

Data Sheet

Fujitsu PRIMERGY RX300 S7 Dual socket 2 U rack server

The versatile 2U powerhouse

The PRIMERGY RX Rack Server family is the perfect consolidations. platform to form dynamic infrastructures for your business processes today and in the coming decade. You will thus benefit several times over from our recognized experience in optimized data center technology and our innovative strength in developing energy-efficient and cost/performance-optimized rack systems for universal use. PRIMERGY rack servers, built upon industry standards, focus from a functional viewpoint on core features: energy efficiency, reliability, optimized for virtualization, ease of operation and maintenance, flexibility for your future. And thus they notably meet your requirements for outstanding cost efficiency. Optimal operating costs and long-term usability comply with the IT quality required by your customers. Our responsibility goes way beyond the hardware as our tailor-made service packages mean that you can rely on the best support for your IT during its whole life cycle.



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 a 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 power management this will result in lower operational costs. This 2U power house is the right choice for all types of business applications and



Features and 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

Housing types	Rack	Rack
Storage drive architecture	6x 3.5" SAS/SATA	max. 16x 2.5" 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: 1066 MHz, 80 W)	
Intel® Xeon® processor E5-2609 (4C/4T, 2.40 GHz, TLC: 10 MB, Turbo: No, 6.4 GT/s, Mem bus: 1066 MHz, 80 W)	
Intel® Xeon® processor E5-2620 (6C/12T, 2.00 GHz, TLC: 15 MB, Turbo: Yes, 7.2 GT/s, Mem bus: 1333 MHz, 95 W)	
Intel® Xeon® processor E5-2630 (6C/12T, 2.30 GHz, TLC: 15 MB, Turbo: Yes, 7.2 GT/s, Mem bus: 1333 MHz, 95 W)	
Intel® Xeon® processor E5-2630L (6C/12T, 2.00 GHz, TLC: 15 MB, Turbo: Yes, 7.2 GT/s, Mem bus: 1333 MHz, 60 W)	
Intel® Xeon® processor E5-2637 (2C/4T, 3.00 GHz, TLC: 5 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1600 MHz, 80 W)	
Intel® Xeon® processor E5-2640 (6C/12T, 2.50 GHz, TLC: 15 MB, Turbo: Yes, 7.2 GT/s, Mem bus: 1333 MHz, 95 W)	
Intel® Xeon® processor E5-2643 (4C/8T, 3.30 GHz, TLC: 10 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1600 MHz, 130 W)	
Intel® Xeon® processor E5-2650 (8C/16T, 2.00 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1600 MHz, 95 W)	
Intel® Xeon® processor E5-2650L (8C/16T, 1.80 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1600 MHz, 70 W)	
Intel® Xeon® processor E5-2660 (8C/16T, 2.20 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1600 MHz, 95 W)	
Intel® Xeon® processor E5-2665 (8C/16T, 2.40 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1600 MHz, 115 W)	
Intel® Xeon® processor E5-2667 (6C/12T, 2.90 GHz, TLC: 15 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1600 MHz, 130 W)	
Intel® Xeon® processor E5-2670 (8C/16T, 2.60 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1600 MHz, 115 W)	
Intel® Xeon® processor E5-2680 (8C/16T, 2.70 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1600 MHz, 130 W)	
Intel® Xeon® processor E5-2687W (8C/16T, 3.10 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1600 MHz, 150 W)	
Intel® Xeon® processor E5-2690 (8C/16T, 2.90 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s, Mem bus: 1600 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, 1333 MHz, PC3-10600, DIMM 4 GB (1 module(s) 4 GB) DDR3 LV, registered, ECC, 1600 MHz, PC3-12800, DIMM 8 GB (1 module(s) 8 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM 8 GB (1 module(s) 8 GB) DDR3 LV, registered, ECC, 1600 MHz, PC3-12800, DIMM 16 GB (1 module(s) 16 GB) DDR3 LR LV, registered, ECC, 1333 MHz, PC3-10600, LRDIMM 16 GB (1 module(s) 16 GB) DDR3 LV, registered, ECC, 1600 MHz, PC3-12800, DIMM 32 GB (1 module(s) 32 GB) DDR3 LR LV, registered, ECC, 1333 MHz, PC3-10600, LRDIMM
Memory options	2 GB (1 module(s) 2 GB) DDR3 LV, unbuffered, ECC, 1600 MHz, PC3-12800, DIMM 4 GB (1 module(s) 4 GB) DDR3 LV, unbuffered, ECC, 1600 MHz, PC3-12800, DIMM
Interfaces	
USB 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) with upgrade options for additional 2x1 Gbit/s (RJ45), 4x 1 Gbit/s (RJ45) or 2x 10 Gbit/s (SFP+)
Service LAN (RJ45)	1 x dedicated management LAN port for iRMC S3 (10/100/1000 Mbit/s) Service LAN traffic can be switched to shared onboard Gbit LAN port or optional Modular LAN 2x10Gbit controller Front management LAN port as option
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)
Onboard or integrated Controller	
RAID controller	4 port for internal 3G SATA and SAS (as upgrade option "Patsburg B") for HDDs with RAID 0/1/10 or SAS LTO device (Intel C600) See 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), Modular integrated on-board LAN offers upgrade options for additional 2x1 Gbit/s, 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.
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"
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
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	
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)	
Service display	Optional: 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	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
	Novell® SUSE Linux Enterprise Server 11
	Novell® SUSE Linux Enterprise Server 10
	Novell® SUSE Linux Enterprise Server 10 with XEN
Red Hat® Enterprise Linux 6	
Red Hat® Enterprise Linux 5	
Red Hat® Enterprise Linux 5 with XEN	
Citrix® XenServer®	
Operating system release link	http://docs.ts.fujitsu.com/dl.aspx?id=a9e600b9-e4cb-4f48-aa41-632f69058421
Operating system notes	Support of other Linux derivatives on demand

Server Management

Standard	ServerView Suite - Deploy
	SV Installation Manager
	SV Scripting Toolkit
	SV Deployment Manager (30-day trial version)
	ServerView Suite - Control
	SV Operations Manager incl. PDA and ASR & R (Prefailure and Analysis; Automatic Server Recovery and Restart)
	SV Performance Management
	SV Power Management
	SV RAID Manager
	ServerView Suite - Maintain
	SV Remote Management (iRMC)
	SV Update Management (BIOS, Firmware, Windows Drives and SV Agents)
	SV Asset Management
SV Online Diagnostics	
ServerView Suite - Integrate	
SV Integration packs e.g. for Microsoft System Center, Nagios, HP, SIM, HP NNM, IBM Tivoli, Altiris Deployment Solutions and others	
Option	ServerView Suite - Deploy
	SV Deployment Manager (full version)
	ServerView Suite - Maintain
	iRMC Advanced Pack incl. Advanced Video Redirection (AVR) and Remote Storage
	ServerView Suite - Dynamize
	SV Virtual-IO Manager (VIOM)
SV Resource Orchestrator Virtual Edition (ROR VE)	
SV Resource Orchestrator Cloud Edition (ROR CE)	
ServerView Suite - Integrate	
SV Integration pack for Fujitsu ManageNow® solution	

Server Management

Server Management notes	Regarding Operating System dependencies for ServerView Suite software Products see dedicated Product Data sheets.
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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 locations)
Operating environment Link	http://docs.ts.fujitsu.com/dl.aspx?id=d4ebd846-aa0c-478b-8f58-4cfbf3230473
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)
Power supply efficiency	94% (at 50% PSU load, CSCI "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

Germany	GS
Europe	CE Class A *
USA/Canada	CSAc/us FCC Class A
Global	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronic equipment)
Japan	VCCI
China	CCC (planned) CCC (depending on configuration)
Australia/New Zealand	C-Tick
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://sp.ts.fujitsu.com/sites/certificates/

