Elasticity for dynamic adaption to changing requirements

FUJITSU Server PRIMERGY systems provide the most powerful and flexible data center solutions for companies of all sizes, across all industries and for any type of workload. This includes expandable PRIMERGY tower servers for remote and branch offices, versatile rack-mount servers, compact and scalable blade systems, as well as density-optimized scale-out servers. They convince by business proven quality with a wide range of innovations, highest efficiency cutting operational cost and complexity, and provide more agility in daily operations in order to turn IT faster into a business advantage.

Fujitsu Server PRIMERGY BX blade systems are the perfect platform to build a converged infrastructure designed to reduce IT costs, time and efforts. PRIMERGY Blade Servers utilizes a modular architecture and contain in addition to the compute power, all required infrastructure and network components, storage capacity as well as management modules that helps companies to simplify their infrastructure, achieve significant cost reductions and increase flexibility.

PRIMERGY BX900 S2
The Fujitsu Server PRIMERGY BX900 S2 is the accelerated dynamic server infrastructure in a single cube. This blade server can be dynamically adapted to various IT requirements and provides significant economic advantages for a large and growing number of applications. The PRIMERGY BX900 S2 has space for up to 18 server and storage blades in a 10U chassis. Thus it’s the leader in its class for density in a compact form factor. Fujitsu’s Cool-safe™ cooling concept, combined with power supply units certified with 80Plus Platinum and holistic power management, reduce your costs and ensures a more efficient use of energy and cooling capacity. Centralized management of physical and virtualized environments and comprehensive I/O virtualization capabilities, combined with a fully redundant system design, supports business agility. Furthermore the PRIMERGY BX900 S2 provides future-proof connectivity enhancements with support of high speed InfiniBand (FDR InfiniBand) with 56 Gbit/s bandwidth. Server blades, equipped with CPUs from the next generation Intel® Xeon® processor E5-2400v2 / E5-2600v2 product family, offers scalable performance to meet highest requirements of extensive virtualization/consolidation scenarios for business critical applications on the one hand, and demanding high performance computing applications on the other hand. Packed with advanced features, up to 24 high-speed DIMM slots and flexible 10Gbit/s Universal Converged Network Adapter (UCNA) on board, the new PRIMERGY server blades provides the highest memory modules density in a dual-socket blade and allows doing more with a two-processor server than ever before.
## Features & Benefits

<table>
<thead>
<tr>
<th>Main Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dynamic Power &amp; Cooling</strong></td>
<td></td>
</tr>
<tr>
<td>Using our Cool-safe™ cooling concept, combined with 94% efficient power supplies and the enhanced ServerView power management software, it ensures maximum dynamic power &amp; cooling. Combined with the 94% PSUs, the holistic power management enables for most accurate control of predefined maximum chassis power consumption.</td>
<td>Save energy costs as never before - guaranteed</td>
</tr>
<tr>
<td><strong>Dynamic Virtualization</strong></td>
<td></td>
</tr>
<tr>
<td>Equipped with server blades that are utilizing CPUs out of the latest generation Intel® Xeon® processor E5-2400v2 / E5-2600v2 product family, very large memory capacities and extended I/O performance, the PRIMERGY BX900 S2 is once again the optimal system for any virtualization scenario on the one hand, and for resource and performance hungry applications on the other hand.</td>
<td>Easily deploy more or larger virtual and physical machines than ever before and in this way increase your IT performance and consolidation ratio.</td>
</tr>
<tr>
<td><strong>Dynamic High Availability</strong></td>
<td></td>
</tr>
<tr>
<td>Due to its fully redundant design (management blades, connection blades, fans, PSUs), and in combination with ServerView Resource Orchestrator (ROR), the PRIMERGY BX900 S2 can completely protect itself against any possible failure; at the same time it excels with the fastest automatic recovery, and with a flexible allocation of its available resources to services, according to requirements.</td>
<td>Best availability, most effective server protection and the agility to adapt to changing requirements.</td>
</tr>
<tr>
<td><strong>Dynamic Scalability</strong></td>
<td></td>
</tr>
<tr>
<td>With space for up to 18 server and/or storage Blades, 8 connection blades, 6 power supply units and 2 management blades in a 10U high chassis, the PRIMERGY BX900 S2 incorporates the highest density. Combined with chassis interconnectivity and switch blade stacking, the system allows highly flexible scaling and simplified management.</td>
<td>Complete investment protection and flexible growth scenarios.</td>
</tr>
<tr>
<td><strong>New Performance level</strong></td>
<td></td>
</tr>
<tr>
<td>PRIMERGY BX900 S2 supports high speed Infiniband (FDR Infiniband) with 56 Gbit/s bandwidth per port at a new level of payload efficiency; the encoding algorithm of 64b/66b instead of 8b/10b with QDR Infiniband results in a more than 70% enhanced ratio of net to gross data rate.</td>
<td>Get the most out of your investment by operating at highest efficiency</td>
</tr>
</tbody>
</table>
Technical details

**PRIMERGY BX900 S2**

**Base unit**
PRIMERGY BX900 S2

**Housing types**
Rack

**Enclosure**

**System unit type**
10 U chassis for 19-inch rack

**Front bays**
18 half height or 9 full height bays for server or storage blades

**Midplane**
High speed midplane with 4 redundant fabrics

**Rear bays**
8 x for Connection Blades (2 Connection Blades per fabric)  
6 x for PSU modules

**Management Blades**
1x hot-plug Management Blade as standard, redundant Management Blade as option

**Fan configuration**
Up to 3 additional hot plug, redundant fan modules

**Fan notes**
2 fan units per module, 2 x 2 fans per unit; modules either part of PSU modules or independent components

**Power supply configuration**
Up to 6x hot-plug power supply module, 3x as minimum  
(4th to 6th power supply module necessary for redundancy, and depending on system configuration)

**Operating panel**

**Operating buttons**
On/off switch  
ID button

**Status LEDs**
Power (amber / green)  
System status (orange)  
Identification (blue)

**Service display**
ServerView Local Service Display for Blade (LSB)

**Management Blade**

**Type of Unit**
BX900 MMB S1

**LAN / Ethernet (RJ-45)**
2 x 1Gb Ethernet

**Management LAN (RJ45)**
Dedicated Service LAN port for MMB (1Gb Ethernet)

**Serial 1 (9-pin)**
1 x RS-232-C

**USB 2.0 ports**
2 x (at rear side of the system)

**Dimensions / Weight**

**Dimensions (W x D x H)**
482.6 mm (Bezel) / 445mm (Body) x 778 x 438

**Height Unit Rack**
10 U

**19" rackmount**
Yes

**Weight**
Up to 191 kg

**Weight notes**
Fully assembled  
Actual weight may vary depending on configuration

**Rack integration kit**
Included

**Electrical values**

**Max. input of single power supply**
3200 W / 1600 W (240 V / 100 V)

**Max. output of single power supply**
2880 W / 1360 W (240 V / 100 V)

**Rated voltage range**
100 V - 240 V

**Rated frequency range**
47 Hz - 63 Hz

**Rated current max.**
65A / 29A (100 V / 240 V)

**Electrical value notes**
To estimate the power consumption of different configurations use the Power Calculator of the System Architect:  
Suitable power supply cables have to be ordered separately.

**Environmental**

**Operating ambient temperature**
5 - 35 °C

**Operating relative humidity**
10 - 85 % (non condensing)

**Operating environment**
FTS 04230 – Guideline for Data Center (installation specification)
Environmental


Noise emission  Measured according to ISO 7779 and declared according to ISO 9296

Sound emission  
- Sound pressure (LpAm)  < 79 dB(A) (operating) < 64 db(A) (standby)
- Sound power (LWAd; 1B = 10dB)  < 8,6 B

Compliance

Germany  GS
Europe  CE Class A *
USA/Canada  
  
  CSA/cus
  UL/c/us
  FCC Class A
Global  
  CB
  RoHS
  WEEE
Japan  VCCI Class A + JIS 61000-3-2
Australia/New Zealand  C-Tick
Taiwan  BSMI

Compliance notes  
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.

Compliance link  http://globalsp.ts.fujitsu.com/sites/certificates

Server and Storage Blades pluggable into system unit front side

<table>
<thead>
<tr>
<th>Product Model name</th>
<th>Processor type support</th>
<th>Processor quantity support</th>
<th>Max. number per BX900</th>
<th>Memory slots total (max.)</th>
<th>Supported capacity RAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIMERGY BX920 S4</td>
<td>Intel® Xeon® processor E5-2400 v2 product family</td>
<td>1 - 2</td>
<td>18</td>
<td>12</td>
<td>768 GB</td>
</tr>
<tr>
<td>PRIMERGY BX924 S4</td>
<td>Intel® Xeon® processor E5-2600 v2 product family</td>
<td>1 - 2</td>
<td>18</td>
<td>24</td>
<td>1,024 GB</td>
</tr>
<tr>
<td>PRIMERGY SX910 S1</td>
<td>Intel® Xeon® processor E5-2600 v2 product family</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRIMERGY SX940 S1</td>
<td>Intel® Xeon® processor E5-2600 v2 product family</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRIMERGY SX960 S1</td>
<td>Intel® Xeon® processor E5-2600 v2 product family</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRIMERGY SX980 S1</td>
<td>Intel® Xeon® processor E5-2600 v2 product family</td>
<td>max. 6, (for the US market max. 3x SX980 S1 can be installed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRIMERGY SX980 S2</td>
<td>Intel® Xeon® processor E5-2600 v2 product family</td>
<td>max. 6, (for the US market max. 3x SX980 S2 can be installed)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Connection Blades (CB) pluggable into system unit rear side

<table>
<thead>
<tr>
<th>Connection type</th>
<th>Down-link ports</th>
<th>Up-link ports</th>
<th>Max. number per BX unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethernet Switch/IBP/EHM 10/40Gb 18/8 + 2</td>
<td>18 x 10 Gbit/s Eth</td>
<td>8 x 10 Gbit/s (SFP+) plus 2 x 40Gbit/s (QSFP+)</td>
<td>6 (CB Slot 1/2 3/4 5/6)</td>
</tr>
<tr>
<td>Eth Fabric Switch 10Gb/s 18/6 + 6 Brocade VDX 2730</td>
<td>18 x 10 Gbit/s Eth</td>
<td>6 x 10 Gbit/s Eth (SFP+) 6 x 4/8 Gbit/s Fibre Channel (SFP/SFP+)</td>
<td>6 (CB Slot 1/2 3/4 5/6)</td>
</tr>
<tr>
<td>Eth FEX 10Gb 16/8</td>
<td>16 x 10 Gbit/s Eth</td>
<td>8 x 10 Gb (SFP+)</td>
<td>6 (CB Slot 1/2 3/4 5/6)</td>
</tr>
<tr>
<td>Connection Blades (CB) pluggable into system unit rear side</td>
<td>Down-link ports</td>
<td>Up-link ports</td>
<td>Max. number per BX unit</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>-----------------</td>
<td>--------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Eth Pass Thru 10Gb 18/18</td>
<td>18 x 1/10 Gbit/s Eth</td>
<td>18 x 1/10 Gb (SFP/SFP+/Twinax)</td>
<td>6 (CB Slot 1/2 3/4 5/6)</td>
</tr>
<tr>
<td>Eth Switch/IBP 10Gb 18/8</td>
<td>18 x 10 Gbit/s Eth</td>
<td>8 x 10 Gb (SFP+)</td>
<td>6 (CB Slot 1/2 3/4 5/6)</td>
</tr>
<tr>
<td>Eth Switch/IBP 1Gb 18/6</td>
<td>18 x 1 Gbit/s Eth</td>
<td>6 x 1 Gb (RJ45)</td>
<td>8 (CB Slot 1/2 3/4 5/6 7/8)</td>
</tr>
<tr>
<td>Eth Switch/IBP 1Gb 36/12</td>
<td>36 x 1 Gbit/s Eth</td>
<td>8 x 1 Gb (RJ45), 4 x 1 Gb (SFP)</td>
<td>8 (CB Slot 1/2 3/4 5/6 7/8)</td>
</tr>
<tr>
<td>Eth Switch/IBP 1Gb 36/8+2</td>
<td>36 x 1 Gbit/s Eth</td>
<td>8 x 1 Gb (RJ45), 2 x 10 Gb (SFP+)</td>
<td>8 (CB Slot 1/2 3/4 5/6 7/8)</td>
</tr>
<tr>
<td>FC Pass Thru 8Gb 18/18</td>
<td>18 x 8 Gbit/s FC</td>
<td>18 x 4/8 Gb (SFP/SFP+)</td>
<td>4 (CB Slot 3/4 5/6)</td>
</tr>
<tr>
<td>FC Switch 8Gb Brocade 14 Port</td>
<td>18 x 8 Gbit/s FC</td>
<td>8 x 4/8 Gb (SFP/SFP+)</td>
<td>4 (CB Slot 3/4 5/6)</td>
</tr>
<tr>
<td>FC Switch 8Gb Brocade 14 Port</td>
<td>18 x 16 Gbit/s FC</td>
<td>8 x 4/8 Gb (SFP/SFP+)</td>
<td>4 (CB Slot 3/4 5/6)</td>
</tr>
<tr>
<td>FC Switch 8Gb Brocade 26 Port</td>
<td>18 x 8 Gbit/s FC</td>
<td>8 x 4/8 Gb (SFP/SFP+)</td>
<td>4 (CB Slot 3/4 5/6)</td>
</tr>
<tr>
<td>FC Switch 8Gb Brocade 26 Port</td>
<td>18 x 16 Gbit/s FC</td>
<td>8 x 4/8 Gb (SFP/SFP+)</td>
<td>4 (CB Slot 3/4 5/6)</td>
</tr>
<tr>
<td>FC Switch 8Gb Brocade 26 Port Enterprise</td>
<td>18 x 8 Gbit/s FC</td>
<td>8 x 4/8 Gb (SFP/SFP+)</td>
<td>4 (CB Slot 3/4 5/6)</td>
</tr>
<tr>
<td>FC Switch 8Gb Brocade 26 Port Enterprise</td>
<td>18 x 16 Gbit/s FC</td>
<td>8 x 4/8 Gb (SFP/SFP+)</td>
<td>4 (CB Slot 3/4 5/6)</td>
</tr>
<tr>
<td>IB Switch 40Gb 18/18</td>
<td>18 x 40 Gbit/s IB</td>
<td>18 x 40 Gb (QSFP)</td>
<td>3 (CB Slot 3/4 5/6 7/8)</td>
</tr>
<tr>
<td>IB Switch 56Gb 18/18</td>
<td>18 x 56 Gbit/s IB</td>
<td>18 x 56 Gb (QSFP)</td>
<td>3 (CB Slot 3/4 5/6 7/8)</td>
</tr>
<tr>
<td>SAS Switch 6Gb 18/6</td>
<td>18 x 6 Gbit/s SAS</td>
<td>6 x 6 Gb SAS</td>
<td>2 (CB Slots 5+6)</td>
</tr>
</tbody>
</table>

**Warranty**

**Standard Warranty**

3 years

**Service level**

Onsite Service

**Maintenance and Support Services - the perfect extension**

**Support Pack Options**

Globally available in major business areas:

- 9x5, Next Business Day Onsite Response Time
- 9x5, 4h Onsite Response Time
- 24x7, 4h Onsite Response Time

**Recommended Service**

24x7, Onsite Response Time: 4h - For locations outside of EMEA please contact your local Fujitsu partner.

**Spare Parts availability**

5 years

**Service Lifecycle**

5 years after end of product life

**Service Weblink**

http://www.fujitsu.com/fts/services/support
More information

**FUJITSU OPTIMIZATION Services**
In addition to Fujitsu PRIMERGY BX900 S2, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

**FUJITSU Portfolio**
Build on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offering. This allows customers to leverage from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

**Computing Products**

**Software**

**More information**
Learn more about Fujitsu PRIMERGY BX900 S2, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.

**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 contribute to the creation of a sustainable environment for future generations through IT. Please find further information at [http://www.fujitsu.com/global/about/environment](http://www.fujitsu.com/global/about/environment)

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