

Fujitsu M10-1 Server

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 and large memory capacity in a space-saving (1U) chassis. The Capacity on Demand (COD) with core-level CPU Activation allows processor resources to be activated one core at a time. Innovative Software on Chip (SWOC) capabilities of the SPARC64 X+ processor delivers high performance by implementing key software functions directly in hardware. The Fujitsu M10-1 supports the Oracle Solaris operating system with a binary compatibility guarantee to protect software investments. Powerful virtualization technologies at no additional cost: Oracle VM Server for SPARC and Oracle Solaris Zones.



Key Benefits

- High performance for ERP, BIDW, OLTP, CRM, big data, and analytics workloads
- High availability to support demanding 24/7 mission-critical applications
- Fast and economical system capacity growth in small increments with no downtime
- Acceleration of Oracle Database In-Memory performance with the SPARC64 X+ processor's Software on Chip capabilities
- Higher levels of system utilization and cost reduction through flexible resource configurations.

PRODUCT OVERVIEW

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.

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

ARCHITECTURE
Processor <ul style="list-style-type: none"> 16-core, 3.2 GHz SPARC64 X+ processor 32 threads per processor (2 threads per core)
Cache per Processor <ul style="list-style-type: none"> Primary cache: instruction: 64 KB; data: 64 KB per core Secondary cache: 22 MB per processor
System Configuration <ul style="list-style-type: none"> Fujitsu M10-1 servers are always configured with one SPARC64 X+ processor 16 dual inline memory module (DIMM) slots per processor support one quarter, half, three quarters and fully populated memory configurations using 8, 16, or 32 GB DDR3 DIMMs <ul style="list-style-type: none"> 512 GB maximum memory configuration with 32 GB DIMMs
System Architecture <ul style="list-style-type: none"> SPARC V9 architecture, ECC protected
INTERFACES
<ul style="list-style-type: none"> Network: Four 1 GbE (100 Mb/sec/1 Gb/sec), IEEE 802.3an (1000BASE-T) standards, auto-negotiation Disks and internal storage: One SAS-2 controller providing hardware RAID 0, 1, and 1E/10 (ZFS file system provides higher levels of RAID) Expansion bus: Three low-profile PCIe 3.0 (3 x8) slots PCI Expansion Units: Up to 23 slots (with three PCI expansion units connected) Ports: Two external USB 2.0 (one front and one rear) Administration interface: Two 1000Base-T (RJ45) network ports, one RJ45 serial management port, one USB port (for maintenance only)
MASS STORAGE AND MEDIA
Internal storage: <ul style="list-style-type: none"> Up to eight 2.5-inch SAS-2 drives <ul style="list-style-type: none"> 600 GB or 1.2 TB hard disk drives (HDD) 400 GB or 800 GB solid state drive (SSD) Fujitsu flash accelerator NVMe PCIe 3.0 cards <ul style="list-style-type: none"> Fujitsu 3.2 TB Flash Accelerator, maximum of three
External storage: <ul style="list-style-type: none"> External DVD drive available

Key Features

- A compact entry-level server that scales up to 16 cores.
- Ideal for data center integration and virtualization.
- The 16-core 3.2 GHz SPARC64 X+ processor delivers high performance for enterprise workloads such as OLTP, ERP, BIDW, SCM, and CRM.
- Software-on-chip instructions on the SPARC64 X+ processor 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.
- Server management is done through the independent service processor's eXtended System Control Facility (XSCF).

- Oracle offers a complete line of best-in-class, innovative storage, hardware, and software solutions, along with renowned world-class service and support. For more information, please refer to oracle.com/storage

POWER SUPPLIES

- Two hot-swappable AC 770 W redundant (1 + 1) power supplies
- Voltage 100 to 120 VAC, 200 to 240 VAC, frequency 50/60 Hz
- Maximum operating input current at 100/200 VAC: 8.7/4.2 A
- Maximum operating input power at 100/200 VAC: 849/824 W

KEY RAS FEATURES

- End-to-end ECC protection
- Guaranteed data path integrity
- Automatic recovery with instruction retry
- Dynamic L1, and L2 cache way degradation
- ECC and extended ECC protection for memory, memory mirroring, periodic memory patrol, and Predictive Self Healing (a feature of Oracle Solaris)
- Hardware redundancy in memory (when mirroring), HDD/SSD, PCI cards (multipath configuration), power system, power supply unit (PSU), and fan
- Hot-pluggable HDD/SSD, PSU, and fan. Hot plugging of PCI cards supported with the PCI Expansion Unit
- Live operating system upgrades
- Firmware updates during system operation

SOFTWARE

Operating System

Oracle recommends the latest version of Oracle Solaris 11.4 for enhanced performance and functionality, including features enabled by Software on Chip technology

- Oracle Solaris 11.1 or later
- Oracle Solaris 10 1/13 plus required patches

Applications certified for Oracle Solaris 9 or 8 only may run in an Oracle Solaris 9 or 8 branded zone running within an Oracle Solaris 10 domain.

Software Included

- Oracle Solaris 11.4 (latest version), which includes Oracle VM Server for SPARC
- Oracle Solaris ZFS (default file system)

Virtualization

Built-in, no-cost Oracle VM Server for SPARC provides the flexibility and power for running multiple logical domains in a single server. Multiple Oracle Solaris Zones may be run within a single Oracle VM Server for SPARC logical domain.

ENVIRONMENT

Operating temperature:

- 5° C to 35° C at 0 to 500 m (41° F to 95° F at 0 to 1,640 ft.)

- 5° C to 33° C at 501 to 1,000 m (41° F to 91° F at 1,641 to 3,280 ft.)
- 5° C to 31° C at 1,001 to 1,500 m (41° F to 88° F at 3,281 to 4,920ft.)
- 5° C to 29° C at 1,501 to 3,000 m (41° F to 84° F at 4,421 to 9,840 ft.)

Nonoperating temperature:

- -25° C to 60° C (-13° F to 140° F) (packed)
- 0 to 50° C (32° F to 122° F) (nonpacked)

Operating relative humidity: 20% to 80% relative humidity, noncondensing

Nonoperating relative humidity: 8 to 80% relative humidity, noncondensing

Operating altitude: 0 m to 3,000 m (0 feet to 9,840 feet)

Acoustic noise

DESCRIPTION	ONE CPU INSTALLED
Sound power level	7.4 B
Sound pressure level	58 dB

REGULATIONS (MEETS OR EXCEEDS THE FOLLOWING REQUIREMENTS)

Safety:

- UL/CSA 60950-1, UL/CSA 62368-1, EN 60950-1, EN 62368-1, IEC 60950-1 CB scheme with all country differences, IEC 62368-1 CB scheme with all country differences

EMC:

- Emissions: FCC 47 CFR 15, ICES-003, EN 55032, KN32, VCCI V3, EN 61000-3-2, EN 61000-3-3, JIS C 61000-3-2
- Immunity: EN 55024, KN35

Certifications:

- North America Safety (NRTL), European Union (EU), International CB Scheme, BSMI (Taiwan), RCM (Australia), CCC (PRC), KCC (Korea), VCCI (Japan), EAC (Eurasian CU), BIS (India)

European Union directives:

- Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU as amended, Low Voltage Directive 2014/35/EU, EMC Directive 2014/30/EU, WEEE Directive 2012/19/EU, and Eco design Directive 2009/125/EC

All standards and certifications referenced are to the latest official version. For additional detail, please contact your sales representative.

Other country regulations/certifications may apply.

DIMENSIONS AND WEIGHT

- Height: 42.5 mm (1.67 inches); 1U
- Width: 431 mm (17.0 inches)
- Depth: 721 mm (28.4 inches)
- Weight: 18 kg (40 lb.)

WARRANTY

The Fujitsu M10-1 server comes with a one-year warranty. Visit oracle.com/us/support/policies/ for more information about Oracle's hardware warranty.

COMPLETE SUPPORT

With Oracle Premier Support, you will get the services you need to maximize the return on your investment in the Fujitsu M10-1 server. Complete system support includes 24/7 hardware service, expert technical support, proactive tools, and updates to Oracle Solaris, Oracle VM, and integrated software (such as firmware)—all for a single price. Learn more at oracle.com/support

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