

PRIMERGY BF400 S2

The server solution for unique flexibility in your Data Center

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PRIMERGY BladeFrame

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With PRIMERGY BladeFrame powered by Egenera, Fujitsu Siemens Computers clears the way for highly responsive enterprise IT. The solution features a service-oriented infrastructure, the innovative Processing Area Network (PAN), which radically eliminates the complexity of traditional infrastructures. Thanks to the simplification, separation and sharing of resources, IT departments have experienced enormous gains in agility and efficiency. Applications can be deployed within a matter of minutes, instead of weeks, and investment costs and the total cost of ownership can be demonstrably reduced by 50 percent.

PRIMERGY BladeFrame is a service-oriented infrastructure in which processing, network and resource management are integrated and ready for use. The best of two worlds is combined in PRIMERGY BladeFrame – the kind of administration functions that are valued in the mainframe world with a blade-type processing architecture, based on industry standards. This makes the solution a “Dynamic Data Center in the box“ which goes far beyond traditional blade architectures and presents a completely new approach to utilizing IT.

PRIMERGY BladeFrame BF400 S2

The BladeFrame 400 consists of a cabinet containing 24 processing resources, redundant central controllers, redundant integrated switches, redundant high-speed interconnects and BladeFrames PAN Manager software.

The BladeFrame combines the utility of stateless servers with powerful software that virtualizes processing, storage and networking resources into a "computing fabric."

The PAN Manager software provides a single point for configuring, managing and monitoring both the physical and virtual resources in the Processing Area Network.

Now, businesses can provision systems and allocate resources in minutes not days, weeks or months to optimize mission-critical applications in real time.

PRIMERGY BladeFrame 400 S2 makes it possible to map a broad palette of the market's leading customer applications.



Key Features	Benefits
n Stateless, anonymous and interchangeable processing nodes (pBlades)	n Automated allocation, repurposing and failover since any pBlade can immediately assume the identity of any other n Seamless integration and less complexity n Massive reduction in network and storage ports
n Reduced time for provisioning new servers	n Faster reaction on new as well as on changed business processes
n Flexible, fast reallocation of server capacities	n Reduction in real server instances and in software license costs n Increased server utilization
n Logically separate areas, each with their own administration authority for physical and virtual resources that are allocated to a set of applications	n Independent, customer specific domains
n Flexible failover and high availability without the need of additional cluster software	n Ratio between production and failover servers = N:1, instead of 1:1
n Consistent form factor of processing resources (pBlade) n 2- / 4-socket pBlades with Dual- and Quad-Core CPU's n Intel / AMD: Mix and match configurations	n Support of Windows, Linux, VMware and Solaris operating systems n Unmodified applications can be deployed on demand

PRIMERGY BF400 S2 – BladeFrame Server	
BladeFrame Dimensions (equivalent to standard rack)	Height 210 cm (230 cm packaged) Width 61 cm (97 cm packaged) Depth 89 cm (112 cm packaged) (41U usable for configuring blades)
Weight	479 kg (fully configured 2-socket pBlades) 599 kg (fully configured 4-socket pBlades)
Electrical Specifications	Number of connections: - 4 (standard power option) - 8 (redundant power option) Input voltage 200 - 240V
Input current	24A per plug, single phase AC; connector IEC 309-32A international
Leakage Current (Maximum)	Domain A/B – 16 mA Domain C/D – 13 mA
Frequency	50/60 Hz
Power consumption	2000 Watt to 19200 Watt varies with configuration
Heat dissipation	7400kJ/h to 69000 kJ/h (7000 BTU to 65500 BTU) varies with configuration
Maximum altitude	1,828 m
Ambient temp.	Operating temperature range 5° C to 35° C
Humidity	(non-condensing) 10–80%
Acoustics	Computer room / datacenter compatible

Control Blade Architecture	
Number of Control Blades	2 (redundant) per BF400 BladeFrame In normal state, Control Blades share I/O
Height	17.8 cm (4U).
I/O interfaces	4 Ports 2 Gigabits/sec. Fibre Channel (LC-type connector) 4 Ports Gigabit Ethernet (Fibre LC-type connector or copper RJ45) 4 Ports 10/100/1000 Ethernet (copper RJ45)
Console port	RS232 (front accessible)
Management interface port	10/100/1000BaseT Ethernet (front accessible, copper RJ45)
Accessible drives	DVD drive DVD-ROM (1 per cBlade)
Power supply	355 W (Independent of other blades)
Cooling mechanism	Self-contained front to back
Hot-pluggable	Yes

Switch Blade Architecture	
Number of Switch Blades	2 (redundant) per BladeFrame
Height	8.9 cm (2U)
Hot-pluggable	Yes
Power supply	160 W (Independent of other blades)
Cooling mechanism	Self-contained front to back

Software/Management	
Operating systems	Red Hat Enterprise Linux SUSE LINUX Enterprise Server Microsoft Windows Server 2003 VMware Infrastructure 3 Solaris 10
System management	PAN Manager software
Out-of-band system management	IPMI
Third-party management interfaces	BMC Patrol®, HP OpenView Network Node Manager, Tivoli Enterprise Console®, SNMP-based management products

Processing Blade Architecture	
Height: 5.3cm (1.2U) each (max. 24 per BF400 S2) For detailed Processing Blade configurations, please see BF400 S2 BladeFrame configuration guide	
Processing Blade BFi20 S4 with: n 64-bit Intel Xeon E5410 Quad-Core 2.33GHz incl. 2x CPU 12MB SLC; 1333MHz FSB; 8GB memory; 225 Watt n 64-bit Intel Xeon E5450 Quad-Core 3.0GHz incl. 2x CPU 12MB SLC; 1333MHz FSB; 16GB memory; 300 Watt n 64-bit Intel Xeon E5450 Quad-Core 3.0GHz incl. 2x CPU 12MB SLC; 1333MHz FSB; 32GB memory; 300 Watt	
Processing Blade BFa20 S2 with: n AMD Opteron 2220SE Dual-Core 2.8GHz incl. 2x CPU; 2x1MB SLC; 16GB memory; 390 Watt	
Processing Blade BFi40S4 with: n 64-bit Intel Xeon X7350 Quad-Core 2.93 GHz incl. 4x CPU; 2x4MB SLC and 32 GB memory; 710 Watt n 64-bit Intel Xeon X7350 Quad-Core 2.93 GHz incl. 4x CPU; 2x4MB SLC and 64 GB memory; 710 Watt	
Processing Blade BFa40 S2 with: n AMD Opteron 8220SE Dual-Core 2.8GHz incl. 4x CPU; 2x1MB SLC; 32GB memory; 680 Watt	

Compliance with Norm and Standards	
Product safety	
Global / Europe	IEC 60950 / EN 60950
USA	UL 60950 3rd. Ed.
Canada	CAN/CSA-C22.2 No. 60950 3rd. Ed.
Electro magnetic compatibility	
Europe	EN 55 022 class A, EN 55024, EN61000-4-3, EN61000-4-2
Taiwan / Japan	CNS 13438 class A / VCCI class A
USA / Canada	CFR47, part 15, subpart B, class A / ICES-003 class A
This product and the released accessories are in compliance with emission class A. In certain cases measures have to be taken to reduce the electro magnetic influence to other equipment.	
Declaration of conformity	
Europe (CE)	89/336/EEC(EMC);73/23 EEC(LVD)
North America	FCC class A
Approvals	
Product safety	
Global / Europe	CB / CE
USA / Canada	UL

BladePlane BF400 S2	
Data transfer rate	2.5 Gigabits/sec. over redundant point-to-point switched fabric interconnects