Datasheet for Red Hat certification

NEXT GENERATION PLATFORM MAXIMIZING ENERGY EFFICIENCY AND PERFORMANCE

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 BX620 S6

The Fujitsu PRIMERGY BX620 S6 Server Blade can be equipped with up to two Dual-, Quad- or Six-Core CPUs of the latest Intel® Xeon® processor 5500 or 5600 series. The new Intel® Xeon® processor series, the first 32 nm processors, automatically regulate the power consumption and adapt the server performance according to the application requirements, thus maximizing energy efficiency and performance. 12 DIMM slots and a memory capacity of up to 192GB make the server blade ideal for virtualization scenarios and compute-intensive applications. Six onboard Ethernet channels with iSCSI support are available as communication interfaces. The server blade also has two optional slots for a mezzanine card and an SAS storage module.

Green IT is an important component of the new Dual Socket Server Blades. The innovative cooling concept Cool-safe™ reduces energy consumption and intelligent ServerView power management functions make saving energy easy, reducing the power costs of each server. All things considered, the new PRIMERGY BX620 S6 Server Blade helps do more with less power, which in turn contributes to a significant reduction in costs during its entire product lifecycle. Efficient system administration is supported by the integrated Remote Management Controller (iRMc S2). The iRMc S2 integrates remote management functions for the server and is the ideal solution for autonomous remote monitoring, diagnostics and maintenance.
## FEATURES AND BENEFITS

### MAIN FEATURES

<table>
<thead>
<tr>
<th>TOP PERFORMANCE THANKS TO PROCESSOR TECHNOLOGY</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two Dual-, Quad or Six-Core CPUs with the latest Intel® Xeon® processor 5600 series with Intel® Turbo Boost and Intelligent Power technology.</td>
<td>Intelligent Power technology reduces energy costs in comparison to single-core servers by automatically shifting processors and memory into the lowest available power state. Turbo Boost technology automatically increases processor frequency and uses hyperthreading in order to meet the requirements of complex applications.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HIGH MEMORY CAPACITY</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 192GB RAM with DDR3 technology and 12 DIMM slots</td>
<td>Scalable memory for computing-intensive applications and virtualized environments.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMPREHENSIVE MANAGEMENT</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrespective of the system status, ServerView Operations Manager enables comprehensive management of all servers within the network from a central console.</td>
<td>The PRIMERGY ServerView Suite simplifies the installation and monitoring of the servers to be managed and their components. For example, the analysis function is used to project any exceeding of threshold values or resource bottlenecks. Event Management can be used to plan the actions that are to be taken when a particular situation is detected in the analysis phase.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONNECTIVITY</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six onboard Ethernet channels are available as communication interfaces. Additional two optional slots for a mezzanine card or an SAS storage module.</td>
<td>High flexibility when selecting I/O connections.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REMOTE MANAGEMENT MADE EASY</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management via the integrated Remote Management Controller (iRMCS2) 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.</td>
<td>Easy and reliable management and control. Routine and maintenance tasks in the event of server problems can be carried out efficiently on a remote basis.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENERGY-EFFICIENT PERFORMANCE</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Intel® Xeon® processor 5600 series automatically regulates power consumption and adapts the server performance according to the applications.</td>
<td>Up to 40 percent more performance in comparison to the previous version, and 30 percent less power consumption.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAFETY</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>An optional Trusted Platform Module (TPM) to securely save keys and authentications for the hardware platform.</td>
<td>This component enables third-party manufacturer programs to save key information (e.g. drive encryption via Windows BitLocker Drive Encryption).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CUSTOMER SELF SERVICE (CSS)</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The CSS concept is used to identify and remove the affected component.</td>
<td>Important simplification of repair and maintenance work and the simultaneous opportunity to save costs. Local Service Panel (LSP) or Local Service Display (LSD) indicates the hardware component that must be replaced.</td>
</tr>
</tbody>
</table>
### MAINBOARD

<table>
<thead>
<tr>
<th>Mainboard type</th>
<th>D 3051</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chipset</td>
<td>Intel® 5500</td>
</tr>
<tr>
<td>Processor quantity and type</td>
<td>1 - 2 x Intel® Xeon® processor E5500 series / Intel® Xeon® processor E5600 series / Intel® Xeon® processor L5600 series / Intel® Xeon® processor X5600 series</td>
</tr>
</tbody>
</table>

### PROCESSOR

<table>
<thead>
<tr>
<th>Processor type</th>
<th>Core/Thread</th>
<th>GHz</th>
<th>SLC</th>
<th>TLC</th>
<th>Turbo</th>
<th>Mem bus</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Xeon® processor E5503</td>
<td>2C/2T</td>
<td>2.00</td>
<td>4x256</td>
<td>4MB</td>
<td>No</td>
<td>4.8 GT/s</td>
<td>80 W</td>
</tr>
<tr>
<td>Intel® Xeon® processor E5506</td>
<td>4C/4T</td>
<td>2.13</td>
<td>4x256</td>
<td>4MB</td>
<td>No</td>
<td>4.8 GT/s</td>
<td>80 W</td>
</tr>
<tr>
<td>Intel® Xeon® processor E5507</td>
<td>4C/4T</td>
<td>2.26</td>
<td>4x256</td>
<td>4MB</td>
<td>No</td>
<td>4.8 GT/s</td>
<td>80 W</td>
</tr>
<tr>
<td>Intel® Xeon® processor E5620</td>
<td>4C/8T</td>
<td>2.40</td>
<td>4x256</td>
<td>12MB</td>
<td>1/1/2/2/5.86</td>
<td>8066 MHz</td>
<td>80 W</td>
</tr>
<tr>
<td>Intel® Xeon® processor E5630</td>
<td>4C/8T</td>
<td>2.53</td>
<td>4x256</td>
<td>12MB</td>
<td>1/1/2/2/5.86</td>
<td>8066 MHz</td>
<td>80 W</td>
</tr>
<tr>
<td>Intel® Xeon® processor E5640</td>
<td>4C/8T</td>
<td>2.66</td>
<td>4x256</td>
<td>12MB</td>
<td>1/1/2/2/5.86</td>
<td>8066 MHz</td>
<td>80 W</td>
</tr>
<tr>
<td>Intel® Xeon® processor L5609</td>
<td>4C/4T</td>
<td>1.86</td>
<td>4x256</td>
<td>12MB</td>
<td>No</td>
<td>4.8 GT/s</td>
<td>80 W</td>
</tr>
<tr>
<td>Intel® Xeon® processor L5630</td>
<td>4C/8T</td>
<td>2.13</td>
<td>4x256</td>
<td>12MB</td>
<td>1/1/2/2/5.86</td>
<td>8066 MHz</td>
<td>40 W</td>
</tr>
<tr>
<td>Intel® Xeon® processor L5640</td>
<td>6C/12T</td>
<td>2.26</td>
<td>4x256</td>
<td>12MB</td>
<td>2/2/3/3/4/6.4</td>
<td>1333 MHz</td>
<td>60 W</td>
</tr>
<tr>
<td>Intel® Xeon® processor X5650</td>
<td>6C/12T</td>
<td>2.66</td>
<td>4x256</td>
<td>12MB</td>
<td>2/2/2/2/3/6.4</td>
<td>1333 MHz</td>
<td>95 W</td>
</tr>
<tr>
<td>Intel® Xeon® processor X5660</td>
<td>6C/12T</td>
<td>2.80</td>
<td>4x256</td>
<td>12MB</td>
<td>2/2/2/2/3/6.4</td>
<td>1333 MHz</td>
<td>95 W</td>
</tr>
<tr>
<td>Intel® Xeon® processor X5667</td>
<td>6C/12T</td>
<td>3.06</td>
<td>4x256</td>
<td>12MB</td>
<td>2/2/3/3/6.4</td>
<td>1333 MHz</td>
<td>95 W</td>
</tr>
<tr>
<td>Intel® Xeon® processor X5670</td>
<td>6C/12T</td>
<td>2.93</td>
<td>4x256</td>
<td>12MB</td>
<td>2/2/2/2/3/6.4</td>
<td>1333 MHz</td>
<td>95 W</td>
</tr>
</tbody>
</table>

### Memory slots

<table>
<thead>
<tr>
<th>Memory capacity (min. - max.)</th>
<th>2 GB - 192 GB</th>
</tr>
</thead>
</table>

### MEMORY MODULES INDEPENDENT MODE

<table>
<thead>
<tr>
<th>Memory type</th>
<th>2 GB (1 module(s) 2 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 GB (1 module(s) 2 GB) DDR3, unbuffered, ECC, 1333 MHz, PC3-10600, DIMM</td>
</tr>
<tr>
<td></td>
<td>2 GB (1 module(s) 2 GB) DDR3 LV, unbuffered, ECC, 1333 MHz, PC3-10600, DIMM</td>
</tr>
<tr>
<td></td>
<td>4 GB (1 module(s) 4 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM</td>
</tr>
<tr>
<td></td>
<td>4 GB (1 module(s) 4 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM</td>
</tr>
<tr>
<td></td>
<td>8 GB (1 module(s) 8 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM</td>
</tr>
<tr>
<td></td>
<td>8 GB (1 module(s) 8 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM</td>
</tr>
<tr>
<td></td>
<td>16 GB (1 module(s) 16 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500, DIMM</td>
</tr>
</tbody>
</table>

### MEMORY MODULES MIRRORED MODE

<table>
<thead>
<tr>
<th>Memory type</th>
<th>4 GB (2 module(s) 2 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8 GB (2 module(s) 4 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM</td>
</tr>
<tr>
<td></td>
<td>8 GB (2 module(s) 4 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM</td>
</tr>
<tr>
<td></td>
<td>16 GB (2 module(s) 8 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM</td>
</tr>
<tr>
<td></td>
<td>16 GB (2 module(s) 8 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM</td>
</tr>
<tr>
<td></td>
<td>32 GB (2 module(s) 16 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500, DIMM</td>
</tr>
</tbody>
</table>

### Memory slots

<table>
<thead>
<tr>
<th>Memory capacity (min. - max.)</th>
<th>2 GB - 192 GB</th>
</tr>
</thead>
</table>

### Memory protection

<table>
<thead>
<tr>
<th>Memory Mirroring support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot-spare memory support</td>
</tr>
<tr>
<td>SDDC (Chipkill™)</td>
</tr>
</tbody>
</table>

### Technical Details

**Datasheet:** Fujitsu PR iMERGY BX620 s6 Dual-socket Server Blade

**Website:** [ts.fujitsu.com/Primergy](http://ts.fujitsu.com/Primergy)
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) 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

Memory modules notes
standard and LV DDR3 DIMM modules

INTERFACES

USB ports
2 x USB at the front via special cable

Graphics (15-pin)
1 x VGA at the front via special cable

LAN / Ethernet (RJ-45)
6 x Gbit Ethernet via Midplane at GbE Switch Blade or GbE Pass-Thru Blade or GbE iBP

Service LAN (RJ45)
1 x dedicated service LAN port for iRMc S2 (10/100 Mbit/s)
Service LAN traffic can be switched to shared onboard Gbit LAN port

I/O CONTROLLER ON BOARD

LAN Controller
Intel® 82575EB, 2 x 10/100/1000 Mbit/s Ethernet (I/O acceleration), 3 x 2-channel LAN controller on-board

Remote Management Controller
Integrated Remote Management Controller (iRMC S2, 32 MB attached memory incl. graphics controller)

Onboard Controller notes
pluggable Storage Modules for internal HDDs

Trusted Platform Module (TPM)
Infineon / 1.2 (option)

SLOTS

PCI-Express x8
1 x BX6x0 Mezzanine direct connection on Mainboard

Slot Notes
1x for SAS Storage Module (See under Components -> SAS controller)

General system information

OPERATING PANEL

Operating buttons
On/off switch

Status LEDs
Power (amber / green)
System status (green / orange)
Console Port (green / amber)
LAN connection (green)
Hard disks access (green)
Mezzanine card status (green)

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

CERTIFIED OR SUPPORTED OPERATING SYSTEMS

Certified or supported operating systems
Microsoft® Windows Server® 2008 R2
Microsoft® Windows Server® 2008
Microsoft® Windows Storage Server® 2008
Microsoft® Windows Server® 2003
Novell SUSE Linux Enterprise Server
Red Hat Enterprise Linux
Citrix® XenServer™
VMware Infrastructure
VMware vSphere 4.0
Note: Support of other Linux derivatives on demand

Operating system release link
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 Analysis

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) 286 x 470 x 43 mm

Dimension notes (Depth: 520 mm incl. handles and plugs)

Weight up to 7.5 kg

Weight notes Actual weight may vary depending on configuration

Noise emission

Operating relative humidity 10 - 85 % (non condensing)

Temperature note In accordance with the corresponding PRIMERGY BX600 system unit

ELECTRICAL VALUES

Active power (max. configuration) 331 W

Heat emission 1191.6 kJ/h (1129.4 BTU/h)

COMPLIANCE

Germany GS

Europe CE Class A *

USA/Canada CSAc/us
ULc/us
ICES-003 Class A
FCC Class A

Global CB
RoHS (Restriction of hazardous substances)
WEEE (Waste electrical and electronical equipment)

Japan VCCI

Australia/New Zealand C-Tick

Taiwan BSMI

Compliance notes In combination with corresponding PRIMERGY BX system unit


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, 3 Gb/s, 300 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 3 Gb/s, 146 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 3 Gb/s, 146 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 3 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.

SCSI / SAS CONTROLLER

SAS Ctrl. 3 Gb 4 ports int. / 4 ports ext.
## SAS STORAGE MODULES
- Storage module, HDD SAS 3 Gb, RAID level: 0, 1, 10, 256 MB Cache, inclusive BBU
- Storage module, HDD SAS 3 Gb, RAID level: 0, 1, 10,

## RAID CONTROLLER
- RAID 5/6 Ctrl., HDD SAS 6 Gb, LSI, 8 ports ext.
- RAID level: 0, 1, 10, 5, 50, 6, 60, 512 MB Cache, optional BBU (based on LSI SAS2108)

## FIBRE CHANNEL CONTROLLER
- Fibre Channel Mezzanine Card 2 x 4 Gb BX600-FC42E
- Fibre Channel Ctrl. 2 x 8 Gb Emulex LPe12002 MMF LC
- RAID 5/6 ctrl., HDD sas 6 Gb, lsi, 8 ports ext.
- RAID level: 0, 1, 10, 5, 50, 6, 60, 512 MB cache, optional BBu (based on lsi sas2108)

## LAN CONTROLLER
- Ethernet Ctrl. 2 x 10 Gb Intel® Ethernet Server Adapter X520-Da2
- Ethernet Ctrl. 2 x 1 Gb Fujitsu Eth Ctrl 2x1Gbit PCIe x4 D2735 Cu
- Ethernet Ctrl. 2 x 1 Gb Intel® PRO/1000 PT Dual Port Server Adapter
- Ethernet Mezzanine Card 2 x 1 Gb

### WARRANTY
- **Standard Warranty**: 3 years
- **Service level**: On-site service (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

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http://ts.fujitsu.com/Primergy
FUJITSU PLATFORM SOLUTIONS
In addition to Fujitsu PRIMERGY BX620 S6, 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 BX620 S6, 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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