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Data Sheet
Fujitsu PRAID EP680i

RAID Controller SAS 12Gbit/s 8GB cache based on Broadcom 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 EP680i
The Fujitsu RAID Controller PRAID EP680i with 8GB cache and 16x12Gbit/s SAS ports improves performance for storage intensive workloads such as databases and sets new speed and data security standards for internal storage drives. The new PRAID EP680i supports up to 16 SAS/SATA drives, up to 4 NVMe PCIe drives or a mixture of SAS/SATA and NVMe drives. NVMe is an interface with lower overhead, lower latency and drastically increased bandwidth and IOP's. The RAID stack is based on the Broadcom 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 EP680i is designed for 3, 6 and 12Gbit/s SAS as well as for 3 and 6Gbit/s SATA drives. Regardless of the drive speed, it delivers significant performance improvements in both read and write applications. The controller firmware also supports FastPath® without an additional license. FastPath® accelerates the use of SSD only configurations. The RAID controller supports all of the important RAID levels including RAID 6 and 60. The optional flash battery backup (FBU) combined with the already included 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 TFM module is bundled with the controller, the FBU is optional. Important information for later upgrade from or downgrade to std. SAS controller: Specific cable sets per system can be required as L-Part, please refer to Paper Configurator, order tool or controller and system documentation. Orders ex factory are configured with appropriate cables.

Main Features	Benefits
Number of supported drives	
■ 16 lines of 12Gbit/s SAS ports PCI Express® 4.0	■ Connect up to 256 SAS/SATA HDDs and SSDs, 4 NVMe SSDs
RAID levels	
■ SAS3916 12Gbit/s RAID-on-Chip	■ RAID levels 0, 1, 5 and 6 for more data security, RAID spans 10, 50 and 60 for more data security
Scalable performance	
■ 16 lines of 16 Gbit/s PCIe Gen 4 for up to 4x x4 NVMe drives; 8GB 2666MHz DDR4 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-friendly management options	■ Seamless integration of RAID management

Technical details

Technical details

Controller Silicon	RoC (RAID on Chip) SAS3916
Adapter 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	16 ports int.
Number of Connectors	2
Number of internal ports	16
Data transfer rate up to	12 Gbit/s; 16 Gbit/s
Bus type	PCIe 4.0
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
	- 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 240 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)
	- Support for Self Encrypting Drives (SED)

RAID level	0, 1, 10, 5, 50, 6, 60
RAID cache backup unit	Optional FBU
RAID controller notes	based on SAS3516
Interface technology	SAS/SATA/PCIe-NVMe

Order code	Product Name	Height of bracket	RAID controller cache size	Number of Connectors
PYBSR4C62L	PRAID EP680i NVMe LP	Low Profile (LP)	8 GB	2
PYBSR4C62	PRAID EP680i NVMe FH	Full Height (FH)	8 GB	2
PYBSR4C6L	PRAID EP680i LP	Low Profile (LP)	8 GB	2
PYBSR4C6	PRAID EP680i FH	Full Height (FH)	8 GB	2
PY-SR4C6	PRAID EP680i FH/LP	Full Height / Low Profile	8 GB	2

Order code	Product Name	Notes

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 EP680i, 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 EP680i, 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 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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