Data Sheet

PRIMERGY SX30
Storage Subsystem

The compact passive PRIMERGY storage subsystem for direct connection to PRIMERGY servers.

The PRIMERGY SX30 storage subsystem is a passive, directly connectable system for data storage and for extending the hard disk capacity of connected PRIMERGY servers. With up to 14 hard disks and Ultra320 SCSI technology, the PRIMERGY SX30 offers a maximum total capacity of more than 4 Tbyte. Whereas the maximum internal hard disk capacity of a server is soon exhausted, depending on the model, the external PRIMERGY SX30 storage subsystem can grow gradually in line with business needs. The rack variant with three 3 height units (U) is the right choice for 19-inch rack infrastructures where small dimensions are one of the requirements. The tower variant can extend the existing storage capacities of servers, for example in office environments.

The tower and rack variants of the PRIMERGY SX30 storage subsystem come in two types: with two independent SCSI busses with 7 hard disks each, or with all 14 hard disks on one SCSI bus. In addition, a special variant of the type with two SCSI busses can be ordered for use as a cluster subsystem. This can then also be used for previously-delivered systems (with 2 SCSI busses) with the aid of a conversion kit. Cluster capability is enabled through the use of dual node SCSI modules. In conjunction with Microsoft Windows 2000 Advanced Server, Windows 2003 Enterprise Edition or with the Linux Enterprise Editions of Red Hat and SUSE, two PRIMERGY servers can then each be operated via a 2-channel RAID controller on one 2-channel PRIMERGY SX30 subsystem.

Many active components in the PRIMERGY SX30 storage subsystem, such as hot-plug hard disks, hot-plug fans and hot-plug power supply modules, can be replaced online. The hot-plug power supply units, which can optionally be configured to offer redundancy, can be connected via separate power lines (phase redundancy). The two hot-plug fans in the PRIMERGY SX30 are designed to offer redundancy even in the basic configuration.

The PRIMERGY SX30 storage subsystem indicates the operating state of the subsystem and its most important internal modules by means of LE displays on the front panel. In particular for the hard disks, power supply units and the fan module, LEDs directly on the module also indicate the relevant operating state.

The PRIMERGY SX30 storage subsystem is integrated in PRIMERGY server management: signaling takes place via the SCSI connections on the basis of the SAF-TE (SCSI Accessed Fault-Tolerant Enclosures) standards. This integrates not just the hard disks, but also the power supply units and fans. The standard product PRIMERGY ServerView Suite, for example, enables monitoring of the temperature of the entire subsystem and its most important modules. In addition, the hard disks independently check their operating states thanks to the use of S.M.A.R.T. (Self-Monitoring, Analysis and Reporting) technology. They then promptly report potential faults to ensure that the hard disks that are expected to develop a fault can be replaced in good time.

Type	PRIMERGY Storage Subsystem
General specification	
Number of bays for hot-plug hard disks	14 x 3.5 inch (1 inch wide)
SCSI addresses for hard-disks	Automatic assignment
Host connections	1 per SCSI Bus (single node) or 2 per SCSI Bus (SCSI cluster)
Max. no. of power supply units	2 with full redundancy (hot-plug) option, standard by SX30 cluster
Fan unit	2 redundant fans (hot-plug)
Connection of hard disks	
Number of channels	Ultra320 SCSI, with up to 14 hot-plug hard disks (2 x 7 or 1 x 14 per SCSI channel)
External SCSI adapters	UHD (68-pin, screw type)
Server controller	RAID controller Ultra320 or RAID controller U2W LVD SCSI
RAID Lever	0, 1, 10, 50, JBOD; additional depending on RAID controller
Hard disk drives	
Net capacity	18, 36, 73, 146, 300 Gbyte (in 1 inch frame)
Access time	$\geq$ 5 ms
Total capacity	max. 4 Tbyte

1 Gbyte equals one billion bytes when referring to hard disk drive capacity; accessible capacity may vary.

System management	
System management	
RAID status signaling and monitoring of internal operating parameters via SAF-TE and status LEDs on the subsystem.	

Options

- Hot-plug power supply module for redundancy
- Ultra160 and Ultra320 SCSI hot-plug hard disks 36 / 73 / 146 / 300 Gbyte 10000 rpm (SCA; 80-pins) 18 / 36 / 73 Gbyte 15000 rpm (SCA, 80-pins)
- Conversion kit for U320 SCSI clusters
- Cable lengths (2.5 m)

Electrical values	
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Power supply unit redundant	2 hot-plug modules, each rated with 500 W
Output power	max. 305 W
Apparent power	max. 310VA
Heat load	1100 kJ/h or 305 W
Rated power voltage	100 – 240 V
Rated current	max. 1.5 A with 240 V
	max. 3.5 A with 100 V
Nominal frequency	50 – 60 Hz
Environmental conditions (DIN EN 60721-3-X)	
Ambient temperature	15°C to 35°C (to IEC 721)
Noise generation (ISO 9296)	
Sound pressure level (L_{wAd})	$\leq$ 6.6 B idle; 6.7 B operation (to ISO 9296) (in standard configurations)
Sound pressure level (L_{pAm})	$\leq$ 52 dB idle; 53 dB operation (to ISO 9296) (in standard configurations)

Dimensions	
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Rack (H x W x D)	133 x 483 x 681 mm 3 height units (mounting depth 643 mm)
Tower (H x W x D)	481 x 280 x 692
Weight	Approx. 32 kg (depending on configuration)
Compliance with Norm and Standards	
Product safety	
Global	IEC 60950
Europe	EN 60950
USA / Canada	UL 1950, CSA 22.2 No. 950
Electro magnetic compatibility	
Europe	EN 55 022 class A, EN 55024, EN61000-3-3; EN61000-2-3
Taiwan	-
Japan	-
Australian / New Zealand	-
USA / Canada	FCC class A
Declaration of conformity	
Europe (CE)	73/23/EWG (EMV)
North America	FCC class A
Approvals	
Product safety	
Global	CB
Europe	ENEC
Germany	GS
USA / Canada	CSA_{US} / CSA_C

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.

Electro magnetic compatibility	
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Australian	-
Taiwan	-
Japan	-