FUJITSU

Data Sheet
Fujitsu PRAID EP440i TFM/ EP440i TFM SafeStore

RAID Controller SAS 12Gbit/s 4GB cache based on LSI MegaRAID® for internal storage devices

The RAID architecture (Redundant Array of Independent Disks) combines multiple storage devices, including hard drives and NVMe devices, into a single logical unit. Redundancy data is generated from data segments (barring RAID 0) and distributed across the devices. Consequently, operating systems interact with this collective array rather than the individual devices. The core purpose of RAID is to enhance data availability, reducing potential disruptions from storage devices failures. The effectiveness of a RAID setup largely depends on the RAID controller in use.
Choose Fujitsu RAID controllers for a blend of modern technology and proven experience, providing the data protection that businesses need today.

PRAID EP440i TFM/ EP440i TFM SafeStore
The Fujitsu RAID Controller PRAID EP440i TFM with 4GB cache and 12Gbit/s SAS ports x (8) improves performance for storage intensive workloads such as databases and sets new speed and data security standards for internal storage drives. 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 EP440i TFM is designed for backward

compatibility with 3Gbit/s SAS as well as with 6Gbit/s and 3Gbit/s SATA hard drives. Regardless of the drive speed, it delivers significant performance improvements in both read and write applications. SafeStore is supported by different controller-PRAID EP440i TFM SafeStore. MegaRAID® SafeStore software helps manage self-encrypting drives attached to RAID controller cards for higher levels of security. An authentication key is required to lock a drive so that its contents remain safely beyond the reach of hackers and thieves and MegaRAID® SafeStore software helps to create and locally manage those authentication keys.The RAID controller supports all of the important RAID levels including RAID 6 and 60. The optional flash battery backup (FBU) combined with TFM module ensures the integrity of the data stored in the cache on the RAID controller in case of a power outage. In this event, the data will be copied to a non-volatile flash memory (TFM). The FBU provides a low-priced alternative to an uninterruptible power supply (UPS) and, when compared to battery backup up units (BBU), enables a long-term, secure store of data and better serviceability. The TFM module is bundled with the controller, the FBU is optional. Important information for later upgrade from std. SAS controller: Specific cable sets per system are available as L-parts. For upgrade from std. SAS controller see manual. Orders ex factory are configured with appropriate cables.

Main Features	Benefits
Number of supported drives ■ 12Gbit/s SAS ports PCI Express® 3.0 x8 RAID levels ■ LSISAS3108 12Gbit/s RAID-on-Chip	■ Connect up to 240 HDDs and SSDs ■ RAID levels 0, 1, 5 and 6 for more data security, RAID spans 10, 50 and 60 for more data security
Scalable performance ■ 4GB 1333MHz DDRIII cache memory	■ Improves performance for storage intensive workloads (such as databases) and for certain load profiles like random access to databases (especially for SSD drives)
Simplified management ■ User Management Options	■ Seamless merging of the RAID management into system management
■ RAID Advanced Software Options LSI CacheCade®. Fast Path is supported free of charge by controller firmware	■ Create high performance controller cache pools

Technical details

Technical details

Controller Silicon	RoC (RAID on Chip) LSI SAS3108
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
Bus type	PCIe 3.0
Bus width	x8
RAID Management	ServerView RAID Manager StorCLI (command-line interface) BIOS Configuration Utility

Key RAID Data Protection Feature	- RAID levels 0, 1, 5 and 6
	- RAID spans 10, 50 and 60
	- Maximum number of spans is 8
	- Online Capacity Expansion (OCE)
	- Online RAID level Migration (RLM)
	- Auto resume after loss of system power during array rebuild or reconstruction (RLM)
	- Fast initialization for quick array setup
	- Single controller multipathing (failover)
	- Load Balancing
	- Configurable stripe size up to 1MB
	- Fast initialisation for quick array setup
	- Check consistency for background data integrity - Make Data Consistent (MDC)
	- Patrol read for media scanning and repairing
	- Up to 64 logical drives per controller
	- 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)

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-L110	RAID Ctrl FBU option for PRAID EP4xx with 25cm, 55cm, 70cm cable	installed - Super-capacitor incl. cable

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 EP440i TFM/ EP440i TFM SafeStore, 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 PRAID EP440i TFM/ EP440i TFM SafeStore, 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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