

Data Sheet

FUJITSU Server PRIMERGY RX4770 M5 Rack Server

Power for the backend of digitalization

FUJITSU Server PRIMERGY will give you the servers you need to power any workload and changing business requirements. As business processes expand so does the need for applications. Each has its own resource footprint, so you need a way to optimize your computing to better serve your users. PRIMERGY systems will help you match your computing capabilities to your business priorities with our complete portfolio of expandable PRIMERGY tower servers for remote and branch offices, versatile rack-mount servers as well as hyper-converged multi-node servers. They convince by business proven quality with a wide range of innovations, highest efficiency cutting operational cost and complexity, provide more agility in daily operations, and integrate seamlessly to let help you concentrate on core business functions.

FUJITSU Server PRIMERGY RX rack systems are versatile rack-optimized servers providing best-in-class performance and energy efficiency, and thus form the "standard" in each data center. PRIMERGY RX servers already deliver 25 years of development and production know-how resulting in extremely low failure rates below market average, and lead to continuous operations and outstanding hardware availability.

PRIMERGY RX4770 M5

The FUJITSU Server PRIMERGY 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. An onboard dual-channel 10 Gbit/s Ethernet controller, together with 8 PCI-Express Gen3 slots, help to increase bandwidth for even faster time-to-business 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
<p>INNOVATION MEETS PERFORMANCE</p> <ul style="list-style-type: none"> 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. <p>ENHANCED FEATURES FOR ENHANCED COMPUTING</p> <ul style="list-style-type: none"> Extended RAS-features for fail-safe operation: Built-in redundancy and hot-pluggable components, Advanced ECC, Memory Scrubbing and SDDC. The RX4770 M5 comes with onboard LAN for basic LAN, DynamicLoM via OCP slot for extended requirements. 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. <p>PROTECT YOUR COMPANY WITH SECURE SERVERS</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 S5, ...). <p>INFRASTRUCTURE MANAGEMENT</p> <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. Intel® Optane™ DC persistent memory technology will transform critical data workloads – from cloud and databases, to in-memory analytics, and content delivery networks but also for future technologies such as Artificial Intelligence of Virtual Reality applications. 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. The right Ethernet connection for all: Basic via onboard LAN, extended with DynamicLoM via OCP guarantees the highest flexibility to integrate the server into existing infrastructures – now and in future without overhauling the existing infrastructure. On top of that, this server is not only "greener", but also less expensive over time. Cool-safe® ATD and highly efficient hot-plug power supplies save energy costs. 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. 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.

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
Intel® Xeon® Gold Processor		
	Intel® Xeon® Gold processor 5215 (10C, 2.50 GHz, up to 3.0 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 5215L (10C, 2.50 GHz, up to 3.0 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 5215M (10C, 2.50 GHz, up to 3.0 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 5217 (8C, 3.00 GHz, up to 3.4 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 5218 (16C, 2.30 GHz, up to 2.8 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 5218B (16C, 2.30 GHz, up to 2.8 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 5220 (18C, 2.20 GHz, up to 2.7 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 5220S (18C, 2.70 GHz, up to 2.7 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 5222 (4C, 3.80 GHz, up to 3.9 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6222V (20C, 1.80 GHz, up to 2.4 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6226 (12C, 2.70 GHz, up to 3.5 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6230 (20C, 2.10 GHz, up to 2.8 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6234 (8C, 3.30 GHz, up to 4.0 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6238 (22C, 2.10 GHz, up to 2.8 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6238L (22C, 2.10 GHz, up to 3.7 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6238M (22C, 2.10 GHz, up to 3.7 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6240 (18C, 2.60 GHz, up to 3.3 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6240L (18C, 2.60 GHz, up to 3.3 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6240M (18C, 2.60 GHz, up to 3.3 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6240Y (18C, 2.60 GHz, up to 3.3 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6242 (16C, 2.80 GHz, up to 3.5 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6244 (8C, 3.60 GHz, up to 4.3 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6246 (12C, 3.30 GHz, up to 4.1 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6248 (20C, 2.50 GHz, up to 3.2 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6252 (24C, 2.10 GHz, up to 2.8 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6254 (18C, 3.10 GHz, up to 3.9 GHz, 10.4 GT/s)	
	Intel® Xeon® Gold processor 6262V (24C, 1.90 GHz, up to 2.5 GHz, 10.4 GT/s)	

Intel® Xeon® Platinum Processor	<p>Intel® Xeon® Platinum 8253 (16C, 2.20 GHz, TLC: 22 MB, Turbo: 2.50 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 125 W, AVX Base 1.70 GHz, AVX Turbo 2.00 GHz)</p> <p>Intel® Xeon® Platinum 8256 (4C, 3.80 GHz, TLC: 16.5 MB, Turbo: 3.90 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 105 W, AVX Base 3.70 GHz, AVX Turbo 3.70 GHz)</p> <p>Intel® Xeon® Platinum 8260 (24C, 2.40 GHz, TLC: 35.75 MB, Turbo: 3.10 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 165 W, AVX Base 1.90 GHz, AVX Turbo 2.60 GHz)</p> <p>Intel® Xeon® Platinum 8260L (24C, 2.40 GHz, TLC: 35.75 MB, Turbo: 3.10 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 165 W, AVX Base 1.90 GHz, AVX Turbo 2.60 GHz)</p> <p>Intel® Xeon® Platinum 8260M (24C, 2.40 GHz, TLC: 35.75 MB, Turbo: 3.10 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 165 W, AVX Base 1.90 GHz, AVX Turbo 2.60 GHz)</p> <p>Intel® Xeon® Platinum 8260Y (24C, 2.40 GHz, TLC: 35.75 MB, Turbo: 3.10 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 165 W, AVX Base 1.80 GHz, AVX Turbo 2.50 GHz)</p> <p>Intel® Xeon® Platinum 8268 (24C, 2.90 GHz, TLC: 35.75 MB, Turbo: 3.50 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 205 W, AVX Base 2.40 GHz, AVX Turbo 3.00 GHz)</p> <p>Intel® Xeon® Platinum 8270 (26C, 2.70 GHz, TLC: 35.75 MB, Turbo: 3.40 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 205 W, AVX Base 2.20 GHz, AVX Turbo 2.90 GHz)</p> <p>Intel® Xeon® Platinum 8276 (28C, 2.20 GHz, TLC: 38.5 MB, Turbo: 3.00 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 165 W, AVX Base 1.70 GHz, AVX Turbo 2.60 GHz)</p> <p>Intel® Xeon® Platinum 8276L (28C, 2.20 GHz, TLC: 38.5 MB, Turbo: 3.00 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 165 W, AVX Base 1.70 GHz, AVX Turbo 2.60 GHz)</p> <p>Intel® Xeon® Platinum 8276M (28C, 2.20 GHz, TLC: 38.5 MB, Turbo: 3.00 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 165 W, AVX Base 1.70 GHz, AVX Turbo 2.60 GHz)</p> <p>Intel® Xeon® Platinum 8280 (28C, 2.70 GHz, TLC: 38.5 MB, Turbo: 3.30 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 205 W, AVX Base 2.20 GHz, AVX Turbo 2.90 GHz)</p> <p>Intel® Xeon® Platinum 8280L (28C, 2.70 GHz, TLC: 38.5 MB, Turbo: 3.30 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 205 W, AVX Base 2.20 GHz, AVX Turbo 2.90 GHz)</p> <p>Intel® Xeon® Platinum 8280M (28C, 2.70 GHz, TLC: 38.5 MB, Turbo: 3.30 GHz, 10.4 GT/s, Mem bus: 2,933 MHz, 205 W, AVX Base 2.20 GHz, AVX Turbo 2.90 GHz)</p>
Processor notes	A minimum 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.
Standard memory modules	<p>8 GB (1 module(s) 8 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, DIMM, 1Rx8</p> <p>16 GB (1 module(s) 16 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, DIMM, 2Rx8</p> <p>16 GB (1 module(s) 16 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, DIMM, 1Rx4</p> <p>32 GB (1 module(s) 32 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, DIMM, 2Rx4</p> <p>64 GB (1 module(s) 64 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, DIMM, 2Rx4</p> <p>128 GB (1 module(s) 128 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, LRDIMM, 4Rx4</p> <p>64 GB (1 module(s) 64 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, LRDIMM, 4Rx4</p>

Standard memory modules (for use in combination with non-volatile memory modules)	96 GB (6 module(s) 16 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, DIMM, 1Rx4
	64 GB (4 module(s) 16 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, DIMM, 1Rx4
	128 GB (8 module(s) 16 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, DIMM, 1Rx4
	192 GB (6 module(s) 32 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, DIMM, 2Rx4
	128 GB (4 module(s) 32 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, DIMM, 2Rx4
	256 GB (8 module(s) 32 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, DIMM, 2Rx4
	768 GB (6 module(s) 128 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, LRDIMM, 4Rx4
	384 GB (6 module(s) 64 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, LRDIMM, 4Rx4
	256 GB (4 module(s) 64 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, LRDIMM, 4Rx4
	512 GB (8 module(s) 64 GB) DDR4, registered, ECC, 2,933 MT/s, PC4-2933, LRDIMM, 4Rx4
Non-volatile memory modules	128 GB (1 module(s) 128 GB) DDR-T, registered, ECC, 2,666 MT/s, NVM, DCPMM, 1Rx4
	256 GB (2 module(s) 128 GB) DDR-T, registered, ECC, 2,666 MT/s, NVM, DCPMM, 1Rx4
	512 GB (2 module(s) 256 GB) DDR-T, registered, ECC, 2,666 MT/s, NVM, DCPMM, 2Rx4
	512 GB (4 module(s) 128 GB) DDR-T, registered, ECC, 2,666 MT/s, NVM, DCPMM, 1Rx4
	1024 GB (4 module(s) 256 GB) DDR-T, registered, ECC, 2,666 MT/s, NVM, DCPMM, 2Rx4
	2048 GB (4 module(s) 512 GB) DDR-T, registered, ECC, 2,666 MT/s, NVM, DCPMM, 4Rx4
	768 GB (6 module(s) 128 GB) DDR-T, registered, ECC, 2,666 MT/s, NVM, DCPMM, 1Rx4
	1536 GB (6 module(s) 256 GB) DDR-T, registered, ECC, 2,666 MT/s, NVM, DCPMM, 2Rx4
	3072 GB (6 module(s) 512 GB) DDR-T, registered, ECC, 2,666 MT/s, NVM, DCPMM, 4Rx4
Interfaces	
USB 3.0 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
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
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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
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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	
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Operating Systems and Virtualization Software

Certified or supported operating systems and virtualization software	Windows Server 2019 Datacenter
	Windows Server 2019 Standard
	Windows Server Datacenter, version 1809
	Windows Server Standard, version 1809
	Hyper-V Server 2016
	Windows Server 2016 Datacenter
	Windows Server 2016 Standard
	Windows Server Datacenter, version 1709
	VMware vSphere™ 6.7
	VMware vSphere™ 6.5
	SUSE® Linux Enterprise Server 12
	Red Hat® Enterprise Linux 8
	Red Hat® Enterprise Linux 7
Oracle® Linux 7	
Oracle® VM 3	
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

Infrastructure and Server Management

DC Infrastructure Management	Infrastructure Manager (ISM) Essential Advanced
Server Management	Infrastructure Manager (ISM) Essential Advanced 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. For detailed information see relevant system configurator.
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)
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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 Power Calculator of the System Architect: http://configurator.ts.fujitsu.com/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
Model	PS4770A
Global	CB RoHS (Substance limitations in accordance with global RoHS regulations) WEEE (Waste electrical and electronic 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

Optical drives	Blu-ray Disc™ Triple Writer, (6x BD-RW, 8x DVD, 24x CD), ultraslim, SATA I DVD Super Multi ultra slim , (8x DVD; 24x CD), ultraslim, SATA I
Hard disk drives	HDD SATA, 6 Gb/s, 2 TB, 7,200 rpm, 512n, hot-plug, 2.5-inch, business critical HDD SATA, 6 Gb/s, 2 TB, 7,200 rpm, 512e, hot-plug, 2.5-inch, business critical HDD SATA, 6 Gb/s, 1 TB, 7,200 rpm, 512n, hot-plug, 2.5-inch, business critical HDD SATA, 6 Gb/s, 1 TB, 7,200 rpm, 512e, hot-plug, 2.5-inch, business critical

Hard disk drives

HDD SAS, 12 Gb/s, 900 GB, 15,000 rpm, 512n, hot-plug, 2.5-inch, enterprise
HDD SAS, 12 Gb/s, 900 GB, 10,000 rpm, 512n, hot-plug, 2.5-inch, enterprise
HDD SAS, 12 Gb/s, 900 GB, 10,000 rpm, 512e, hot-plug, 2.5-inch, enterprise
HDD SAS, 12 Gb/s, 600 GB, 15,000 rpm, 512n, hot-plug, 2.5-inch, enterprise
HDD SAS, 12 Gb/s, 600 GB, 10,000 rpm, 512n, hot-plug, 2.5-inch, enterprise
HDD SAS, 12 Gb/s, 600 GB, 10,000 rpm, 512e, hot-plug, 2.5-inch, enterprise
HDD SAS, 12 Gb/s, 600 GB, 10,000 rpm, 512n, hot-plug, 2.5-inch, enterprise, SED
HDD SAS, 12 Gb/s, 300 GB, 15,000 rpm, 512n, hot-plug, 2.5-inch, enterprise
HDD SAS, 12 Gb/s, 300 GB, 10,000 rpm, 512n, hot-plug, 2.5-inch, enterprise, SED
HDD SAS, 12 Gb/s, 300 GB, 10,000 rpm, 512n, hot-plug, 2.5-inch, enterprise
HDD SAS, 12 Gb/s, 2.4 TB, 10,000 rpm, 512e, hot-plug, 2.5-inch, enterprise, SED
HDD SAS, 12 Gb/s, 2.4 TB, 10,000 rpm, 512e, hot-plug, 2.5-inch, enterprise
HDD SAS, 12 Gb/s, 2 TB, 7,200 rpm, 512n, hot-plug, 2.5-inch, business critical
HDD SAS, 12 Gb/s, 1.8 TB, 10,000 rpm, 512e, hot-plug, 2.5-inch, enterprise, SED
HDD SAS, 12 Gb/s, 1.8 TB, 10,000 rpm, 512e, hot-plug, 2.5-inch, enterprise
HDD SAS, 12 Gb/s, 1.2 TB, 10,000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 12 Gb/s, 1.2 TB, 10,000 rpm, 512e, hot-plug, 2.5-inch, enterprise
HDD SAS, 12 Gb/s, 1.2 TB, 10,000 rpm, 512n, hot-plug, 2.5-inch, enterprise, SED
HDD SAS, 12 Gb/s, 1 TB, 7,200 rpm, 512n, hot-plug, 2.5-inch, business critical

Solid-State-Drive

SSD SATA, 6 Gb/s, 960 GB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 0.9 DWPD (Drive Writes Per Day for 5 years)
SSD SATA, 6 Gb/s, 960 GB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3 DWPD (drive writes per day for 5 years)
SSD SATA, 6 Gb/s, 480 GB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 0.9 DWPD (Drive Writes Per Day for 5 years)
SSD SATA, 6 Gb/s, 480 GB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3.6 DWPD (Drive Writes Per Day for 5 years)
SSD SATA, 6 Gb/s, 240 GB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 1.4 DWPD (Drive Writes Per Day for 5 years)
SSD SATA, 6 Gb/s, 240 GB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3.6 DWPD (Drive Writes Per Day for 5 years)
SSD SATA, 6 Gb/s, 7.68 TB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 0.5 DWPD (Drive Writes Per Day for 5 years)
SSD SATA, 6 Gb/s, 3.84 TB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 1.0 DWPD (Drive Writes Per Day for 5 years)
SSD SATA, 6 Gb/s, 3.84 TB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3 DWPD (drive writes per day for 5 years)
SSD SATA, 6 Gb/s, 1.92 TB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 0.9 DWPD (Drive Writes Per Day for 5 years)
SSD SATA, 6 Gb/s, 1.92 TB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3 DWPD (drive writes per day for 5 years)
SSD M.2 SATA, 6 Gb/s, 480 GB, non hot plug, enterprise, 1.4 DWPD (Drive Writes Per Day for 5 years)
SSD M.2 SATA, 6 Gb/s, 240 GB, non hot plug, enterprise, for VMware
SSD M.2 SATA, 6 Gb/s, 240 GB, non hot plug, enterprise, 1.4 DWPD (Drive Writes Per Day for 5 years)

Solid-State-Drive

SSD SAS, 12 Gb/s, 960 GB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 1 DWPD (Drive Writes Per Day for 5 years)
SSD SAS, 12 Gb/s, 800 GB, Write-Intensive, hot-plug, 2.5-inch, enterprise, 10 DWPD (Drive Writes Per Day for 5 years), SED
SSD SAS, 12 Gb/s, 800 GB, Write-Intensive, hot-plug, 2.5-inch, enterprise, 10 DWPD (Drive Writes Per Day for 5 years)
SSD SAS, 12 Gb/s, 800 GB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3 DWPD (Drive Writes Per Day for 5 years)
SSD SAS, 12 Gb/s, 480 GB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 1 DWPD (Drive Writes Per Day for 5 years)
SSD SAS, 12 Gb/s, 400 GB, Write-Intensive, hot-plug, 2.5-inch, enterprise, 10 DWPD (Drive Writes Per Day for 5 years), SED
SSD SAS, 12 Gb/s, 400 GB, Write-Intensive, hot-plug, 2.5-inch, enterprise, 10 DWPD (Drive Writes Per Day for 5 years)
SSD SAS, 12 Gb/s, 400 GB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3 DWPD (Drive Writes Per Day for 5 years)
SSD SAS, 12 Gb/s, 3.84 TB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 1 DWPD (Drive Writes Per Day for 5 years)
SSD SAS, 12 Gb/s, 3.2 TB, Mixed-use, hot-plug, 2.5-inch, enterprise, 2.3 DWPD (Drive Writes Per Day for 5 years)
SSD SAS, 12 Gb/s, 1.92 TB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 1 DWPD (Drive Writes Per Day for 5 years)
SSD SAS, 12 Gb/s, 1.6 TB, Write-Intensive, hot-plug, 2.5-inch, enterprise, 10 DWPD (Drive Writes Per Day for 5 years), SED
SSD SAS, 12 Gb/s, 1.6 TB, Write-Intensive, hot-plug, 2.5-inch, enterprise, 10 DWPD (Drive Writes Per Day for 5 years)
SSD SAS, 12 Gb/s, 1.6 TB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3 DWPD (Drive Writes Per Day for 5 years)

PCIe SSD & SATA DOM SSD	PCIe-SSD SFF, 750 GB, Write-Intensive, hot-plug, 2.5-inch, Flash drive, 30 DWPD (Drive Writes Per Day for 5 years)
	PCIe-SSD SFF, 500 GB, Read-Intensive, hot-plug, 2.5-inch, Flash drive, 0.7 DWPD (Drive Writes Per Day for 5 years)
	PCIe-SSD SFF, 6.4 TB, Mixed-use, hot-plug, 2.5-inch, Flash drive, 3.0 DWPD (Drive Writes Per Day for 5 years)
	PCIe-SSD SFF, 4 TB, Read-Intensive, hot-plug, 2.5-inch, Flash drive, 3.0 DWPD (Drive Writes Per Day for 5 years)
	PCIe-SSD SFF, 4 TB, Read-Intensive, hot-plug, 2.5-inch, Flash drive, 0.6 DWPD (Drive Writes Per Day for 5 years)
	PCIe-SSD SFF, 3.2 TB, Mixed-use, hot-plug, 2.5-inch, Flash drive, 3.0 DWPD (Drive Writes Per Day for 5 years)
	PCIe-SSD SFF, 2 TB, Read-Intensive, hot-plug, 2.5-inch, Flash drive, 3.0 DWPD (Drive Writes Per Day for 5 years)
	PCIe-SSD SFF, 1.6 TB, Mixed-use, hot-plug, 2.5-inch, Flash drive, 3.0 DWPD (Drive Writes Per Day for 5 years)
	PCIe-SSD SFF, 1 TB, Read-Intensive, hot-plug, 2.5-inch, Flash drive, 3.0 DWPD (Drive Writes Per Day for 5 years)
	PCIe-SSD AIC, 750 GB, Write-Intensive, HHHL, Flash drive, 30 DWPD (Drive Writes Per Day for 5 years)
PCIe-SSD AIC, 375 GB, Write-Intensive, HHHL, Flash drive, 30 DWPD (Drive Writes Per Day for 5 years)	
	Dual microSD 64GB Enterprise
SCSI / SAS Controller	LSI PSAS CP400e LP SAS Ctrl. 12 Gbit/s 8 ports ext. PCIe 3.0 x8
	Fujitsu PSAS CP403i SAS Ctrl. 12 Gbit/s 8 ports int. PCIe 3.0 x8
	Fujitsu PSAS CP400i SAS Ctrl. 12 Gbit/s 8 ports int. PCIe 3.0 x8
	Fujitsu PSAS CP400e FH SAS Ctrl. 12 Gbit/s 8 ports ext. PCIe 3.0 x8
RAID Controller	Fujitsu PRAID EP580i LP, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, NVMe-PCIe 8 Gbit/s, 8 Gbit/s 16 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 8 GB, Optional FBU based on LSI SAS3516
	Fujitsu PRAID EP540i LP, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, NVMe-PCIe 8 Gbit/s, 8 Gbit/s 16 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 4 GB, Optional FBU based on LSI SAS3516
	Fujitsu PRAID EP540e LP, RAID 5/6 Ctrl., SAS 12 Gbit/s, 8 ports ext. RAID level: 0, 1, 10, 5, 50, 6, 60, 4 GB, Optional FBU based on LSI SAS3516
	Fujitsu PRAID EP540e FH, RAID 5/6 Ctrl., SAS 12 Gbit/s, 8 ports ext. RAID level: 0, 1, 10, 5, 50, 6, 60, 4 GB, Optional FBU based on LSI SAS3516
	Fujitsu PRAID EP420i, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 2 GB, Optional FBU based on LSI SAS3108
	Fujitsu PRAID EP420i for SafeStore, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 2 GB, Optional FBU based on LSI SAS3108
	Fujitsu PRAID EP400i, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 1 GB, Optional FBU based on LSI SAS3108
	Fujitsu PRAID CP400i, RAID Ctrl., SAS/SATA 12 Gbit/s, 8 ports int. RAID level: 0, 1, 1E, 10, 5, 50, No FBU support
Fibre Channel controller	Fibre Channel Host Bus Adapter 1 x 32 Gbit/s Cavium QLE2740 MMF LC-style
	Fibre Channel Host Bus Adapter 2 x 32 Gbit/s Cavium QLE2742 MMF LC-style
	Fibre Channel Host Bus Adapter 1 x 32 Gbit/s Emulex LPe32000-M6-F MMF LC-style
	Fibre Channel Host Bus Adapter 2 x 32 Gbit/s Emulex LPe32002-M6-F MMF LC-style
	Fibre Channel Host Bus Adapter 1 x 16 Gbit/s Qlogic QLE2690 LC-style
	Fibre Channel Host Bus Adapter 2 x 16 Gbit/s Qlogic QLE2692 LC-style
	Fibre Channel Host Bus Adapter 1 x 16 Gbit/s Emulex LPe31000-M6-F MMF LC-style
	Fibre Channel Host Bus Adapter 2 x 16 Gbit/s Emulex LPe31002-M6-F MMF LC-style

Communication, Network	<p>Converged Network Adapter 2 x 10 Gbit/s / 25 Gbit/s PCIe 3.0 x8 SFP28 (Cavium)</p> <p>Ethernet Ctrl. 1 x 100 Gbit/s PCIe 3.0 x16 QSFP28 (Cavium)</p> <p>Ethernet Ctrl. 1 x 100 Gbit/s PCIe 3.0 x16 QSFP28 (Mellanox)</p> <p>Ethernet Ctrl. 2 x 10 Gbit/s ; 1 Gbit/s PCIe 3.0 x8 RJ45 (Cavium)</p> <p>Ethernet Ctrl. 2 x 10 Gbit/s ; 1 Gbit/s PCIe 3.0 x8 RJ45 (Intel®)</p> <p>Ethernet Ctrl. 2 x 10 Gbit/s ; 1 Gbit/s PCIe 3.0 x8 SFP+ (Cavium)</p> <p>Ethernet Ctrl. 2 x 10 Gbit/s / 25 Gbit/s PCIe 3.0 x8 SFP28 (Cavium)</p> <p>Ethernet Ctrl. 2 x 10 Gbit/s / 25 Gbit/s PCIe 3.0 x8 SFP28 (Intel®)</p> <p>Ethernet Ctrl. 2 x 10 Gbit/s / 25 Gbit/s PCIe 3.0 x8 SFP28 (Mellanox)</p> <p>Ethernet Ctrl. 2 x 10 Gbit/s PCIe 3.0 x8 SFP+ (Intel®)</p> <p>Ethernet Ctrl. 2 x 40 Gbit/s PCIe 3.0 x16 QSFP (Mellanox)</p> <p>Ethernet Ctrl. 4 x 10 Gbit/s ; 1 Gbit/s PCIe 3.0 x8 RJ45 (Cavium)</p> <p>Ethernet Ctrl. 4 x 10 Gbit/s ; 1 Gbit/s PCIe 3.0 x8 RJ45 (Intel®)</p> <p>Ethernet Ctrl. 4 x 10 Gbit/s ; 1 Gbit/s PCIe 3.0 x8 SFP+ (Cavium)</p> <p>Ethernet Ctrl. 4 x 10 Gbit/s PCIe 3.0 x8 SFP+ (Intel®)</p> <p>Ethernet Ctrl. 4 x 1 Gbit/s PCIe 2.1 x4 RJ45 (Intel®)</p> <p>InfiniBand HCA 1 x 100 Gbit/s PCIe 3.0 x16 QSFP for the US market max. one IB HCA 100Gb controller can be installed (Mellanox)</p> <p>InfiniBand HCA 2 x 100 Gbit/s PCIe 3.0 x16 QSFP for the US market max. one IB HCA 100Gb controller can be installed (Mellanox)</p> <p>Interface modul for Dynamic LoM 2 x 10 Gbit/s RJ45 (Intel®)</p> <p>Interface modul for Dynamic LoM 2 x 10 Gbit/s SFP+ (Intel®)</p> <p>Interface modul for Dynamic LoM 4 x 10 Gbit/s SFP+ (Intel®)</p> <p>Interface modul for Dynamic LoM 4 x 1 Gbit/s RJ45 (Intel®)</p> <p>MPO x 40 Gbit/s ()</p> <p>Omni Path 1 x PCIe 3.0 x16 (Intel®)</p>
Rack infrastructure	<p>Rackmount kit full extraction (820mm), tool less mounting, length variable 559-914mm</p> <p>Rack Mount Kit</p> <p>Cable Management for 19-inch DataCenter / PRIMECENTER Racks</p> <p>Cable Arm 2U for PRIMECENTER- and 3rd-party racks</p>
Warranty	
Warranty period	3 years
Warranty type	Onsite warranty
Warranty Terms & Conditions	http://support.ts.fujitsu.com/warranty/Index.asp?LNG=COM
Product Support Services - the perfect extension	
Support Pack Options	<p>Globally available in major business areas:</p> <p>9x5, Next Business Day Onsite Response Time</p> <p>9x5, 4h Onsite Response Time (depending on country)</p> <p>24x7, 4h Onsite Response Time (depending on country)</p>
Recommended Service	24x7, Onsite Response Time: 4h - For locations outside of EMEA please contact your local Fujitsu partner.
Service Lifecycle	5 years after end of product life
Service Weblink	http://www.fujitsu.com/emeia/products/product-support-services/

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2020-05-25 WW-EN

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