# PRIMERGY TX200 S2

## Dual Xeon™ Server - Cost-efficient expansion options and failsafe operation

PRIMERGY TX Tower Servers ensure carefree and continuous operation with proven data center technology. Their design for maximum ease of use and ease of management has been honored with industry design awards in 2003 and 2004. The latest processor generation combined with innovative air flow cooling technology ("Cool-safe") assure a long life and the highest possible performance at work. And as your business grows, so do our PRIMERGY towers, providing plenty of headroom for expansion so that you benefit longer from your investments in PRIMERGY tower servers. For corporate workgroups and remote sites, PRIMERGY TX servers ensure less troubleshooting and lower costs with their complete PRIMERGY ServerView Suite remote management functions – flexible management from anywhere at any time. Since corporate infrastructure is subject to consolidation changes, our universal tower-to-rack conversion kit protects your investment by prolonging the system's lifecycle.

The flexible custom supply model and our build-to-order process mean that only fully built and pre-tested solutions are shipped to customers, who can select from a broad family of tower models to meet their individual needs.

### PRIMERGY TX200 S2

Flexible expansion options are the key to placing new or larger workloads on your server. This applies not only to physical capacity, such as the number of disk drives, advanced data protection schemes, or I/O connectivity; in particular, consideration of the transition to 64-bit computing is a must in today's technology purchase decisions.
The PRIMERGY TX200 S2 is a perfect match for these requirements, providing you with a cost-efficient standard. TX200 is a failsafe operation platform for your application stacks, with standards such as disk mirroring, hot-plug disks, Chipkill™ and hot-spare memory, and the "Cool-safe" innovative air flow system design that supports next-generation processor technology. Your business can rely on this solution!
In addition, further options – such as extended RAID functions, clustering options and redundancy for power supplies and fans – tailor these standards to your individual safety needs.

| Key Features | Benefits |
|---|---|
| ▪ New 64-bit Intel Xeon (EM64T) and up to 2 MB SLC offer extended 64-bit address space and therefore more direct useable memory and performance. | ▪ With 64-bit Intel Xeon Technology the processor gives the company a way to ease into 64-bit computing, as soon as the individual need of the application comes up. |
| ▪ Onboard 2-channel Ultra320 SCSI controller with embedded **IME** RAID 1 functionality and low-cost ZCR RAID 0, 1, 10, 5, 50 option<br>▪ Hot spare memory, hot-spare tape option | ▪ Enhanced data reliability and without extra cost, business continuity right from the entry-class server, more value for money as well as added data safety. |
| ▪ Up to 9x (6 + 3) hot-plug HDD infrastructure<br>Hot-plug functionality is available as option for the most important system components:<br>Hot-plug, redundant PSU and System fans (optional)<br>▪ 1x Gbit LAN with PCI-Express interconnect onboard | ▪ Tailor made availability, offers the security level which is recommended by your individual application demands<br><br>▪ Fast communication link through onboard PCI-Express interconnect |

| Type | Dual Processor Tower Server |
|---|---|
| **System board** | D 1919 |
| Chip set | Intel® E7320 |
| Processors | 64-bit Intel® Xeon™ (1 - 2) |
| Frequencies (GHz) | 2.80, 3.00, 3.20, 3.40 |
| Front-Side-Bus | 800 MHz |
| Second-Level-Cache | 2 Mbyte, ECC |
| **Memory** | 512 Mbyte up to max. 12 Gbyte |

2-way interleaved, registered ECC PC2700 DDR1 SDRAM; 3 banks with 2 slots each for modules 256 Mbyte, 512 Mbyte, 1 and 2 Gbyte; memory scrubbing, Chipkill™* and hot-spare memory support;
** Chipkill™ only with modules > 256 MB

**Flash-EPROM**

Local BIOS update with floppy disk; Remote BIOS-Update via LAN with Global Flash and service partition / RomPilot, or through chipDISK / RTDS via modem

**Interfaces**

| | |
|---|---|
| Serial | 1x RS-232-C (9-pin) (usable for BMC or OS or shared) |
| Serial | 1x RS-232-C (9-pol) |
| Parallel (option) | Centronics, 25-pin, EPP/ECP comp. |
| Keyboard, Mouse | 2x PS/2 |
| USB 2.0 | 1x front, 2x back (UHCI, 480 Mbit/s) |
| Graphics | 1x VGA (15-pin) |
| LAN | 1x 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) | 2-channel Fast-IDE controller for 1 device + RemoteView Diagnosis |
| SCSI (LSI53C1030) | 2-channel Ultra320 SCSI with RAID 1 (**I**ntegrated **M**irroring **E**nhanced also for odd number of HD´s for Windows and Linux) |
| RAID option (PCI card, ZCR) | RAID level 0, 1, 10, 5, 50 extension for onboard SCSI/RAID controller |
| LAN (BroadCom5721) | 1x 10/100/1000 Mbit/s Ethernet (PCE-Boot via LAN from PXE server) |
| Graphics | ATI Rage XL 8 MB |
| Server management | Baseboard Management Controller (BMC), IPMI 1.5 compatible |

**Hard disk drives** — 36, 73, 146, 300 Gbyte, U320 SCSI

1 Gbyte equals one billion bytes when referring to hard disk drive capacity; accessible capacity may vary.

**I/O Slots (Standard)**

2x PCI-X 64-bit / 66 MHz, 1xlong, 1xshort 3.3V (ZCR supp.);
2x PCI-X 64-bit / 100 MHz, long, 3.3V;
 (1x with max. 133 MHz (IOOP™), if only 1 slot is in use)
1x PCI 32-bit / 33 MHz, long, 5V (RSB support)

**Drive bays**

| | |
|---|---|
| for hard disks | 6x 3.5/1-inch, hot-plug, slide-in chassis |
| for optional hard disks | 3x 3.5/1-inch, hot-plug, requires 2 bays for accessible drives |
| for accessible drives | 2x 5.25/1.6-inch free; 1x 5.25/0,5-inch for opt. CD, DVD; CD-/DVD-RW 1x 3.5/1-inch occupied with FD drive |
| for optional accessible drive | 1x 3.5/2-inch for hot-plug tape drive, requires 2 hard disk bays |

**System fans (hot-plug)**

Standard / redundant (option): (2 + 2) fans + 1 fan per CPU

**Electrical values**

1x standard or 2x optional redundant hot-plug power supplies

| | |
|---|---|
| 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 / 9.0 A – 5.0 A AC outlet with standard PSU: 2 A |
| Rated current in basic configuration | 100 V - 240 V / 4.4 A - 1.5 A |
| Active power | 798 W |
| Apparent power | 809 VA |
| Heat emission | 2873 kJ/h (2723 btu/h) |

**Temperature/Noise/Dimension/Weight**

| | |
|---|---|
| Ambient temperature | 10°C - 35°C (EN60721-3-3 class 3K2) |
| Sound pressure $L_{pAm}$ | 44 <= 52 dB (A) (ISO9296) |
| Sound power $L_{WAd}$ | 6.2 <= 6.7 B (ISO9296) |
| Floor-stand (HxWxD) | 473 * 286 * 775 (mm) |
| Rack (HxWxD) | 177 * 483 * 770 (mm); Rack mounting depth 735 mm; 4 U |
| Weight | 25 - 40 kg (configuration dependent) |

**Compliance with Norm and Standards**

**Product safety**

| | |
|---|---|
| Global | IEC 60950-1 |
| Europe | EN 60950-1 |
| USA | UL 60950 3rd. Ed. |
| Canada | CAN/CSA-C22.2 No. 60950 3rd. Ed. |

**Electro magnetic compatibility**

| | |
|---|---|
| Europe | EN 55 022 class A, EN 55024, EN 61000-3-3 |
| Taiwan / Japan | CNS 13438 class A; VCCI class A |
| Australia / New Zealand | AS / NZS 3548 class A |
| USA / Canada | FCC class A |

**Declaration of conformity**

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|---|---|
| Europe (CE) | 89/336/EEC(EMV);73/23 EEC(LVD) |
| North America | FCC class A |

**Approvals**

**Product safety**

| | |
|---|---|
| Global | CB |
| Europe | 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 operating systems**

Microsoft: Windows 2003 Standard, Enterprise IA32 Edition;
Microsoft: Windows 2003 Standard, Enterprise x64 Edition;
Microsoft Windows 2003 Web Edition
Microsoft Small Business Server 2003 Stand./Premium Edition*
Microsoft: Windows 2000 Advanced Server; Server
Novell: NetWare 6.5
SCO: UnixWare 7.1.4; Open Server 5.0.7
SUSE: Enterprise Server 8 for x86 and 9 x86 / EM64T
SUSE: Linux 9.2, 9.3 for X86
Red Hat: Enterprise Linux 2.1; 3 and 4 for X86 / EM64T

\* No application support
** 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: | RemoteView with IDE chipDISK and RemoteView Service Board |