

Sun™ SPARC® Enterprise M8000 Server

Mainframe Reliability with Industry-leading Virtualization



Highlights

- 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
- Up to 16 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
- Highly scalable product line — from a single-socket system to a 64-socket, 256-thread system



Designed for large organizations and demanding applications that require mission-critical, 24x7 performance, the high-end Sun™ SPARC® Enterprise™ M8000 server delivers the reliability, availability, and serviceability of traditional mainframes, but without the expense, complexity, and vendor lock-in. Built on the advanced SPARC64® VI 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.

Mainframe-RAS and scalability features

RAS features traditionally found on mainframe-class systems 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, such as power supplies, I/O units, CPU memory boards, and service processors, 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. And fault isolation is provided down to the ASIC level.

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	Up to 16 SPARC64 VI dual core processors SPARC V9 Architecture, ECC protected
Cache per SPARC64 Level 1	128-KB D-cache and 128-KB I-cache
Cache per SPARC64 Level 2	5-MB to 6-MB on-chip
Clock speed	2.28 GHz to 2.4GHz

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/s peak, 69.6-GB/s stream (copy)
System bus bandwidth I/O	61-GB/s 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	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™

Value added software	VERITAS File System, VERITAS Volume Manager Sun Cluster™ Sun HPC ClusterTools™ Java Enterprise System
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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 DPF
Power Option 3	AC power 415 VAC 3-phase STAR (50/60 Hz), 30 A Power Cords: Two direct wired power connections; includes DPF
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; hardened operating system kernel; live operating system upgrades; journaling file system; 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 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/see.

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 SunSpectrumSM 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, SunVIPSM support, and premium online resources such as on-demand health checks and OS update services.

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