

Data Sheet

Fujitsu PRIMERGY BX900 S2 Blade Server

The Enhanced Dynamic Cube

Fujitsu PRIMERGY BX Blade Servers provide a faster, simpler and lower-cost way to build and run an IT infrastructure in your midsize organization, branch office or large data center. The PRIMERGY BX system family is designed so that the chassis components can be used throughout the family. Server, storage and connection blades can be added or replaced without any additional cabling or administration effort. PRIMERGY Blade Servers provide maximum performance and maximum redundancy, but with only minimum space requirements and low power consumption. Business agility is achieved through simple, modular design and a large number of useful features that help reduce deployment time to hours or even only minutes. You can use thousands of applications and a large number of certified operating systems, and you can arrange your own individual combinations of virtual machines, storage and server blades together with a wide-ranging selection of internal and external connections, such as Ethernet, Fibre Channel, SAS and InfiniBand. And as business requirements change, the Fujitsu PRIMERGY Blade Servers can be adapted to meet individual needs in a suitable manner.

PRIMERGY BX900 S2

The Fujitsu 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 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

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 Intel® Xeon® processor 5600 series and next generation Intel® Xeon® processor E5 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 Converged Network Adapter 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

Main Features	Benefits
<p>Dynamic Power & Cooling</p> <ul style="list-style-type: none"> Using our Cool-safe™ cooling concept, combined with 94% efficient power supplies and the enhanced ServerView power management software, it ensures maximum dynamic power & cooling. Combined with the 94% PSUs, the holistic power management enables for most accurate control of predefined maximum chassis power consumption. 	<ul style="list-style-type: none"> Save energy costs as never before - guaranteed Easily deploy more or larger virtual and physical machines than ever before and in this way increase your IT performance and consolidation ratio. Best availability, most effective server protection and the agility to adapt to changing requirements. Complete investment protection and flexible growth scenarios. Get the most out of your investment by operating at highest efficiency
<p>Dynamic Virtualization</p> <ul style="list-style-type: none"> Equipped with server blades that are utilizing CPUs out of the Intel® Xeon® processor E5 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. 	
<p>Dynamic High Availability</p> <ul style="list-style-type: none"> 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. 	
<p>Dynamic Scalability</p> <ul style="list-style-type: none"> 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. 	
<p>New Performance level</p> <ul style="list-style-type: none"> 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. 	

Technical details

PRIMERGY BX900 S2

Housing types	Rack
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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
Service LAN (RJ45)	Dedicated Service LAN port for MMB (1Gb Ethernet)
Serial 1 (9-pin)	1 x RS-232-C
USB 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)
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: http://configurator.ts.fujitsu.com/public/ 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 locations)
Operating environment Link	http://docs.ts.fujitsu.com/dl.aspx?id=e4813edf-4a27-461a-8184-983092c12dbe
Noise emission	Measured according to ISO 7779 and declared according to ISO 9296

Environmental

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	CSAc/us ULc/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://sp.ts.fujitsu.com/sites/certificates/

Server and Storage Blades pluggable into system unit front side

Product Model name	Product Type	Processor quantity support	Max. number per BX900	Memory slots total	Supported capacity RAM (max.)
PRIMERGY BX920 S3	Dual Socket Server Blade (Intel) http://docs.ts.fujitsu.com/dl.aspx?id=33efe617-f9a6-44cf-ac8a-ab5eadfe03f0	1 - 2	18	12	384 GB
PRIMERGY BX924 S3	Dual Socket Server Blade (Intel) http://docs.ts.fujitsu.com/dl.aspx?id=4f5c04d4-b7d3-4fc5-af8c-b65f845d2b52	1 - 2	18	24	768 GB
PRIMERGY SX910 S1	Storage Blade Tape http://docs.ts.fujitsu.com/dl.aspx?id=cc5ba5c8-2c98-4647-b585-db5890f9243c		6		
PRIMERGY SX940 S1	Storage Blade Disk http://docs.ts.fujitsu.com/dl.aspx?id=cabdb01-8a40-44dd-af4d-50bc074c0ec8		6		
PRIMERGY SX960 S1	Storage Blade Disk http://docs.ts.fujitsu.com/dl.aspx?id=489d2a0c-81f1-4d3e-aaa3-df55ac446930		2		
PRIMERGY SX980 S1	Storage Blade Disk http://docs.ts.fujitsu.com/dl.aspx?id=b4de3482-a07c-4cda-8f9c-de4e3869291b		max. 6, (for the US market max. 2x SX980 S1 can be installed)		
PRIMERGY SX980 S2	Storage Blade Disk http://docs.ts.fujitsu.com/dl.aspx?id=5bbd7637-71eb-49ed-b5c9-b3e7737b42d5		max. 4, (for the US market max. 2x SX980 S2 can be installed)		

Connection Blades (CB) pluggable into system unit rear side

Connection type	Down-link ports	Up-link ports	Max. number per BX unit
Eth Fabric Switch 10Gbit/s 18/6+6 Brocade VDX 2730	18 x 10 Gbit/s Eth	6 x 10 Gbit/s Eth (SFP+) 6 x 4/8 Gbit/s Fibre Channel (SFP/SFP+)	6 (CB Slot 1/2 3/4 5/6)
Eth Fabric Switch 10Gbit/s 18/6+6 Brocade VDX 2730	18 x 10 Gbit/s Eth	6 x 10 Gb Eth (SFP+) 6 x 4/8 Gb Fibre Channel (SFP/SFP+)	6 (CB Slot 1/2 3/4 5/6)
Eth FEX 10Gb 16/8	16 x 10 Gbit/s Eth	8 x 10 Gb (SFP+)	6 (CB Slot 1/2 3/4 5/6)
Eth FEX 10Gb 16/8	16 x 10 Gbit/s Eth	8 x 10 Gb (SFP+)	6 (CB Slot 1/2 3/4 5/6)
Eth Pass Thru 10Gb 18/18	18 x 1/10 Gbit/s Eth	18 x 1/10 Gb (SFP/SFP+/Twinax)	6 (CB Slot 1/2 3/4 5/6)

Connection Blades (CB) pluggable into system unit rear side

Connection type	Down-link ports	Up-link ports	Max. number per BX unit
Eth Switch/IBP 10Gb 18/8	18 x 10 Gbit/s Eth	8 x 10 Gb (SFP+)	6 (CB Slot 1/2 3/4 5/6)
Eth Switch/IBP 1Gb 18/6	18 x 1 Gbit/s Eth	6 x 1 Gb (RJ45)	8 (CB Slot 1/2 3/4 5/6 7/8)
Eth Switch/IBP 1Gb 36/12	36 x 1 Gbit/s Eth	8 x 1 Gb (RJ45), 4 x 1 Gb (SFP)	8 (CB Slot 1/2 3/4 5/6 7/8)
Eth Switch/IBP 1Gb 36/8+2	36 x 1 Gbit/s Eth	8 x 1 Gb (RJ45), 2 x 10 Gb (SFP+)	8 (CB Slot 1/2 3/4 5/6 7/8)
FC Pass Thru 8Gb 18/18	18 x 8 Gbit/s FC	18 x 4/8 Gb (SFP/SFP+)	4 (CB Slot 3/4 5/6)
FC Switch 8Gb Brocade 14 Port	18 x 8 Gbit/s FC	8 x 4/8 Gb (SFP/SFP+)	4 (CB Slot 3/4 5/6)
FC Switch 8Gb Brocade 26 Port	18 x 8 Gbit/s FC	8 x 4/8 Gb (SFP/SFP+)	4 (CB Slot 3/4 5/6)
FC Switch 8Gb Brocade 26 Port Enterprise	18 x 8 Gbit/s FC	8 x 4/8 Gb (SFP/SFP+)	4 (CB Slot 3/4 5/6)
IB Switch 40Gb 18/18	18 x 40 Gbit/s IB	18 x 40 Gb (QSFP)	3 (CB Slot 3/4 5/6 7/8)
IB Switch 56Gb 18/18	18 x 56 Gbit/s IB	18 x 56 Gb (QSFP)	3 (CB Slot 3/4 5/6 7/8)
SAS Switch 6Gb 18/6	18 x 6 Gbit/s SAS	6 x 6 Gb SAS	2 (CB Slots 5+6)

Warranty

Standard Warranty	3 years
Service level	Onsite Service (depending on country)
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

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

www.fujitsu.com/global/services/computing/

Software

www.fujitsu.com/software/

More information

Learn more about Fujitsu PRIMERGY BX900 S2, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
<http://www.fujitsu.com/>

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/>



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2013-03-13 CE-EN

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