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Data Sheet
Fujitsu PRIMERGY SX940 S1 Storage Blade Disk

For easy and cost effective server consolidation

PRIMERGY SX storage blades are installed together with PRIMERGY server blades in the PRIMERGY BX chassis. The introduction of storage blades is a simple and low-priced way to consolidate servers. Above all, small and medium-sized companies usually have rack and tower servers which offer a high degree of capcity regarding local hard disks. The use of storage blades equipped with tape drives is a simple and quick method to backup system data locally. Having local access to large amounts of data is often necessary, for example, in the world of computer-aided engineering (CAE), where smaller local workgroups have to access and create very large models. Examples for using storage blades are operation within limited environments as a file server or for Microsoft® SharePoint portals.

PRIMERGY SX940 S1
The PRIMERGY SX940 S1 Direct Attached Storage Blade Disk can be used to extend the internal storage capacity of PRIMERGY BX9xx Server Blades. A maximum of four internal disk drives greatly extends the maximum amount of disk storage of a Server Blade. One Storage Blade occupies one blade slot within the PRIMERGY BX400 or BX900 system unit; in BX400 it is positioned right from an adjacent server blade, while in BX900 it is positioned either left or right of it, or between two server blades. The 1x 4 or 2x 2 respectively disk drives of one SX940 S1 are driven by 1 or 2 integrated, highly functional SAS/RAID controllers with optional 512 Mbyte cache and BBU. Each controller provides RAID levels 0, 1, 5 and 6. The connection to each Server Blade is realized via a midplane link to the high performing PCIe x4 interfaces of each Server Blade's system board.

Features and Benefits

Main Features	Benefits
Operational diversity ■ PRIMERGY SX940 S1 provides up to 4 additional disk drives for one or two Server Blades; up to four Storage Blades Disk usable in BX400 and up to six Storage Blades Disk usable per BX900 system unit	■ Variability through the optional choice of either connecting 2x up to 2 drives to two different, adjacent Server Blades (BX900 only), or to connect up to 4 disk drives to one adjacent Server Blade
Fast interconnect ■ Midplane connection via PCIe x4 interface	■ Avoidance of additional cabling due to the direct connection to Server Blade(s) via the high performance midplane, no need for additional disk controller slots in Server Blade(s)
High capacity and transfer rates ■ SAS (2.0) enterprise class or SATA business critical drives	■ High capacity of up to 2.4 TB with high quality SAS drives, up to 2 TB with SATA HDDs
Enhanced speed plus secure data transmission ■ High performance RAID controller (1x or 2x) within the Storage Blade, providing RAID levels 0, 1, 5 and 6, optionally accelerated by 512 MB cache module and secured by iBBU	■ The write-back cache comprehensively enhances the speed of write operations and in the event of power failures, the integrated Battery Backup Unit guarantees data integrity

Technical details

Enclosure	
Type	Storage extension unit for BX920 S1/S2, BX922 S2, BX924 S2 and BX960 S1 Server Blade
Number of hard disk drives	1 - 4
Storage architecture	Direct Attached Storage (DAS)
Status LEDs	Power (green)

Storage disks	
	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, 250 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 SATA, 3 Gb/s, 1 TB, 7200 rpm, hot-plug, 2.5-inch, business critical
	HDD SAS, 6 Gb/s, 900 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 600 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 450 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 300 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 300 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 146 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 73 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 3 Gb/s, 600 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 3 Gb/s, 450 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	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, 73 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise

RAID Controller	
	Integrated RAID 5/6 Ctrl., HDD SAS 6 Gb, Fujitsu , 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 512 MB Cache, Optional BBU (based on LSI SAS2108)
	Integrated RAID 0/1 Ctrl., SAS/SATA 6 Gb, Fujitsu , 8 ports int. RAID level: 0, 1, 10, No BBU support (based on LSI SAS2008)
	Integrated RAID 0/1 Ctrl., SAS/SATA 3 Gb, 4 ports int. RAID level: 0, 1, 1E, No BBU support (based on LSI 1064e)

Dimensions / Weight	
Dimensions (W x D x H)	45 x 500 x 210 mm
Weight	3.95 kg
Weight notes	Actual weight may vary depending on configuration

Environmental	
Temperature note	In accordance with the corresponding PRIMERGY BX400 and BX900 system unit
Operating environment	FTS 04230 Guideline for Data Center (installation locations)
Operating environment Link	http://docs.ts.fujitsu.com/dl.aspx?id=d4ebd846-aa0c-478b-8f58-4cfbf3230473

Compliance	
Germany	GS
Europe	CE Class A *
Global	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronical equipment)

Compliance

Compliance notes	In combination with corresponding PRIMERGY BX system unit
	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/

More information

Fujitsu platform solutions

In addition to Fujitsu PRIMERGY SX940 S1, 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 SX940 S1, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
http://www.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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