

## FUJITSU M10-1 SERVER

EXTREME PERFORMANCE AND MISSION-CRITICAL AVAILABILITY AT AN ENTRY-LEVEL PRICE

### KEY FEATURES

- A compact entry-level server that scales up to 16 cores.
- Ideal for data center integration and virtualization.
- The 16-core 2.8 GHz SPARC64 X+, and the 3.2 GHz SPARC64 X+ processors and the 8-core 3.7 GHz SPARC64 X+ processor, with supercomputer technology, provide superior performance for enterprise workloads such as OLTP, ERP, BIDW, SCM, and CRM.
- Software-on-chip instructions on the SPARC64 X+ processors accelerate key database functions.
- CPU Activation economically and rapidly meets capacity requirements.
- Flexible resource configuration using Oracle VM Server for SPARC and Oracle Solaris Zones virtualization technologies.
- Power-saving features are built in to the processor and the server.
- Mainframe-class RAS features for 24/7 mission-critical applications.
- The server is managed by the independent service processor's eXtended System Control Facility (XSCF).
- Firmware updates during system operation.

*The Fujitsu M10-1 is a high performance, compact entry-level server with high reliability that is ideal for data center integration and virtualization. It supports as many as 16 cores, large memory capacity, and a large capacity disk in a space-saving one-rack-unit (1U) chassis. It can handle low-end and midrange enterprise applications. The Fujitsu M10-1 uses the latest SPARC64 X+ (“ten plus”) processors. Customers can enjoy the benefits of Capacity on Demand (COD) with core-level CPU Activation to grow processor resources one core at a time. Innovative Software on Chip (SWOC) capabilities of SPARC64 X+ processors delivers dramatic performance increases by implementing key software functions directly in hardware. The Fujitsu M10-1 server enables highly flexible system configuration with a suite of built-in virtualization technologies included at no cost: Oracle VM Server for SPARC and Oracle Solaris Zone. The Fujitsu M10-1 supports the Oracle Solaris operating system which includes a binary compatibility guarantee that protects software investments.*



### Keep Pace with Expanding Needs

The Fujitsu M10-1 server was designed to help IT managers reduce Total Cost of Ownership (TCO), rapidly deploy new business services, and reduce server sprawl by consolidating existing systems more cost-effectively and more reliably. IT managers can take advantage of enterprise-class reliability, availability, and scalability (RAS) features in a 1U box and can incrementally grow capacity and economically satisfy their business requirements with no wasted resources, just improved utilization that will meet their IT needs now and into the future.

### Consolidate and Lower Costs

The compact and flexible Fujitsu M10-1 server delivers greatly improved business efficiency. IT managers can consolidate many separate entry-level servers onto one Fujitsu M10-1 server and reduce space and power consumption. In addition to providing eco-efficiencies and mainframe-class reliability features, the Fujitsu M10-1 server is easy to manage and comes with a suite of built-in virtualization technologies at no additional cost. Combined with Oracle and partner service offerings, the Fujitsu M10-1 enables customers to capture new revenue streams and shorten their time to market while dramatically improving throughput, energy efficiency, and service-level predictability at reduced costs.

Fujitsu M10-1 Server Specifications	
<b>Processor</b>	
CPU	SPARC64 X+: 16-core or 8-core, dual-threaded SPARC V9 architecture, Error Checking and Correction (ECC) protection
Primary cache per core	64 K data cache and 64 K instruction cache
Secondary cache per processor	22 MB (16-core SPARC64 X+), 24 MB (8-core SPARC64 X+)
Clock speed	2.8 GHz (16-core SPARC64 X+) / 3.2 GHz (16-core SPARC64 X+) / 3.7 GHz (8-core SPARC64 X+)
Software on Chip features	<ul style="list-style-type: none"> <li>• SIMD Single Instruction Multiple Data Vector Processing</li> <li>• Extended Floating-Point Registers</li> <li>• Decimal Floating-Point Processing. IEEE 754 standard and Oracle Number are supported.</li> <li>• Cryptographic Processing. Supported encryption modes are AES, DES, 3DES, RSA and SHA.</li> </ul>
<b>System</b>	
CPU	One 16-core or one 8-core CPU
Main memory	Up to 1 TB with 64 GB DIMM
I/O	<ul style="list-style-type: none"> <li>• Three PCI Express 3.0 short, low-profile slots (eight lanes)</li> <li>• Up to 23 PCI Express slots with optional PCI expansion unit</li> <li>• 4-port GbE, 1-port SAS, 2-port USB</li> </ul>
Memory bandwidth (per chip)	102 GB/sec
Service processor	One
<b>Storage</b>	
Internal device	Up to eight 900 GB or 600 GB internal 2.5-in. SAS HDDs or 400 GB SAS SSDs
<b>Software</b>	
Operating system	<ul style="list-style-type: none"> <li>• Oracle Solaris 11.1 or later</li> <li>• Oracle Solaris 10 1/13 or later</li> </ul>
Software Included	<ul style="list-style-type: none"> <li>• Oracle Solaris 11.2 which includes Oracle VM Server for SPARC</li> <li>• Oracle Solaris ZFS (default file system)</li> </ul>
Management software	<ul style="list-style-type: none"> <li>• XSCF monitoring/control facility</li> <li>• XSCF software, which manages hardware configuration and health, domain configuration and status, error monitor, and notification</li> </ul>
System monitoring	Oracle Enterprise Manager Ops Center
Virtualization	<p>Built-in, no-cost Oracle VM Server for SPARC and Oracle Solaris Zones provide the flexibility and power of up to 32 virtual systems in a single Fujitsu M10-1 server.</p> <p>Applications certified only for Oracle Solaris 8 or Oracle Solaris 9 may be installed in an Oracle Solaris legacy zone in an Oracle Solaris 10 1/13 guest domain.</p>
<b>Reliability, Availability, and Serviceability</b>	
Key features	<ul style="list-style-type: none"> <li>• End-to-end ECC protection</li> <li>• Guaranteed data path integrity</li> <li>• Automatic recovery with instruction retry</li> <li>• Dynamic L1 and L2 cache way degradation</li> <li>• ECC and Extended ECC protection for memory, memory mirroring, periodic memory patrol, and predictive self-healing</li> <li>• Hardware redundancy for memory, HDD/SSD, PSU, and fan</li> <li>• Hot-pluggable HDD/SSD, PSU, and fan. Hot-plug of PCI card supported with the PCI Expansion Unit.</li> <li>• Live operating system upgrades</li> <li>• Firmware updates during system operation</li> </ul>

Fujitsu M10-1 Server Specifications – continued	
<b>Environment</b>	
AC power	100 V to 120 V $\pm$ 10% (50/60 Hz), 200 V to 240 V $\pm$ 10% (50/60 Hz)
Power consumption	Maximum 849 W (SPARC64 X+)
Operating temperature	<ul style="list-style-type: none"> <li>• 5° to 35° C (41° to 95° F) at an altitude of 0 m to 500 m</li> <li>• 5° to 33° C (41° to 91° F) at an altitude of 501 m to 1,000m</li> <li>• 5° to 31° C (41° to 88° F) at an altitude of 1,001 m to 1,500 m</li> <li>• 5° to 29° C (41° to 84° F) at an altitude of 1,501 m to 3,000 m</li> </ul>
Non-operating temperature	<ul style="list-style-type: none"> <li>• -20° to 60° C (packed)</li> <li>• 0° to 50°C (non-packed)</li> </ul>
Altitude	Up to 3,000 m (9,843 ft.)
Acoustic Noise	<ul style="list-style-type: none"> <li>• 7.4 B (SPARC64 X+)</li> <li>• 58 dB (SPARC64 X+)</li> </ul>
Cooling	<ul style="list-style-type: none"> <li>• Input voltage of 100 to 120 VAC: 2,900 kJ/hr, 2,750 BTU/hr (SPARC64 X+)</li> <li>• Input voltage of 200 to 240 VAC: 2,820 kJ/hr, 2,670 BTU/hr (SPARC64 X+)</li> </ul>
<b>Dimensions and Weight</b>	
Height	4.25 cm (1.67 in.)
Width	43.1 cm (17.0 in.)
Depth	72.1 cm (28.4 in.)
Weight	18 kg (39.7 lb.)
<b>Regulations</b>	
Safety	<ul style="list-style-type: none"> <li>• UL60950-1, 2nd edition + A1</li> <li>• CSA C22.2 No. 60950-1-07 + A1</li> <li>• EN60950-1:2006 + A1:2010 +A2:2011</li> <li>• IEC60950-1:2005, 2nd edition + A1:2009 (evaluated to all CB countries)</li> <li>• CFR21 Part 1040</li> <li>• IEC60825-1</li> <li>• IEC60825-2</li> <li>• CB Scheme with all country deviations</li> <li>• CNS14336</li> <li>• GB4943.1-2011</li> <li>• S-Mark</li> <li>• GOST-R certification mark</li> </ul>
RFI/EMC	<ul style="list-style-type: none"> <li>• EN55022:2010</li> <li>• VCCI (2012)</li> <li>• FCC Part-15 (2012)</li> <li>• CNS13438:2006 (CISPR 22:2005 +A1:2005)</li> <li>• KCC</li> <li>• GOST-R certification mark</li> <li>• S-Mark</li> <li>• EN61000-3-2:2006 + A1:2009 + A2:2009</li> <li>• EN61000-3-3:2008</li> <li>• JIS C 61000-3-2 (2011)</li> <li>• ICES-003 Class A</li> <li>• AS/NZS CISPR 22 (2009)</li> <li>• GB9254-2008</li> <li>• GB17625.1-2003</li> <li>• CISPR 22:2008</li> </ul>
Immunity	<ul style="list-style-type: none"> <li>• EN55024:2010</li> <li>• IEC61000-4-2</li> <li>• IEC61000-4-3</li> <li>• IEC61000-4-4</li> <li>• IEC61000-4-5</li> <li>• IEC61000-4-6</li> <li>• IEC61000-4-8</li> <li>• IEC61000-4-11</li> </ul>
Telecommunications	EN 300 386 V1.4.1 (2008), GR-3160-CORE

## Warranty

Visit [oracle.com/us/support/index.html](http://oracle.com/us/support/index.html) for Oracle's global warranty support information on Oracle products.

## Services

From design and implementation to support and management, Oracle 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. Oracle's expertise helps you address key data center challenges, including virtualization/consolidation, power, space and cooling optimization, planning and implementation, and ongoing maintenance and support. In addition, Oracle offers top-rated technical support for your Fujitsu M10-1 server. Visit [oracle.com/us/support/index.html](http://oracle.com/us/support/index.html) for information on Oracle's service program offerings for Oracle products.

## Contact Us

For more information about the Fujitsu M10-1 server, visit [oracle.com](http://oracle.com) or call +1.800.ORACLE1 to speak to an Oracle representative.



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