Data Sheet

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PRIMERGY RX300 S3

Dual Socket 2U Xeon® based Rack Server – Compact capacity in central service to your departments

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PRIMERGY RX servers are perfect answers for an IT strategy that seeks to downsize data center infrastructure costs by enhancing transparency of structure, management overhead and maximize the use of investments.

With RX rack servers and the PRIMECENTER rack enclosures, you benefit from our renowned experience in data center technology, which assures the best quality of data center operation. To guarantee heterogeneous data center assets, the PRIMECENTER modular design accommodates seamless integration of PRIMEPOWER compute nodes, storage SAN and NAS subsystems, as well as other infrastructure components such as hubs, KVM switches and more, using a universal power circuit structure.

Cost-effective scaling, simplified operation and enhanced quality of data center IT production are the main benefits in deploying PRIMERGY RX servers. Their centralized PRIMERGY Server View Suite management functions mean less troubleshooting and costs and remote access from anywhere at any time. The 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 – shortening your time to production.

PRIMERGY RX300 S3

PRIMERGY RX300 S3 rack server packs the capacity of a fully-featured departmental server into a rack design only 2 U in height. It is offering the breakthrough performance features of leading edge Dual- or Quad-Core Intel® Xeon® 5000 sequence CPUs embedded in a powerful design with an 8-port SAS controller and fast PCIe links and PCI-X busses. Expandability is covering for nearly any workload: 32 GB FBD667 memory, up to 6 SAS / SATA or up to 12x 2.5 inch SAS hard disk drives, and sufficient free PCI slots for heavy I/O requirements.
To guarantee its high availability level, PRIMERGY RX300 S3 delivers: redundant hot-plug power supplies and fans option, Hot-pluggable hard disk drives and PCIe cards and onboard RAID. Special attention is given to secure memory data, with SDDC and memory mirroring option. The new „Cool-safe™“ technology secures optimal temperatures even at peak workloads, such ensuring longevity and extended Mean Time Between Failures. With this built-in failsafe functionality PRIMERGY RX300 S3 is suited ideally to meet demands for continuous operation in business critical environments, running data bases, terminal services, business applications or consolidation and virtual machine tasks.

Key Features	Benefits
■ Dual- or Quad-Core Intel Xeon 5000 processor sequence and 2x 2 / 4 / 2x 4 MB shared SLC offer outstanding Dual-Core performance and balanced architecture that incorporates next generation memory and I/O technologies	■ Higher overall productivity through outstanding Dual-/Quad-Core performance with faster FSB, larger L2 cache etc. 64-bit computing for demanding applications, with full compatibility for 32 bit legacy applications, ideal for database applications
■ PCI-Express attached onboard 2x Gbit/s Ethernet LAN and SAS/RAID controllers	■ Fast communication path through usage of PCI-Express also for board internal components like RAID and LAN
■ Internal max. 6x 300 GB SAS / 6x 500 GB SATA 3.5“ HDD or up to 12x 146 GB 2.5” SAS HDD, all hot-plug up to 5 PCIe and PCI-X slots	■ Highest flexibility on basis of latest I/O technologies for consolidation of data and applications.
■ Hot-plug, redundant power supply and fans options, Hot-plug PCIe and hard disks, RAID5 onb. option	■ No-break repair service saves cost, reduces planned and unplanned downtimes
■ Integrated Remote Management Controller (iRMC)	■ Comfort and security for continuous operation

Type	Dual Socket Rack Server
System board	D 2119
Chip set	Intel® 5000P
Processors	Dual- or Quad-Core Intel® Xeon® (1 - 2)
Frequencies (GHz)	5050 (3.00) / 5060 (3.20), 5080 (3.73), 5110 (1.60), 5120 (1.86) / 5130 (2.00), 5140 (2.33), 5148 (2.33) 40W, 5150 (2.66), 5160 (3.00) Dual-Core or L5310 (1.60) 50W; E5310 (1.60), L5320 (1.86) 50W, E5320 (1.86), L5335 (2.00) 50W E5335 (2.00), E5345 (2.33), X5355 (2.66), X5365 (3.00) Quad-Core
Front-Side-Bus	667, 1066, 1333 MHz / also 1066 (5310/20)
Second-Level-Cache	2x 2 (50xx) / 4 (51xx), 2x 4 MB (53xx), ECC
Memory	1 Gbyte up to max. 32 Gbyte
4-way interleaved, FullyBuffered DIMM DDR2 FBD667; ECC; 8 slots divided into 2 branches with 2 channels each for PC2-5300F modules with 512, 1, 2 and 4 GB; SDDC, Memory Mirroring option	
Flash-EPROM	
Local BIOS update with floppy disk; Remote BIOS-Update via LAN with Global Flash and service partition	
Interfaces	
Serial	1x RS-232-C (9-pin) (usable for iRMC or system)
Serial (option)	1x RS-232-C (9-pin) occupies PCI-slot 1
Parallel (option)	Centronics, 25-pin, EPP/ECP comp. (occupies PCI-slot 5)
Keyboard, Mouse	2x PS/2
USB 2.0	2x front, 2x back; (OHCI, 480 Mbit/s) 1x internal for backup drives
Graphics	1x VGA (15-pin)
LAN	2x RJ45
Front Panel	
On/off switch; NMI-, reset button; LEDs for system status (amber), identification (blue), hard disks access (green), power (amber/green); (back: system status, identification)	
Onboard controller **	
IDE (ATA100)	for 1 x CD / DVD (integr. in Southbridge)
SAS (Brockton) also useable for SATA	8-Port SAS controller with integrated RAID (0, 1, 1E).(Integrated **Mirroring Enhanced** also for odd numbered HD´s for Windows and Linux).
MegaRaid PCI Express™ RoMB (option) (in 2.5-inch base unit mandatory)	RAID Level 0, 1, 10, 5, 50 extension for onboard SAS RAID-controller with iButton (enable key) and 256MB Cache or 256MB iTBBU (Cache with integrated BBU). SAS and SATA are supported, no simultaneous operation of SAS and SATA
LAN (BroadCom5715)	2x 10/100/1000 Mbit/s Ethernet (PCE-Boot via LAN from PXE server)
Server management	Integrated Remote Management Controller (iRMC) incl. graphics controller, IPMI 2.0 compatible
Hard disk drives (all hot-plug)	36, 73, 146, 300 Gbyte 3.5-inch SAS or 80, 160, 250, 500 Gbyte 3.5-inch SATA or 36, 73, 146 Gbyte 2.5-inch SAS optional (no later conversion 3.5 to 2.5-inch)
1 Gbyte equals one billion bytes when referring to hard disk drive capacity; accessible capacity may vary.	
I/O Slots (Standard)	
1x PCIe x8 Low Profile 2x PCIe x4 Low Profile, Hot-plug 2 x PCI-X 64-bit / 133 MHz, low profile; 3.3 V	
I/O Slots (risercard option)	
1 x PCI-X 64-bit / 133 MHz, long, full height; 2 x PCI-X 64-bit / 133 MHz, short, full height	
Drive bays	
for hard disks	6x 3,5/1-inch, for SAS / SATA or 12x 2,5/1-inch for SAS optional
for accessible drives	1x 5,25/0,5-inch, for IDE-CD or DVD-ROM opt. 1x 3.5/0.5-inch for opt. LocalView Display or FD

System fan units (hot-plug)
Standard / redundant (option): 1 + 1 units, 4 fans each

Electrical values	
1x Hot-plug power supply unit as standard. Additional hot-plug unit for redundancy option	
Output power	600 W / 1 + 1 x 600 W each
Rated voltage range	100 - 240 V
Rated frequency	50-60 Hz
Max. rated current	100 V - 240 V / 8.5 A – 3.8 A
Rated current in basic configuration	100 V - 240 V / 4.2 A - 1.4 A
Active power	681 W
Apparent power	689 VA
Heat emission	2452 kJ/h (2324 btu/h)
Temperature/Noise/Dimensions/Weight	
Ambient temperature	10°C - 35°C (DIN IEC 721-3-3) class 3K2
Declared noise emission according to ISO 9296	idle* operating* (*ISO 7779)
L_{WAd} (1 B = 10 dB)	6.7 B 7.1 B
L_{pAm} (bystander position)	53 dB 56 dB
Overall measures	85.9 * 482.6 * 785 (mm); (HxWxD)
Rack mount depth / U: Rack cable depth:	745 mm / 2 U, 100 mm (900mm Rack recommended)
Rack integration kit	inclusive telescopic rails as part of the standard delivery
Weight	~ 25 kg (configuration dependent)
Compliance with Norms and Standards	
Product safety	
Global / Europe	IEC 60950-1 / EN 60950-1
USA	UL 60950 3rd. Ed.
Canada	CAN/CSA-C22.2 No. 60950-1
Electromagnetic compatibility	
This product and the released accessories, are in compliance with emission class A. In certain cases measures have to be taken to reduce the electro magnetic influence to other equipment.	
Europe	EN 55 022 class A, EN 55024, EN 61000-3-2 / -3-3
Taiwan / Japan	BSMI class A; VCCI class A /JEIDA
Australia / New Zealand	C-Tick class A
USA / Canada	FCC class A
Declaration of conformity	
Europe (CE)	89/336/EEC(EMV);73/23 EEC(LVD)
North America	FCC class A
Approvals	
Product safety	
Global / Europe	CB / CE
USA / Canada	CSA_{US} / CSA_{C}
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.	
Supported server operating systems	
See actual release status operating systems: e.g. Windows Server 2003; Novell SUSE Linux Enterprise Server , Red Hat Enterprise Linux; VMware ESX (Support of Debian, Ubuntu, Mandriva Linux and other Linux derivatives on demand)	
** For supported controllers (onboard and PCI cards for SCSI, RAID, LAN, WAN, etc.), please refer to the corresponding system configurator.	
Server Management (see separate data sheets)	
Standard:	PRIMERGY ServerView Suite; PDA, ASR&R
Optional:	LocalView, RemoteView, iRMC Advanced Pack

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