing them separately. Sun System Performance Packs include integrated hardware and OS coverage, including Sun technical support, expedited hardware service, SunVIP℠ support, and premium online resources such as on-demand health checks and OS update services.

Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, CA 95054 USA **Phone** 1-650-960-1300 or 1-800-555-9SUN **Web** sun.com

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