Data Sheet
Fujitsu PRIMERGY RX4770 M5 Rack Server

Power for the backend of digitalization

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 RX4770 M5

The Fujitsu PRIMERGY Server RX4770 M5 is an industry-standard x86 server system with four sockets, providing superior levels of performance, scalability and efficiency. This combination turns the server into an ideal platform for running databases and transactional applications, business intelligence (BI) workloads, back-end and in-memory databases as well as other compute-intensive applications. In addition, it substantially simplifies carrying out DC server optimization such as server virtualization or consolidation. Featuring the latest Intel® Xeon® Scalable Family processors with each up to 28 cores pushes this server to a whole new level of compute performance to deliver more efficient business results. Thanks to the highly performant and superfast DDR4 memory technology with up to 6TB memory capacity and optionally up to 24x Intel® Optane™ DC Persistent Memory NV-DIMM modules along with excellent support for NVMe Flash drives, the system can handle complex, data-intensive workloads such as in-memory databases like SAP HANA® and real-time business analytics even easier than the previous generation. The PRIMERGY RX4770 M5 supports 12 Gbit/s SAS/SATA controllers with optional FBU. It can either come as a 16x 2.5-inch hot-plug storage drives holding base unit or in a base unit holding a total of 12x storage drives even for directly connected PCIe SSDs. Up to eight PCI-Express Gen3 slots increases bandwidth and provides sufficient expandability for faster insights. With built-in redundancy and hot-pluggable components as well as advanced business-critical RAS features such as Resilient System- and Memory Technologies, the RX4770 M5 provides higher availability and uptime. Virtualization and consolidation of IT resources offer many benefits but can often lead to increased expenses for server administration. Therefore the PRIMERGY RX4770 M5 delivers state-of-the-art management capabilities with the latest generation integrated Remote Management Controller (iRMC S5) offering a variety of user-friendly functions to ensure a faster and more cost-effective infrastructure management, no matter whether the server is located in the server-room next door or in another part of the world.

Features & Benefits

Main Features	Benefits
INNOVATION MEETS PERFORMANCE	
■ Wide choice of different types of Intel® Xeon® Scalable processors as well as new 2nd generation Intel® Xeon® Scalable processors. Each processor offers up to 28 cores, up to 56 threads, 12 memory channels enabling a significantly higher performance and efficiency. They rely on Intel® UltraPath Interconnect for an increased data rate between the CPUs. Intel® Optane™ DC persistent memory is an innovative memory technology that delivers a unique combination of affordable large capacity and persistence (non-volatility). It revolutionizes the data center memory-storage hierarchy of the past and brings massive data sets closer to the CPU for faster time to insight. In total, up to 15,360 GB main memory in a mixed mode (non-volatile memory + DDR4 @ 2,933 MT/s) are available.	■ Ready for the future and data growth scenarios with the performance of two processors – marking the standard of tomorrow with an increase in computing power. New SKUs of the 2nd generation Intel® Xeon® Scalable processors deliver additional customer value with increased performance and industry leading frequency for the most demanding workloads.
ENHANCED FEATURES FOR ENHANCED COMPUTING	
■ Extended RAS-features for fail-safe operation: Built-in redundancy and hot-pluggable components, Advanced ECC, Memory Scrubbing and SDDC. A storage drive bay configuration with up to 16x 2.5-inch or up to 12x PCIe 2.5-inch SSD SFF*, complemented by internal M.2 devices for hypervisor installations. Our power supply units with up to 96% energy efficiency and Fujitsu's Cool-safe® Advanced Thermal Design for higher ambient temperatures in the data center are available for this server.	■ Business-critical RAS features lower the risk for unplanned IT downtimes. The systems' enhanced set of features adds even more reliability, availability, and serviceability that customers need to run business-critical applications.
REVOLUTIONIZING MEMORY AND STORAGE	
■ Intel® Optane™ persistent memory modules are DDR4 socket compatible and can co-exist with conventional DDR4 DRAM DIMMs on the same platform. They are available in capacities of 128 GB, 256 GB and 512 GB.	■ Optimize, store, and move larger, more complicated data sets with Intel® Optane™ technology. This revolutionary innovation bridges critical gaps in the storage and memory hierarchy delivering persistent memory, large memory pools, fast caching and fast storage.
INFRASTRUCTURE MANAGEMENT	
■ ISM is available with two licensing options: (1) ISM Advanced is the fully featured licensed version of ISM that provides comprehensive infrastructure management capabilities across datacenter. (2) ISM Essential provides a quick start to infrastructure management with essential monitoring and update functions.	■ Converged data center management that provides organizations centralized control over the entire infrastructure that includes servers, storage, networking, cloud management software as well as power and cooling using a single user interface.
PROTECT YOUR COMPANY WITH SECURE SERVERS	
■ 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 S5, …).	■ PRIMERGY servers come with a wide variety of such robust security features and combine these capabilities with the best quality and efficiency, and more agility in daily operations helps to turn IT into a business advantage faster.

Technical details

PRIMERGY RX4770 M5		
Base unit	PRIMERGY RX4770 M5	PRIMERGY RX4770 M5 Performance
Housing types	Rack	Rack
Storage drive architecture	16x 2.5-inch SAS/SATA/PCIe, thereof max. 12x 2.5-inch PCIe	8x 2.5-inch SAS/SATA/PCIe
Power supply	Hot-plug	Hot-plug
Product Type	Quad Socket Rack Server	Quad Socket Rack Server
Mainboard		
Mainboard type	D3753	
Chipset	Intel® C624	
Processor quantity and type	2 or 4 x Intel® Xeon® Gold 5xxx processor / Intel® Xeon® Gold 6xxx processor / Intel® Xeon® Platinum 8xxx processor	
Mainboard type		
Processor quantity and type	2 or 4	4
Processor notes	A mimimum of 2 processors must be configured, no mix of different processor types	
Memory slots	48 (12 DIMMs per CPU, 6 channels with 2 slots per channel)	
Memory slot type	DIMM (DDR4 / DDR-T for non-volatile memory modules)	
Memory capacity (min. - max.)	16 GB - 15 TB	
Memory protection	Advanced ECC Memory Scrubbing SDDC Memory Mirroring support Rank sparing memory support	
Memory notes	Max. 6 slots populated with DCPMM modules per CPU, please see relevant system configurator for details. Memory Mirroring Mode with identical modules in both channel pairs of a bank (4 or 6 modules per bank) per CPU. Rank Sparing Mode with minimum of 2 modules single ranked (1R) or dual ranked (2R) or 1 module quad ranked (4R) per CPU.	
Interfaces		
USB 3.x ports	5 x USB 3.0 (2x front, 2x rear, 1x internal)	
Graphics (15-pin)	2 x VGA (1 x front, 1 x rear)	
Serial 1 (9-pin)	1 x RS-232-C	
Management LAN (RJ45)	1 x dedicated management LAN port for iRMC S5 (10/100/1000 Mbit/s) Management LAN traffic can be switched to shared onboard LAN controller 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	
SATA Controller	Intel® C624, 1 x SATA channel for ODD	
LAN Controller	DynamicLoM based on Intel® C624 (Intel® X722) Optional DynamicLoM OCP adaptors: 2 x 10 Gbit/s Ethernet (RJ45) 2 x 10 Gbit/s SFP+ 4 x 1 Gbit/s Ethernet (RJ45) 4 x 10 Gbit/s SFP+ All supported features are described in relevant system configurator. Wake-on-LAN supported on onboard Port 1. Extra LAN controller(PCIe Cards) are listed below. (i210 LAN card via project release possible)	
Remote management controller	Integrated Remote Management Controller (iRMC S5, 512 MB attached memory incl. graphics controller) IPMI 2.0 compatible	
Trusted Platform Module (TPM)	Infineon / TPM 1.2 or TPM 2.0 module; TCG compliant (option)	
Slots		
PCI-Express 3.0 x16	8 x whereas 4x full height and 4x low profile with up to 167mm length	

Slots		
Slot Notes	Important note: 4 PCIe slots are supported with the first and second processor. Additional 4 PCIe slots are supported with the third and forth processors. Slot 1&2: PCIe Gen3 x16 @CPU1 for low profile cards with up to 167mm length Slot 3&4: PCIe Gen3 x16 @CPU4 for full height cards with up to 167mm length Slot 5: PCIe Gen3 x16 @CPU2 for low profile cards with up to 167mm length Slot 6&7: PCIe Gen3 x16 @CPU3 for full height cards with up to 167mm length Slot 8: PCIe Gen3 x16 @CPU2 for low profile cards with up to 167mm length (used for the internal modular RAID controller if selected)	
PCI-Express 3.0 x4		
PCI-Express 3.0 x16	8 x	6 x PCIe slot 1 & 2 not available; reserved for additional air cooling
Drive bays		
Storage drive bays	2.5-inch hot-plug SAS/SATA/PCIe 2 x M.2 slot whereas slot 1 supports 80mm or 110mm and slot 2 supports 42mm or 80mm	
Notes accessible drives	All possible options described in relevant system configurator.	
Optional accessible drives	1 x 5.25/9.5mm for DVD-RW/Blu-ray	
Drive bays (Base unit specific)		
Storage drive bays	16 x 2.5-inch hot-plug SAS/SATA/PCIe	8 x 2.5-inch hot-plug SAS/SATA/PCIe
General system information		
Number of fans	12	
Fan configuration	hot-plug	
Fan notes	11+1 redundant	
Operating panel		
Operating buttons	On/off switch NMI button Reset button ID button	
Status LEDs	System status (green) Global error (orange) Identification (blue) Hard disks access (green) Power (green) CSS (orange) At system rear side: System status (green) CSS (orange) Identification (blue) Global error (orange) LAN connection (green) LAN speed (green / yellow)	
BIOS		
BIOS features	UEFI compliant Legacy BIOS compatibility customer configuration option Secure boot support ROM based setup utility GPT support for boot drives larger than 2.2 TB Memory Redundancy support (Mirroring, Sparing) IPMI support Recovery BIOS BIOS settings save and restore Local BIOS update from USB device Online update tools for main Linux versions Local and remote update via ServerView Update Manager 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
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)	482.6 mm (Bezel) / 434.8 mm (Body) x 724.8 x 86.9 mm
Mounting Depth Rack	741.3 mm
Height Unit Rack	2 U
19" rackmount	Yes
Mounting Cable depth rack	200 mm (1,000 mm Rack recommended)
Weight	max. 29.7 kg
Weight notes	Actual weight may vary depending on configuration
Rack integration kit	Rack integration kit as option
Environment	
Operating temperature note	Cool-safe® Advanced Thermal Design (above 35 °C or below 10 °C) depending on configuration. Please use the Fujitsu WebArchitect (www.fujitsu.com/configurator/public) to get detailed information on the corresponding configurations.
Operating relative humidity	10 - 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)	47.4 dB(A) (idle) / 47.4 dB(A) (operating)
Sound power (LWAd; 1B = 10dB)	6.5 B (idle) / 6.5 B (operating)
Noise notes	Noise emissions depends on operation modes, system configuration and ambient temperature. Operating mode measured based on OLTIS with 50% load. *OLTIS = FUJITSU Load Profile which stresses all components of a server with a given load level.
Environmental (Base unit specific)	
Operating ambient temperature	5 - 40 °C (41 - 104 °F) 5 - 35 °C (41 - 95 °F)
Electrical values	
Power supply configuration	2 hot-plug power supplies (standard), single power supply configuration possible
Hot-plug power supply redundancy	Optional
Active power (max. configuration)	2,335 W
Apparent power (max. configuration)	2360 VA
Heat emission (max. configuration)	8406.0 kJ/h (7967.3 BTU/h)
Rated current max.	20 A (100 V) / 8 A (240 V)
Active power note	To estimate the power consumption of different configurations use the Fujitsu Product Configurator: www.fujitsu.com/configurator/public
Power supply	1600W hot-plug, 94% (Platinum efficiency), 200-240V, 50 / 60Hz
Power supply notes	Hot plug power supply redundancy with AC input Voltage at 200 - 240V only
Compliance	
Product	PRIMERGY RX4770 M5

Compliance	
Model	PS4770A
Global	CB RoHS (Substance limitations in accordance with global RoHS regulations) WEEE (Waste electrical and electronical equipment)
Europe	CE
USA/Canada	CSAc/us ICES-003 / NMB-003 Class A FCC Class A
Japan	VCCI:V3 Class A + JIS 61000-3-2
South Korea	KN32 KN35
Australia/New Zealand	C-Tick (planned)
Taiwan	CNS 13438 class A - planned
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	http://support.ts.fujitsu.com/warranty/Index.asp?LNG=COM
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 RX4770 M5, 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 RX4770 M5, 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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