

Datasheet

Fujitsu SPARC Enterprise M9000 server

Everything your mission critical enterprise application needs in stability, scalability and asset protection

Only the best with Fujitsu SPARC Enterprise

Based on robust SPARC architecture and running the leading Oracle Solaris 11, Fujitsu SPARC Enterprise servers are ideal for customers needing highly scalable, reliable servers that increase their system utilization and performance through virtualization.

The combined leverage of Fujitsu's expertise in mission-critical computing technologies and high-performance processor design, with Oracle's expertise in open, scalable, partition-based network computing, provides the overall flexibility to meet any task.

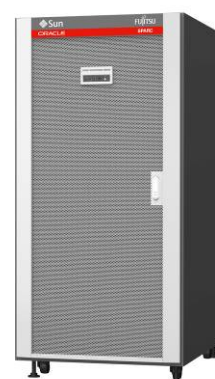
A SPARC of steel

Fujitsu SPARC Enterprise M9000 is the nearest thing you can get to an open mainframe. Absolutely rock solid, dependable and sophisticated, but with the total Solaris binary compatibility necessary to both protect your investments and enhance your business.

Its rich virtualization eco-system of extended partitioning and Solaris Containers coupled with dynamic reconfiguration, means non-stop operation and total resource utilization at no extra cost. Benchmark leading performance with the world's best applications and outstanding processor scalability just add to the capabilities of this most expandable of system platform.



Base cabinet and Expansion cabinet



Base cabinet



Features and benefits

Main features	Benefits
<p>Flexible investment protection</p> <ul style="list-style-type: none">■ All SPARC64 VI dual-core processor and SPARC64 VII/VII+ quad-core processor can be mixed and matched in the servers and even partitions.■ Supports up to 24 physical partitions and thousands of Solaris Containers with dynamic reconfiguration and optional Fujitsu PRIMECLUSTER inter-partition clustering. <p>Reliability that makes you forget</p> <ul style="list-style-type: none">■ Engineered like a mainframe with outstanding self-healing capability.■ All circuits, processors and memory are constantly monitored to ensure correct and continuous operation. <p>World's most advanced OS, Oracle Solaris 11</p> <ul style="list-style-type: none">■ Whole network can be virtualized by mapping physical network entities onto virtualization entities■ Solaris 10 Containers can help applications run on Solaris 11■ Boot Environment greatly reduces downtime for server updates■ Highest security including delegated administration can minimize risks of attacks	<ul style="list-style-type: none">■ Investment protection for years to come, less risk and lower cost of ownership.■ Scales to nearly twice the performance with the same number of sockets and similar space and power requirements.■ Fast deployment of new applications with total availability for business critical processes. <ul style="list-style-type: none">■ Best suited for the largest databases, financial and high volume applications.■ Manages itself so you don't have to.■ Self-managing hardware also maximizes the opportunity for applications to work at peak performance. <ul style="list-style-type: none">■ Minimizes costs of server administration and maintenance■ Application asset protection by non-disruptive upgrades■ Maximum system operations time due to online systems update ability■ Protects business credibility by eliminating information exposure and business disruption risks

Topics

Flexible investment protection

Fujitsu has invested in your future by ensuring that new processors can be installed in existing systems. Even better they can be mixed, on the same system boards and in the same physical partitions, with previous processors. This provides unrivalled investment protection and - as you don't need to replace servers so often - it can also reduce your overall IT spends.

As advances in processor technology have continued, Fujitsu SPARC Enterprise and SPARC 64 processors provide the ability to significantly increase performance over time. You can either add more processors or employ new processors with almost twice the performance. In the latter case the increased performance comes with almost no increase in data center power consumption or additional heat management.

To ensure that all that performance is fully used, support for up to 24 physical partitions and thousands of Solaris Containers lets you quickly and dynamically reconfigure the system for both existing and new business processes. Plus, in conjunction with Fujitsu PRIMECLUSTER middleware you can also implement fully mission-critical clustered solutions, between physical partitions, inside your M9000.

Reliability that makes you forget

When Fujitsu designed Fujitsu SPARC Enterprise M9000 they looked to their long mainframe heritage to provide the quality and robustness needed in a major UNIX business-critical platform. The result is the most reliable, most scalable and self-sustaining system available with the world's largest application systems and databases. By placing the widest range of error checking and correction systems directly into the hardware, the platform manages itself. This relieves system administrators from most of the difficult diagnostic and recovery tasks required with many other systems. Once you own Fujitsu SPARC Enterprise system you will soon forget the operational problems of the past. Like the engine management systems in the finest cars, everything is monitored and self-managed to ensure all applications work nonstop at the peak of their capability.

World's most advanced OS, Oracle Solaris

Solaris is the only OS that has the scalability, security, and diagnostic features, to fully and quickly comprehend the situation, if a major application problem occurs. That is one of the reasons Solaris has the largest application portfolio and why it is the development platform of choice for many of the world's major business applications.

Technical details

Processor		Base cabinet	Base cabinet & expansion cabinet
Processor quantity and type		2–32x SPARC64 VII/VII+ or SPARC64 VI	2–64x SPARC64 VII/VII+ or SPARC64 VI
Processor options		SPARC64 VII+ quad-core processor (3.0GHz, 128KB L1 cache on core, 12MB L2 cache per chip)	
		SPARC64 VII quad-core processor (2.88GHz, 128KB L1 cache on core, 6MB L2 cache per chip)	
		SPARC64 VI dual-core processor (2.4GHz, 256KB L1 cache on core, 6MB L2 cache per chip)	
Memory			
Memory slots		256 slots	512 slots
Memory slot type		DDR2 SDRAM	
Memory capacity (min. – max.)		32GB–2TB	64GB–4TB
Memory protection		ECC	
		Extended ECC	
		Memory Mirroring support	
		Memory Patrolling	
Memory modules		32GB Memory Expansion (16x 2GB DIMM)	
		64GB Memory Expansion (16x 4GB DIMM)	
		128GB Memory Expansion (16x 8GB DIMM)	
Drive bays			
Hard disk bay configuration		32x 2.5-inch hot-swap SAS	64x 2.5-inch hot-swap SAS
Hard disk drives		146GB 2.5-inch 10,000rpm	
		300GB 2.5-inch 10,000rpm	
Tape drive bay configuration		1x 3.5-inch hot-swap bay	2x 3.5-inch hot-swap bay
Tape drives		DAT72 (option)	
Optical drive bay configuration		1x 128mm bay	2x 128mm bay
Optical drives		CD-RW/DVD-RW (8xDVD-ROM, 6xDVD-RW, 24xCD/CD-R, 10xCD-RW)	
Interfaces			
Remote Cabinet Interface (RCI)		2 port	
Service LAN for XSCF		2ports (10/100Mbit/s, RJ45)	4 ports (10/100Mbit/s, RJ45)
Service serial for XSCF		1 port (RS232C, RJ45)	2 port (RS232C, RJ45)
Slots			
PCI Express		64x PCI Express (x8, full-height, short)	128x PCI Express (x8, full-height, short)
Note		Expandable to 224 slots (PCI Express, PCI-X) when using 16x External I/O Expansion Units	Expandable to 288 slots (PCI Express, PCI-X) when using 16x External I/O Expansion Units

Supported operating systems		Base cabinet	Base cabinet & expansion cabinet
Supported operating systems	SPARC64 VII+	Oracle Solaris 10 8/07 or later Oracle Solaris 11	
	SPARC64 VII	Oracle Solaris 10 8/07 or later Oracle Solaris 11	
	SPARC64 VI	Oracle Solaris 10 11/06 or later Oracle Solaris 11	
Operating system release link		www.fujitsu.com/sparcenterprise/manual/notes/	
Server management			
Service processor		eXtended System Control Facility (XSCF)	
Supported software		Enhanced Support Facility Server System Manager	
Virtualization			
Virtualization features		Hardware partitioning Dynamic Reconfiguration Capacity on demand Solaris Container	

RAS features		Base cabinet	Base cabinet & expansion cabinet
Processor RAS		Integer register protected by ECC	
		L1 cache protected by parity and redundancy and L2 cache protected by ECC	
		Dynamic way degradation in L1, L2 cache and TLB	
		Hardware Instruction Retry	
		Dynamic chip/core degradation	
Redundant components		Operation of processor is recorded automatically	
		Memory (mirror configuration)	
		Hard disk drive (software RAID)	
		PCI card (multi-path configuration)	
		Fan	
Hot-swap components		Power supply unit	
		Power system	
		Service processor (XSCF)	
		CPU memory unit (CMU)	
		I/O unit (IOU)	
		Hard disk drive (software RAID)	
		PCI card	
		Tape drive (DAT)	
		Optical drive (CD-RW/DVD-RW)	
		External I/O expansion units	
		Fan	
		Power supply unit	
		Service processor (XSCF)	
		Memory	
		Hard disk drive (software RAID)	
Degradation features	Dynamic degradation	Fan	
	Static degradation	Power supply unit	
		Service processor (XSCF)	
		CPU memory unit (CMU)	
		Processor (chip, core, cache)	
		Memory	
		I/O unit (IOU)	
		Hard disk drive	
		PCI cards	
		Crossbar	
Dimensions / Weight	Floor-stand (W x D x H)	Fan	
		Power supply unit	
		System clock	
Dimensions / Weight	Floor-stand (W x D x H)	850 x 1,260 x 1,800 mm	1,674 x 1,260 x 1,800 mm
		33.5 x 49.6 x 70.9 inches	65.9 x 49.6 x 70.9 inches
Weight		940 kg	1,880 kg
		2,072 lb.	4,136 lb.

Environment

	Base cabinet	Base cabinet & expansion cabinet
Sound pressure (LpAm)	68 dB (A)	69 dB (A)
Operating ambient temperature	5–32°C (depending on altitude) 41–89.6°F (depending on altitude)	
Operating relative humidity	20–80%	
Operating altitude	0–3,000 m 0–10,000 ft	

Electrical values

Rated voltage range	Single-phase	AC 200–240 V	
	3-phase (delta)	AC 200–240 V	
	3-phase (star)	AC 380–415 V	
Rated frequency range		50/60 Hz	
Active power max.		20.22 kW	40.44 kW
Apparent power max.		21.45 kVA	42.89 kVA
Heat emission		72,792 kJ/h	145,584 kJ/h

Compliance

Europe	CE RoHS
USA/Canada	FCC UL/CSA
Japan	VCCI
China	Chinese RoHS
Korea	MIC
Taiwan	BSMI
Compliance note	There is general compliance with the safety requirements of major countries. National approvals required in order to satisfy statutory regulations or for other reasons can be applied for on request.

Warranty and support services

Service link	www.fujitsu.com/support
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More information

Fujitsu platform solutions

In addition to Fujitsu SPARC Enterprise M9000, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Dynamic Infrastructures

With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure-as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

Computing Products

www.fujitsu.com/global/services/computing/

- PRIMERGY: Industrial standard server
- SPARC Enterprise: UNIX server
- PRIMEQUEST: Mission-critical IA server
- ETERNUS: Storage system
- BS2000/OSD: Mainframe
- GS21: Mainframe
- ESPRIMO: Desktop PC
- LIFEBOOK: Notebook PC
- CELSIUS: Workstation

Software

www.fujitsu.com/software/

- Interstage: Application infrastructure software
- Systemwalker: System management software
- Symfaware: Database software
- PRIMECLUSTER: Clustering software

More information

Learn more about Fujitsu SPARC Enterprise M9000, please contact your Fujitsu sales representative, Fujitsu business partner, or visit our website.

www.fujitsu.com/sparcenterprise/

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT. Please find further information at: www.fujitsu.com/global/about/environment/



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