

# Data Sheet

## 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 via the integrated Remote Management Controller (iRMC S2) enables access to each server 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 quad-channel 1 Gb or dual-channel 10 Gb Ethernet, dual-channel 8 Gb Fibre Channel, dual-channel 10 Gb CNA (FCoE), and dual-channel 40 Gb Infiniband offer excellent I/O connection options via the high-performance Midplane of the Blade Server chassis. The high I/O capacity of the server blade allows optimal use 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>I/O connectivity with the best-in-class rating.</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 E5500 series / Intel® Xeon® processor E5600 series / Intel® Xeon® processor L5600 series / Intel® Xeon® processor X5600 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 E5603 (4C/4T, 1.60 GHz, SLC: -, TLC: 4 MB, Turbo: No, 4.8 GT/s, Mem bus: 1066 MHz, 80 W)	
Intel® Xeon® processor E5606 (4C/4T, 2.13 GHz, SLC: -, TLC: 8 MB, Turbo: No, 4.8 GT/s, Mem bus: 1066 MHz, 80 W)	
Intel® Xeon® processor E5607 (4C/4T, 2.26 GHz, SLC: -, TLC: 8 MB, Turbo: No, 4.8 GT/s, Mem bus: 1066 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 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 E5645 (6C/12T, 2.40 GHz, SLC: -, TLC: 12 MB, Turbo: 1/1/1/1/2/2, 5.86 GT/s, Mem bus: 1333 MHz, 80 W)	
Intel® Xeon® processor E5649 (6C/12T, 2.53 GHz, SLC: -, TLC: 12 MB, Turbo: 1/1/1/1/2/2, 5.86 GT/s, Mem bus: 1333 MHz, 80 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 X5672 (4C/8T, 3.20 GHz, SLC: -, TLC: 12 MB, Turbo: 2/2/3/3, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)	
Intel® Xeon® processor X5675 (6C/12T, 3.06 GHz, SLC: -, 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 - 288 GB
<b>Memory protection</b>	Advanced ECC Memory Scrubbing SDDC (Chipkill™) Memory Mirroring support Hot-spare memory support

<b>Memory Modules Independent Mode</b>	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
	32 GB (1 module(s) 32 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500, DIMM
<b>Memory Modules Mirrored Mode</b>	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) 8 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
<b>Interfaces</b>	
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
<b>I/O controller on board</b>	
RAID controller	Integrated SAS RAID 0/1 for HDD's
LAN Controller	2 x Intel® 82575, 2 x 10/100/1000 Mbit/s Ethernet, Intel® VT-c (includes I/OAT, VMDq)
Remote Management Controller	Integrated Remote Management Controller (iRMC S2, 32 MB attached memory incl. graphics controller)
Trusted Platform Module (TPM)	Infineon / 1.2 (option)
<b>Slots</b>	
PCI-Express 2.0 x8	2 x BX900 Mezzanine Card
Storage drive bays	2
<b>Operating panel</b>	
Operating buttons	On/off switch ID button
Status LEDs	Power (amber / green) System status (orange) LAN connection (green) Identification (blue) CSS (yellow)
<b>BIOS</b>	
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

## Operating Systems and Virtualization Software

<b>Certified or supported operating systems and virtualization software</b>	Microsoft® Microsoft® Hyper-V™ Server 2008 R2
	Microsoft® Windows Server® 2008 R2 Datacenter
	Microsoft® Windows Server® 2008 R2 Enterprise
	Microsoft® Windows Server® 2008 R2 Standard
	Microsoft® Windows® Small Business Server 2011 Premium Add-On
	Microsoft® Windows® Small Business Server Standard 2011
	Microsoft® Windows® Server 2008 Enterprise
	Microsoft® Windows® Server 2008 Standard
	Microsoft® Windows Server® 2003 Enterprise Edition
	Microsoft® Windows Server® 2003 Standard Edition
	VMware vSphere™ 5.0 Embedded
	VMware vSphere™ 5.0
	VMware vSphere™ 4.1
	VMware vSphere™ 4.1 Embedded
	VMware vSphere™ 4.1 Installable
	VMware vSphere™ 4.0
	VMware vSphere™ 4.0 Embedded
	VMware vSphere™ 4.0 Installable
	Novell® SUSE Linux Enterprise Server 11
	Novell® SUSE Linux Enterprise Server 10
Novell® SUSE Linux Enterprise Server 10 with XEN	
Red Hat® Enterprise Linux 6	
Red Hat® Enterprise Linux 5	
Red Hat® Enterprise Linux 5 with XEN	
Citrix® XenServer®	
<b>Operating system release link</b>	<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>
<b>Operating system notes</b>	Support of other Linux derivatives on demand

## Server Management

<b>Standard</b>	<ul style="list-style-type: none"> <li>ServerView Suite - Deploy <ul style="list-style-type: none"> <li>SV Installation Manager</li> <li>SV Scripting Toolkit</li> <li>SV Deployment Manager (30-day trial version)</li> </ul> </li> <li>ServerView Suite - Control <ul style="list-style-type: none"> <li>SV Operations Manager incl. PDA and ASR &amp; R (Prefailure and Analysis; Automatic Server Recovery and Restart)</li> <li>SV Performance Management</li> <li>SV Power Management</li> <li>SV RAID Manager</li> </ul> </li> <li>ServerView Suite - Maintain <ul style="list-style-type: none"> <li>SV Remote Management (iRMC)</li> <li>SV Update Management (BIOS, Firmware, Windows Drives and SV Agents)</li> <li>SV Asset Management</li> <li>SV Online Diagnostics</li> </ul> </li> <li>ServerView Suite - Integrate <ul style="list-style-type: none"> <li>SV Integration packs e.g. for Microsoft System Center, Nagios, HP, SIM, HP NNM, IBM Tivoli, Altiris</li> </ul> </li> <li>Deployment Solutions and others</li> </ul>
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**Server Management**

<b>Option</b>	ServerView Suite - Deploy SV Deployment Manager (full version) ServerView Suite - Maintain iRMC Advanced Pack incl. Advanced Video Redirection (AVR) and Remote Storage ServerView Suite - Dynamize SV Virtual-IO Manager (VIOM) SV Resource Orchestrator Virtual Edition (ROR VE) SV Resource Orchestrator Cloud Edition (ROR CE) ServerView Suite - Integrate SV Integration pack for Fujitsu ManageNow® solution
<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
<b>Operating environment</b>	FTS 04230 Guideline for Data Center (installation locations)
<b>Operating environment Link</b>	<a href="http://docs.ts.fujitsu.com/dl.aspx?id=d4ebd846-aa0c-478b-8f58-4cfbf3230473">http://docs.ts.fujitsu.com/dl.aspx?id=d4ebd846-aa0c-478b-8f58-4cfbf3230473</a>

**Electrical values****Compliance**

<b>Germany</b>	GS
<b>Europe</b>	CE Class A *
<b>Global</b>	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronic 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. * 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.
<b>Compliance link</b>	<a href="http://sp.ts.fujitsu.com/sites/certificates/">http://sp.ts.fujitsu.com/sites/certificates/</a>

# Components

## Storage disks

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, 250 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 SATA, 3 Gb/s, 1 TB, 7200 rpm, hot-plug, 2.5-inch, business critical
HDD SAS, 6 Gb/s, 900 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 6 Gb/s, 600 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 6 Gb/s, 450 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 6 Gb/s, 300 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
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, 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

Ethernet Mezzanine Card 4 x 1 Gb Fujitsu , PCIe x4
CNA Mezzanine Card 2 x 10 Gb Emulex (MC-CNA102E), PCIe Gen2 x8
Ethernet Mezzanine Card 2 x 10 Gb Fujitsu , PCIe Gen2 x8
Fibre Channel Mezzanine Card 2 x 8 Gb Emulex (MC-FC82E), PCIe x4
InfiniBand CX2 Mezzanine Card 2 x 40 Gb Mellanox , PCIe x8
SAS HBA Mezzanine Card x 6 Gb Fujitsu (), PCIe Gen2 x8
SAS RAID Mezzanine Card x 6 Gb Fujitsu (), PCIe Gen2 x8

## Warranty

Standard Warranty	3 years
Service level	(depending on country)
<b>Maintenance and Support Services - the perfect extension</b>	
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	<a href="http://www.fujitsu.com/fts/services">http://www.fujitsu.com/fts/services</a>

## More information

### 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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**Contact**  
FUJITSU LIMITED

Website: [www.fujitsu.com](http://www.fujitsu.com)  
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