SPARC ENTERPRISE M5000 SERVER

MAINFRAME-CLASS RAS AND UNMATCHED INVESTMENT PROTECTION

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
- Mix and match up to eight SPARC64 VI and/or SPARC64 VII/VII+ processors in the same system
- 100% binary compatibility with earlier versions of your applications
- Built-in, no-cost, and flexible virtualization technology
- Ideal consolidation platform with up to four Dynamic Domains and support for thousands of Oracle Solaris Containers
- Accelerates database applications by 2x, cuts transaction times in half with Oracle's Storage F5100 Flash Array

Oracle's midrange SPARC Enterprise M5000 server delivers leading reliability, flexibility, and binary compatibility in a value-priced server by combining the power of the Oracle Solaris operating system with RAS features traditionally found on mainframe-class systems. Built on the latest quad-core SPARC64 VII/VII+ or dual-core SPARC64 VI processor, the SPARC Enterprise M5000 server provides enterprise-class service levels for medium-to-large databases, scientific and engineering applications, and consolidation/virtualization projects.

The SPARC Enterprise M5000 server delivers main-frame class reliability, availability, and serviceability.

Protect Your Investment with Mainframe-Class Reliability, Availability, and Serviceability in a Highly Flexible System

Uniquely protect IT investments with the SPARC Enterprise M5000 servers. Oracle offers no forklift upgrades and you can mix and match different speeds/generations of SPARC64 processors in existing and new M-series servers. Benefit from Oracle's long term SPARC Enterprise road map and "future-proof" investments with the SPARC Enterprise M5000 server. What's more, many mainframe class RAS features come standard in the SPARC Enterprise M5000 server, including automatic recovery with instruction retry, up to 512 GB of

system memory with error-correcting code (ECC) protection and 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.

To enhance flexibility, the 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 Oracle Solaris Containers, which enable a single Oracle Solaris 10 instance to support many isolated execution environments.

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 M5000 server is preinstalled with Oracle Solaris 10. Oracle Solaris 10 also delivers revolutionary features, including Dynamic Tracing (DTrace), Oracle Solaris ZFS, crypto- graphic infrastructures, IP filter, and User and Process Rights Management.

SPARC Enterprise M5000 Server Specifications

Processor	
Up to eight SPARC64 VII/VII+ quad-core processors or eight dual-core SPARC64 VI processors	
Currently offered	• SPARC64 VII+ • SPARC64 VI
Also supported	• SPARC64 VII
SPARC V9 Architecture, ECC protected	
Cache per SPARC64 Level 1	• SPARC64 VII+: 64 KB D-cache and 64 KB I-Cache • 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+ 2.66GHz: 11 MB on-chip • SPARC64 VII 2.53GHz: 5.5 MB on-chip • SPARC64 VI 2.15GHz: 5 MB on-chip
Clock speed	• SPARC64 VII+: 2.66 GHz • SPARC64 VII: 2.53 GHz • SPARC64 VI: 2.15 GHz
System	
CPU	One to four CPU boards (CMU), two CPUs per board
Main memory	Up to 512 GB per domain/system, using 8 GB DIMMs (64 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/sec peak, 24.831 GB/sec stream (copy)
System bus bandwidth	• 16 GB/sec peak

(I/O)	
Service processor for system management	
Up to four Dynamic Domains	

Storage	
Boot device	• Up to four internal, 2.5 in. SAS boot disks
External	• Direct, SAN or NAS attached to Sun StorageTek compatible tape libraries, flash array, and disk arrays, including StorageTek 3X00, 5X00, 6X00, 9X00, and Jx000 families and Sun Storage F5100 Flash Array
Resource Management	
Dynamic Domains	
Oracle Solaris 10 Resource Manager including Oracle Solaris Containers	
Software	
Operating system	• SPARC64 VII+ (2.66GHz): Oracle Solaris 10 (10/09) and XCP 1100 or later • SPARC64 VII (2.53GHz): Oracle Solaris 10 (08/07) or later (requires installation of S10 Patch Bundle MU8) and XCP 1090 or later SPARC64 VI (2.15GHz): Oracle Solaris 10 (11/06) or later (plus patches) and XCP 1040 or later
Software included	• Oracle Solaris 10 09/10 Preloaded • XCP Firmware
System monitoring	• Oracle Enterprise Manager Ops Center
Environmental	
AC power	100–240 V AC 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 93% relative humidity, noncondensing
Altitude	Up to 3000 m (9,842 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 • Dynamic L1 and L2 cache line degradation • ECC and Extended ECC protection for memory, memory mirroring, and Predictive Self-Healing • Fault-isolated Dynamic Domains • Dynamic Reconfiguration • Auto Diagnosis and Recovery • Online Upgrades • Concurrent maintenance of disks, fans, and power supplies • Redundant network connections • Redundant storage connections • Live operating system upgrades • Journaling file system • Hardened I/O drivers • Dynamic individual core or CPU offlining • Memory page retirement • Cluster support	
Dimensions and Weight	
Height	44.0 cm (17.33 in.)
Width	44.4 cm (17.48 in.)
Depth	81.0 cm (31.9 in.)
Weight	275 lb. (125 kg)

Services

Visit www.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 our products.

Contact Us

For more information about Oracle's SPARC Enterprise M5000 server, please visit oracle.com/sun or call +1.800.786.0404 to speak to an Oracle representative.

Oracle is committed to developing practices and products that help protect the environment

Hardware and Software, Engineered to Work Together

ORACLE