DATA SHEET

PRIMERGY RX330 S1 LARGE TLC

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Dual Socket Quad-Core AMD Opteron™ 2000 series-based rack server - High-performance, low-priced standard server

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 RX330 S1 Large TLC

Corporate applications in data center server farms which are centrally implemented and controlled require constantly increasing performance. The low-priced PRIMERGY RX330 S1 (Large TLC) is a new basic unit from the previous RX330 S1 with a Standard TLC of 2 MB. The PRIMERGY RX330 S1 can be ordered based on a new basic unit with Quad-Core Opteron™ processors with 6 MB Third Level Cache (TLC). The new basic unit is only released with the new 2300 series processors with 6 MB TLC. It is not possible to convert or upgrade the existing RX330 S1 basic unit to this new processsor generation. Only the faster DDR2 memory modules with 800 MHz are released for the new basic unit (Large TLC) with the new processors. The new basic unit in the RX330 S1 has a motherboard with a new D number.
RX330 offers enough local storage capacity for use as a stand-alone application server and for server farms in scale-out environments with average requirements regarding availability features and virtualization. The PRIMERGY RX330 S1 with its two Quad-Core AMD Opteron™ processors in the 2300 series and up to 32 Gbytes DDR2-800 memory is perfect for your business application requirements. The PRIMERGY RX330 S1 with its combination of up to 6 hot-plug SAS or SATA hard disks, integrated disk mirroring, 4 PCI slots for heavy I/O requirements and a redundant power supply option is indeed a budget-saving platform.

MAIN FEATURES	BENEFITS
The latest AMD Opteron™ Quad-Core processors in the 2300 series with AMD64 technology and 4x 512 KB SLC and 6 MB TLC for convincing performance	The processor offers with AMD64 a simple method for 64-bit computing as soon as the individually used application makes this necessary. An average 20% increase in performance with the new Quad-Core processors in comparison to the existing Quad-Core processors with 2 MB TLC.
Up to 6x 1 TB hot-plug SATA or 450 GB hot-plug SAS hard disks, up to 32 GB DDR2-800 memory, 4 PCIe / PCI-X slots, storage integration Fibre channel add on, 2 height units housing	Enhanced computing power in a compact housing, fast communication path due to PCI-Express
Integrated RAID 0, 1, 1E, LEDs, iRMC and ServerView Suite, optional RAID 5 and redundant power supply	Comfort and security for continuous operation
2 x Gbit/s Ethernet LAN plus extra Service LAN	Top-speed communications link via LAN as standard assures continuity in failover mode

Technical details

Mainboard	
Mainboard type	D 2932
Chipset	BroadCom HT2100 plus HT1000
Processor quantity and type	1 - 2 x AMD Opteron™ 2000 series
Processor options	AMD Opteron™ 2372 HE (4C, 2.1 GHz, SLC: 4 x 512 KB, TLC: 6 MB, 2 GT/s, 55 W)
	AMD Opteron™ 2376 (4C, 2.3 GHz, SLC: 4 x 512 KB, TLC: 6 MB, 2 GT/s, 75 W)
	AMD Opteron™ 2376 HE (4C, 2.3 GHz, SLC: 4 x 512 KB, TLC: 6 MB, 2 GT/s, 55 W)
	AMD Opteron™ 2380 (4C, 2.5 GHz, SLC: 4 x 512 KB, TLC: 6 MB, 2 GT/s, 75 W)
Memory slots	8 (4 slots per processor)
Memory slot type	DIMM (DDR2)
Memory capacity (min. - max.)	2 GB - 32 GB
Memory Protection	Advanced ECC Memory Scrubbing SDDC (Chipkill™)
Memory notes	1GB modules without SDDC
Memory options	8 GB (module(s) with 4 GB), DDR2, 800 MHz, PC2-6400
	4 GB (module(s) with 2 GB), DDR2, 800 MHz, PC2-6400
	2 GB (module(s) with 1 GB), DDR2, 800 MHz, PC2-6400
Upgrade notes	A BIOS update can be necessary for a memory and processor upgrade.
Interfaces	
USB ports	4 x USB 2.0 (1 x front, 2 x rear, 1 x internal for iRMC)
Graphics (15-pin)	1 x VGA
Serial 1 (9-pin)	1 x serial RS-232-C, usable for iRMC or system or shared
Serial 2 (9-pin)	1 x serial RS-232-C
Mouse / Keyboard (PS/2)	2
LAN / Ethernet (RJ-45)	2 x Gbit/s Ethernet
Service LAN (RJ45)	1 x dedicated Service LAN port for iRMC (10/100 Mbit/s) Service LAN traffic can be switched to shared onbord Gbit LAN port
Onboard or integrated Controller	
Fast IDE/Ultra DMA-100	1
RAID Controller	8 port onboard SAS Controller (LSI 1068) with RAID Level 0, 1, 1E for Windows and Linux
SATA Controller	1 x SATA channel for DVD or backup
LAN Controller	BCM 5715, 2 x 10/100/1000 Mbit/s Ethernet (TCP/IP acceleration), PXE-Boot via LAN from PXE server and iSCSI boot (also diskless) via onboard LAN
Remote Management Controller	Integrated Remote Management Controller (iRMC) incl. graphics controller, IPMI 2.0 compatible

Onboard or integrated Controller	
Onboard Controller notes	RAID option (PCI card, LSI 1078): RAID level 5
Slots	
PCI-Express x8	2 x (1 x low profile on Motherboard, 1 x full height)
PCI slots	1 x PCI 64-bit/66 MHz
Slot Notes	plus 1x PCI Express x4 or Riser card with 1 x PCI 64-bit/66MHz
Drive bays	
Hard disk bays	6 x 3.5-inch hot-plug SAS/SATA
Hard disk bay configuration	two seperate SAS backplanes
Accessible drive bays	1 x 5.25/1.6-inch for backup devices or CD-RW/DVD
Notes accessible drives	All possible options described in relevant system configurator.
General system information	
Number of fans	3
Fan configuration	one unit incl. control logic
Operating panel	
Operating buttons	On/off switch NMI button Reset 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 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 BIOS settings save and restore BIOS settings save and restore
Supported operating systems	
Supported operating systems	Microsoft® Windows Server® 2008 Microsoft® Windows Server® 2003 Novell SUSE Linux Enterprise Server Red Hat Enterprise Linux VMware Infrastructure Note: Support of other Linux derivatives on demand
Operating system release link	http://ts.fujitsu.com/software http://docs.ts.fujitsu.com/dl.aspx?id=a9e600b9-e4cb-4f48-aa41-632f69058421
Server Management	
Standard	ServerView Suite: SV Installation Manager SV Operation Mananger SV RAID Manager SV Update Manager 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)

Server Management	
Option	ServerView Deployment Manager (fully functional unlimited version) ServerView Integration for Tivoli TEC®, Tivoli NetView, HP OpenView NNM and HP OpenView iRMC 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)	430 x 770 x 86 mm
Mounting Depth Rack	710 mm
Height Unit Rack	2 U
19” rackmount	Yes
Mounting Cable depth rack	100 mm (900 mm Rack recommended)
Weight	up to 25 kg
Weight notes	Weight may vary depending on actual 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)	45,6 dB(A) (idle) / 54 dB(A) (operating)
Sound power (LWAd; 1B = 10dB)	6.1 B (idle) / 6.8 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 power supply	625 W
Hot-plug power supply redundancy	Yes
Rated voltage range	100 - 240 V
Rated frequency range	50 - 60 Hz
Rated current max.	5.1 A / 2.5 A (100 V / 240 V)
Rated current in basic configuration	2.4 A / 1.2 A (100 V / 240 V)
Active Power max. (per system unit)	513 W
Apparent power max. (per system unit)	516 VA
Heat emission	1846.8 kJ/h (1750.9 BTU)
Compliance	
Germany	GS
Europe	CE
USA/Canada	CSAc/us ULc/us FCC Class A
Global	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronical equipment)
Japan	VCCI 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.
Compliance link	https://sp.ts.fujitsu.com/sites/certificates/default.aspx

Components

Hard disk drives	SATA, 3 Gb/s, 1000 GB, 7200 rpm, hot plug, 3.5-inch
	SATA, 3 Gb/s, 750 GB, 7200 rpm, hot plug, 3.5-inch
	SATA, 3 Gb/s, 500 GB, 7200 rpm, hot plug, 3.5-inch
	SATA, 3 Gb/s, 250 GB, 7200 rpm, hot plug, 3.5-inch
	SATA, 3 Gb/s, 160 GB, 7200 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s, 450 GB, 15000 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s, 300 GB, 15000 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s, 146 GB, 15000 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s, 73 GB, 15000 rpm, hot plug, 3.5-inch
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
Tape Drives	DDS Gen5, 36 GB , 3 MB/s, half height, SCSI U2W
	DDS Gen6, 80 GB , 6 MB/s, half height, SCSI U160
Optical drives	DVD-ROM, (16xDVD; 48xCD), half height, PATA
	DVD Super Multi, (16xDVD, 8xDVD+RW 6xDVD-RW, 12xDVD-RAM; 48xCD, 32xCD-RW), half height, PATA
SCSI / SAS Controller	SAS Ctrl 3 Gb 4 ports int. / 4 ports ext.
RAID Controller	RAID 5/6 Ctrl, 3 Gb, RAID 5/6 SAS based on LSI MegaRAID 256MB, RAID level: 0, 1, 10, 5, 50, 6, 60, 256 MB Cache,
Fibre Channel controller	Fibre Channel Ctrl 1 x 4 Gb Emulex LPe1150 MMF LC
	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 1 x 4 Gb Qlogic QLE2460 MMF LC
	Fibre Channel Ctrl 2 x 4 Gb Qlogic QLE2462 MMF LC
LAN Controller	Ethernet Ctrl 1 x 1 Gb Intel® Gigabit CT Desktop Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® Gigabit CT Desktop Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 GT Desktop Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 MT Single Port Server Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 PF Server Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 PF Server Adapter low profile
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 PT Server Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 PT Server Adapter low profile
	Ethernet Ctrl 2 x 1 Gb Intel® PRO/1000 PT Dual Port Server Adapter
	Ethernet Ctrl 2 x 1 Gb Intel® PRO/1000 PT Dual Port Server Adapter low profile
	Ethernet Ctrl 4 x 1 Gb Intel® PRO/1000 PT Quad Port Server Adapter low profile
Rack infrastructure	Cable Arm 2U for 3rd party racks
	Cable Management for 19-inch DataCenter / PRIMECENTER 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
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

Information about environmental care, policies, programs and our Environmental Guideline FSC 03230:
http://ts.fujitsu.com/aboutus
Take back and Recycling information:
http://ts.fujitsu.com/recycling

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