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# Data Sheet
# Fujitsu PRIMERGY RX1440 M2 Rack Server

## Powerful compact server that serves your AI and VDI workloads

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 RX1440 M2
The Fujitsu PRIMERGY Server RX1440 M2 is a mono-socket 1U rack server that delivers powerful performance together with flexible configuration options. Powered by the 4th Gen AMD EPYC™ processors and huge DDR5 memory, the server system is ideal for traditional and emerging workloads such as AI, VDI, data intensive workloads. The PRIMERGY RX1440 M2 can be equipped with the 4th Gen AMD EPYC™ CPU featuring up to 128 cores. Along with enhanced DDR5 memory technology supporting 4,800 MT/s, the server features enormous memory capacity provided by 24 DIMM slots in total supporting 6TB 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 AI, VM, container and application density. The design of the server offers balanced expandability with up to 13 hot-plug

2.5" storage devices as well as up to 3 (+1) PCIe 5.0 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 5.0 delivers double the I/O performance over PCIe 4.0, provides 128 PCIe lanes. Moreover, the server can be equipped with different kinds of NVIDIA GPU cards. The PRIMERGY RX1440 M2 comes with two redundant 2400W high-efficiency (Titanium Level) power supply units and in total four fan modules with speed control providing efficient system cooling.

# Features & Benefits

| Main Features | Benefits |
|---|---|
| **EFICIENT, HIGH PERFORMANCE COMPUTING**<br>■ With up to 128 cores in a single-socket configuration, 24 DIMMs, 6 TB memory capacity, as well as support for up to 13 storage devices, the PRIMERGY RX1440 M2 server delivers valuable AI, VDI and virtual machines (VMs) peformance with unprecedented security. | ■ The versatile PRIMERGY RX1440 M2 server with AMD EPYC™ 9004 processors shortens time to value for IT organizations running demanding workloads. |
| **EXPANDABILITY AND DENSITY**<br>■ The server system offers the possibility of using up to 13x 2.5-inch storage devices. There is also the option of expanding the server using a total of 3x PCIe plus 1x internal RAID 5.0 slots. The server can be equipped with different kinds of NVIDIA GPU cards. | ■ Agile and data-driven companies modern platforms that scale easily and are optimized for application performance. The PRIMERGY RX1440 M2 is built upon a mono system architecture but provides high amount of cores, broad memory configuration options and flexibility to meet performance demands. |
| **AGILE INFRASTRUCTURE MANAGEMENT**<br>■ 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. | ■ 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, as well as power and cooling using a single user interface. |
| **SECURITY**<br>■ PRIMERGY RX1440 M2 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. | ■ Designed with security in mind, AMD EPYC™ 9004 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 RX1440 M2

| | | | |
|---|---|---|---|
| Base unit | PRIMERGY RX1440 M2 | PRIMERGY RX1440 M2 | PRIMERGY RX1440 M2 |
| Housing types | Rack | Rack | Rack |
| Storage drive architecture | 8x 2.5-inch SAS/SATA | 4x 3.5-inch SAS/SATA | 10x 2.5-inch SATA/NVMe |
| Power supply | Hot-plug | Hot-plug | Hot-plug |
| Product Type | Mono Socket Rack Server | Mono Socket Rack Server | Mono Socket Rack Server |

## Mainboard

| | | | |
|---|---|---|---|
| Mainboard type | D4130 | | |
| Chipset | System on Chip (SoC) | | |
| Processor quantity and type | 1 x AMD EPYC™ 9004 series processor | | |
| Mainboard type | D4130 | D4130 | D4130 |
| Processor quantity and type | 1 x AMD EPYC™ 9004 series processor | 1 x AMD EPYC™ 9004 series processor | 1 x AMD EPYC™ 9004 series processor |
| Processor notes | single CPU support | | |
| Memory slots | 24 (24 DIMMs per CPU) | | |
| Memory slot type | DIMM (DDR5) | | |
| Memory capacity (min. - max.) | 16 GB - 6 TB | | |
| Memory protection | Advanced ECC | | |
| Memory notes | for the Genoa system, Mix and match of modules with different capacity and rank or from different manufacturers weren`t possible. | | |

## Interfaces

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|---|---|
| USB 3.x ports | 4 x USB 3.0 (2x rear, 2x front) |
| Graphics (15-pin) | 1 x VGA (1x rear) |
| Serial 1 (9-pin) | 1 x Serial (1x rear) |
| Management LAN (RJ45) | 1 x dedicated management LAN port for iRMC S6 (10/100/1000 Mbit/s) |

## Onboard or integrated Controller

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|---|---|
| RAID controller | All hardware storage controller options are described under Components<br>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. |
| LAN Controller | Dynamic LoM via OCP slot; OCPv3 compliant<br>Optional OCP adaptors:<br>    4 x 1 Gbit/s Ethernet (RJ45)<br>    2 x 10 Gbit/s Ethernet (RJ45)<br>    4 x 10 Gbit/s Ethernet (RJ45)<br>    2 x 10 Gbit/s SFP+<br>    4 x 10 Gbit/s SFP+<br>    2 x 25 Gbit/s SFP28<br>    4 x 25 Gbit/s SFP28<br>    2x 100 Gbit/s QSFP28<br>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) |
| 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

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| Slot Notes | Standard Rear Type:  3x HHHL PCIe slot + 2x OCPv3<br>Optional Rear Type 1: 2x FHHL PCIe slot + 2x OCPv3<br>Optional Rear Type 2: 2x 2.5" HDD + 1 x FHHL PCIe slot 2x OCPv3<br>Stretch Goal:    3x 2.5" HDD + 2x OCPv3 |

## Drive bays (Base unit specific)

| | |
|---|---|
| Storage drive bays | Up to 10: 10x 2.5-inch SATA/SAS/NVME(PCIe SSD) |

## Drive bays (Base unit specific)

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|---|---|
| Storage drive bay configuration | There are 4 kinds of storage drive bay configurations.<br>PYR1442R3N     4x 3.5" HDD bays<br>PYR1442R2N     8x 2.5" HDD bays<br>PYR1442RAN    10x 2.5" HDD bays for SAS/SATA HDDs with RAID controller<br>PYR1442RBN    10x 2.5" HDD bays for PCIe SSD with onboard controller |
| 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/3x 2.5-inch hot-plug SAS/SATA/PCIe rear option |

## Drive bays (Base unit specific)

| | | | |
|---|---|---|---|
| Storage drive bays | up to 8x 2.5" (LFF) hot plug drives (SAS/SATA) | up to 4x 3.5" (LFF) hot plug drives (SAS/SATA) | up to 10x 2.5" (LFF) hot plug drives (PCIe_NVMe) |
| Optional accessible drives | Ultra slim 9.5mm optical drive (optional) | Ultra slim 9.5mm optical drive (optional) | |

## General system information

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| Number of fans | 8 |
| Fan configuration | The fans are controlled to guarantee a reliable system cooling in combination with utmost silence. |
| Fan notes | FOXCONN/ PIA060M12H-P11-AB |

## Operating panel

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|---|---|
| Operating buttons | On/off switch<br>ID button<br>Reset button<br>NMI button |
| Status LEDs | At system front side:<br>Power (DC-On: green / AC-On: white)<br>Identification(Blue-on: Activated by ID switch / Blue-flashing: Activated by IRMC)<br>CSS (orange)<br>Customer self service(Orange-on: Pre-failure detected /Orange-flashing: Error)<br>Global error LED(Orange-on: Pre-failure / Orange-flashing: Error)<br>LAN link/transfer(Green-on: LAN link / Green-Flashing: LAN transfer)<br>LAN speed(Off: 10 Mbit/s / Green: 100 Mbit/s / Yellow: 1000 Mbit/s)<br>Hard disks access (green) |

## BIOS

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|---|---|
| BIOS features | UEFI compliant<br>BIOS Flash EPROM update by software<br>BIOS settings save and restore<br>IPv4/IPv6 remote PXE support<br>IPv4/IPv6 remote PXE & iSCSI boot support<br>MCTP support<br>Local BIOS update from USB device<br>Secure boot support |

## Operating Systems and Virtualization Software

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|---|---|
| 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

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|---|---|
| DC Infrastructure Management | Infrastructure Manager (ISM)<br>    Essential Edition<br>    Advanced Edition |
| Server Management | ServerView Agentless Service (SVAS)<br>ServerView ESXi CIM Provider<br>ServerView Installation Manager (SVIM)<br>ServerView Update Manager Express (UME) |
| Management notes | For further information regarding ISM and ServerView Suite see dedicated data sheets. |

## Infrastructure and Server Management

| | |
|---|---|
| Manageability link | http://docs.ts.fujitsu.com/dl.aspx?id=9e92297a-16fb-4c69-8559-e38e7b42fee6 |

## Dimensions / Weight

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|---|---|
| Rack (W x D x H) | 483 x 842 x 43 mm |
| Height Unit Rack | 1 U |
| 19" rackmount | Yes |
| Weight | up to 18.9 kg |
| Weight notes | Actual weight may vary depending on configuration |
| Rack integration kit | Rack integration kit |

## Environment

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| Operating ambient temperature | 10 - 35 ℃ |
| Operating temperature note | PRIMERGY servers are designed for the usage with operating temperatures of up to 35℃. 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 condensin), maximum dew point 21℃ (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 | According to ISO9296 |
| Sound pressure (LpAm) | 40 dB(A) (idle) / 41 dB(A) (operating) typical Values |
| Sound power (LWAd; 1B = 10dB) | 4.8 B (idle) / 6.3 B (operating) typical Values |
| Noise notes | Noise emissions depends on operation modes, system configuration and ambient temperature. |

## Electrical values

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|---|---|
| Power supply configuration | 1x hot-plug power supply or 2x hot-plug power supply for redundancy |
| Hot-plug power supply redundancy | Yes |
| Active power (max. configuration) | 2,608.6 W |
| Apparent power (max. configuration) | 2570 VA |
| Heat emission (max. configuration) | 9391.0 kJ/h (8900.9 BTU/h) |
| Rated current max. | 12A (100-127 V) / 15A (200-240 V) |
| Power supply | 900W hot-plug, 94% (Platinum efficiency), 100-240V, 50 / 60Hz<br>900W hot-plug, 96% (Titanium efficiency), 200-240V, 50 / 60Hz<br>1600W hot-plug, 94% (Platinum efficiency), 100-240V, 50 / 60Hz<br>1600W hot-plug, 94% (Platinum efficiency), 200-240V, 50 / 60Hz<br>2200W hot-plug, 94% (Platinum efficiency), 100-240V, 50 / 60Hz<br>2400W hot-plug, 96% (Titanium efficiency), 100-240V, 50 / 60Hz |

## Compliance

| | |
|---|---|
| Product | PRIMERGY RX1440M2 |
| Model | PR1440A |
| Global | CB<br>RoHS (Substance limitations in accordance with global RoHS regulations)<br>WEEE (Waste electrical and electronical equipment) |
| Germany | GS |
| Europe | CE |
| USA/Canada | NRTLc/us<br>FCC Class A<br>ICES-003 / NMB-003 Class A |
| Japan | VCCI Class A + JIS 61000-3-2 |
| South Korea | KC |
| China | CCC |
| Australia/New Zealand | RCM |
| Taiwan | BSMI |
| Compliance link | https://sp.ts.fujitsu.com/sites/certificates |

### Compliance

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| 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.<br>* Warning:<br>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

### Notes

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| 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

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| 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

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|---|---|
| Support Pack Options | Globally available in major metropolitan areas:<br>9x5, Next Business Day Onsite Response Time<br>9x5, 4h Onsite Response Time (depending on country)<br>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 RX1440 M2, 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 RX1440 M2, 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



## Copyrights

## Disclaimer

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