

Data Sheet

PRIMERGY RX2450 M1 Rack Server

Powerful server that serves your services

Fujitsu offers a fantastic blend of systems, solutions and expertise to guarantee maximum productivity, efficiency and flexibility, delivering confidence and reliability. 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 RX2450 M1

The Fujitsu PRIMERGY Server RX2450 M1 is a dual-socket 2U rack server that delivers powerful performance together with flexible configuration options. Powered by the 2nd and 3rd Gen AMD EPYC™ Processors, the server system is ideal for traditional and emerging workloads such as virtualized and cloud computing environments, all kinds of service providers, HPC and data-intensive workloads. The PRIMERGY RX2450 M1 can be equipped with two AMD EPYC™ CPU's featuring up to 64 cores each. Along with enhanced DDR4 memory technology supporting 3,200 MT/s, the server features sufficient memory capacity provided by 32 DIMM slots in total supporting 4TB of memory.

In particular the instructions per clock increase of the latest AMD EPYC™ processors compared to the previous generation as well as the amount of DIMM slots provide great VM, container and application density. The design of the server offers balanced expandability with up to 24 hot-swap

2.5" storage drives as well as up to four PCIe 4.0 expansion slots. In order not to waste the disk capacity in the front of the chassis, the system also offers other advanced features such as SSD SATA M.2 drives for efficient boot requirements. PCIe 4.0 delivers double the I/O performance over PCIe 3.0, provides 128 PCIe lanes and satisfies voracious needs for east-west bandwidth. Moreover, the server can be equipped with different kinds of NVIDIA GPU cards. The PRIMERGY RX2450 M1 comes with two redundant 1600W high-efficiency (Platinum Level) power supply units and in total four fan modules with speed control providing efficient system cooling.



Features & Benefits

Main Features	Benefits
<p>SECURE, HIGH PERFORMANCE COMPUTING</p> <ul style="list-style-type: none"> With up to 128 cores (per 2-socket configuration), 32 DIMMs, 4 TB memory capacity, as well as support for up to 24 storage drives, the PRIMERGY RX2450 M1 server delivers low cost virtual machines (VMs) with unprecedented security. <p>EXPANDABILITY AND DENSITY</p> <ul style="list-style-type: none"> The server system offers the possibility of using up to 24x 2.5-inch storage drives. There is also the option of expanding the server using a total of 4x PCIe Gen 4 slots. The server can be equipped with different kinds of NVIDIA GPU cards. <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>SECURITY</p> <ul style="list-style-type: none"> PRIMERGY RX2450 M1 equipped with AMD EPYC™ processors boast a set of advanced security features, called AMD Infinity Guard, which includes the AMD secure processor, Secure Memory Encryption (SME), and Secure Encrypted Virtualization (SEV). All of these features help minimize potential attack surfaces as software is booted and executed and processes your critical data. 	<ul style="list-style-type: none"> The versatile PRIMERGY RX2450 M1 server with AMD EPYC™ 7002/7003 processors shortens time to value for IT organizations running demanding workloads. Agile and data-driven companies modern platforms that scale easily and are optimized for application performance. The PRIMERGY RX2450 M1 is built upon a scalable system architecture and provides choice and flexibility to meet performance demands. As you scale your infrastructure, scale your profitability with FUJITSU Software Infrastructure Manager (ISM). ISM enables organizations to have centralized control over the entire data center, which includes servers, storage, networking, cloud management software as well as power and cooling using a single user interface. Designed with security in mind, AMD EPYC™ 7003 series processors help protect your CPU, applications, and data. And with the range of features you need to power your business, you can adapt your IT infrastructure to match workload challenges you face today and into the future.

Technical details

PRIMERGY RX2450 M1

Base unit	PRIMERGY RX2450 M1	PRIMERGY RX2450 M1	PRIMERGY RX2450 M1	PRIMERGY RX2450 M1
Base unit - order code	PYR2451RET	PYR2451RFT	PYR2451RGT	PYR241RHT
Housing types	Rack	Rack	Rack	Rack
Storage drive architecture	max. 20x 2.5-inch SATA/PCIe	24x 2.5-inch SAS/SATA/PCIe	24x 2.5-inch SAS/SATA/PCIe	24x 2.5-inch SAS/SATA/PCIe
Power supply	Hot-plug	Hot-plug	Hot-plug	Hot-plug
Product Type	Dual Socket 2U Server Node	Dual Socket 2U Server Node	Dual Socket 2U Server Node	Dual Socket 2U Server Node
Notes	16xOnboard SATA, 4xOnboard PCIeSSD BTO HBA or RAID controller is orderable as optical parts. L-part HBA or RAID controller is orderable as optical parts.	12xOnboard SATA, 4xSATA under Raid/HBA, 4xSATA/SAS under Raid/HBA, 4xOnboard PCIeSSD BTO 1pcs CP503i or 1pcs EP520i or 1pcs EP640i controller needs to be ordered together. L-part HBA or RAID controller is orderable as optional parts.	4xOnboard SATA, 12xSATA under Raid/HBA, 4xSATA/SAS under Raid/HBA, 4xOnboard PCIeSSD BTO 2pcs CP503i or 2pcs EP520i or 2pcs EP640i or 1pcs EP540i or 1pcs EP580i or 1pcs EP680i or 1pcs CP600i controller needs to be ordered together. L-part HBA or RAID controller is orderable as optional parts.	16xSATA under Raid/HBA, 4xSATA/SAS under Raid/HBA, 4xOnboard PCIeSSD BTO 2pcs EP540i or 2pcs EP580i or 2pcs EP680i or 2pcs CP600i controller needs to be ordered together. L-part HBA or RAID controller is orderable as optional parts.

Mainboard

Mainboard type	MBD-H12DSU-IN-P
Chipset	System on Chip (SoC)
Processor quantity and type	2 x AMD EPYC™ 7002 series processor / AMD EPYC™ 7003 series processor
Processor notes	Two CPUs must be configured, no mix of different CPU types
Memory slots	32 (16 DIMMs per CPU)
Memory slot type	DIMM (DDR4) ECC
Memory capacity (min. - max.)	64 GB - 4 TB
Memory protection	Advanced ECC

Interfaces

USB 3.x ports	2 x USB 3.0 (2x rear)
Graphics (15-pin)	1 x VGA (1x rear)
Serial 1 (9-pin)	1 x Serial (1x rear)
Management LAN (RJ45)	1x 1GbE (1x rear)

Onboard or integrated Controller

RAID controller	All hardware storage controller options are described under Components
SATA Controller	SATA controller integrated on the system board; up to twenty SATA HDDs/SSDs can be connected to the controller.
LAN Controller	2x 1GbE (Use AOC LAN card)
Remote management controller	BMC with 256 MB DDR4-800 SRAM for video, IPMI 2.0 compatible

Slots

PCI-Express 4.0 x16	4 x Full height 3x PCIe Gen4 x16 for double-wide GPU, 1x PCIe Gen4 x16
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Drive bays (Base unit specific)

Storage drive bays	Up to 24: 16x 2.5-inch SATA only + 4x 2.5-inch SAS/SATA + 4x 2.5-inch NVMe (PCIe Gen3)
Storage drive bay configuration	There are 4 kinds of storage drive bay configurations. - PYR2451RAT :16xOnboard SATA, 4xOnboard PCIeSSD - PYR2451RBT :12xOnboard SATA, 4xSATA under Raid/HBA, 4xSATA/SAS under Raid/HBA, 4xOnboard PCIeSSD * 1pcs CP503i or 1pcs EP520i controller are required. - PYR2451RCT :4xOnboard SATA, 12xSATA under Raid/HBA, 4xSATA/SAS under Raid/HBA, 4xOnboard PCIeSSD * 2pcs CP503i or 2pcs EP520i or 1pcs EP540i or 1pcs EP580i controller are required. - PYR2451RDT :16xSATA under Raid/HBA, 4xSATA/SAS under Raid/HBA, 4xOnboard PCIeSSD * 2pcs EP540i or 2pcs EP580i controller are required.

General system information

Number of fans	4
Fan configuration	The fans are controlled to guarantee a reliable system cooling in combination with utmost silence.
Fan notes	SANYO FAN-9HV0812P1H6041

Operating panel

Operating buttons	On/off switch Reset button
Status LEDs	Hard disk error System status and warning (PSU/Fan)

BIOS

BIOS features	UEFI compliant IPMI support
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Operating Systems and Virtualization Software

Certified or supported operating systems and virtualization software	Windows Server 2022 Datacenter
	Windows Server 2022 Standard
	Windows Server 2019 Datacenter
	Windows Server 2019 Standard
	Windows Server 2016 Datacenter
	Windows Server 2016 Standard
	Windows Storage Server 2016 Standard
	VMware vSphere™ 8.0
	VMware vSphere™ 7.0
	VMware vSphere™ 6.7
Operating system release link	SUSE® Linux Enterprise Server 15
	Red Hat® Enterprise Linux 8
Operating system notes	http://docs.ts.fujitsu.com/dl.aspx?id=d4ebd846-aa0c-478b-8f58-4cfbf3230473 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 RAID Manager
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)	437 x 705.3 x 89 mm
Height Unit Rack	2 U
19" rackmount	Yes
Weight	up to 32.7 kg
Weight notes	Actual weight may vary depending on configuration
Rack integration kit	Rack integration kit

Environment

Operating ambient temperature	10 - 35 °C
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.

Environment

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
Sound pressure (LpAm)	Noise typical configuration: 61.6 dBA (operating)

Electrical values

Power supply configuration	2 hot-plug power supplies
Hot-plug power supply redundancy	Yes
Rated current max.	100-127VAC/13.8A 200-240VAC/9.6A
Power supply	1000W@100-127Vac / 1600W@200-240Vac

Compliance

Product	PRIMERGY RX2450 M1
Global	IEC 60950-1 /62368 CISPR 32
Europe	EN 60950 - 1 EN 61000-3-3 EN 61000-3-2 EN 62479 EN 50392 ETSI 300 386 2011/65/EU (EC) No 1907/2006
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

PCIe SSD & SATA DOM SSD	PCIe-SSD SFF, 15.36 TB, Read-Intensive, hot-plug, 2.5-inch, Flash drive, 1.0 DWPD
	PCIe-SSD SFF, 12.8 TB, Mixed-use, hot-plug, 2.5-inch, Flash drive, 3.0 DWPD
	PCIe-SSD SFF, 7.68 TB, Read-Intensive, hot-plug, 2.5-inch, Flash drive, 1.0 DWPD
	PCIe-SSD SFF, 6.4 TB, Mixed-use, hot-plug, 2.5-inch, Flash drive, 3.0 DWPD
	PCIe-SSD SFF, 3.84 TB, Read-Intensive, hot-plug, 2.5-inch, Flash drive, 1.0 DWPD
	PCIe-SSD SFF, 3.2 TB, Mixed-use, hot-plug, 2.5-inch, Flash drive, 3.0 DWPD
	PCIe-SSD SFF, 1.92 TB, Read-Intensive, hot-plug, 2.5-inch, Flash drive, 1.0 DWPD
	PCIe-SSD SFF, 1.6 TB, Mixed-use, hot-plug, 2.5-inch, Flash drive, 3.0 DWPD

RAID Controller

Fujitsu PRAID EP680i FH, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, NVMe-PCIe 16 GT/s, 16 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 8 GB, Optional FBU based on LSI SAS3916
Fujitsu PRAID EP580i FH, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, NVMe-PCIe 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 FH, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, NVMe-PCIe 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 EP520i FH, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, NVMe-PCIe 8 Gbit/s, 8 Gbit/s 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 2 GB, Optional FBU based on LSI SAS3516

Fibre Channel controller	Fibre Channel Host Bus Adapter 1 x 32 Gbit/s Emulex LPE35000-M2-F MMF LC-style
	Fibre Channel Host Bus Adapter 2 x 32 Gbit/s Emulex LPE35002-M2-F MMF 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
	InfiniBand HCA 1 x 200Gb/s PCIe x16 QSFP for the US market max. one IB HCA 200Gb controller can be installed (Mellanox)
GPU computing card	NVIDIA® A40, 48 GB, 696 GB/s, 48GB GDDR6, N/A, PCIe 4.0 x16
	NVIDIA® A16, 64 GB, 800GB/s (4 x200GB/s), 64GB GDDR6 (4 x16GB), N/A, PCIe 4.0 x16
	NVIDIA® A30, 933GB/s, 24GB HBM2, N/A, PCIe 4.0 x16
	NVIDIA® RTX™ A4500, 640 GB/s, 20GB GDDR6, N/A, PCIe 4.0 x16, 4 x DisplayPort
	NVIDIA® A2, 200GB/s, 16GB, N/A, PCIe 4.0 x8
	NVIDIA® RTX™ A6000, 48 GB, 786 GB/s, 48 GB GDDR6, N/A, PCIe 4.0 x16, 4 x DisplayPort
Notes	
Compatibility	If and to the extent a list of components or certain compatibilities are specified in the product data sheet, these component lists and compatibility specifications are exhaustive. Using deviating or other system components and applications together with the product may but does not necessarily have to lead to compatibility problems. A final statement and/or commitment on the compatibility of such deviating or other system components and applications can only be provided after a corresponding verification through a dedicated compatibility testing.
Continuity management	The product may in connection with and depending on the specific configuration include elements to support time- and performance-critical applications, however high availability (e.g., 99.9999%) and failsafe performance is not a standalone product feature. If and to the extent the product is to be used in such business-critical environments, it is within the sole responsibility of the user to set up the specific additional technical features (e.g., Storage Cluster), redundancies, and operational conditions as required to ensure such high availability or failsafe performance.
Security	The properties of the product provide a baseline for product security and therefore end-customer IT security. However, these properties are not sufficient on their own to protect the product from all existing threats, such as intrusion attempts, data exfiltration and other forms of cyberattacks. To customize security settings, please use the configuration options as available for the respective product. During operation, the IT security of this product is within the responsibility of the respective administrator/end-user of the product. Please note, that Fujitsu as a manufacturer does not make any policy prescriptions or advocacy statements regarding IT security best practices and/or general product operation.
Warranty	
Manufacturer 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 PRIMERGY RX2450 M1, 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/

Software

www.fujitsu.com/software/

More information

Learn more about PRIMERGY RX2450 M1, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
<http://www.fujitsu.com/global/products/computing/servers/primergy/rack/rx2450m1/>

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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