

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. | <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. |
| <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. | <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. |
| <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">■ 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 Operation of processor is recorded automatically | |
| Redundant components | | Memory (mirror configuration) Hard disk drive (software RAID) PCI card (multi-path configuration) Fan Power supply unit Power system Service processor (XSCF) | |
| Hot-swap components | | 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) | |
| Degradation features | Dynamic degradation | Memory Hard disk drive (software RAID) Fan Power supply unit Service processor (XSCF) | |
| | Static degradation | CPU memory unit (CMU) Processor (chip, core, cache) Memory I/O unit (IOU) Hard disk drive PCI cards Crossbar Fan Power supply unit System clock | |
| Dimensions / Weight | | | |
| Floor-stand (W x D x H) | | 850 x 1,260 x 1,800 mm 33.5 x 49.6 x 70.9 inches | 1,674 x 1,260 x 1,800 mm 65.9 x 49.6 x 70.9 inches |
| Weight | | 940 kg 2,072 lb. | 1,880 kg 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 |

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
- Symfoware: 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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2011-11-11 WW-EN