

# Datasheet Fujitsu SPARC Enterprise M8000 server

Provides the enterprise start point for large database. ERP and OLTP applications plus total stability, flexibility 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

As you would expect in a server aimed at your most important tasks, Fujitsu SPARC Enterprise M8000 has all the qualities of a mainframe. Absolutely rock solid, dependable and sophisticated, it has 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 attractive open system platform.



# Features and benefits

Main features	Benefits
<p><b>Flexible investment protection</b></p> <ul style="list-style-type: none"><li>■ All SPARC64 VI dual-core processor and SPARC64 VII/VII+ quad-core processor can be mixed and matched in the servers and even partitions.</li><li>■ Supports up to 16 physical partitions and thousands of Solaris Containers with dynamic reconfiguration and optional Fujitsu PRIMECLUSTER inter-partition clustering.</li></ul>	<ul style="list-style-type: none"><li>■ Investment protection for years to come, less risk and lower cost of ownership.</li><li>■ Scales to nearly twice the performance with the same number of sockets and similar space and power requirements.</li><li>■ Fast deployment of new applications with total availability for business critical processes.</li></ul>
<p><b>Reliability that makes you forget</b></p> <ul style="list-style-type: none"><li>■ Engineered like a mainframe with outstanding self-healing capability.</li><li>■ All circuits, processors and memory are constantly monitored to ensure correct and continuous operation.</li></ul>	<ul style="list-style-type: none"><li>■ Best suited to the needs of large databases, financial and high volume applications.</li><li>■ Manages itself so you don't have to.</li><li>■ Self-managing hardware also maximizes the opportunity for applications to work at peak performance.</li></ul>
<p><b>World's most advanced OS, Oracle Solaris 11</b></p> <ul style="list-style-type: none"><li>■ Whole network can be virtualized by mapping physical network entities onto virtualization entities</li><li>■ Solaris 10 Containers can help applications run on Solaris 11</li><li>■ Boot Environment greatly reduces downtime for server updates</li><li>■ Highest security including delegated administration can minimize risks of attacks</li></ul>	<ul style="list-style-type: none"><li>■ Minimizes costs of server administration and maintenance</li><li>■ Application asset protection by non-disruptive upgrades</li><li>■ Maximum system operations time due to online systems update ability</li><li>■ Protects business credibility by eliminating information exposure and business disruption risks</li></ul>

# 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 (up to 64 cores with Fujitsu SPARC Enterprise M8000) 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 16 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 M8000.

## Reliability that makes you forget

When Fujitsu designed Fujitsu SPARC Enterprise M8000 they looked to their long mainframe heritage to provide the quality and robustness needed in a major UNIX business-critical platform. The result is a most reliable, and highly scalable, self-sustaining system. That works well with the world's most popular business 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 non-stop 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

### Processor quantity and type

2-16x SPARC64 VII+, SPARC64 VII, 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

128 slots

### Memory slot type

DDR2 SDRAM

### Memory capacity (min. - max.)

16GB-1TB

### 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

16x 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

### Tape drives

DAT72 (option)

### Optical drive bay configuration

1x 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

2 ports (10/100Mbit/s, RJ45)

### Service serial for XSCF

1 port (RS232C, RJ45)

## Slots

### PCI Express

32x PCI Express (x8, full-height, short)

### Note

Expandable to 112 slots (PCI Express, PCI-X) when using 20x External I/O Expansion Units

### Supported operating systems

Supported operating systems	SPARC64 VII+  SPARC64 VII  SPARC64 VI	Oracle Solaris 10 8/07 or later Oracle Solaris 11 Oracle Solaris 10 8/07 or later Oracle Solaris 11 Oracle Solaris 10 11/06 or later Oracle Solaris 11
Operating system release link	<a href="http://www.fujitsu.com/sparcenterprise/manual/notes/">www.fujitsu.com/sparcenterprise/manual/notes/</a>	

### 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
-------------------------	---

<b>RAS features</b>	
<b>Processor RAS</b>	<u>Integer register protected by ECC</u> <u>L1 cache protected by parity and redundancy and L2 cache protected by ECC</u> <u>Dynamic way degradation in L1, L2 cache and TLB</u> <u>Hardware Instruction Retry</u> <u>Dynamic chip/core degradation</u> <u>Operation of processor is recorded automatically</u> <u>Memory (mirror configuration)</u> <u>Hard disk drive (software RAID)</u> <u>PCI card (multi-path configuration)</u> <u>Fan</u> <u>Power supply unit</u> <u>Power system</u> <u>Service processor (XSCF)</u> <u>CPU memory unit (CMU)</u> <u>I/O unit (IOU)</u> <u>Hard disk drive (software RAID)</u> <u>PCI card</u> <u>Tape drive (DAT)</u> <u>Optical drive (CD-RW/DVD-RW)</u> <u>External I/O expansion units</u> <u>Fan</u> <u>Power supply unit</u> <u>Service processor (XSCF)</u> <u>Memory</u> <u>Hard disk drive (software RAID)</u> <u>Fan</u> <u>Power supply unit</u> <u>Service processor (XSCF)</u> <u>CPU memory unit (CMU)</u> <u>Processor (chip, core, cache)</u> <u>Memory</u> <u>I/O unit (IOU)</u> <u>Hard disk drive</u> <u>PCI cards</u> <u>Crossbar</u> <u>Fan</u> <u>Power supply unit</u>
<b>Redundant components</b>	
<b>Hot-swap components</b>	
<b>Degradation features</b>	<b>Dynamic degradation</b>  <b>Static degradation</b>

### Environment

Sound pressure (LpAm)	67 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.	10.50 kW	
Apparent power max.	10.98 kVA	
Heat emission	37,800 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	<a href="http://www.fujitsu.com/support">www.fujitsu.com/support</a>
--------------	--

# More information

## Fujitsu platform solutions

In addition to Fujitsu SPARC Enterprise M8000, 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/](http://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/](http://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 M8000, please contact your Fujitsu sales representative, Fujitsu business partner, or visit our website.  
[www.fujitsu.com/sparcenterprise/](http://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/](http://www.fujitsu.com/global/about/environment/)



## Copyright

©Copyright 2010 Fujitsu Limited. Fujitsu, the Fujitsu logo, PRIMERGY, PRIMEQUEST, ETERNUS, BS2000/OSD, GS21, ESPRIMO, LIFEBOOK, CELSIUS, Interstage, Systemwalker, Symfoware, PRIMECLUSTER are trademarks or registered trademarks of Fujitsu Limited in Japan and other countries. GLOVIA is a trademark of GLOVIA International LLC in the United States and other countries. UNIX is a registered trademark of The Open Group in the United States and other countries. All SPARC trademarks are trademarks or registered trademarks of SPARC International, Inc. in the United States and other countries. Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other company, product and service names may be trademarks or registered trademarks of their respective owners.

## Disclaimer

Technical data subject to modification and delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.

## Contact

FUJITSU LIMITED  
Website: [www.fujitsu.com](http://www.fujitsu.com)  
2011-11-11 WW-EN