

Data Sheet

Fujitsu PRIMERGY RX2540 M7 Rack Server

The data center standard without compromise

Fujitsu offers a fantastic blend of systems, solutions and expertise to guarantee maximum productivity, efficiency and flexibility, delivering confidence and reliability. Fujitsu PRIMERGY servers deliver workload-optimized x86 industry standard systems for any workload and business demand. Since there is no single server solution to meet all these needs, Fujitsu offers a broad server portfolio consisting of expandable tower servers, versatile rack-mount servers, density-optimized multi-node servers as well as GPU servers purpose-built for the demands of AI and VDI. While all these systems are designed to handle multiple workloads, each server is optimized for specific use cases. Whatever the size of your business – large enterprise with multiple sites, or a small or medium-sized company with limited space and budget – with the right choice of server, your IT can become the business enabler you have always wanted it to be.

PRIMERGY RX2540 M7

The Fujitsu PRIMERGY RX2540 M7 generation x86 server based on dual-sockets delivers the latest in performance, improved usability, and flexible expandability in an optimized compact 2U chassis. The PRIMERGY RX2540 M7 forms the valuable standard in every modern data center, using the latest technology developments to run nearly every workload from the most basic to business-critical applications depending on the chosen configuration. Equipped with the latest 4th generation of Intel® Xeon® Scalable Processors with up to 60 cores and 4x UPI 2.0 links, there are resulting performance improvements of more than 40% compared to the previous generation processors. Along with enhanced DDR5 memory technology supporting up to 4,800 MT/s, the server features a flexible, large amount of memory capacity. Configurable in 32 DIMM slots are in total 8TB memory with latest DDR5 modules supported. The support of Compute Express Link

(CXL) with 4x 16 devices is included. The modular design of the server offers excellent expandability with up to 12x 3.5" SAS/SATA, up to 24x 2.5" SAS/SATA/NVMe storage drives. In addition, 6 further 2.5" storage devices SAS/SATA/NVMe are available as an option on the rear of the chassis. Additional expansion options are provided by up to 8x PCIe Gen 5 slots and SAS 24G for upcoming devices. Moreover, the server can be equipped with two double-width or up to six single-width NVIDIA GPU cards. Thus, the server also provides optimized performance for AI and HPC workloads. An onboard OCP v3 LAN connection complete the overall picture. The server system also includes the latest security technologies to help secure sensitive workloads and enable new opportunities to unleash the power of data. PRIMERGY RX2540 M7 always provides Platform Firmware Resilience (PFR) to help protect against platform firmware attacks and is designed to detect and correct them before they can compromise or disable the machine. Even as your workloads and administration tasks become more complex, the Fujitsu Infrastructure Manager (ISM) as well as the integrated next generation Remote Management Controller (iRMC S6) simplifies management of your server and the IT infrastructure so you can focus on your business objectives. Where the right performance, expandability, and efficiency are essential, the PRIMERGY RX2540 M7 is the ideal server for business-critical workloads such as collaboration, business processing, AI, machine learning, graphics rendering, or in-memory databases.



Features & Benefits

Main Features	Benefits
<p>UNMATCHED SCALABILITY AND PERFORMANCE</p> <ul style="list-style-type: none"> Wide choice of different available types of 4th Generation Intel® Xeon® Scalable processors. Each processor offers up to 60 cores (depending on SKU), 16 memory channels, up to 4 Intel® Ultra Path Interconnect (UPI 2.0 at 16 GT/s) and PCI-Express 5 with up to 80 lanes (per socket) enabling a significantly higher performance and efficiency. <p>ACCELERATE IT TRANSFORMATION</p> <ul style="list-style-type: none"> New DDR5 DIMM modul (@ 4,800 MT/s) technology combined with Intel® Optane™ PMem 300 series modules are supported on 4th Gen Intel® Xeon® Scalable processors and create a high performing, large-capacity of 8 TB in 32 memory slots that helps turn more data into actionable insights with the RX2540 M7. <p>EXTENSIVE EXPANDABILITY</p> <ul style="list-style-type: none"> Expand with up to 8 PCIe Gen 5 slots and OCP V3 small form factor solution. The server can be equipped with up to six NVIDIA GPU cards (depending on card). Moreover, different available base units with 10/12x 3.5-inch or up to 16/24x 2.5-inch support provide massive expandability. Our server systems are built to scale easily to be able to adapt to a variety of applications and meet upcoming demands. <p>AGILE INFRASTRUCTURE MANAGEMENT</p> <ul style="list-style-type: none"> Infrastructure Manager (ISM) provides seamless, holistic management ensuring that IT infrastructures retain the dynamic flexibility required to support ever-changing business demands. Two versions of ISM are available. ISM Advanced is a powerful, fully featured version offering comprehensive infrastructure management capabilities such as support for multiple hardware configurations, physical and virtual network connection indicators and firmware baseline updates. A free entry-level version, ISM Essential, provides essential monitoring and firmware update of all supported devices, including servers, storage and network switches. <p>COMPREHENSIVE PROTECTION</p> <ul style="list-style-type: none"> PRIMERGY servers are equipped with beneficial features to protect against, detect and recover from security breaches (UEFI Secure Boot, TPM 2.0, signed firmware updates, agent-free device management, secure authorization and authentication, alerting and logging, secure Out of Band Management with iRMC S6, ...). High availability features help facilitate continuous operations. 	<ul style="list-style-type: none"> 2U, 2-socket platform that provides scalability and performance to adapt to a variety of applications. Drive demanding workloads by latest 4th Generation Intel® Xeon® Scalable Processors with up to 60 cores per CPU. Transform your data center for modern operations and drive demanding workloads with 32 DIMM modules (up to 8 TB). With DDR5 DIMM memory and Intel® Optane™ persistent memory provide fast, high capacity and cost effective memory for memory intensive workloads. Maximize storage performance with up to 12x 3.5" or up to 24x 2.5" storage devices and ensure application performance scales to meet demands. Up to 8 PCIe Gen 5 slots and OCP V3 adapters also ensure enough growth opportunities. As you scale your infrastructure, scale your profitability with embedded intelligence from iRMC S6 as well as Infrastructure Manager (ISM) which enables organizations to have centralized control over the infrastructure using a single user interface. Benefit from advanced security technologies such as Platform Firmware Resilience (PFR) to protect the most sensitive portions of a workload, encryption support to enhance data and VM protection as well as physical protection to avoid unauthorized access.

Technical details

PRIMERGY RX2540 M7

Base unit	PRIMERGY RX2540 M7 LFF	PRIMERGY RX2540 M7 LFF	PRIMERGY RX2540 M7 SFF	PRIMERGY RX2540 M7 SFF	PRIMERGY RX2540 M7 SFF	PRIMERGY RX2540 M7 LFF
Housing types	Rack	Rack	Rack	Rack	Rack	Rack
Storage drive architecture	10x 3.5-inch SAS/SATA	12x 3.5-inch SAS/SATA	16x 2.5-inch SAS/SATA	8x 2.5-inch SAS/SATA/PCIe	24x 2.5-inch SAS/SATA	6x 3.5-inch SAS/SATA
Power supply	Hot-plug	Hot-plug	Hot-plug	Hot-plug	Hot-plug	Hot-plug
Product Type	Dual Socket Rack Server	Dual Socket Rack Server	Dual Socket Rack Server	Dual Socket Rack Server	Dual Socket Rack Server	Dual Socket Rack Server

Mainboard

Mainboard type	D3983
Chipset	Intel® C741
Processor quantity and type	1 - 2 x Intel® Xeon® Bronze 3xxx processor / Intel® Xeon® Silver 4xxx processor / Intel® Xeon® Gold 5xxx processor / Intel® Xeon® Gold 6xxx processor / Intel® Xeon® Platinum 8xxx processor
Processor notes	no mix of different processor types
Memory slots	32 (16 DIMMs per CPU, 8 channels with 2 slots per channel)
Memory slot type	DIMM (DDR5 RDIMM and Intel® Optane™ PMem)
Memory capacity (min. - max.)	16 GB - 8 TB
Memory protection	ECC Memory Scrubbing SDDC ADDDC (Adaptive Double DRAM Device Correction) Memory Mirroring support
Memory notes	Max. 8 slots populated with PMem modules per CPU, please see relevant system configurator for details.
Memory modules notes	Max capacity maybe changed.

Interfaces

USB 3.x ports	6 x USB 3.0 (2x front, 2x rear, 2x internal)
Graphics (15-pin)	2 x VGA (thereof 1x front optional - not for base unit with 12x 3.5" and 24x 2.5" drives)
Serial 1 (9-pin)	1 x serial RS-232-C optional, usable for iRMC or system or shared
Management LAN (RJ45)	1 x dedicated management LAN port for iRMC S6 (10/100/1000 Mbit/s)
Interface notes	Management LAN traffic can be switched to shared onboard Gbit LAN port, speed and connector is related to installed interface card.

Onboard or integrated Controller

RAID controller	All hardware storage controller options are described under Components For dedicated base units front AND rear storage drives may be connected to a single controller. Please see relevant system configurator for configuration options and restrictions.
SATA Controller	1x SATA channel for ODD, 2x SATA channel for M.2 and 8x SATA channel for HDD/SSD
LAN Controller	Dynamic LoM via OCP slot; OCPv3 compliant Optional OCP adaptors: 4 x 1 Gbit/s Ethernet (RJ45) 2 x 10 Gbit/s Ethernet (RJ45) 4 x 10 Gbit/s Ethernet (RJ45) 2 x 10 Gbit/s SFP+ 4 x 10 Gbit/s SFP+ 2 x 25 Gbit/s SFP28 4 x 25 Gbit/s SFP28 2x 100 Gbit/s QSFP28 All supported features are described in relevant system configurator.
Remote management controller	Integrated Remote Management Controller (iRMC S6, 1024 MB attached memory incl. graphics controller) IPMI 2.0 compatible
GPU / coprocessor	GFX/GPU support for dedicated base units. Please see relevant WebArchitect for details and restrictions.
Trusted Platform Module (TPM)	Infineon / TPM 2.0 module; TCG compliant (option)

Slots	
PCI-Express 4.0 x16	1 x Low profile
Slot Notes	One PCIe Gen4 x16 slot is only for a Modular RAID controller, it may be occupied with it if configured. Important: 3 PCIe slots are supported with the first processor. 4 PCIe slots are supported with two processors. PCIe riser card options can expand number of slots by two (max. 8 in total) and support max. 4 full height slots. Possible slot length described in relevant system configurator.
Drive bays	
Storage drive bays	up to 16x 2.5-inch, 24x 2.5-inch, 10x 3.5-inch or 12x 3.5-inch base units
Accessible drive bays	1 x 5.25/9.5mm for DVD-RW/Blu-ray
Notes accessible drives	All possible options described in relevant system configurator.
Optional hard disk bays	2x/4x 2.5-inch hot-plug SAS/SATA/PCIe rear option
General system information	
Number of fans	6
Fan configuration	redundant / hot-plug
Fan notes	n+1 redundant
Operating panel	
Operating buttons	On/off switch Reset button NMI button ID button
Status LEDs	At system front side: Power (DC-On: green / AC-On: white) Global error (orange) Identification (blue) Hard disks access (green) CSS (orange) At system rear side: System status (green) Identification (blue) Global error (orange) LAN connection (green) LAN speed (green / yellow)
BIOS	
BIOS features	UEFI compliant Secure boot support ROM based setup utility GPT support for boot drives larger than 2.2 TB Memory Redundancy support (Mirroring) IPMI support Recovery BIOS BIOS settings save and restore Local BIOS update from USB device Online update tools for main Linux versions IPv4/IPv6 remote PXE & iSCSI boot support Cryptographically Signed BIOS Firmware Update HTTP and HTTPS Boot PCIe Bifurcation configurable
Operating Systems and Virtualization Software	
Operating system release link	http://docs.ts.fujitsu.com/dl.aspx?id=d4ebd846-aa0c-478b-8f58-4cfbf3230473
Operating system notes	Support of other Linux derivatives on demand Use of certified or supported operating systems and virtualization software is subject to proactive acceptance of the respective License Agreements/ EULAs/ Subscription and support terms of the Software manufacturer as applicable for the relevant Software whether preinstalled or optional. The software may only be available bundled with a software support subscription which – depending on the Software - may be subject to separate remuneration.
Infrastructure and Server Management	
DC Infrastructure Management	Infrastructure Manager (ISM) Essential Edition Advanced Edition

Infrastructure and Server Management

Server Management	Infrastructure Manager (ISM) Essential Edition Advanced Edition ServerView Suite
Management notes	For further information regarding ISM and ServerView Suite see dedicated data sheets.
Manageability link	http://docs.ts.fujitsu.com/dl.aspx?id=9e92297a-16fb-4c69-8559-e38e7b42fee6

Dimensions / Weight

Rack (W x D x H)	482.5 mm (Bezel) / 435 mm (Body) x 800 x 86.9 mm
Mounting Depth Rack	873.1 mm
Height Unit Rack	2 U
19" rackmount	Yes
Weight	max. 32 kg
Weight notes	Actual weight may vary depending on configuration
Rack integration kit	Rack integration kit as option

Environment

Operating temperature note	PRIMERGY servers are designed for the usage with operating temperatures of up to 35°C. There could be configurations that are not able to work within this normal operation class. Please use the Fujitsu WebArchitect (www.fujitsu.com/configurator/public) to get detailed information on the corresponding configurations.
Operating relative humidity	8 - 85 % (non condensing)
Operating environment	FTS 04230 – Guideline for Data Center (installation specification)
Operating environment link	http://docs.ts.fujitsu.com/dl.aspx?id=e4813edf-4a27-461a-8184-983092c12dbe
Noise emission	Measured according to ISO 7779 and declared according to ISO 9296
Sound pressure (LpAm)	39.3 dB(A) (idle) / 41.9 dB(A) (operating) typical Values
Sound power (LWAd; 1B = 10dB)	5.3 B (idle) / 5.6 B (operating) typical Values
Noise notes	Noise emissions depends on operation modes, system configuration and ambient temperature.

Electrical values

Power supply configuration	1 x hot-plug power supply or 2x hot-plug power supply for redundancy
Hot-plug power supply redundancy	Optional
Active power (max. configuration)	2,635 W
Apparent power (max. configuration)	1164 VA
Heat emission (max. configuration)	9486.0 kJ/h (8991.0 BTU/h)
Rated current max.	12A (100-127 V) / 15A (200-240 V)
Active power note	To estimate the power consumption of different configurations please use the Fujitsu WebArchitect: www.fujitsu.com/configurator/public
Power supply	500W hot-plug, 94% (Platinum efficiency), 100-240V, 50 / 60Hz 500W hot-plug, 96% (Titanium efficiency), 200-240V, 50 / 60Hz 900W hot-plug, 94% (Platinum efficiency), 100-240V, 50 / 60Hz 900W hot-plug, 96% (Titanium efficiency), 200-240V, 50 / 60Hz 1600W hot-plug, 94% (Platinum efficiency), 100-240V, 50 / 60Hz; 100V range: 1030W 1600W hot-plug, 96% (Titanium efficiency), 200-240V, 50 / 60Hz 2200W hot-plug, 94% (Platinum efficiency), 200-240V, 50 / 60Hz 2400W hot-plug, 96% (Titanium efficiency), 200-240V, 50 / 60Hz 1300W hot-plug, 94% (equivalent to Platinum efficiency) –48V DC 1600W hot plug, 94% (equivalent to Platinum efficiency) 380V DC
Power supply notes	Power Safeguard adapts system performance in case the power requirements exceeds supply limits. Platinum PSUs are only for APAC/Japan market.

Compliance

Product	PRIMERGY RX2540 M7
Model	PR300E
Global	CB RoHS (Substance limitations in accordance with global RoHS regulations) WEEE (Waste electrical and electronical equipment)
Germany	GS
Europe	CE

Compliance

USA/Canada	NRTLc/us FCC Class A ICES-003 / NMB-003 Class A
Japan	VCCI Class A + JIS 61000-3-2
Russia	EAC
South Korea	KC
China	CCC
Australia/New Zealand	RCM
Taiwan	BSMI
Compliance link	https://sp.ts.fujitsu.com/sites/certificates
Compliance notes	There is general compliance with the safety requirements of all European countries and North America. National approvals required in order to satisfy statutory regulations or for other reasons can be applied for on request. * Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Components

Warranty

Warranty period	3 years
Warranty type	Onsite warranty
Warranty Terms & Conditions	www.fujitsu.com/support
Product Support - the perfect extension	
Support Pack Options	Globally available in major metropolitan areas: 9x5, Next Business Day Onsite Response Time 9x5, 4h Onsite Response Time (depending on country) 24x7, 4h Onsite Response Time (depending on country)
Recommended Service	24x7, Onsite Response Time: 4h - For locations outside of EMEA please contact your local Fujitsu partner.
Service Lifecycle	at least 5 years after shipment, for details see https://support.ts.fujitsu.com/
Service Weblink	http://www.fujitsu.com/emeia/products/product-support-services/

More information

Fujitsu products, solutions & services

In addition to Fujitsu PRIMERGY RX2540 M7, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio

Built on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offerings. This allows customers to select from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

Computing Products

www.fujitsu.com/global/products/computing/

Software

www.fujitsu.com/software/

More information

Learn more about Fujitsu PRIMERGY RX2540 M7, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
www.fujitsu.com/primergy

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 contribute to the creation of a sustainable environment for future generations through IT.

Please find further information at <http://www.fujitsu.com/global/about/environment>



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Disclaimer

Please note that the data sheet reflects the technical specification with the maximum selection of components for the named system and not the detailed scope of delivery. The scope of delivery is defined by the selection of components at the time of ordering. The product was developed for normal business use.

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