

Sun™ SPARC® Enterprise M5000 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, which make Sun SPARC Enterprise servers ideal for consolidation
- Solaris™ Application Guarantee for maximum investment protection
- Up to eight dual-core, SPARC64 VI processors
- Maximum system utilization through hardware partitioning, with up to four Dynamic Domains, providing 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 RAS features traditionally found on mainframe-class systems, the midrange Sun™ SPARC® Enterprise™ M5000 server delivers leading reliability, flexibility, and binary compatibility in a value-priced server. Built on the advanced, SPARC64 VI dual-core processor, the Sun SPARC Enterprise M5000 server provides enterprise-class service levels for medium-size to large databases, scientific/engineering applications, and consolidation/virtualization projects.

Mainframe-class RAS in a highly flexible system

A surprising number of mainframe-class RAS features come standard in the Sun SPARC Enterprise M5000 server, including automatic recovery with instruction retry, up to 256 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. Plus, the disks, power supply, and fans are redundant and hot-swappable, and the I/O cards are hot-swappable as well. Other Solaris 10 features that further enhance system reliability include Predictive Self-Healing, which automatically identifies and isolates faults and provides guidance when remediation is needed.

To enhance flexibility, the Sun SPARC Enterprise M5000 server supports up to four Dynamic Domains — CPU board-level domains for large, mission-critical workloads that depend on maximum isolation, and single-socket-level

domains for finer granularity with high isolation. For additional flexibility, each system can support thousands of Solaris Containers, which enable a single Solaris 10 OS instance to support many isolated execution environments.

Solaris: the world's most advanced OS

The Solaris 10 OS is preinstalled on every Sun SPARC Enterprise M5000 server and is an integral part of the system's advanced design. Sun goes so far as to guarantee that applications written for the Solaris 10 OS are 100 percent binary compatible with SPARC/Solaris applications built for earlier versions of the OS. And the Solaris 10 OS also supports Dynamic Tracing (DTrace), Solaris ZFS, cryptographic infrastructures, IP filter, and User and Process Rights Management. In addition, the Solaris OS provides industry-leading network identity services, plus Web and application services, collaboration and communication services, portal services, and clustering.

Sun SPARC Enterprise M5000 Server

Processor

Up to eight 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	Up to four CPU boards (CMU), two CPUs per board
Main memory	Up to 256-GB per domain/system, using 4-GB DIMMS (32-GB per memory board x eight boards)
I/O	Up to 10 I/O slots with eight PCIe slots each and two PCI-X (four PCIe and one PCI-X per I/O tray) Up to 50 PCIe or PCI-X slots with 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)	64-GB/s peak, 25.2-GB/s stream (copy)
System bus bandwidth (I/O)	16-GB/s peak
Service processor for system management	
Up to four Dynamic Domains	

Storage

Boot device	Up to 4 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
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Environmental

AC power	100–240 VAC 1-phase (50/60 Hz), 12 A per power cord, two to four 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 M5000 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:	44.02 cm (17.33 in.)
W:	44.4 cm (17.48 in.)
D:	81.57 cm (32.10 in.)
Weight:	275 kg (605 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 M5000 solution that gives you a competitive edge.

Sun™ System Performance Packs combine top-rated SunSpectrumSM support with your Sun SPARC Enterprise M5000 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.