Data Sheet
Fujitsu M10-1 Server

A high performance, compact entry-level server with high reliability that is ideal for data center integration and virtualization

The Fujitsu M10-1

The Fujitsu M10-1 server 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 the core-level CPU Activation feature, growing processor resources one core at a time. Innovative Software on Chip capabilities of SPARC64 X+ processors deliver dramatic performance gains 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 the Oracle Solaris Zones feature of Oracle Solaris.

Keep Pace with Expanding Needs

The Fujitsu M10-1 server running the industry-leading Oracle Solaris operating system was designed to help IT managers reduce Total Cost of Ownership (TCO), rapidly deploy new business services, and consolidate existing sprawling systems more cost-effectively and reliably than ever. IT managers can take advantage of enterprise-class reliability, availability, and scalability (RAS) features in a 1U box and can incrementally grow capacity to satisfy their business requirements exactly as needed–with no wasted resources, 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, Fujitsu M10 enables customers to innovate to capture new revenue streams and shorten the time to market while dramatically improving throughput, energy efficiency, and service-level predictability at reduced costs.

Features and Benefits

Main features	Benefits
■ 16-core SPARC64 X+ processor and up to 1 TB of main memory	■ Superior performance for largest workloads such as ERP, BIDW, SCM, CRM, Big Data, and Analytics
■ 8-core 3.7 GHz SPARC64 X+ processor option for higher per-core performance	■ Do more with less: faster cores, higher productivity, fewer software licenses
■ 1U form factor	■ Space-saving entry-level server ideal for data center integration and virtualization
■ Mainframe-class reliability, availability, and serviceability (RAS) capabilities	■ High availability to support the most demanding 24/7 mission-critical applications
■ Core-based CPU activation	■ Ability to pay for only the resources that are needed, minimizing initial investment and avoiding expensive upgrades ■ Fast and economical system capacity growth in increments as small as two processor cores at a time with no downtime
■ Software-on-Chip instructions implementing key software functions directly on SPARC64 X+ processors	■ Drastic performance gains for a wide range of applications such as encryption, decimal arithmetic operations, and key database functions
■ Built-in no-cost virtualization: Oracle VM Server for SPARC and Oracle Solaris Zones technologies	■ Higher levels of system utilization and cost reduction with flexible resource configurations ■ Massive server consolidation without the need to acquire additional software
■ Supports Oracle Solaris 11 and Oracle Solaris 10, also Solaris 9 and 8 with Oracle Solaris Legacy Containers	■ Investment protection for application software as well as system management and administration expertise developed over the years avoiding costly and complex migrations
■ Oracle Solaris 100% Binary Compatibility Guarantee	■ Preserving of software investments with the full binary compatibility guarantee that the existing SPARC Oracle Solaris applications would run unmodified

Technical Details

Processor

CPU	SPARC64 X+: 16-core or 8-core processors, Dual-threaded SPARC V9 architecture, Error Checking and Correction (ECC) protection
Level 1 cache per core	64 K data cache and 64 K instruction cache
Level 2 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	• SIMD Single Instruction Multiple Data Vector Processing • Extended Floating-Point Registers • Decimal Floating-Point Processing. IEEE 754 standard and Oracle Number are supported. • Cryptographic Processing. Supported algorithms: AES, DES, 3DES, RSA and SHA

System

CPU	One 16-core or 8-core CPU
Main memory	Up to 1 TB with 64 GB DIMM
I/O	• Three PCI Express 3.0 short, low-profile slots (eight lanes) • Up to 23 PCI Express slots with optional PCI expansion unit • 4-port GbE, 1-port SAS, 2-port USB
Memory bandwidth (per chip)	102 GB/sec
Service processor	One

Storage

Local storage	As many as eight 600 GB or 1.2 TB internal 2.5-in. SAS HDDs or 400 GB or 800 GB eMLC SAS SSDs (can be mixed)

Software

Operating system	Control Domain: • Oracle Solaris 11.1 (plus required SRU) or later • Oracle Solaris 10 1/13 (plus required patches) Guest Domains: • Oracle Solaris 11.1 (plus required SRU) or later • Oracle Solaris 10 1/13 (plus required patches) • Oracle Solaris 10 8/11 (plus required patches) • Oracle Solaris 10 9/10 (plus required patches) Please see the *Fujitsu M10/SPARC M10 Systems Product Notes* manual for SRU/patch requirements.
Software included	• Oracle Solaris 11.3 which includes Oracle VM Server for SPARC • Oracle Solaris ZFS (default file system)
Management software	• XSCF monitoring/control facility • XSCF software, which manages hardware configuration and health, domain configuration and status, error monitor, and notification
System monitoring	Oracle Enterprise Manager Ops Center 12c Release 2 or later
Virtualization	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. 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.

Reliability, Availability, and Serviceability

Key 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 • Hardware redundancy in memory, HDD, SSD(Software RAID), PSU, and fan • Hot-pluggable HDD/SSD, PSU, and fan. Hot-plug of PCI card supported with the PCI Expansion Unit. • Live operating system upgrades • Firmware updates during system operation

Environment

AC power	100 V to 120 V ± 10% (50/60 Hz), 200 V to 240 V ± 10% (50/60 Hz)
Power consumption	Maximum 849 W (SPARC64 X+)
Operating temperature	• 5° to 35° C (41° to 95° F) at an altitude of 0 m to 500 m • 5° to 33° C (41° to 91° F) at an altitude of 501 m to 1,000m • 5° to 31° C (41° to 88° F) at an altitude of 1,001 m to 1,500 m • 5° to 29° C (41° to 84° F) at an altitude of 1,501 m to 3,000 m
Non-operating temperature	• –20° to 60° C (packed) • 0° to 50°C (non-packed)
Altitude	Up to 3,000 m (9,843 ft.)
Acoustic Noise	• 7.4 B (SPARC64 X+) • 58 dB (SPARC64 X+)
Cooling	• Input voltage of 100 to 120 VAC: 2,900 kJ/hr, 2,750 BTU/hr (SPARC64 X+) • Input voltage of 200 to 240 VAC: 2,820 kJ/hr, 2,670 BTU/hr (SPARC64 X+)

Dimensions and Weight

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.)

Regulations

Safety	• UL60950-1, 2nd edition + A1 • CSA C22.2 No. 60950-1-07 + A1 • EN60950-1:2006 + A1:2010 +A2:2011 • IEC60950-1:2005, 2nd edition + A1:2009 (evaluated to all CB countries) • CFR21 Part 1040 • IEC60825-1 • IEC60825-2 • CB Scheme with all country deviations • CNS14336 • GB4943.1-2011 • S-Mark • GOST-R certification mark
RFI / EMC	• EN55022:2010 • VCCI (2012) • FCC Part-15 (2012) • CNS13438:2006 (CISPR 22:2005 +A1:2005) • KCC • GOST-R certification mark • S-Mark • EN61000-3-2:2006 + A1:2009 + A2:2009 • EN61000-3-3:2008 • JIS C 61000-3-2 (2011) • ICES-003 Class A • AS/NZS CISPR 22 (2009) • GB9254-2008 • GB17625.1-2003 • CISPR 22:2008
Immunity	• EN55024:2010 • IEC61000-4-2 • IEC61000-4-3 • IEC61000-4-4 • IEC61000-4-5 • IEC61000-4-6 • IEC61000-4-8 • IEC61000-4-11
Telecommunications	• EN 300 386 V1.4.1 (2008) • GR-3160-CORE

More Information

Fujitsu platform solutions

In addition to Fujitsu M10-1, Fujitsu provides a complete range of platform solutions. These solutions 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 client systems to datacenter solutions, Managed Infrastructure services and Infrastructure-as-a-Service (IaaS) clouds. Customers can make the most beneficial choices from the complete and comprehensive selection of Fujitsu technologies and services. This takes IT flexibility and efficiency to the next level.

Computing Products

www.fujitsu.com/global/services/computing/
- FUJITSU M10: UNIX server
- PRIMERGY: Industrial standard 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
- Systemwalker: System management
- Symfoware: Database
- PRIMECLUSTER: Clustering

More information

Learn more about Fujitsu M10-1, please contact your Fujitsu sales representative, Fujitsu business partner, or visit our website.
www.fujitsu.com/sparc

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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