FUJITSU

DATA SHEET

PRIMERGY TX300 S5

Issue: April 2009

Dual Socket Intel® Xeon® processor server - No compromise tower server

PRIMERGY TX industry standard tower servers: efficient, rock solid, record-breaking performance. PRIMERGY TX servers benefit from over 20 years pioneering work in the field of Green IT. That is how TX servers reach industry – leading performance per watt ratios, lowering the environmental impact and running costs. TX servers can easily be managed locally or remotely via the PRIMERGY ServerView Suite, saving IT admin costs. That's efficient performance. Our made-to-measure service packages take care of your system every step of the way. Rest assured, PRIMERGY TX servers are put through 5000 boot cycles - that's rock solid performance. PRIMERGY TX servers are flexible systems capable of using up to two processors and up to 20 hard disks. Tower to rack mounting kits are available to move to a consolidated rack infrastructure. TX servers have a tradition of setting record-breaking performance levels. So, whether you use them as tower or rack servers, for file, print or application purposes, you will benefit from record-breaking performance. PRIMERGY TX: a tower of strength.

PRIMERGY TX300 S5

Are you looking for business continuity, especially for your core business applications? Our PRIMERGY TX300 servers can provide peace of mind for you when you choose a suitable server platform.

The new TX300 S5 offers maximum levels of availability and expandability as a result of hot plug, redundant versions. It has powerful performance features as supplied by the leading Intel® Dual, Quad or Turbo Quad-Core Xeon® CPUs in the 5500 series which are integrated in a powerful set up with an 8-port SAS controller as well as fast PCIe Gen2 connections in the new PRIMERGY design. Continuity is ensured as a result of the modular RAID, redundant Dual LAN features and optional redundant hot-plug power supply and fans. The "cool-safe™" technology in the new honeycomb design ensures optimal temperatures despite peak workloads and thus ensures long-life. Optimal performance and high energy efficiency is ensured in connection with EPA-compliant power supply (89% energy efficiency), a no-cable motherboard wherever possible and new power management features. The PRIMERGY TX300 S5 has up to 2 memory boards with 18 DIMM slots for memory mirroring with up to 144 GB DDR3 RAM. The system just needs a few additional options in order to meet the highest demands, such as clustering or disaster-tolerant setup.

The PRIMERGY TX300 S5 is exactly the right platform for business-critical remote sites.

MAIN FEATURES	BENEFITS
Xeon® 5500 series Dual, Quad or Turbo Quad-Core processors with Turbo Boost technology, Demand Based Switching, QuickPath Interconnect (QPI) and Internal Memory Management Unit	Higher overall productivity thanks to excellent CPU performance, prepared for next generation 6C
More and faster memory (18 DIMMs up to 144 GB DDR3)	Innovative memory for system reliability, with maximum memory protection mechanisms, ideal for virtualization
Hot-plug, redundant power supply and fan option, hot-plug SAS or SATA hard disks, modular RAID 5/6 option, Dual Gbit/s LAN, Local Service Panel (LSP) or Local Service display (LSD) module	Highest availability and redundancy for your core applications
Internal max. 6 (8)x 450 GB SAS / 6 (8)x 1 TB SATA 3.5"HDD or up to 12 (20)x 300 GB SAS / 12(20)x 120 GB 2.5" SATA HDD, all hot-plug, 7 PCIe Gen2 slots (2 x8, 5 x4)	Highest flexibility on account of state-of-the-art I/O technologies to consolidate data and applications.
Unique, patented solution for maximum I/O bandwidth with 4x PCIe Gen2 x8 slots (from 4 PCIe slots two x4 wired slots are automatically used x8 if the neighbouring slot is empty)	Maximum possible I/O bandwidth; no expensive card in an empty slot required!

Technical details

Mainboard

Mainboard type	D 2619
Chipset	Intel® 5520
Processor quantity and type	1 - 2 x Intel® Xeon® processor 5500 series

Processor options	
	Intel® Xeon® E5502 (2C, 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® E5504 (4C, 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® E5506 (4C, 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® E5520 (4C, 2.26 GHz, SLC: 4 x 256 KB, TLC: 8 MB, Turbo: Yes, 5.86 GT/s, Mem bus: 1066 MHz, 80 W)
	Intel® Xeon® E5540 (4C, 2.53 GHz, SLC: 4 x 256 KB, TLC: 8 MB, Turbo: Yes, 5.86 GT/s, Mem bus: 1066 MHz, 80 W)
	Intel® Xeon® L5506 (4C, 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® L5520 (4C, 2.26 GHz, SLC: 4 x 256 KB, TLC: 8 MB, Turbo: Yes, 5.86 GT/s, Mem bus: 1066 MHz, 60 W)
	Intel® Xeon® X5550 (4C, 2.67 GHz, SLC: 4 x 256 KB, TLC: 8 MB, Turbo: Yes, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)
	Intel® Xeon® X5570 (4C, 2.93 GHz, SLC: 4 x 256 KB, TLC: 8 MB, Turbo: Yes, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)

Memory slots	18 (9 DIMMs per CPU, 3 channels with 3 slots per channel)
Memory slot type	DIMM (DDR3) registered
Memory capacity (min. - max.)	2 GB - 144 GB
Memory Protection	Advanced ECC Memory Scrubbing SDDC (Chipkill™) Hot-spare memory support Memory Mirroring support
Memory notes	max. 144 GB registered,; min. 2 GB registered; Memory Mirroring with 2 identical modules, Hot-spare Memory with three identical modules per channel

Memory Modules Independent Mode	2 GB (1 module(s) with 2 GB), DDR3-SDRAM, registered, ECC, 1066 MHz, PC3-8500
	2 GB (1 module(s) with 2 GB), DDR3-SDRAM, registered, ECC, 1333 MHz, PC3-10600
	4 GB (1 module(s) with 4 GB), DDR3-SDRAM, registered, ECC, 1066 MHz, PC3-8500
	4 GB (1 module(s) with 4 GB), DDR3-SDRAM, registered, ECC, 1333 MHz, PC3-10600
	8 GB (1 module(s) with 8 GB), DDR3-SDRAM, registered, ECC, 1066 MHz, PC3-8500
	8 GB (1 module(s) with 8 GB), DDR3-SDRAM, registered, ECC, 1333 MHz, PC3-10600
Memory Modules Mirrored Mode	4 GB (2 module(s) with 2 GB), DDR3-SDRAM, registered, ECC, 1066 MHz, PC3-8500
	4 GB (2 module(s) with 2 GB), DDR3-SDRAM, registered, ECC, 1333 MHz, PC3-10600
	8 GB (2 module(s) with 4 GB), DDR3-SDRAM, registered, ECC, 1066 MHz, PC3-8500
	8 GB (2 module(s) with 4 GB), DDR3-SDRAM, registered, ECC, 1333 MHz, PC3-10600
	16 GB (2 module(s) with 8 GB), DDR3-SDRAM, registered, ECC, 1066 MHz, PC3-8500
	16 GB (2 module(s) with 8 GB), DDR3-SDRAM, registered, ECC, 1333 MHz, PC3-10600
Memory Modules Spare Mode	6 GB (3 module(s) with 2 GB), DDR3-SDRAM, registered, ECC, 1066 MHz, PC3-8500
	6 GB (3 module(s) with 2 GB), DDR3-SDRAM, registered, ECC, 1333 MHz, PC3-10600
	12 GB (3 module(s) with 4 GB), DDR3-SDRAM, registered, ECC, 1066 MHz, PC3-8500
	12 GB (3 module(s) with 4 GB), DDR3-SDRAM, registered, ECC, 1333 MHz, PC3-10600
	24 GB (3 module(s) with 8 GB), DDR3-SDRAM, registered, ECC, 1066 MHz, PC3-8500
	24 GB (3 module(s) with 8 GB), DDR3-SDRAM, registered, ECC, 1333 MHz, PC3-10600

Interfaces

USB ports	10 x USB 2.0 (3x front, 4x rear, 2x internal for backup devices plus 1x USB stick)
Graphics (15-pin)	2 x VGA (thereof 1x front optional)
Serial 1 (9-pin)	1 x serial RS-232-C, usable for iRMC S2 or system or shared
Serial 2 (9-pin)	1 x serial RS-232-C
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 onbord Gbit LAN port

Onboard or integrated Controller

RAID Controller	Integrated RAID 0/1 or RAID 5/6 controller for SAS base units (occupies one PCIe slot). See under Components RAID controller
SATA Controller	ICH10B, 2 x SATA channel for DVD
LAN Controller	Intel® 82575EB , 2 x 10/100/1000 Mbit/s Ethernet (TCP/IP acceleration), 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), IPMI 2.0 compatible
Trusted Platform Module (TPM)	Infineon / separate module; TCG V1.2 compliant (option)

Slots

PCI-Express Gen2 x4	5 x full height from 4 PCIe slots each two wired x4 slots can be combined to one wired x8 slot one PCIe-2 slot is occupied with one of two possible modular RAID controllers
PCI-Express Gen2 x8	2 x full height
Slot Notes	slot 5 and 7 are notched at the right side and thus also usable for x16 cards (operating x8, slot 5 only if neighbor slot is empty)

Drive bays

Hard disk bay configuration	6x 3,5-inch, for SAS / SATA or 12x 2,5-inch for SAS/SATA optional
Accessible drive bays	3 x 5.25/1.6-inch
Notes accessible drives	All possible options described in relevant system configurator.
Optional hard disk bays	2 x 3.5-inch hot-plug SAS/SATA or 8x 2.5-inch hot-plug SAS in HDD box (occupies 2x 5.25-inch bays)

Operating panel

Operating buttons	On/off switch NMI button Reset button

Operating panel

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)
Service display	Optional: ServerView Local Service Panel (LSP) ServerView Local Service Display (LSD)

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

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	ASR&R PDA
Option	ServerView Deployment Manager (fully functional unlimited version) ServerView Remote Management ServerView Integration for Tivoli TEC®, Tivoli NetView, HP OpenView NNM and HP OpenView 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

Floor-stand (W x D x H)	286 x 745 x 466 mm
Rack (W x D x H)	483 x 748 x 177 mm
Mounting Depth Rack	710 mm
Weight	up to 40 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)	35 dB(A) (idle) / 37 dB(A) (operating)
Sound power (LWAd; 1B = 10dB)	5.2 B (idle) / 5.5 B (operating)
Operating ambient temperature	10 - 35°C
Operating relative humidity	10 - 85 % (non condensing)

Electrical values

Power supply configuration	1x 800 W hot-plug power supply plus three 120mm standard fans or 2x 800W hot-plug power supply plus three hot-plug and redundant double fans
Max. output of power supply	800 W
Rated voltage range	100 - 240 V
Rated frequency range	50 - 60 Hz

Electrical values

Rated current max.	100 V - 240 V / 9,0 A – 5,0 A
Rated current in basic configuration	100 V - 240 V / 4,4 A - 1,5 A
Active Power max. (per system unit)	560 W
Apparent power max. (per system unit)	570 VA
Heat emission	2016.0 kJ/h (1911.3 BTU)

Compliance

Germany	TÜV GS
Europe	CE
USA/Canada	CSAc/us FCC Class A
Global	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronical equipment)
Japan	VCCI class A
Australia&New Zealand	C-Tick
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.
Compliance link	https://sp.ts.fujitsu.com/sites/certificates/default.aspx

Components

Hard disk drives	SSD SATA, 1.5 Gb/s, 50 GB, hot plug, 2.5-inch
	SATA, 120 GB, 5400 rpm, hot plug, 2.5-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, 1 TB, 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, 146 GB, 10000 rpm, hot plug, 2.5-inch
	SAS, 3 Gb/s, 73 GB, 15000 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s, 73 GB, 15000 rpm, hot plug, 2.5-inch
	SAS, 3 Gb/s, 73 GB, 10000 rpm, hot plug, 2.5-inch
	SAS, 3 Gb/s, 36 GB, 15000 rpm, hot plug, 2.5-inch
Hard disk notes	Mix of 3.5-inch SAS and SATA HDD is possible but required seperate RAID sets 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, USB 2.0
	DDS Gen6, 80 GB , 6 MB/s, half height, SCSI U160
	DDS Gen6, 80 GB , 6 MB/s, half height, USB 2.0
	LTO2HH Ultrium, 200 GB , 24 MB/s, half height, SCSI U160
	LTO3HH Ultrium, 400 GB , 60 MB/s, half height, SCSI U320
	LTO4HH Ultrium, 800 GB , 120 MB/s, half height, SAS 3Gb/s
	RDX Drive, 80 GB, 160 GB, 320 GB , 25 MB/s, half height, USB 2.0
Optical drives	Blu-ray combo drive, (2x BD-ROM; 8x DVD; 24x CD), slimline, SATA I
	DVD-ROM, (16xDVD; 48xCD), half height, 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 1ch int/ext PCIe x1 |
| | SAS Ctrl 3 Gb 4 ports int. / 4 ports ext. PCIe x4 |

RAID Controller	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, no BBU support (based on LSI 1078)
	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 1078)
	Integrated RAID 5/6 Ctrl, SAS/SATA 3 Gb, 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 256 MB Cache, optional BBU (based on LSI 1078)
	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 port int. RAID level: 0, 1, 1E, no BBU support , for internal SAS tapes (based on LSI 1064e)

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 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	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 2U for 3rd party racks
	Rackmount kit full extraction (820mm), tool less mounting
	Cable Management for 19-inch DataCenter / PRIMECENTER Racks

Warranty

| Standard Warranty | 3 years |
| Service level | On-site Service |

Maintenance and Support Services - the perfect extension

| Recommended Service | 7x24, Onsite Response Time: 4h |
| 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