DATA SHEET
PRIMERGY RX200 S5 - DUAL-SOCKET 1 U RACK SERVER

IF EFFICIENCY IS THE KEY DECISION FACTOR, CHOOSE RX200 FOR MAXIMUM PRODUCTIVITY

PRIMERGY RX servers offer the perfect solution to downsize data center infrastructure costs efficiently. Basis for it is an IT strategy for more transparency of structure- and administrative expenses as well as maximum use of investments. Our broad portfolio of innovative virtualization, server and solution offerings for TCO reductions of 60% or more provides best prerequisites. Optimized air flow cooling technology assures a long life, highest possible performance/ watt as well as by far best in class efficiency -proven by numerous benchmark records.
Benefit from our renowned experience in datacenter technology. These allow it, to transfer the availability rates of high end UNIX servers to RX rack servers, PRIMECENTER rack enclosures and infrastructure products.
PRIMERGY ServerView Suite with remote management functions provides comprehensive management from anywhere at any time. Our flexible custom supply model and our build-to-order process means that only fully built and pre-tested rack solutions are shipped to the customer. Last but not least Fujitsu Technology Solutions proven commitment to green IT offers clear competitive advantages to our customers.

PRIMERGY RX200 S5

The new RX200 offers the seemingly impossible: more performance, higher expandability and greater reliability packed in a flat rack housing of only 1U – with a significantly improved performance / power consumption ratio. In other words: more for less with regard to data center energy-efficiency. Energy consumption and cooling in data centers is a “burning” issue. The innovative PRIMERGY Cool-safe™ system design of the new RX200 rack server generation provides the right answers. Hot-pluggable, redundant power supply units, whose efficiency has been increased to 89%, ensure efficient energy utilization. Depending on the load, sensor-controlled, hot-pluggable and redundant fans are used to maintain an optimal temperature in the server at all times; all supported by an innovative, extremely air-permeable honeycomb design and barrier-free, internal air-flow channels. The result is a sustainable high server performance, longlife components and fewer data center cooling requirements. The integrated ServerView Power Management is used to monitor and manage the maximum consumption loads in order to ensure cost efficiency. Cool-safe™ gives you the certainty that the top performance of the new Intel® Xeon® Dual-Core, Quad-Core and Turbo Quad-Core processor generation can be fully exploited in high-level memory and hard disk configurations in this 1U rack server.

FEATURES AND BENEFITS

MAIN FEATURES	BENEFITS
DESIGNED FOR HIGHEST ENERGY EFFICIENCY	
■ Highly efficient power supply units 89+% EPA-compliant (Environmental Protection Agency)	■ High performance for particularly efficient energy utilization
■ Sensor-controlled fan management	■ Fan management as required saving energy and reducing noise levels
■ Power consumption management	■ Individually defined profiles for power consumption
■ 2.5 inch hard disks with low consumption	■ 2.5 inch hard disks save up to 20 % energy
DESIGNED FOR HIGHEST RELIABILITY NEEDS	
■ Memory sparing and mirroring option	■ High availability and reliability
■ Hot-plug redundant power supplies and fans,	■ Security level for each application scenario
■ Hot-plug hard disks	■ Permanently high performance available, longer lifespan for components used, optimal performance per watt ratio
■ Cool-safe™ system design with high air thoughput	
■ Integrated Remote Management Controller iRMC S2 plus optional iRMC Advanced Pack	■ Easy, fast service access from anywhere ensuring reliable operations
■ Modular RAID for levels 0, 1, 5, 6,….	■ Low-priced, powerful data security
■ Individual service packages	■ Tailor-made service for the respective requirements
DESIGNED FOR HIGHEST PERFORMANCE NEEDS	
■ Dual, Quad and Turbo Quad-Core Intel Xeon 5500 series with up to 8 MB TLC and VT-x	■ More virtual machines und applications can be used on one server
■ Up to 96 GB state-of-the-art DDR3 main memory	■ Higher application loads and extended usage options
■ 2 free PCIe Gen2 slots, double I/O throughput	■ Double I/O bandwidth so that SAN and network loads achieve optimal throughput
■ 2 x Gbit/s Ethernet LAN with VT-c (I/O acceleration and VMDq)	■ More than 2 TByte of low-priced internal hard disk storage
■ Up to 8x 2.5 inch hot-plug SAS hard disks in 1HE	■ Problem-free usage for market-relevant virtualization solutions
■ Certification for Hyper-V, VMware, Xen Hypervisor	
DESIGNED FOR EASY SERVICEABILITY	
■ Customer self-service module integrated	■ Cost-reducing and pro-active customer self-service
■ Switchable service LAN (shared or dedicated)	■ Physically separated service access
■ Illuminated green control points on hot-plug components	■ Easy-to-use with standardized labeling
■ Fully extendable telescope rails	■ Comfortable rack installation and server operation
SOLUTIONS FOR SERVER MANAGEMENT	
■ ServerView Suite - Proven tools for the efficient management of physical and virtual resources throughout the entire lifecycle: perfect installation - stable operations – secure updates - exact (remote) maintenance – easy integration in specific corporate management solutions	■ The key to high-level IT benefits and reduced operational and service costs: greater reliability, lower downtimes and improved service quality

TECHNICAL DETAILS

MAINBOARD	
Mainboard type	D 2786
Chipset	Intel® 5500
Processor quantity and type	1 - 2 x Intel® Xeon® processor 5500 series
PROCESSOR	Intel® Xeon® processor E5502 (2C/2T, 1.86 GHz, SLC: 2 x 256 KB, TLC: 4 MB, Turbo: No, 4.8 GT/s, Mem bus: 800 MHz, 80 W)
	Intel® Xeon® processor E5504 (4C/4T, 2.00 GHz, SLC: 4 x 256 KB, TLC: 4 MB, Turbo: No, 4.8 GT/s, Mem bus: 800 MHz, 80 W)
	Intel® Xeon® processor E5506 (4C/4T, 2.13 GHz, SLC: 4 x 256 KB, TLC: 4 MB, Turbo: No, 4.8 GT/s, Mem bus: 800 MHz, 80 W)
	Intel® Xeon® processor E5520 (4C/8T, 2.26 GHz, SLC: 4 x 256 KB, TLC: 8 MB, Turbo: 1/1/2/2, 5.86 GT/s, Mem bus: 1066 MHz, 80 W)
	Intel® Xeon® processor E5530 (4C/8T, 2.40 GHz, SLC: 4 x 256 KB, TLC: 8 MB, Turbo: 1/1/2/2, 5.86 GT/s, Mem bus: 1066 MHz, 80 W)
	Intel® Xeon® processor E5540 (4C/8T, 2.53 GHz, SLC: 4 x 256 KB, TLC: 8 MB, Turbo: 1/1/2/2, 5.86 GT/s, Mem bus: 1066 MHz, 80 W)
	Intel® Xeon® processor L5506 (4C/4T, 2.13 GHz, SLC: 4 x 256 KB, TLC: 4 MB, Turbo: No, 4.8 GT/s, Mem bus: 800 MHz, 60 W)
	Intel® Xeon® processor L5520 (4C/8T, 2.26 GHz, SLC: 4 x 256 KB, TLC: 8 MB, Turbo: 1/1/2/2, 5.86 GT/s, Mem bus: 1066 MHz, 60 W)
	Intel® Xeon® processor L5530 (4C/8T, 2.40 GHz, SLC: 4 x 256 KB, TLC: 8 MB, Turbo: 1/1/2/2, 5.86 GT/s, Mem bus: 1066 MHz, 60 W)
	Intel® Xeon® processor X5550 (4C/8T, 2.66 GHz, SLC: 4 x 256 KB, TLC: 8 MB, Turbo: Yes, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)
	Intel® Xeon® processor X5560 (4C/8T, 2.80 GHz, SLC: 4 x 256 KB, TLC: 8 MB, Turbo: 2/2/3/3, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)
	Intel® Xeon® processor X5570 (4C/8T, 2.93 GHz, SLC: 4 x 256 KB, TLC: 8 MB, Turbo: 2/2/3/3, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)
Memory slots	12 (3 channels per CPU with 2 slots per channel = 6 DIMMs per CPU)
Memory slot type	DIMM (DDR3)
Memory capacity (min. - max.)	1 GB - 96 GB
Memory protection	Advanced ECC Memory Scrubbing SDDC (only for registered DIMMs) Memory Mirroring support Hot-spare memory support
Memory notes	max. 96 GB registered or 24 Gbyte unbuffered; min. 2 GB registered or 1 GB unbuffered, no mix of registered and unbuffered modules possible; Memory Mirroring with 2 identical modules per channel
MEMORY MODULES INDEPENDENT MODE	1 GB (1 module(s) 1 GB) DDR3, unbuffered, ECC, 1066 MHz, PC3-8500
	2 GB (1 module(s) 2 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500
	2 GB (1 module(s) 2 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600
	2 GB (1 module(s) 2 GB) DDR3, unbuffered, ECC, 1066 MHz, PC3-8500
	4 GB (1 module(s) 4 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500
	4 GB (1 module(s) 4 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600
	8 GB (1 module(s) 8 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500
	8 GB (1 module(s) 8 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600

MEMORY MODULES MIRRORED MODE	4 GB (2 module(s) 2 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500
	4 GB (2 module(s) 2 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600
	8 GB (2 module(s) 4 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500
	8 GB (2 module(s) 4 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600
	16 GB (2 module(s) 8 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500
	16 GB (2 module(s) 8 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600
MEMORY MODULES PERFORMANCE MODE	6 GB (3 module(s) 2 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500
	6 GB (3 module(s) 2 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600
	12 GB (3 module(s) 4 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500
	12 GB (3 module(s) 4 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600
	24 GB (3 module(s) 8 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500
	24 GB (3 module(s) 8 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600
Upgrade notes	A BIOS update can be necessary for a memory and processor upgrade.
INTERFACES	
USB ports	7 x USB 2.0 (3x front, 3x rear, 1x internal)
Graphics (15-pin)	2 x VGA (1x front)
Serial connection	1 x serial RS-232-C (9-pin), usable for iRMC or system or shared
LAN / Ethernet (RJ-45)	2 x Gbit/s Ethernet
Service LAN (RJ45)	1 x dedicated service LAN port for iRMC S2 (10/100 Mbit/s) Service LAN traffic can be switched to shared onboard Gbit LAN port
ONBOARD OR INTEGRATED CONTROLLER	
RAID Controller	Integrated RAID 0/1 or RAID 5/6 controller for SAS base units (option, occupies one PCIe slot). See under Components RAID controller
SATA Controller	ICH10R, 4-port for RAID 0,1 (for 4x 2.5-inch HDD´s only) , 1 x SATA channel for DVD
LAN Controller	Intel® 82575EB , 2 x 10/100/1000 Mbit/s Ethernet (I/O acceleration), VT-c (I/O acceleration and VMDq), PXE boot via LAN from PXE server, iSCSI boot (also diskless) via onboard LAN
Remote Management Controller	Integrated Remote Management Controller (iRMC S2, 32 MB attached memory incl. graphics controller),
Trusted Platform Module (TPM)	optional TPM
SLOTS	
PCI-Express 2.0 x4 (mech. x8)	1 x low profile
PCI-Express 2.0 x8	2 x (1x full height or low profile, 1x low profile)
Slot Notes	PCI-Express Gen2 x4, only for modular RAID controller
DRIVE BAYS	
Hard disk bays	8
Hard disk bay configuration	6 x 2.5-inch SAS or 8 x 2.5-inch SAS
Accessible drive bays	1 x 5.25/0.5-inch for CD/RW-DVD (only for option 6x 2.5-inch HD)
GENERAL SYSTEM INFORMATION	
Number of fans	12
Fan configuration	redundant hot plug fans (6+6 redundancy)
OPERATING PANEL	
Operating buttons	On/off switch Reset button NMI button
Status LEDs	System status (amber / yellow) Identification (blue) Hard disks access (green) Power (amber / green) At system rear side: System status (amber / yellow) Identification (blue) LAN connection (green) LAN speed (green / yellow)

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 SYSTEM	
Supported operating systems	Microsoft® Windows Server® 2008 R2 Microsoft® Windows Server® 2008 Microsoft® Windows Server® 2003 R2 Novell SUSE Linux Enterprise Server Red Hat Enterprise Linux Citrix® XenServer™ VMware Infrastructure VMware vSphere 4.0 Note: Support of other Linux derivatives on demand
Operating system release link	http://docs.ts.fujitsu.com/dl.aspx?id=a9e600b9-e4cb-4f48-aa41-632f69058421
SERVER MANAGEMENT	
Standard	ASR&R Automatic Server Recovery and Restart PDA Prefailure Detection and Anaylsis ServerView Suite: SV Installation Manager SV Operation Manager SV RAID Manager SV Update Management SV Power Management SV Agents Online update packages for BIOS, firmware drivers and ServerView Agents ServerView Integration solutions for Microsoft SMS, MOM, SCOM, SCCM and Altiris Deployment Solution ServerView Deployment Manager (fully functional 30-day trial version) ServerView Deployment Manager (fully functional 30-day trial version)
Option	ServerView Integration for Tivoli TEC®, Tivoli NetView, HP NNM and HP Operations Manager iRMC S2 Advanced Pack
Server Management notes	Regarding Operating System dependencies and product details for ServerView Suite Software Products see dedicated Product Data sheets.
DIMENSIONS / WEIGHT	
Rack (W x D x H)	482.6 mm (Bezel) / 431mm (Body) x 765 x 43 mm
Mounting Depth Rack	728 mm
Height Unit Rack	1 U
19" rackmount	Yes
Mounting Cable depth rack	200 mm (1000 mm Rack recommended)
Weight	up to 18 kg
Weight notes	Actual weight may vary depending on configuration
Rack integration kit	Rack integration kit as option
ENVIRONMENTAL	
Noise emission	Measured according to ISO 7779 and declared according to ISO 9296
Sound pressure (LpAm)	49 dB(A) (idle) / 57 dB(A) (operating)
Sound power (LWAd; 1B = 10dB)	6.6 B (idle) / 7.4 B (operating)
Operating ambient temperature	10 - 35°C
Operating relative humidity	10 - 85 % (non condensing)
ELECTRICAL VALUES	
Power supply configuration	hot-plug power supply as standard, redundancy as option (1 + 1 redundancy)
Max. output of single power supply	770 W
Hot-plug power supply redundancy	Yes

ELECTRICAL VALUES	
Rated voltage range	100 - 127 V / 200 - 240 V
Rated frequency range	47 - 63 Hz
Rated current max.	8 A / 4 A
Rated current in basic configuration	5 A / 2.5 A (100 V / 240 V)
Active power (max. configuration)	459 W
Apparent power (max. configuration)	466 VA
Heat emission	1652.4 kJ/h (1566.2 BTU/h)

The following products use less energy and reduce greenhouse gas emissions by meeting the strict Energy Star guidelines.

LKN:R2005S0010IN
For configuration details see link below.

http://ts.fujitsu.com/products/standard_servers/e_efficient.html

COMPLIANCE	
Germany	GS
Europe	CE Class A *
USA/Canada	CSAc/us ULc/us ICES-003 Class A FCC Class A
Global	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronical equipment)
Japan	VCCI Class A + JIS 61000-3-2
Taiwan	CNS 13438 class A
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	https://sp.ts.fujitsu.com/sites/certificates/default.aspx

COMPONENTS

HARD DISK DRIVES	SSD SATA, 3 Gb/s, 64 GB, SLC, hot-plug, 2.5-inch, enterprise
	SSD SATA, 3 Gb/s, 32 GB, SLC, hot-plug, 2.5-inch, enterprise
	HDD SATA, 3 Gb/s, 500 GB, 7200 rpm, hot-plug, 2.5-inch, business critical
	HDD SATA, 3 Gb/s, 160 GB, 7200 rpm, hot-plug, 2.5-inch, business critical
	HDD SAS, 3 Gb/s, 300 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 3 Gb/s, 146 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 3 Gb/s, 146 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 3 Gb/s, 73 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
Hard disk notes	One Gigabyte equals one billion bytes, when referring to hard disk drive capacity. Accessible capacity may vary, also depending on used software
OPTICAL DRIVES	Blu-ray Disc™ Combo Drive, (2x 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	SCSI Ctrl 320 MB 1x int /1x ext
	SAS Ctrl 3 Gb 4 ports int. / 4 ports ext.

RAID CONTROLLER	RAID 5/6 Ctrl, SAS 6 Gb, LSI , 8 ports ext. RAID level: 0, 1, 10, 5, 50, 6, 60, 512 MB Cache, optional BBU (based on LSI SAS2108)
	RAID 5/6 Ctrl, SAS/SATA 3 Gb, LSI MegaRAID SAS8880E, 8 ports ext. RAID level: 0, 1, 10, 5, 50, 6, 60, 512 MB Cache, optional BBU (based on LSI 1078)
	Integrated RAID 5/6 Ctrl, SAS/SATA 3 Gb, RAID 5/6 SAS based on LSI MegaRAID 256MB, 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 256 MB Cache, optional BBU (based on LSI SAS1078)
	Integrated RAID 5/6 Ctrl, SAS/SATA 3 Gb, 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 512 MB Cache, optional BBU (based on LSI SAS1078)
	Integrated RAID 0/1 Ctrl, SAS/SATA 3 Gb, 8 ports int. RAID level: 0, 1, 1E, no BBU support (based on LSI 1068e)
	Integrated RAID 0/1 Ctrl, SAS/SATA 3 Gb, 4 ports int. RAID level: 0, 1, 1E, no BBU support , for internal SAS tapes (based on LSI 1064e)
FIBRE CHANNEL CONTROLLER	Fibre Channel Ctrl 2 x 4 Gb Emulex LPe11002 MMF LC
	Fibre Channel Ctrl 1 x 4 Gb Emulex LPe1150 MMF LC
	Fibre Channel Ctrl 1 x 4 Gb Qlogic QLE2460 MMF LC
	Fibre Channel Ctrl 2 x 4 Gb Qlogic QLE2462 MMF LC
	Fibre Channel Ctrl 2 x 8 Gb Emulex LPe12002 MMF LC
	Fibre Channel Ctrl 1 x 8 Gb Emulex LPe1250 MMF LC
LAN CONTROLLER	Converged Network Adapter 2 x 10 Gb Emulex OCe10102
	Ethernet Ctrl 1 x 1 Gb Intel® Gigabit CT Desktop Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 PF Server Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 PT Server Adapter
	Ethernet Ctrl 2 x 10 Gb Intel® 10 Gigabit XF SR Dual Port Server Adapter
	Ethernet Ctrl 2 x 1 Gb Intel® PRO/1000 PT Dual Port Server Adapter
	Ethernet Ctrl 4 x 1 Gb Intel® PRO/1000 PT Quad Port Server Adapter
RACK INFRASTRUCTURE	Cable Arm 1U for PRIMECENTER- and 3rd-party racks
	Rackmount kit full extraction (760mm), tool less mounting
	Rackmount kit partly extraction (524mm), tool less mounting

WARRANTY	
Standard Warranty	3 years
Service level	On-site Service (depending on country)
MAINTENANCE AND SUPPORT SERVICES - THE PERFECT EXTENSION	
Recommended Service	7x24, Onsite Response Time: 4h
Spare Parts availability	5 years
Service Weblink	http://ts.fujitsu.com/Supportservice


Green
Policy
Innovation