

Data Sheet

Fujitsu PRIMERGY RX300 S7 Dual socket 2 U rack server

Datasheet for Red Hat certification

The versatile 2U powerhouse

PRIMERGY RX300 S7

The Fujitsu PRIMERGY RX300 S7 is a dual socket rack server, focusing on versatility and scalability. The new modular concept supports excellent expandability with up to 16 hard disk drives, up to 7 PCIe Gen 3 cards and up to 768GB RAM, all in one single 2U rack housing. Furthermore, the new Intel® Xeon® E5 product family delivers the top performance to ensure today's demand while being prepared for future requirements thanks to the upgrade kits as well as the cost-saving Modular LAN options. Thanks to the power supply units with 94% efficiency and the new power management this will result in lower operational costs. This 2U power house is the right choice for all types of business applications and consolidations.



Features & Benefits

Main Features	Benefits
<p>Meet today's demand and be prepared for future requirements</p> <ul style="list-style-type: none">■ Intel Xeon E5-2600 product family with up to 8 core processors and Turbo Boost 2.0	<ul style="list-style-type: none">■ Increased performance of up to 80% compared to the previous generation■ Optimized for business applications, cloud and virtualization
<p>Lifecycle investment protection</p> <ul style="list-style-type: none">■ Expanded scalability of up to 24 DIMMs with 768 GB memory, up to 16 hard disk drives and 7 PCIe slots Gen3■ New modular concept for the base unit as well as a choice for LAN controller, RAID controller and power supplies■ Upgrade kits for hard disk drives, backup devices as well as LTO drives	<ul style="list-style-type: none">■ Maximum scalability to meet future demand■ Individual and cost-saving configuration of the server according to the need of today with upgrade option to meet the demand of tomorrow■ Upgrade kits save budget as the system can be upgraded when the company grows and thus protect the investment■ Ability to protect the data by integrating LTO drives
<p>Cost efficient operations</p> <ul style="list-style-type: none">■ Simplified power management with profiles for 'minimum power' and 'low-noise'■ 2 hot-plug PSU with 94% efficiency (80Plus platinum)■ Fujitsu ServerView Suite offers tools for installation and deployment, permanent status monitoring and control. A wide range of integration packs allow a seamless and easy integration in widely-used enterprise management systems.	<ul style="list-style-type: none">■ Simplified and comprehensive power management that results with the high efficient power supplies in significant savings■ Fujitsu ServerView Suite provides all the functions for fail-safe, flexible and automated 24x7 server operations and improves end-user productivity via intelligent and innovative system management solutions.

Technical details

PRIMERGY RX300 S7

Base unit	PRIMERGY RX300 S7	PRIMERGY RX300 S7
Housing types	Rack	Rack
Storage drive architecture	6x 3.5-inch SAS/SATA	max. 16x 2.5-inch SAS/SATA
Power supply	Hot-plug	Hot-plug

Mainboard

Mainboard type	D2939
Chipset	Intel® C600 (Intel® Patsburg A)
Processor quantity and type	1 - 2 x Intel® Xeon® processor E5-2600 product family

Processor

Intel® Xeon® processor E5-2603 (4C/4T, 1.80 GHz, TLC: 10 MB, Turbo: No, 6.4 GT/s, Mem bus: 1,066 MHz, 80 W)	
Intel® Xeon® processor E5-2609 (4C/4T, 2.40 GHz, TLC: 10 MB, Turbo: No, 6.4 GT/s, Mem bus: 1,066 MHz, 80 W)	
Intel® Xeon® processor E5-2620 (6C/12T, 2.00 GHz, TLC: 15 MB, Turbo: Yes, 7.2 GT/s, Mem bus: 1,333 MHz, 95 W)	
Intel® Xeon® processor E5-2630 (6C/12T, 2.30 GHz, TLC: 15 MB, Turbo: Yes, 7.2 GT/s, Mem bus: 1,333 MHz, 95 W)	
Intel® Xeon® processor E5-2630L (6C/12T, 2.00 GHz, TLC: 15 MB, Turbo: Yes, 7.2 GT/s, Mem bus: 1,333 MHz, 60 W)	
Intel® Xeon® processor E5-2637 (2C/4T, 3.00 GHz, TLC: 5 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1,600 MHz, 80 W)	
Intel® Xeon® processor E5-2640 (6C/12T, 2.50 GHz, TLC: 15 MB, Turbo: Yes, 7.2 GT/s, Mem bus: 1,333 MHz, 95 W)	
Intel® Xeon® processor E5-2643 (4C/8T, 3.30 GHz, TLC: 10 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1,600 MHz, 130 W)	
Intel® Xeon® processor E5-2650 (8C/16T, 2.00 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1,600 MHz, 95 W)	
Intel® Xeon® processor E5-2650L (8C/16T, 1.80 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1,600 MHz, 70 W)	
Intel® Xeon® processor E5-2660 (8C/16T, 2.20 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1,600 MHz, 95 W)	
Intel® Xeon® processor E5-2665 (8C/16T, 2.40 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1,600 MHz, 115 W)	
Intel® Xeon® processor E5-2667 (6C/12T, 2.90 GHz, TLC: 15 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1,600 MHz, 130 W)	
Intel® Xeon® processor E5-2670 (8C/16T, 2.60 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1,600 MHz, 115 W)	
Intel® Xeon® processor E5-2680 (8C/16T, 2.70 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1,600 MHz, 130 W)	
Intel® Xeon® processor E5-2690 (8C/16T, 2.90 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1,600 MHz, 135 W)	
Memory slots	24 (12 DIMMs per CPU, 4 channels with 3 slots per channel)
Memory slot type	DIMM (DDR3)
Memory capacity (min. - max.)	2 GB - 768 GB
Memory protection	Advanced ECC Memory Scrubbing SDDC (Chipkill™) Hot-spare memory support Rank sparing memory support Memory Mirroring support (as soon as released)

Memory notes	Max. 8 memory modules/CPU with UDIMM (low voltage or standard) OR quad-rank RDIMM; max. 12 memory modules/CPU with single or dual-rank RDIMM or single, dual-rank or quad-rank Load-Reduced (LR) DIMM. Memory Mirroring with identical modules in both channel pairs of a bank (4 modules per bank), Rank sparing or Performance Mode with identical modules in all four channels (4 modules per bank).	
Memory options	4 GB (1 module(s) 4 GB) DDR3 LV, registered, ECC, 1,333 MHz, PC3-10600, DIMM, single rank 4 GB (1 module(s) 4 GB) DDR3 LV, registered, ECC, 1,600 MHz, PC3-12800, DIMM, dual rank 4 GB (1 module(s) 4 GB) DDR3 LV, registered, ECC, 1,600 MHz, PC3-12800, DIMM, single rank 8 GB (1 module(s) 8 GB) DDR3 LV, registered, ECC, 1,333 MHz, PC3-10600, DIMM, dual rank 8 GB (1 module(s) 8 GB) DDR3 LV, registered, ECC, 1,600 MHz, PC3-12800, DIMM, dual rank 16 GB (1 module(s) 16 GB) DDR3 LR LV, registered, ECC, 1,333 MHz, PC3-10600, LRDIMM, quad rank 16 GB (1 module(s) 16 GB) DDR3 LV, registered, ECC, 1,600 MHz, PC3-12800, DIMM, dual rank 32 GB (1 module(s) 32 GB) DDR3 LR LV, registered, ECC, 1,333 MHz, PC3-10600, LRDIMM, quad rank	
Memory options	2 GB (1 module(s) 2 GB) DDR3 LV, unbuffered, ECC, 1,600 MHz, PC3-12800, DIMM, single rank 4 GB (1 module(s) 4 GB) DDR3 LV, unbuffered, ECC, 1,600 MHz, PC3-12800, DIMM, dual rank	
Upgrade notes	A BIOS update can be necessary for a memory and processor upgrade.	
Interfaces		
USB 2.0 ports	10 x USB 2.0 (2x front, 4x rear, 2x internal for backup devices, 1x USB stick, 1x uSSD)	
Graphics (15-pin)	2 x VGA (thereof 1x front optional)	
Serial 1 (9-pin)	1 x serial RS-232-C, usable for iRMC or system or shared	
LAN / Ethernet	2 x Gbit/s Ethernet (RJ45) plus 2x1 Gbit/s as default Modular integrated on-board LAN with upgrade options to 4x 1 Gbit/s (RJ45) or 2x 10 Gbit/s (SFP+)	
Management LAN (RJ45)	1 x dedicated management LAN port for iRMC S3 (10/100/1000 Mbit/s) Management LAN traffic can be switched to shared onboard Gbit LAN port or optional Modular LAN 2x10 Gbit controller Front Service LAN port as option	
Onboard or integrated Controller		
RAID controller	4 port for internal 3G SATA and SAS (as upgrade option with SAS enabling key) for HDDs with RAID 0/1/10 or SAS LTO device (Intel C600) additional RAID controller options are described under Components RAID controller	
SATA Controller	Intel® C600, 1 x SATA channel for ODD	
LAN Controller	Intel® Ethernet Controller I350, 2 x 10/100/1000 Mbit/s Ethernet (I/O acceleration), In addition 2x1 Gbit/s as default Modular integrated on-board LAN with upgrade options to 4x 1 Gbit/s or 2x 10 Gbit/s PXE-Boot via LAN from PXE server, iSCSI boot (also diskless)	
Remote Management Controller	Integrated Remote Management Controller (iRMC S3, 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 3.0 x8	5 x Low profile	
PCI-Express 3.0 x16	2 x Low profile (2nd processor required)	
Slot Notes	One PCIe Gen3 x8 slot may be occupied with a Modular integrated on-board LAN controller if configured. One PCIe Gen3 x8 slot may be occupied with a Modular RAID controller if configured. Important: 5 PCIe x8 slots are supported with the first processor. 7 PCIe slots (including 2 PCIe x16) are supported with two processors.	
Drive bays		
Storage drive bays	2.5-inch base unit (max. 16 x 2.5) or 3.5-inch base unit (max. 6 x 3.5)	
Accessible drive bays	1 x 5.25/0.5-inch for ODD 1 x 5.25/1.6-inch for ODD or backup devices 1 x 5.25/0.5-inch for Local Service Display	
Notes accessible drives	All possible options described in relevant system configurator.	
Drive bays (Base unit specific)		
Storage drive bays	6 x 3.5-inch hot-plug SAS/SATA	2.5-inch expandable x 2.5-inch hot-plug SAS/SATA
Storage drive bay configuration	max. 6x3.5"	max. 16x2.5"

Drive bays (Base unit specific)

Optional accessible drives	1x 3.5/1.6-inch bay for backup devices (occupies 2x 3.5-inch HDD)	LTO 5.25" or DAT/RDX 3.5" possible
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General system information

Number of fans	5
Fan configuration	redundant / hot-plug
Fan notes	4+1 redundant

Operating panel

Operating buttons	On/off switch Reset button NMI button ID button
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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) LAN connection (green) LAN speed (green / yellow)
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Service display	Optional: ServerView Local Service Display (LSD)
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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
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Operating Systems and Virtualization Software

Certified or supported operating systems and virtualization software	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® Web Server 2008 R2
	Microsoft® Windows HPC Server® 2008 R2 Suite
	Microsoft® Windows® Small Business Server 2011 Premium Add-On
	Microsoft® Windows® Small Business Server Standard 2011
	Microsoft® Windows® Server 2008 Datacenter
	Microsoft® Windows® Server 2008 Enterprise
	Microsoft® Windows® Server 2008 Standard
	Microsoft® Windows® Web Server 2008
	VMware vSphere™ 5.0 Embedded
	VMware vSphere™ 5.0
	VMware vSphere™ 4.1
	VMware vSphere™ 4.1 Embedded
	VMware vSphere™ 4.1 Installable
	VMware vSphere™ 4.0
	VMware vSphere™ 4.0 Embedded
	VMware vSphere™ 4.0 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®	

Operating system release link

Operating system notes	Support of other Linux derivatives on demand
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Server Management

Dimensions / Weight

Rack (W x D x H)	482.6 mm (Bezel) / 445mm (Body) x 770 x 86.9 mm
Mounting Depth Rack	735 mm
Height Unit Rack	2 U
19" rackmount	Yes
Weight	up to 25 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)
Noise emission	Measured according to ISO 7779 and declared according to ISO 9296
Sound pressure (LpAm)	Low noise mode: 25 dB(A) min, 29 dB(A) max (idle) / 27 dB(A) min, 32 dB(A) max (operating) Performance mode: 48 dB(A) (idle) / 48 dB(A) min, 68 dB(A) max (operating)
Sound power (LWAd; 1B = 10dB)	Low noise mode: 4.1 B min, 4.5 max (idle) / 4.1 B min, 4.9 B max (operating) Performance mode: 6.5 B (idle) / 6.5 B min, 8.2 B max (operating)

Electrical values

Power supply configuration	1-2x 450W/800W hot-plug power supply
Max. output of single power supply	450/800 W (94% efficiency)

Electrical values

Power supply efficiency	94 % (80 PLUS platinum)
Hot-plug power supply output	450/800 W (94% efficiency)
Hot-plug power supply redundancy	Yes
Rated voltage range	100 V - 240 V
Rated frequency range	47 Hz - 63 Hz
Rated current max.	8.2 A (100 V) / 3.3 A (240 V)
Rated current in basic configuration	100 V - 240 V / TBD
Active power (min. configuration)	53 W
Active power (max. configuration)	830 W
Apparent power (max. configuration)	873 VA
Heat emission	2988.0 kJ/h (2832.1 BTU/h)
Power Supply Notes	Power Safeguard adapts system performance in case the wattage exceeds supply limits.

Compliance

Global	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronic equipment)
Germany	GS
Europe	CE Class A *
USA/Canada	CSAc/us FCC Class A
Japan	VCCI
China	CCC (depending on configuration)
Australia/New Zealand	C-Tick
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, 3 Gb/s, 32 GB, SLC, hot-plug, 2.5-inch, enterprise
	SSD SAS, 6 Gb/s, 400 GB, SLC, hot-plug, 2.5-inch, enterprise
	SSD SAS, 6 Gb/s, 200 GB, SLC, hot-plug, 2.5-inch, enterprise
	SSD SAS, 6 Gb/s, 100 GB, SLC, hot-plug, 2.5-inch, enterprise
	HDD SATA, 6 Gb/s, 500 GB, 7,200 rpm, hot-plug, 3.5-inch, business critical
	HDD SATA, 6 Gb/s, 500 GB, 7,200 rpm, hot-plug, 2.5-inch, business critical
	HDD SATA, 6 Gb/s, 250 GB, 7,200 rpm, hot-plug, 2.5-inch, business critical
	HDD SATA, 6 Gb/s, 3 TB, 7,200 rpm, hot-plug, 3.5-inch, business critical
	HDD SATA, 6 Gb/s, 2 TB, 7,200 rpm, hot-plug, 3.5-inch, business critical
	HDD SATA, 6 Gb/s, 1 TB, 7,200 rpm, hot-plug, 3.5-inch, business critical
	HDD SATA, 6 Gb/s, 1 TB, 7,200 rpm, hot-plug, 2.5-inch, business critical
	HDD SATA, 3 Gb/s, 2 TB, 7,200 rpm, hot-plug, 3.5-inch, business critical
	HDD SAS, 6 Gb/s, 900 GB, 10,000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 600 GB, 15,000 rpm, hot-plug, 3.5-inch, enterprise
	HDD SAS, 6 Gb/s, 600 GB, 10,000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 450 GB, 15,000 rpm, hot-plug, 3.5-inch, enterprise
	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, 3.5-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, 73 GB, 15,000 rpm, hot-plug, 2.5-inch, enterprise	
Backup Drives	DDS Gen5 (for 3.5-inch HDD bay), 36 GB, 3 MB/s, half height, USB 2.0
	DDS Gen5 3.5", 36 GB, 3 MB/s, half height, USB 2.0
	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
	RDX Drive, 160 GB, 320 GB, 500 GB, 1 TB, 25 MB/s, half height, USB 2.0
Optical drives	DVD Super Multi, (8xDVD/DVD+RW, 6xDVD-RW, 5xDVD-RAM; 24xCD/CD-R, 16xCD-RW), slimline, SATA I
RAID Controller	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 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
	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 controller	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
	Converged Network Adapter 2 x 10 Gbit/s PCIe 2.0 x8 (Emulex)
	Ethernet Ctrl. 1 x 1 Gbit/s PCIe 1.1 x1 (Intel®)
Communication, Network	Ethernet Ctrl. 1 x 1 Gbit/s PCIe x4 (Intel®)
	Ethernet Ctrl. 2 x 10 Gbit/s PCIe 2.0 x8 (Fujitsu)
	Ethernet Ctrl. 2 x 1 Gbit/s PCIe x4 (Fujitsu)
	Ethernet Ctrl. 4 x 1 Gbit/s PCIe x4 (Fujitsu)
	InfiniBand HCA 1 x 40 Gbit/s PCIe 2.0 x8 (Mellanox)
	InfiniBand HCA 2 x 40 Gbit/s PCIe 2.0 x8 (Mellanox)

Rack infrastructure	Rackmount kit full extraction (820mm), tool less mounting, length variable 559-914mm Cable Management for 19-inch DataCenter / PRIMECENTER Racks Cable Arm 2U for PRIMECENTER- and 3rd-party racks
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Warranty	
Standard Warranty	3 years
Service level	Onsite Service
Maintenance and Support Services - the perfect extension	
Recommended Service	24x7, Onsite Response Time: 4h - For locations outside of EMEA please contact your local Fujitsu partner.
Spare Parts availability	5 years
Service Lifecycle	
Service Weblink	http://ts.fujitsu.com/Supportservice

More information

Fujitsu platform solutions

In addition to Fujitsu PRIMERGY RX300 S7, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Dynamic Infrastructures

With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

Computing Products

www.fujitsu.com/global/services/computing/

Software

www.fujitsu.com/software/

More information

Learn more about Fujitsu PRIMERGY RX300 S7, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
<http://ts.fujitsu.com/Primergy>

Fujitsu green policy innovation



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