FUJITSU

Datasheet
Fujitsu ETERNUS JX40 Storage Subsystem

Passive direct server attached drive extension

ETERNUS JX Storage Subsystem

Because of low investment cost and easy handling, storage, which is directly attached to a server, is an alternative for environments with only one to very few server systems. As a passive extension of server storage, ETERNUS JX is a perfect solution to grow the capacity e.g. for non-critical file-services or data of small branch offices. Attached to the SAS RAID controller of the server, it offers basic data protection through mirroring, striping or adding parity information to the data in all relevant RAID groups.

ETERNUS JX40

The ETERNUS JX40 is a reliable and innovative easy-to-use storage subsystem. As Direct Attached Storage (DAS), it extends the storage-capacity of Fujitsu's PRIMERGY servers through a fastest 6 Gbit/s SAS connection by up to 144 Terabyte. With a height of only two units per shelf, the ETERNUS JX40 subsystem meets the requirements for a compact design with 2.5 inch mixable SAS and SATA hard disk drives in 19-inch rack infrastructures.

Green IT

Green Policy Innovation

SUPER Green Product   This product has the top-level environmental factor in the comparison with our previous product or product in market.

Features and benefits

Main features	Benefits
Quality and realiabitlity ■ Direct Attached Storage (DAS) for intel-based servers with fastest 6 Gbit/s SAS connection. ■ Up to 144 high performance SAS and/or large capacity SATA disk drives enlarge storage capacity by up to 144 Terabyte.	■ Reliable storage capacity for biggest data volume.
Innovation and flexibility ■ Components like hot plug disk drives and power supply modules can be replaced while the server is running. ■ Standardized 2.5" PRIMERGY server disk drives are used.	■ Continuous operation during flexible drive replacements.
Ease of use ■ Status of the components is signalized by LED displays and light-emitting diodes. ■ Drive extension is completely managed by the server and can be used in all usage scenarios with certified PRIMERGY servers. ■ The subsystem can be integrated in the standard Fujitsu server management ServerView Suite.	■ Easy installation and control of the subsystem.

Features and benefits

Quality and reliability

The ETERNUS JX40 is a reliable and innovative easy-to-use storage subsystem. As Direct Attached Storage (DAS), it extends the storage-capacity of Fujitsu's PRIMERGY servers through a fastest 6 Gbit/s SAS connection by up to 144 Terabyte. With a height of only two units per shelf, the ETERNUS JX40 subsystem meets the requirements for a compact design with 2.5 inch mixable SAS and SATA hard disk drives in 19-inch rack infrastructures.

Depending on the model, the maximum internal disk drive capacity of a server can soon be exhausted. The ETERNUS JX40 storage system with its SAS 2.0 technology enables flexible expansion with additional powerful and highly available disk drives as storage requirements grow.

Up to 24 drives offer a total maximum capacity of 24 Terabyte in one external housing. Cascading of up to three ETERNUS JX40s via the second SAS link permits expansion to a maximum of 144 Terabyte of external capacity at the two SAS ports of a PRIMERGY server.

Innovation and flexibility

In the ETERNUS JX40 storage subsystem, the active components – hot-plug disk drives and hot-plug power supply modules – can be replaced while the server is running. The redundant hot-plug power supply units can be connected with phase redundancy via separate power lines. Optimum and secure cooling of the drives is ensured by two independent fans in each power supply unit.

The disk drives in the ETERNUS JX40 are identical with the ones used in PRIMERGY servers and therefore mix and match easily. They can be organized in different RAID levels by means of the server's SAS RAID controller.

Ease of use

The ETERNUS JX40 storage subsystem provides information on the operating status of the subsystem and the most important internal modules via LED displays on the front panel. Disk drives and I/O as well as power supply units also indicate their operating status directly on the module by means of light-emitting diodes.

The ETERNUS JX40 storage subsystem is integrated in the standard server management software PRIMERGY ServerView Suite. Signaling is based on the SES (SCSI Enclosure Services) standard and is performed via the SAS interface. PRIMERGY ServerView Suite enables, for example, monitoring of the temperature of the entire subsystem and the most important modules, such as disk drives, power supply units, the integrated fans and the expander module.

Thanks to S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology), the disk drives autonomously check their operating status and report potential errors pro-actively. As a result, there is sufficient time to take precautions and replace disk drives that are at risk.

Fujitsu offers ServerView RAID (AURA), a uniform management tool with an identical interface for the different vendor-specific tools of the RAID controllers in the PRIMERGY servers. The full functionality of the PRIMERGY SAS RAID controller can also be used and configured with ServerView RAID (AURA).

Technical details

General system information

Host interface	1 SAS SFF 8088 port on the standard SAS 2.0 I/O module (expander)
Number of connections	First SAS x4 port to connect 24 hot-plug SAS and/or SATA drives to servers in max. 2/4/6m cable distance; Second SAS x4 port to cascade up to three ETERNUS JX40 in max. 0.75m cable distance per one of two SAS
Supported PRIMERGY server controller	LSI MegaRAID SAS9280-8e, PCIe x4, 512MB Cache with ECC LSI MegaRAID SAS9285-8e, PCIe2.0 x8, 1GB Cache with ECC
RAID levels	0, 1, 1E, 1+0, 5, 5+0, 6, 6+0 (by PRIMERGY RAID controller)
Storage capacity - physical	Max. 144 TB
Storage capacity - logical	Max. 144 TB
Number of hard disk drives	1 – 144
Drives	SAS, 146 GB, 15000 U/min, 2,5-inch SAS, 300 GB, 15000 U/min, 2,5-inch SAS, 300 GB, 10000 U/min, 2,5-inch SAS, 450 GB, 10000 U/min, 2,5-inch SAS, 600 GB, 10000 U/min, 2,5-inch SAS, 900 GB, 10000 U/min, 2,5-inch SATA, 500 GB, 7200 U/min, 2,5-inch SATA, 1000 GB, 7200 U/min, 2,5-inch SSD Solid State Disks SAS, 100 GB, MLC (Multi Level Cell), 2,5-inch SSD Solid State Disks SAS, 200 GB, MLC (Multi Level Cell), 2,5-inch SSD Solid State Disks SAS, 400 GB, MLC (Multi Level Cell), 2,5-inch SSD Solid State Disks SATA, 100 GB, SLC (Single Level Cell), 2,5-inch SSD Solid State Disks SATA, 400 GB, SLC (Single Level Cell), 2,5-inch
Drive interface	Serial Attached SCSI (6 Gbit/s); Serial ATA (3 Gbit/s)

Installation specification

Dimension (W x D x H) - standard	483 x 650 x 88 mm (2 U) 19 x 25.5 x 3.5 inches (2 U)
Dimension (W x D x H) - maximum	483 x 650 x 266 mm (6 U) 19 x 25.5 x 10.5 inches (6 U)
Service Area	Front: 800 mm or more, Rear: 800 mm or more Front: 31.5 inches or more, Rear: 31.5 inches or more
Weight	max. 105 kg (w. 35 kg per single enclosure) max. 232 lb (w. 77.2 lb per single enclosure)
Power voltage	AC 100 V – 240 V
Power frequency	50 Hz / 60 Hz
Power phase	Single (phase redundancy possible)
Maximum Power Consumption	AC 100 V – 120 V : 386 W (389 VA) AC 200 V – 240 V : 379 W (386 VA)
Maximum Heat Generation	AC 100 V – 120 V : 1390 KJ/h AC 200 V – 240 V : 1364 KJ/h

Environmenal

Temperature (Operating)	10 - 40° C 50 - 104° F
Humidity (Operating)	0 - 80% RH (relative humidity)

Technical details

Noise emission (single enclosure)

Noise notes / description	measured according to ISO7779 and declared according to ISO9296
Sound power (LWAd; 1B = 10dB)	6.0 B
Sound pressure (LpAm)	43.5 dB(A)

Options

Noise notes / description	Hot-plug drives (SAS and SATA, mixing is possible) Hot-plug power supply units, two for full redundancy, each with two redundant fans

Supported configurations

	A wide range of host operating systems, servers as well as applications are supported. For a detailed support matrix check http://ts.fujitsu.com/products/storage/matrixEP.html

Compliance with standards

Product safety	UL 60950-1, CSA 60950-1, EN 60950-1, IEC 60950-1, GOST
Electromagnetic Compatibility	FCC Part-15 Class A, ICES-003 Class A, EN 55022 Class A, VCCI Class A, AS/NZS CISPR 22 Class A, CNS 13438 (C6357) Class A, C-Tick, BSMI, SASO
Electromagnetic Immunity	EN 55024, EN 61000-2-3, EN 61000-3-3
CE certification	Electromagnetic Compatibility Directive 2004/108/EC, Low Voltage Directive 2006/95/EC, Restriction of certain hazardous Substances Directive 2011/65/EC
Environmental compliance	RoHS-compliant (Restriction of hazardous substances), WEEE-compliant (directive on waste electrical and electronic equipment)
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.
Compliance link	Compliance Link: https://sp.ts.fujitsu.com/sites/certificates/default.aspx

Maintenance and support services

Standard Warranty	2 years On-site Service
ServicePack/Contract Hardware	The perfect extension for optimized operation: Recommended Service: 3 years, 24x7 On-site Service with 4h response time. Check ts.fujitsu.com/services/maintenance_support/hardware_services.html for service levels available at your site.

More information

Fujitsu platform solutions

In addition to Fujitsu ETERNUS JX40, 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/
■ PRIMERGY: Industrial standard server
■ SPARC Enterprise: UNIX server
■ PRIMEQUEST: Mission-critical IA server
■ ETERNUS: Storage system

Software

www.fujitsu.com/software/
■ Interstage: Application infrastructure software
■ Systemwalker: System management software

More information

Learn more about Fujitsu ETERNUS JX40, please contact your Fujitsu sales representative, Fujitsu business partner, or visit our website.
www.fujitsu.com/fts/eternus

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:
www.fujitsu.com/global/about/environment/

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