FUJITSU

DATASHEET
FUJITSU PRIMERGY BX920 S2 DUAL-SOCKET SERVER BLADE

Datasheet for Red Hat certification

UNIVERSAL DUAL-SOCKEL SERVER BLADE WITH HIGH COMPUTING AND I/O PERFORMANCE IN A SMALL FORM FACTOR

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 BX920 S2

The PRIMERGY BX920 S2 Server Blade uses the CPUs of the Intel® Xeon® processor 5500 and 5600 series and thus the latest and most powerful members of the Xeon® family. Utilizing the QuickPath architecture and special on-chip memory controllers, the CPUs of the Intel® Xeon® processor 5600 series easily exceed the capacities of the previous generation. The BX920 S2 server blade can host two of these processors, with up to two hard drives, 144 GB of DDR3 memory as well as two dual-channel Intel 82575 Gigabit Ethernet controllers. The protection against data loss can be increased via the RAS function (now available) called channel sparing of the main memory modules in conjunction with CPUs from the Intel® Xeon® processor 5600 series. The BX920 S2 is ideal for virtualization using hypervisors such as VMware® ESXi, Microsoft Hyper-V™, or Citrix XenServer™. In addition, the PRIMERGY BX920 S2 blades are equipped with the state-of-the-art integrated Remote Management Controller (iRMC S2) and - with its wide range of processor, disk and memory options, it provides IT managers with the performance and scalability they need for all their data center applications. The optimal and secure support of I/O-intensive applications, such as terminal servers is ensured by the optional use of a RAID controller with write-back cache and BBU.

FEATURES AND BENEFITS

MAIN FEATURES	BENEFITS
TOP PERFORMANCE THANKS TO PROCESSOR TECHNOLOGY	
■ Two Dual-Core, Quad-Core or Six-Core CPUs with Intel® Xeon® processor 5500 or 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 BX920 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.	■ Tunable performance with consistent power consumption and even heat dissipation
INTEGRATED MANAGEMENT	
■ 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.
VARIABLE SYSTEM START OPTIONS	
■ Multiple server boot options, including local HDD or SSD, via the network, or USB solid state disk makes this server ideal for any application. It is an excellent platform for both virtualized and physical environments.	■ Multiple usage options enable integration in each environment.
MULTIPLE I/O CONNECTIONS	
■ Two integrated dual-channel Intel® 82575 gigabit Ethernet controllers are standard. Two PCI Express 2.0 Mezzanine slots for a combination of 4-channel Gbit or 2-channel 10 Gbit Ethernet, 2-channel 8 Gbit Fibre Channel and 2-channel 40 Gbit Infiniband offer excellent I/O connection options via the high-performance Midplane of the Blade Server chassis. The high I/O capacity of the blade server allows optimal usage of multiple I/O protocols, ensuring smooth operations for demanding applications.	■ Best in class I/O connectivity.
FAST AND SECURE DATA ACCESS	
■ SAS 2.0 RAID 0,1 Mezzanine card with a 512 MB write-back cache and an optional battery backup unit (as soon as it has been released).	■ Meets highest throughput and security requirements when accessing internal data storage.

TECHNICAL DETAILS

MAINBOARD	
Mainboard type	D 3030
Chipset	Intel® 5500
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)

Memory slots	9 (6 slots on CPU 1, 3 slots on CPU 2)
Memory slot type	DIMM (DDR3)
Memory capacity (min. - max.)	2 GB - 144 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
	8 GB (1 module(s) 8 GB) DDR3 LV, 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 PER- FORMANCE 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

RAID Controller	Integrated SAS RAID 0/1 for HDD´s
LAN Controller	2 x Intel® 82575, 4 x 10/100/1000 Mbit/s Ethernet,
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

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 R2 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	PDA Prefailure Detection and Anaylsis
	ASR&R Automatic Server Recovery and Restart
	ServerView Suite:
	SV Installation Manager
	SV Operation Manager
	SV RAID Manager
	SV Update Management
	SV Power Management
	SV Agents
	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 Integration for Tivoli TEC®, Tivoli NetView, HP NNM and HP Operations Manager
Server Management notes	Regarding operating system dependencies and product details for ServerView Suite software products see dedicated product datasheets.

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

COMPLIANCE

Germany	GS
Europe	CE Class A *
Global	CB
	RoHS (Restriction of hazardous substances)
	WEEE (Waste electrical and electronical equipment)
Compliance notes	In combination with corresponding PRIMERGY BX system unit
	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, 3 Gb/s, 64 GB, SLC, hot-plug, 2.5-inch, enterprise
	SSD SATA, 3 Gb/s, 32 GB, SLC, hot-plug, 2.5-inch, enterprise
	HDD SATA, 3 Gb/s, 500 GB, 7200 rpm, hot-plug, 2.5-inch, business critical
	HDD SATA, 3 Gb/s, 320 GB, 5400 rpm, hot-plug, 2.5-inch, economic
	HDD SATA, 3 Gb/s, 160 GB, 7200 rpm, hot-plug, 2.5-inch, business critical
	HDD SATA, 3 Gb/s, 160 GB, 5400 rpm, hot-plug, 2.5-inch, economic
	HDD SAS, 6 Gb/s, 300 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 146 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 146 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 73 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
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
	InfiniBand Mezzanine Card 2 x 40 Gb Mellanox (), PCIe x8
	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 - For locations outside of EMEA please contact your local Fujitsu partner.
Spare Parts availability	5 years
Service Weblink	http://ts.fujitsu.com/Supportservice

FUJITSU PLATFORM SOLUTIONS

In addition to Fujitsu PRIMERGY BX920 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 BX920 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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