Data Sheet

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PRIMERGY RX300 S4

Dual Socket, Quad-Core, Xeon® 2U 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 dynamic data center operation. To guarantee heterogeneous data center assets, the PRIMECENTER modular design accommodates seamless integration of Solaris based Server 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 ServerView 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 S4

PRIMERGY RX300 S4 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® 5200/5300/5400 series 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: 48 GB FBD667 memory, up to 12x 2.5 inch or up to 6x 3.5 inch SAS hard disk drives, and 6 free PCIe and PCI-X slots for heavy I/O requirements perfect for virtualization tasks.
To guarantee its high availability level, PRIMERGY RX300 S4 delivers: redundant hot-plug power supply and fans option, Hot-pluggable hard disk drives and a modular RAID. Special attention is given to secure memory data, with SDDC hot-spare and memory mirroring option. The „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 S4 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.

Benefits	Key Features
■ Higher overall productivity through outstanding Dual-/Quad-Core performance with fast FSB, large L2 cache etc. 64-bit computing for demanding applications, with full compatibility for 32-bit legacy applications, ideal for database applications ■ Fast communication path through usage of PCI-Express	■ Dual- or Quad-Core Intel Xeon 5200/5400 series and 6/2x 6 MB SLC offer outstanding Dual- or Quad-Core performance and balanced architecture that incorporates latest memory and I/O technologies ■ PCI-Express attached onboard 2x Gbit/s Ethernet LAN and modular RAID controller in PCIe slot
■ Highest flexibility on basis of latest I/O technologies for consolidation of data and applications.	■ Internal max. 6x 300 GB SAS / 6x 750 GB SATA 3.5“ HDD or up to 12x 146 GB 2.5” SAS HDD, all hot-plug 6 free PCIe and PCI-X slots
■ No-break repair service saves cost, reduces planned and unplanned downtimes ■ Comfort and security for continuous operation	■ Hot-plug, redundant power supply and fans options, Hot-plug hard disks, modular RAID5, LSP module option ■ Integrated Remote Management Controller (iRMC), IPMI 2.0

Type	Dual Socket Rack Server
System board	D 2519
Chip set	Intel® 5000P
Processors	Dual- or Quad-Core Intel® Xeon® (1 – 2)
Frequencies (GHz)	5148 (2.33) LV 40W DC / E5205 (1.86) 65W; L5240 (3.00) 50W, X5260 (3.33) 80W DC / L5310 (1.60), L5410 (2.33), L5420 (2.50) 50W QC / E5405 (2,00), E5420 (2.50), E5430 (2.66 GHz), E5440 (2.83), 80W, X5460 (3.16) 120W QC
Front-Side-Bus/ Socket	1066 (E5205, L5310), 1333 MHz
Second-Level-Cache	4 MB (51xx), 2x 4 MB (53xx), 6 MB (52xx), 2x 6 MB (54xx) ECC
Memory	1 Gbyte up to max. 48 Gbyte
4-way interleaved, FullyBuffered DIMM DDR2 PC2-5300F; ECC; 2 boards (1x standard), 12 slots divided into 2 branches with 2 channels each and 3 slots per channel for PC2-5300F modules with 512, 1, 2 and 4 GB; SDDC, Memory Mirroring and hot-spare option, memory upgrade only possible per branch with module pairs	
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 or shared)
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) 2x internal
Graphics	1x VGA (15-pin)
LAN	2x RJ45, 1x Service10/100 (can be switched on Gbit LAN port)
Front Panel	
On/off switch; NMI-, reset button; LEDs for global error (amber/ yellow for Health and CSS), identification (blue), hard disks access (green), power (amber/green); (back: global error, identification, LAN activity, LAN mode)	
Onboard controller **	
ESB2-T	2 x SATA channel for DVD + backup
SAS configuration **in internal PCIe slot either** (LSI 1068) **or** LSI 1078	8 port SAS for internal HDD´s and internal backup devices with RAID 0, 1 (Integrated Mirroring Enhanced also for odd numbered HD´s for Windows and Linux) with RAID 0, 1, 10, 5, 50, 6, 60 (256 or 512 MB RAID Cache and opt. BBU)
LAN (2x BroadCom5708)	2x 10/100/1000 Mbit/s Ethernet (TCP/IP accelerator)(PXE-Boot via LAN from PXE server), iSCSI Boot (also diskless) via onboard LAN
Server management	Integrated Remote Management Controller (iRMC S2, 32 MB attached memory) incl. graphics controller, IPMI 2.0 compatible
TPM (option)	Infineon / 1.2
Hard disk drives (all hot-plug)	36, 73, 146, 300 Gbyte 3.5-inch SAS and/or 250, 500, 750 Gbyte 3.5-inch SATA or 36, 73, 146 Gbyte 2.5-inch SAS optional; 3.5-inch SAS / SATA Mix only in separate RAID sets, 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	
5x PCIe x8, x4 wired low profile (from 4 PCIe slots each two wired x4 slots can be combined to one wired x8 slot) 1 x PCI-X 64-bit / 133 MHz, low profile; 3.3 V	
Drive bays	
for hard disks	6x 3,5/1-inch, for SAS / SATA or 6 or 12x 2,5/1-inch for SAS optional
for optional accessible drives	1x 5.25/0.5-inch, for CD or DVD-ROM 1x 3.5/0.5-inch for LSP or LSD or FD 1x 3.5/1.6-inch for backup occupies 2x 3.5 or 6x 2.5-inch HDD bay
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	700 W / 1 + 1 x 700 W each
Rated voltage range	100 - 240 V
Rated frequency	50-60 Hz
Max. rated current	100 V - 240 V / 8.0 A – 3.5 A
Rated current in basic configuration	100 V - 240 V / 4.2 A – 1.4 A
Active power	726 W
Apparent power	737 VA
Heat emission	2614 kJ/h (2477 btu/h)
Temperature/Noise/Dimensions/Weight	
Ambient temperature	10°C - 35°C (DIN IEC 721-3-3) class 3K2, ETSI 300 019-2-3 Class 3.1
Declared noise emission according to ISO 9296	idle* operating* *(ISO 7779) ETSI 300 753 Class 3.1
L_{WAd} (1 B = 10 dB)	6.9 B 6.9 B
L_{pAm} (bystander position)	52 dB 52 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	Telescopic Rails with full extraction or partial extraction optional
Weight	~ 25 kg (configuration dependent)
Compliance with Norms and Standards	
Product safety	
Global / Europe	IEC 60950-1 / EN 60950-1
USA	UL 60950-1
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, EN61000-3-2 / -3-3, ETSI EN300386
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)	2004/108/EC(EMV);2006/95/EC(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; Windows Server 2008, 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 SAS, SATA, 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 (excerpt):	ServerView Local Service Panel (LSP) or Local Service Display (LSD), ServerView Remote Management, iRMC S2 Advanced Pack

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