FUJITSU

Data Sheet
FUJITSU PRAID EP420e

RAID Controller SAS/SATA 12Gbit/s 2GB cache based on LSI MegaRAID® for external storage devices

The RAID concept (Redundant Array of Independent Disks) refers to several independent hard disks which form a large logical drive when switched together.
Redundancy information is calculated from several data blocks (except for RAID 0) and saved distributed to the individual hard disks. Your operating system no longer accesses the individual hard disks, but the array.
The actual objective of the RAID concept is to increase availability and prevent downtimes in the event of a hard disk failure. However, the theoretical security of the RAID concept is only as good as the RAID controller used. Benefit from the Fujitsu RAID controllers where technology, experience and practical implementation all ensure the security that your company needs in the event of an emergency.

PRAID EP420e

The Fujitsu RAID ControllerPRAID EP420e with 8 external SAS and SATA ports sets new speed and data security standards for external storage. It includes the latest PCI Express 3.0 and 12 Gb/s SAS 3.0 technology and is designed for configuring external storage enclosures with high-performance SAS hard disk drives (HDDs), high-capacity SATA HDDs or application-accelerating solid state drives (SSDs). The RAID stack is based on the LSI MegaRAID® and offers high data throughput, a comprehensive fault tolerance function and user-friendly management options. Moreover, the

Controller management is integrated seamlessly into the Fujitsu server management concept. All controller functions are supported by the Fujitsu ServerView RAID Manager. The PRAID EP420e offering up to double the data transfer rate of 6 Gb/s SAS solutions, 12 Gb/s SAS allows the SAS infrastructure to deliver bandwidth that can fully utilize that of PCI Express 3.0 with a single controller card. The EP420e delivers two 1.2 GHz Power PC processor cores and 72-bit DDRIII interface that drives 2 GB cache memory. Regardless of the drive speed, it delivers significant performance improvements in both read and write applications. Powerful online management service programs (Fujitsu ServerView RAID Manager), which are simple to operate and quick to install, provide the administrator with unparalleled flexibility and access to the arrays. The RAID controller supports all of the important RAID levels including RAID 0, 1, 5, 6, 10, 50 and 60.
The Advanced Software Options in combination with Solid State Disks in front of HDD volumes can create high-capacity, high-performance controller cache pools, depending on the load profile. A free of charge test version is available at PRIMERGY-PM. Link: http://docs.ts.fujitsu.com/dl.aspx?id=c816a64f-8b6d-47df-ba31-836874f08c07

Main Features	Benefits
■ Eight external 12Gb/s SATA+SAS ports	■ RAID levels 0, 1, 5 and 6 for more data security
■ 2GB 1333MHz DDRIII cache memory	■ RAID spans 10, 50 and 60 for more data security
■ ETERNUS JX40 Support	■ Supports up to 4 ETERNUS JX40 (up to 96 hard disks)
■ High-performance cache; RAID 6 Support; PCIe 3.0 Support	■ Significant increase in performance due to a 1 GB controller cache. Meets highest security requirements without any data loss in case 2 disks per RAID 6 array fail
■ User-friendly management options	■ Seamless integration of RAID management into the FTS management concept
■ For use of optional Flash Backup Unit (FBU) the TFM (Transportable Flash Module) has to be ordered.	■ Ensures the integrity in case of power outage.
	■ Long-term, secure store of data and better serviceability compared to BBU.
■ RAID Advanced Software Options LSI CacheCade® and Fast Path.	■ Create high performance controller cache pools.

Technical details

Technical details

Controller Silicon	RoC (RAID on Chip) LSI SAS3108
Controller type	RAID 5/6 Ctrl.
Operating system pre-installed	Information to released operating systems can be found in the server datasheets. Details can be found in the released drivers list on the support portal.
Released drivers list link	http://support.ts.fujitsu.com/Download/Index.asp
Number of ports	8 ports ext.
Connector external	2x SFF8644 (Mini-SAS HD)
Data transfer rate up to	12 Gbit/s
Bus type	PCIe 3.0
Bus width	x8
RAID Management	ServerView RAID Manager StoreCLI (command-line interface) Crtl + R

Key RAID Data Protection Feature	- RAID levels 0, 1, 5 and 6
	- RAID spans 10, 50 and 60
	- Online Capacity Expansion (OCE)
	- Online RAID level Migration (RLM)
	- Auto resume after loss of system power during array rebuild or reconstruction (RLM)
	- Single controller multipathing (failover)
	- Load Balancing
	- Configurable stripe size up to 1MB
	- Fast initialisation for quick array setup
	- Check consistency for background data integrity
	- SSD support with SSD Guard™ technology
	- Patrol read for media scanning and repairing
	- Up to 64 logical drive support
	- DDF-compliant configuration on disk (COD)
	- S.M.A.R.T support
	- Global and dedicated Hot Spare with Revertible Hot Spare support
	  - Automatic rebuild
	  - Enclosure affinity
	- Enclosure management
	  - SES (inband)
	  - SGPIO (outband)
	- Shielded state drive diagnostic technology

RAID level	0, 1, 10, 5, 50, 6, 60
RAID cache backup unit	Optional FBU
RAID controller notes	based on LSI SAS3108
Interface technology	SAS/SATA

Order code	Product Name	Height of bracket	RAID controller cache size	Number of Connectors
S26361-F3847-E202	PRAID EP420e LP	Low Profile (LP)	2 GB	2
S26361-F3847-E2	PRAID EP420e FH	Full Height (FH)	2 GB	2
S26361-F3847-L502	PRAID EP420e FH/LP	Full Height / Low Profile	2 GB	2

Options

Order code	Product Name	Notes
S26361-F5243-E125	RAID Ctrl FBU option for PRAID EP4xx with 25cm cable	installed - Super-capacitor incl. cable
S26361-F5243-E170	RAID Ctrl FBU option for PRAID EP4xxwith 70cm cable	installed - Super-capacitor incl. cable
S26361-F5243-E200	TFM PRAID EP420i/e	installed - Transportable Flash Module - contains flash memory and control logic for Flash Backup Unit (FBU) – required for FBU option
S26361-F5243-L110	RAID Ctrl FBU option for PRAID EP4xx with 25cm, 55cm, 70cm cable	installed - Super-capacitor incl. cable

Options

Order code	Product Name	Notes
S26361-F5243-L660	RAID Advanced Software Options: LSI CacheCade®, Fastpath®	option / loose delivery - LSI CacheCade® and Fast Path for modular RAID controller and Mezzanine card with 1GB / 2GB cache Testkey available: PRIMERGY-PM

Compliance

Compliance notes	According to the corresponding system
Compliance link	https://sp.ts.fujitsu.com/sites/certificates

More information

Fujitsu products, solutions & services

In addition to Fujitsu with PRAID EP420e, 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/products/computing/

Software
www.fujitsu.com/software/

More information

Learn more about FUJITSU Server PRAID EP420e, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
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 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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