FUJITSU

DATASHEET
FUJITSU PRIMERGY BX922 S2 DUAL-SOCKET SERVER BLADE

Datasheet for Red Hat certification

FUTURE-ORIENTED SERVER BLADE WITH ALL THE PREREQUISITES FOR VIRTUALIZATION ENVIRONMENTS

The PRIMERGY BX Blade Servers are the ideal choice for data center solutions of today and tomorrow. Our blade servers provide maximum performance and maximum redundancy, but with only minimum space requirements, low power consumption and a reduction in the time and effort required for cabling. The PRIMERGY BX system family is designed to share components between chassis in order to react quickly and easily to changing business requirements. Storage and server blades can be added without any extra effort, as would be needed when cabling or adding management software. You can use the same applications, rely on the same server and storage components and establish connections to the same networks. The PRIMERGY BX Blade Servers are flexible and have complete control via a central administration instance that is redundant in design; they minimize administrative time and effort, freeing you of time-consuming administration tasks. Our build-to-order process ensures that only completely installed and previously tested solutions are supplied, which have been precisely adapted to individual requirements and which will grow with future business requirements.

PRIMERGY BX922 S2

The PRIMERGY BX922 S2 Server Blade uses up to two CPUs in the Intel® Xeon® processor 5000 sequence with up to 6 cores, including the first 32nm processors. Chipset and CPU offer comprehensive, hardware-based virtualization support which is supplemented by the additional functions on the new onboard Gigabit Ethernet Controller Intel® 82576. The main memory configuration with up to 12 DIMM modules rounds off the picture - the road is open for consolidation strategies which are aligned with virtualization with hypervisor solutions from VMware, Microsoft, RedHat, Suse or Citrix. The design of the PRIMERGY BX922 S2 is very flexible regarding the boot options as - in addition to the increasing use of SAN or NAS - local booting via Solid State Disks and - especially for VMware ESXi - via a USB connected flash module is available. The efficient administration of the entire system via ServerView is supported by the integrated Remote Management Controller (iRMC S2); the hardware monitoring and setting options can thus be optimally visualized in order to use all options at the highest energy-efficiency levels.

FEATURES AND BENEFITS

MAIN FEATURES	BENEFITS
PERFORMANCE DUE TO PROCESSOR TECHNOLOGY ■ Two Dual-Core, Quad-Core or Six-Core CPUs with Intel® Xeon® processor 5500 and 5600 series with Turbo Boost technology, Demand Based Switching, QuickPath Interconnect (QPI) and internal Memory Management Unit. The Intel® QuickPath architecture memory controllers provide the BX922 S2 with a high-speed bandwidth of up to 25 Gigabytes/second (GB/s) between the individual processors, the processors and the memory, as well as between the processors and the I/O hub. Prepared for the next CPU generation with up to 6 computing cores.	■ Tunable performance with consistent power consumption and even heat dissipation. ■ Investment protection through technical preparation for next generation processors.
TOP VIRTUALIZATION SUPPORT ■ Two integrated dual-port Intel® 82576 Gigabit Ethernet controllers are standard. The integrated Intel® virtualization technology for connectivity contains - in addition to I/O acceleration technology and the Virtual Machine Device Queues - Single Root IO virtualization SR-IOV as well. ■ Two PCI Express 2.0 Mezzanine slots with a combination of Quad Gb Ethernet, Dual 8 Gb Fibre Channel and Dual-Channel 10Gb Ethernet offer excellent connection features via a high-performance midplane. The high server blade I/O capacity allows optimal use of various I/O protocols, ensuring smooth operations for demanding applications.	■ Best-in-class I/O connectivity. ■ High flexibility regarding the type of I/O connection. ■ As a result of bypassing the internal hypervisor virtual switch SR-IOV enables virtual machines to reach a performance level which is almost the same as pure physical machines.
FLEXIBLE BOOT OPTIONS ■ Various server boot options, e.g. from the network, from Solid State Drives or a USB Flash module (for VMware ESXi) make the server ideal for every application. It is an excellent platform for both virtualized and physical environments.	■ Multiple use, optimized for virtualization and extremely energy efficient regarding usable local boot media.
WORRY-FREE ADMINISTRATION ■ Management through integrated Remote Management Controller (iRMC S2) enables individual server access and extensive control, even at remote locations. The integrated Pre-failure Detection and Analysis function provides reliable operations in all circumstances.	■ Easy and reliable management and control.

TECHNICAL DETAILS

MAINBOARD	
Mainboard type	D 2861
Chipset	Intel® 5520
Processor quantity and type	1 - 2 x Intel® Xeon® processor 5500 series / Intel® Xeon® processor 5600 series
PROCESSOR	Intel® Xeon® processor E5503 (2C/2T, 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® processor E5506 (4C/4T, 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® processor E5507 (4C/4T, 2.26 GHz, SLC: 4 x 256 KB, TLC: 4 MB, Turbo: No, 4.8 GT/s, Mem bus: 800 MHz, 80 W)
	Intel® Xeon® processor E5620 (4C/8T, 2.40 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 1/1/2/2, 5.86 GT/s, Mem bus: 1066 MHz, 80 W)
	Intel® Xeon® processor E5630 (4C/8T, 2.53 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 1/1/2/2, 5.86 GT/s, Mem bus: 1066 MHz, 80 W)
	Intel® Xeon® processor E5640 (4C/8T, 2.66 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 1/1/2/2, 5.86 GT/s, Mem bus: 1066 MHz, 80 W)
	Intel® Xeon® processor L5609 (4C/4T, 1.86 GHz, SLC: 4 x 256 KB, TLC: 4 MB, Turbo: No, 4.8 GT/s, Mem bus: 800 MHz, 40 W)
	Intel® Xeon® processor L5630 (4C/8T, 2.13 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 1/1/2/2, 5.86 GT/s, Mem bus: 1066 MHz, 40 W)
	Intel® Xeon® processor L5640 (6C/12T, 2.26 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 2/2/3/3/4/4, 6.4 GT/s, Mem bus: 1333 MHz, 60 W)
	Intel® Xeon® processor X5650 (6C/12T, 2.66 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 2/2/2/2/3/3, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)
	Intel® Xeon® processor X5660 (6C/12T, 2.80 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 2/2/2/2/3/3, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)
	Intel® Xeon® processor X5667 (4C/8T, 3.06 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 2/2/3/3, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)
	Intel® Xeon® processor X5670 (6C/12T, 2.93 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 2/2/2/2/3/3, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)
	Intel® Xeon® processor X5677 (4C/8T, 3.46 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 1/1/2/2, 6.4 GT/s, Mem bus: 1333 MHz, 130 W)
	Intel® Xeon® processor X5680 (6C/12T, 3.33 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 1/1/1/1/2/2, 6.4 GT/s, Mem bus: 1333 MHz, 130 W)
Memory slots	12 (3 channels per CPU with 2 slots each)
Memory slot type	DIMM (DDR3)
Memory capacity (min. - max.)	2 GB - 192 GB
Memory protection	Advanced ECC Memory Scrubbing SDDC (Chipkill™) Memory Mirroring support Hot-spare memory support
MEMORY MODULES INDEPENDENT MODE	2 GB (1 module(s) 2 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM
	2 GB (1 module(s) 2 GB) DDR3, unbuffered, ECC, 1333 MHz, PC3-10600, DIMM
	2 GB (1 module(s) 2 GB) DDR3 LV, unbuffered, ECC, 1333 MHz, PC3-10600, DIMM
	4 GB (1 module(s) 4 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM
	4 GB (1 module(s) 4 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM
	8 GB (1 module(s) 8 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM
	16 GB (1 module(s) 16 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500, DIMM

MEMORY MODULES MIRRORED MODE	4 GB (2 module(s) 2 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM
	8 GB (2 module(s) 4 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM
	8 GB (2 module(s) 4 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM
	16 GB (2 module(s) 8 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM
	16 GB (2 module(s) 8 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM
	32 GB (2 module(s) 16 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500, DIMM
MEMORY MODULES SPARE OR PERFORMANCE MODE	6 GB (3 module(s) 2 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM
	12 GB (3 module(s) 4 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM
	12 GB (3 module(s) 4 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM
	24 GB (3 module(s) 8 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM
	24 GB (3 module(s) 16 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM
	48 GB (3 module(s) 16 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500, DIMM

INTERFACES

USB ports	4 x USB at the front via special cable
Graphics (15-pin)	1 x VGA at the front via special cable
Serial connection	1 x RS232 (9-pin) at the front via special cable
LAN / Ethernet (RJ-45)	4 x Gbit Ethernet via Midplane to Ethernet Connection Blade
Service LAN (RJ45)	Service LAN traffic can be switched to shared onboard Gbit LAN port

I/O CONTROLLER ON BOARD

LAN Controller	2 x Intel® 82576, 4 x 10/100/1000 Mbit/s Ethernet, Intel® VT-c (includes I/OAT, VMDq, VMDc = PCI-SIG SR-IOV)
Remote Management Controller	Integrated Remote Management Controller (iRMC S2, 32 MB attached memory incl. graphics controller)
Trusted Platform Module (TPM)	Infineon / 1.2 (option)

SLOTS

PCI-Express 2.0 x8	2 x BX900 Mezzanine Mezzanine Card

DRIVE BAYS

Hard disk bays	2 x 2.5-inch non hot-plug SATA SSD
Hard disk bay configuration	BX922 Disk Drive Mounting Kit needed for SSD support

OPERATING PANEL

Operating buttons	On/off switch ID button
Status LEDs	Power (amber / green) System status (amber) LAN connection (green) Identification (blue) CSS (yellow)

BIOS

BIOS features	Local and remote update via ServerView Update Manager Online update tools for main Windows and Linux versions SMBIOS V2.6 Remote PXE boot support Remote iSCSI boot support

SUPPORTED OPERATING SYSTEMS

Supported operating systems	Microsoft® Windows Server® 2008 Microsoft® Windows Server® 2003 R2 Novell SUSE Linux Enterprise Server Red Hat Enterprise Linux Citrix® XenServer™ 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 Manager
	SV RAID Manager
	SV Update Management
	SV Power Management
	SV Agents
	ASR&R Automatic Server Recovery and Restart
	PDA Prefailure Detection and Anaylsis
	ServerView Remote Management (iRMC S2)
	iRMC S2 Advanced Pack
	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)
Option	ServerView VIOM - Virtual IO Manager
	ServerView Remote Management
	Integration for ServerView Operations Manager
Server Management notes	Regarding Operating System dependencies for ServerView Suite Software Products see dedicated Product Data sheets.

DIMENSIONS / WEIGHT

Dimensions (W x D x H)	45 x 500 x 210 mm
Weight	5,75 kg
Weight notes	Actual weight may vary depending on configuration

ENVIRONMENTAL

Temperature note	In accordance with the corresponding PRIMERGY BX900 System Unit
Electrical values	

COMPLIANCE

Germany	GS
Europe	CE Class A *
Compliance notes	In combination with corresponding PRIMERGY BX system unit
	* Warning:
	This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
Compliance link	https://sp.ts.fujitsu.com/sites/certificates/default.aspx

COMPONENTS

HARD DISK DRIVES	SSD SATA, 3 Gb/s, 64 GB, non-hp, 2.5-inch
	SSD SATA, 3 Gb/s, 32 GB, non-hp, 2.5-inch
Hard disk notes	One Gigabyte equals one billion bytes, when referring to hard disk drive capacity.
MEZZANINE CARDS	Fibre Channel Mezzanine Card 2 x 8 Gb Emulex (MC-FC82E), PCIe x4
	Ethernet Mezzanine Card 4 ports int. x 1 Gb Fujitsu (), PCIe x4
	Ethernet Mezzanine Card 2 x 10 Gb, PCIe Gen2 x8

WARRANTY	
Standard Warranty	3 years
Service level	(depending on country)

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

FUJITSU PLATFORM SOLUTIONS

In addition to Fujitsu PRIMERGY BX922 S2, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Dynamic Infrastructures

With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

Computing Products

www.fujitsu.com/global/services/computing/

Software

www.fujitsu.com/software/

MORE INFORMATION

Learn more about Fujitsu PRIMERGY BX922 S2, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website. http://ts.fujitsu.com/Primergy

FUJITSU GREEN POLICY INNOVATION

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT.
Please find further information at http://www.fujitsu.com/global/about/environment/

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