Sun™ SPARC® Enterprise M4000 Server

Mainframe-class RAS in a Value-priced Server

Highlights

- Scalable, mainframe-class computing for the open systems market
- Advanced virtualization technologies,methodologies, and services, making Sun SPARC Enterprise servers ideal for consolidation
- Investment protection with the unique Solaris™ Application Guarantee
- Up to four dual-core SPARC64 VI processors
- Maximum system utilization through hardware partitioning, with up to two physical Dynamic Domains, with granularity down to a single socket
- Leading performance, utilization, and speed to implementation through Sun's High Availability, Solaris 10 Adoption, and Consolidation services, combined with a global support network

Combining the power of the Solaris™ Operating System with mainframe RAS features, the midrange Sun™ SPARC® Enterprise™ M4000 server boasts reliability, flexibility, and binary compatibility in a value-priced server. Built on the advanced SPARC64® VI dual-core processor, the Sun SPARC Enterprise M4000 server delivers enterprise-class service levels for essential business applications, databases, and smaller consolidation projects.

Mainframe-class scalability, reliability and flexibility

Mainframe-class RAS features come standard in the Sun SPARC Enterprise M4000 server, including automatic recovery with instruction retry, up to 128 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. In addition, the disks, power supply, and fans are redundant and hot-swappable, while the I/O cards are also hot-swappable. Many features unique to the Solaris 10 OS enhance system reliability even further, including Predictive Self-Healing, which automatically identifies and isolates faults and provides specific guidance when action is required.

For more flexibility, the Sun SPARC Enterprise M4000 server supports up to two Dynamic Domains, with a high level of granularity: CPU board-level domains for large, mission-critical workloads requiring maximum isolation, and single-socket-level domains for finer granularity with high isolation. For maximum flexibility, each system can support thousands of Solaris Containers, which can create many private execution environments within a single Solaris OS instance.

Solaris: the world's most advanced OS

The foundation of the Sun SPARC Enterprise M4000 server is the Solaris 10 OS, which comes preinstalled on every system. Sun guarantees — in writing — that the Solaris 10 OS is 100 percent binary compatible with applications written for earlier Solaris versions. The Solaris 10 OS also supports Dynamic Tracing (DTrace), the Solaris Zettabyte File System (ZFS), cryptographic infrastructures, IP filters, and User and Process Rights Management. What's more, the Solaris OS provides services for identity management, Web and application access, collaboration and communication, portals, and clustering.

Sun SPARC Enterprise M4000 Server

Processor

Up to four 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 on-chip
Clock speed	2.15 GHz

System

CPU	One or two CPU boards (CMU), two CPUs per board
Main memory	Up to 128-GB per domain/system, using 4-GB DIMMs (32-GB per memory board x four boards)
I/O	Up to five I/O slots with four PCIe slots and one PCI-X on one I/O tray Up to 25 PCIe or PCI-X slots with the optional External I/O Expansion Unit
System bus	High-speed, low-latency interconnect system bus with redundant data, address, and response crossbar interconnect
System bus bandwidth (memory)	32-GB/s peak, 12.7-GB/s stream (copy)
System bus bandwidth (I/O)	8-GB/s peak
Service processor for system management	
Up to two Dynamic Domains	

Storage

Boot device	Up to two internal, 2.5-in SAS boot disks
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™ Sun Java Enterprise System

Environmental

AC power	100–240 VAC 1-phase (50/60 Hz), 12 A per power cord, one or two power cords
Plug	NEMA-L6-20P (U.S.) or IEC 309-IP44 (INTL) IEC 60320 C19 connector
Receptacle type	IEC 60320 C20
Operating temperature	5°C to 35°C (41°F to 95°F), 20% to 80% relative humidity, noncondensing
Nonoperating temperature	-20°C to 60°C (-4°F to 140°F) 8% to 80% relative humidity, noncondensing
Altitude	Up to 3048 m (10,000 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.

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.

Learn more

The Sun SPARC Enterprise M4000 server belongs to a family of midrange 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.

Dimensions and weight

H:	26.3 cm (10.34 in.)
W:	44.4 cm (17.48 in.)
D:	83.1 cm (32.71 in.)
Weight:	85 kg (187 lb.)

Remote services

Sun Connect

Services

From design and implementation to support and smart sourcing, 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 M4000 solution that gives you a competitive edge.

Sun™ System Performance Packs combine top-rated SunSpectrum℠ support with your Sun SPARC Enterprise M4000 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.

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