Data Sheet
FUJITSU Server PRIMERGY RX600 S6 Quad socket 4U rack server

Balanced composition of top performance and high availability ensures your growth

FUJITSU Server PRIMERGY systems provide the most powerful and flexible data center solutions for companies of all sizes, across all industries and for any type of workload. This includes expandable PRIMERGY tower servers for remote and branch offices, versatile rack-mount servers, compact and scalable blade systems, as well as density-optimized scale-out servers. They convince by business proven quality with a wide range of innovations, highest efficiency cutting operational cost and complexity, and provide more agility in daily operations in order to turn IT faster into a business advantage.

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 datacenter. PRIMERGY RX servers deliver 20 years of development and production know-how resulting in extremely low failure rates below market average, and leading to continuous operations and outstanding hardware availability.

PRIMERGY RX600 S6

Extensive usage of industry standard x86 based platforms is becoming more important than ever: be it as database management system for medium or large-sized databases or as a consolidation basis to run an immensely large number of different applications using virtualization technologies. The scalable Fujitsu Server PRIMERGY RX600 S6 is in every respect a reliable server for such critical company scenarios. The ideal interaction of integrated redundancy functions with server management components results in high-level availability and constantly efficient IT production as a character feature of this server platform.
The latest generation of Intel Xeon processors equipped with up to 10 state-of-the art cores enable a unique performance boost which however does not bear optimal dividends unless paired with other features: a high extendable main memory capacity with up to 64 DIMMs and a very high number of performant PCI Express channels provide a balanced high throughput architecture so as to meet increasing requirements. This and the continued evolution of virtualization support via Intel® components (processor, I/O controller) enable a greater consolidation of servers and applications with all the market relevant virtualization solutions , resulting in excellent best-in-class efficiency.

Features & Benefits

Main Features	Benefits
Scale-up Performance for Growth	
■ Using the scalable Intel® QPI architecture in this 4 CPU sockets server results in an excellent increase in performance when compared to the older Front Side Bus server generations. Thanks to the integration of two memory controllers per processor, the CPU to memory bandwidth has been raised up to a factor of 9. Together with the quadrupled maximum memory capacity and the new processor generation with up to 10 cores per processor and 2 threads per core, the system performance achieves unprecedented growth factors.	■ This system is designed for critical corporate applications and large scale consolidation. Its new architecture ensures for even more efficient deployment of demanding scale-up computing needs. Irrespective of the server usage, as database or virtualization system, the performance can always be extended so that no bottlenecks can arise as a result of low processor performance or main memory capacity.
Balanced Scalability	
■ Balanced scale-up performance is achieved by combining various processor choices, using up to 4 x Intel® Xeon® E7-4800 or up to 2 x Intel® Xeon® E7-2800 processors, with PCI Express Generation 2 I/O busses and up to 64 memory DIMMs on 8 configurable memory boards.	■ More demanding database loads can be hosted on RX600 S6 with peace of mind, capitalizing on high performance I/O, massive computing power and up to 2 TB of local memory. ■ Large scale consolidation of tier 1 and tier 2 workloads into virtual machines benefit from the high platform reliability and its balanced scaleability. ■ More consolidation and virtualization efficiency is obtained by using less server instances with the scale-up RX600 S6 platform. Deployment of "fat VMs" for demanding tier 2 applications can be combined with large scale consolidation of tier 1 virtual machines onto significantly less management instances.
Integrated High Availability as standard	
■ ECC and SDDC memory protection, memory mirroring support, hot-plug Memory Boards with socket-overlapping memory mirroring, hot-plug redundant fans and power supplies as standard, up to 8x hot-plug 2.5-inch SAS/SATA hard disks, hot-plug PCIe slots ■ LocalView display and integrated Remote Management Controller (iRMC S2) IPMI 2.0 as standard	■ Enhanced server reliability without extra cost, operational continuity which means more value for your money as well as secured data safety. ■ Secure management control from wherever your experts are located.

Technical details

PRIMERGY RX600 S6	
Base unit	PRIMERGY RX600 S6 SFF
Housing types	Rack
Storage drive architecture	8x 2.5-inch SAS/SATA/SSD
Power supply	Hot-plug

Mainboard	
Mainboard type	D 3141
Chipset	Intel® 7500 / 7510 Scalable Memory Buffer
Processor quantity and type	2 - 4 x Intel® Xeon® processor E7-2800 series / Intel® Xeon® processor E7-4800 series / Intel® Xeon® processor E7-8800 product family

Processor	
	Intel® Xeon® processor E7-2803 (6C/12T, 1.73 GHz, SLC: -, TLC: 18 MB, Turbo: No, 4.8 GT/s, 105 W)
	Intel® Xeon® processor E7-2850 (10C/20T, 2.00 GHz, SLC: -, TLC: 24 MB, Turbo: 1/1/2/3/3, 6.4 GT/s, 130 W)
	Intel® Xeon® processor E7-4807 (6C/12T, 1.86 GHz, SLC: -, TLC: 18 MB, Turbo: No, 4.8 GT/s, 95 W)
	Intel® Xeon® processor E7-4820 (8C/16T, 2.00 GHz, SLC: -, TLC: 18 MB, Turbo: 0/1/1/1/2, 5.86 GT/s, 105 W)
	Intel® Xeon® processor E7-4830 (8C/16T, 2.13 GHz, SLC: -, TLC: 24 MB, Turbo: 0/1/1/1/2, 6.4 GT/s, 105 W)
	Intel® Xeon® processor E7-4850 (10C/20T, 2.00 GHz, SLC: -, TLC: 24 MB, Turbo: 1/1/2/3/3, 6.4 GT/s, 130 W)
	Intel® Xeon® processor E7-4860 (10C/20T, 2.26 GHz, SLC: -, TLC: 24 MB, Turbo: 1/1/2/3/3, 6.4 GT/s, 130 W)
	Intel® Xeon® processor E7-4870 (10C/20T, 2.40 GHz, SLC: -, TLC: 30 MB, Turbo: 1/1/2/3/3, 6.4 GT/s, 130 W)
	Intel® Xeon® processor E7-8837 (8C/8T, 2.67 GHz, SLC: -, TLC: 24 MB, Turbo: 0/1/1/1/1, 6.4 GT/s, 130 W)

Processor notes	A mimimum of 2 processors must be configured, no mix of different processor types E7-2800 CPU´s can be configured max. 2x
Memory slots	64 (distributed on 8 memory boards with 8 slots each)
Memory slot type	DIMM (DDR3) LV
Memory capacity (min. - max.)	8 GB - 2048 GB
Memory protection	Advanced ECC SDDC Memory Scrubbing Memory DIMM Sparing support Memory Mirroring support
Memory notes	Memory modules are installed on memory boards (8 DIMM slots per memory board) Two memory boards are preinstalled in base unit, further memory boards as option

Memory options	
	16 GB (4 module(s) 4 GB) DDR3 LV, registered, ECC, 1,333 MHz, PC3-10600, DIMM, single rank
	32 GB (4 module(s) 8 GB) DDR3 LV, registered, ECC, 1,333 MHz, PC3-10600, DIMM, dual rank
	64 GB (4 module(s)) DDR3 LV, registered, ECC, 1,600 MHz, PC3-12800, DIMM, dual rank
	128 GB (4 module(s) 32 GB) DDR3 LV, registered, ECC, 1,066 MHz, PC3-8500, DIMM, quad rank

Memory modules notes	Memory modules will be delivered in set´s of 4 DIMMs per order code. Intel® 7510 Scalable Memory Buffer supports max. 1066MHz memory clock speed. Clock speed is also depending on the processor type.

Interfaces	
USB 2.0 ports	6 x USB 2.0 (3 x front, 2 x rear, 1 x internal)
Graphics (15-pin)	2 x VGA (1 x front, 1 x rear)
Serial 1 (9-pin)	1 x RS-232-C

Interfaces	
LAN / Ethernet	4 x Gbit/s Ethernet (RJ45)
Management LAN (RJ45)	1 x dedicated management LAN port for iRMC S2 (10/100 Mbit/s) Management LAN traffic can be switched to shared onboard Gbit LAN port
Onboard or integrated Controller	
RAID controller	8 Port SAS RAID 0/1 or RAID 5/6 controller as option additional RAID controller options are described under Components RAID controller
LAN Controller	2 x Intel® 82576, 4 x 10/100/1000 Mbit/s Ethernet, TCP/IP acceleration, PXE boot via LAN from PXE server
Remote management controller	Integrated Remote Management Controller (iRMC S2, 32 MB attached memory incl. graphics controller) IPMI 2.0 compatible
Trusted Platform Module (TPM)	Infineon / separate module; TCG V1.2 compliant (option)
Slots	
PCI-Express 2.0 x4 (mech. x8)	3 x Full height (2 x ½ length, 1 x ¾ length)
PCI-Express 2.0 x8	4 x Full height (all ¾ length, 2x hot-plug)
PCI-Express 2.0 x16	1 x Full height (all ¾ length)
PCI-Express x4 (mech. x8)	2 x Half height (all ½ length)
Drive bays	
Storage drive bays	8 x 2.5-inch hot-plug
Accessible drive bays	1 x 5.25/0.5-inch for CD-RW/DVD 1 x 5.25/1.6-inch for backup devices
General system information	
Number of fans	8
Fan configuration	hot-plug
Fan notes	1+1 redundant
Operating panel	
Operating buttons	On/off switch NMI button Reset button ID button
Status LEDs	System status (orange / yellow) Identification (blue) Hard disks access (green) Power (amber / green) At system rear side: System status (orange / yellow) Identification (blue)
Service display	ServerView Local Service Display (LSD)
BIOS	
BIOS features	ROM based setup utility Recovery BIOS BIOS settings save and restore Local BIOS update from USB device Online update tools for main Windows and Linux versions Local and remote update via ServerView Update Manager SMBIOS V2.4 Remote PXE boot support Remote iSCSI boot support

Operating Systems and Virtualization Software

Certified or supported operating systems and virtualization software	VMware vSphere™ 5.1 Embedded
	Microsoft® Hyper-V Server 2012 R2
	Microsoft® Windows Server® 2012 R2 Datacenter
	Microsoft® Windows Server® 2012 R2 Standard
	Microsoft® Hyper-V Server 2012
	Microsoft® Windows Server® 2012 Datacenter
	Microsoft® Windows Server® 2012 Standard
	Microsoft® Hyper-V™ Server 2008 R2
	Microsoft® Windows Server® 2008 R2 Datacenter
	Microsoft® Windows Server® 2008 R2 Enterprise
	Microsoft® Windows Server® 2008 R2 Standard
	Microsoft® Windows® Server 2008 Datacenter
	Microsoft® Windows® Server 2008 Enterprise
	Microsoft® Windows® Server 2008 Standard
	VMware vSphere™ 5.1
	VMware vSphere™ 5.0 Embedded
	VMware vSphere™ 5.0
	VMware vSphere™ 4.1
	VMware vSphere™ 4.1 Embedded
	VMware vSphere™ 4.1 Installable
	SUSE® Linux Enterprise Server 11
	SUSE® Linux Enterprise Server 10
	SUSE® Linux Enterprise Server 10 with XEN
	Red Hat® Enterprise Linux 7
	Red Hat® Enterprise Linux 6
	Red Hat® Enterprise Linux 5
	Red Hat® Enterprise Linux 5 with XEN
	Citrix® XenServer®
	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

Server Management

Standard	ServerView Suite - Deploy SV Installation Manager SV Scripting Toolkit ServerView Suite - Control Operations Manager incl. PDA and ASR & R (Prefailure and Analysis; Automatic Server Recovery and Restart) Agents and CIM Providers System Monitor RAID Manager Capacity Management Power Management Storage Support ServerView Suite - Maintain Remote Management (iRMC) Update Management (BIOS, Firmware, Windows Drives and SV Agents) Performance Measurement Asset Management Online Diagnostics ServerView Suite - Integrate Integration packs e.g. for Microsoft System Center, VMware vCenter, Nagios, HP SIM and others Deployment Solutions and others

Server Management	
Option	ServerView Suite - Maintain iRMC Advanced Pack incl. Advanced Video Redirection (AVR), video capturing and Virtual Media ServerView Suite - Dynamize Virtual-IO Manager (VIOM) Resource Orchestrator Virtual Edition (ROR VE) Resource Orchestrator Cloud Edition (ROR CE) ServerView Suite - Integrate Integration pack for Fujitsu ManageNow® solution
Server Management notes	Regarding dependencies for ServerView Suite software products see dedicated product data sheets.
Dimensions / Weight	
Rack (W x D x H)	482.6 mm (Bezel) / 445mm (Body) x 765 x 176 mm
Mounting Depth Rack	728 mm
Height Unit Rack	4 U
19" rackmount	Yes
Mounting Cable depth rack	100 mm (1,000 mm Rack recommended)
Weight	max. 46 kg
Weight notes	Actual weight may vary depending on configuration
Rack integration kit	Rack integration kit as option
Environmental	
Operating ambient temperature	10 - 35 °C
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)	50 dB(A) (idle) / 50 dB(A) (operating)
Sound power (LWAd; 1B = 10dB)	6.5 B (idle) / 6.6 B (operating)
Noise notes	at ambient temperature <23°C Noise emissions and operation modes depend on system configuration.
Electrical values	
Power supply configuration	Up to 4 hot plug power supplies. Base unit equipped with 2 power supplies, 3rd and 4th PSU as option
Max. output of single power supply	850 W
Power supply efficiency	92 % (80 PLUS gold)
Hot-plug power supply redundancy	Yes
Rated voltage range	100 V - 127 V / 200 V - 240 V
Rated frequency range	47 Hz - 63 Hz
Rated current max.	26 A / 11 A (100 V / 240 V)
Active power (min. configuration)	750 W
Active power (max. configuration)	1,790 W
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/
Rated power max.	2,640 W
Heat emission	6444.0 kJ/h (6107.7 BTU/h)
Compliance	
Germany	GS
Europe	CE Class A *
USA/Canada	CSAc/us FCC Class A
Global	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronical equipment)
Japan	VCCI
Taiwan	BSMI

Compliance	
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.
Compliance link	http://globalsp.ts.fujitsu.com/sites/certificates

Compliance	
Global	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronical equipment)
Germany	GS
Europe	CE Class A *
USA/Canada	CSAc/us FCC Class A
Japan	VCCI
Taiwan	BSMI
Compliance link	http://globalsp.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

Storage drives
SSD SATA, 6 Gb/s, 800 GB, Mainstream Endurance, hot-plug, 2.5-inch, enterprise
SSD SATA, 6 Gb/s, 400 GB, Mainstream Endurance, hot-plug, 2.5-inch, enterprise
SSD SATA, 6 Gb/s, 200 GB, Mainstream Endurance, hot-plug, 2.5-inch, enterprise
SSD SATA, 6 Gb/s, 100 GB, MLC, hot-plug, 2.5-inch, enterprise
SSD SATA, 6 Gb/s, 100 GB, Mainstream Endurance, hot-plug, 2.5-inch, enterprise
SSD SAS, 12 Gb/s, 800 GB, Mainstream Endurance, hot-plug, 2.5-inch, enterprise
SSD SAS, 12 Gb/s, 400 GB, Mainstream Endurance, hot-plug, 2.5-inch, enterprise
SSD SAS, 12 Gb/s, 200 GB, Mainstream Endurance, hot-plug, 2.5-inch, enterprise
SSD SAS, 12 Gb/s, 1.6 TB, Mainstream Endurance, hot-plug, 2.5-inch, enterprise
PCIe-SSD, 785 GB, MLC, Flash drive, 7.7 DWPD (drive writes per day)
PCIe-SSD, 365 GB, MLC, Flash drive, 6 DWPD (drive writes per day)
PCIe-SSD, 1.2 TB, MLC, Flash drive, 7.7 DWPD (drive writes per day)
HDD SAS, 6 Gb/s, 900 GB, 10,000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 6 Gb/s, 600 GB, 10,000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 6 Gb/s, 500 GB, 7,200 rpm, hot-plug, 2.5-inch, business critical
HDD SAS, 6 Gb/s, 450 GB, 10,000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 6 Gb/s, 300 GB, 15,000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 6 Gb/s, 300 GB, 10,000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 6 Gb/s, 146 GB, 15,000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 6 Gb/s, 1.2 TB, 10,000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 6 Gb/s, 1 TB, 7,200 rpm, hot-plug, 2.5-inch, business critical

Backup Drives	DDS Gen6, 80 GB, 6 MB/s, half height, USB 2.0
	LTO3HH Ultrium, 400 GB, 60 MB/s, half height, SAS 3Gb/s
	LTO4HH Ultrium, 800 GB, 120 MB/s, half height, SAS 6Gb/s
	LTO5HH Ultrium, 1,500 GB, 140 MB/s, half height, SAS 6Gb/s
	LTO6HH Ultrium, 2,500 GB, 160 MB/s, half height, SAS 6Gb/s
	RDX Drive, 320 GB, 500 GB, 1 TB , 25 MB/s, half height, USB 3.0
Optical drives	Blu-ray Disc™ Triple Writer, (6x BD-ROM; 8x DVD; 24x CD), slimline, SATA I
	DVD Super Multi, (8xDVD/DVD+RW, 6xDVD-RW, 5xDVD-RAM; 24xCD/CD-R, 16xCD-RW), slimline, SATA I
SCSI / SAS Controller	SAS Ctrl. 6 Gbit/s 8 ports ext. PCIe 2.0 x8
RAID Controller	RAID 5/6 Ctrl., SAS/SATA 6 Gbit/s, LSI LSI MegaRAID SAS 9286CV-8e, RAID level: 0, 1, 10, 5, 50, 6, 60, 1 GB, Optional FBU (based on LSI SAS2208)
	RAID 5/6 Ctrl., SAS/SATA 6 Gbit/s, Fujitsu RAID Ctrl SAS 6G 5/6 512MB (D2616), 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 512 MB Cache, Optional BBU for selected systems (based on LSI SAS2108)
	RAID 5/6 Ctrl., SAS/SATA 6 Gbit/s, Fujitsu RAID Ctrl SAS 6G 1GB (D3116C), 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 1 GB, Optional FBU (based on LSI SAS2208)
	RAID 5/6 Ctrl., SAS/SATA 6 Gbit/s, Fujitsu RAID Ctrl SAS 6G 1GB (D3116), 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 1 GB, Optional FBU (based on LSI SAS2208)
	RAID 0/1 Ctrl., SAS/SATA 6 Gbit/s, Fujitsu RAID Ctrl SAS 6G 0/1 (D2607), 8 ports int. RAID level: 0, 1, 10, No BBU support
	Integrated RAID 0/1 Ctrl., SAS/SATA 3 Gbit/s, 4 ports int. RAID level: 0, 1, 1E, No BBU support (based on LSI 1064e)
Fibre Channel controller	Fibre Channel Host Bus Adapter 1 x 8 Gbit/s Qlogic QLE2560 MMF LC-style
	Fibre Channel Host Bus Adapter 2 x 8 Gbit/s Qlogic QLE2562 MMF LC-style
	Fibre Channel Host Bus Adapter 1 x 8 Gbit/s Emulex LPe1250 MMF LC-style
	Fibre Channel Host Bus Adapter 2 x 8 Gbit/s Emulex LPe12002 MMF LC-style
	Fibre Channel Host Bus Adapter 1 x 16 Gbit/s Emulex LPe16000B LC-style
	Fibre Channel Host Bus Adapter 2 x 16 Gbit/s Emulex LPe16002B LC-style
Communication, Network	Ethernet Ctrl. 2 x 10 Gbit/s PCIe 2.0 x8 (Fujitsu)
	Ethernet Ctrl. 2 x 10 Gbit/s PCIe 2.1 x8 (Intel®)
	Ethernet Ctrl. 2 x 1 Gbit/s PCIe 2.1 x4 (Intel®)
	Ethernet Ctrl. 4 x 1 Gbit/s PCIe 2.1 x4 (Intel®)
Rack infrastructure	Cable Arm 2U for 3rd party racks
	Rack Mount Kit
	Cable Management for 19-inch DataCenter / PRIMECENTER Racks
	Cable Arm 2U for PRIMECENTER- and 3rd-party racks

Warranty	
Standard Warranty	3 years
Service level	Onsite Service
Warranty Terms & Conditions	http://support.ts.fujitsu.com/warranty/Index.asp?LNG=COM
Maintenance and Support Services - the perfect extension	
Support Pack Options	Globally available in major business areas: 9x5, Next Business Day Onsite Response Time 9x5, 4h Onsite Response Time 24x7, 4h Onsite Response Time
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/fts/services/support

More information

Fujitsu OPTIMIZATION Services

In addition to Fujitsu PRIMERGY RX600 S6, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio
Build 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 offering. This allows customers to leverage 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/services/computing/

Software
www.fujitsu.com/software/

More information

Learn more about Fujitsu PRIMERGY RX600 S6, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
www.fujitsu.com/fts

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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