

# DATASHEET

## FUJITSU PRIMERGY BX920 S2 DUAL-SOCKET SERVER BLADE

UNIVERSAL DUAL-SOCKET 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
<p><b>TOP PERFORMANCE THANKS TO PROCESSOR TECHNOLOGY</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul> <p><b>INTEGRATED MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul> <p><b>VARIABLE SYSTEM START OPTIONS</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul> <p><b>MULTIPLE I/O CONNECTIONS</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul> <p><b>FAST AND SECURE DATA ACCESS</b></p> <ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>Tunable performance with consistent power consumption and even heat dissipation</li> <li>Easy and reliable management and control.</li> <li>Multiple usage options enable integration in each environment.</li> <li>Best in class I/O connectivity.</li> <li>Meets highest throughput and security requirements when accessing internal data storage.</li> </ul>

# TECHNICAL DETAILS

## MAINBOARD

<b>Mainboard type</b>	D 3030
<b>Chipset</b>	Intel® 5500
<b>Processor quantity and type</b>	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)

<b>Memory slots</b>	9 (6 slots on CPU 1, 3 slots on CPU 2)
<b>Memory slot type</b>	DIMM (DDR3)
<b>Memory capacity (min. - max.)</b>	2 GB - 144 GB
<b>Memory protection</b>	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

<b>MEMORY MODULES SPARE OR PERFORMANCE MODE</b>	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**

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

**I/O CONTROLLER ON BOARD**

<b>RAID Controller</b>	Integrated SAS RAID 0/1 for HDD's
<b>LAN Controller</b>	2 x Intel® 82575, 4 x 10/100/1000 Mbit/s Ethernet,
<b>Remote Management Controller</b>	Integrated Remote Management Controller (iRMC S2, 32 MB attached memory incl. graphics controller)
<b>Trusted Platform Module (TPM)</b>	Infineon / 1.2 (option)

**SLOTS**

<b>PCI-Express 2.0 x8</b>	2 x BX900 Mezzanine Mezzanine Card
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**DRIVE BAYS**

<b>Hard disk bays</b>	2
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**OPERATING PANEL**

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

**BIOS**

<b>BIOS features</b>	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
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**SUPPORTED OPERATING SYSTEMS**

<b>Supported operating systems</b>	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
<b>Operating system release link</b>	<a href="http://ts.fujitsu.com/software">http://ts.fujitsu.com/software</a> <a href="http://docs.ts.fujitsu.com/dl.aspx?id=a9e600b9-e4cb-4f48-aa41-632f69058421">http://docs.ts.fujitsu.com/dl.aspx?id=a9e600b9-e4cb-4f48-aa41-632f69058421</a>

**SERVER MANAGEMENT**

<b>Standard</b>	PDA Prefailure Detection and Analysis 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)
<b>Option</b>	ServerView VIOM - Virtual IO Manager ServerView Integration for Tivoli TEC®, Tivoli NetView, HP NNM and HP Operations Manager
<b>Server Management notes</b>	Regarding operating system dependencies and product details for ServerView Suite software products see dedicated product datasheets.

**DIMENSIONS / WEIGHT**

<b>Dimensions (W x D x H)</b>	45 x 500 x 210 mm
<b>Weight</b>	5.75 kg
<b>Weight notes</b>	Actual weight may vary depending on configuration

**ENVIRONMENTAL**

<b>Temperature note</b>	In accordance with the corresponding PRIMERGY BX900 system unit
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**COMPLIANCE**

<b>Germany</b>	GS
<b>Europe</b>	CE Class A *
<b>Global</b>	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronical equipment)

<b>Compliance notes</b>	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.
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<b>Compliance link</b>	<a href="https://sp.ts.fujitsu.com/sites/certificates/default.aspx">https://sp.ts.fujitsu.com/sites/certificates/default.aspx</a>
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**COMPONENTS**

<b>HARD DISK DRIVES</b>	SSD SATA, 3 Gb/s, 64 GB, hot-plug, 2.5-inch, enterprise SSD SATA, 3 Gb/s, 32 GB, 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
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<b>Hard disk notes</b>	One Gigabyte equals one billion bytes, when referring to hard disk drive capacity.
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<b>MEZZANINE CARDS</b>	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
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**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 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/](http://www.fujitsu.com/global/services/computing/)

##### Software

[www.fujitsu.com/software/](http://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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