

# Data Sheet

## FUJITSU RAID Controller SAS 6Gbit/s 1GB (D3116)

RAID Controller SAS 6Gbit/s 1GB cache based on LSI MegaRAID® for internal 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.

**RAID Controller SAS 6Gbit/s 1GB (D3116)**  
The Fujitsu RAID Controller SAS 6Gbit/s 1GB(D3116) with 8 ports 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 RAID Controller SAS 6Gbit/s 1GB (D3116) 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. Due to the support of 64-bit addressing, a robust set of RAID features and demanding error tolerance functions the controller provides high RAID performance and data availability. 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 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. Always select FBU and TFM module in combination.



| Main Features                                                                                                                                                                                                           | Benefits                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>■ 6Gbit/s SAS ports PCI Express® 2.0 x8</li><li>■ LSI SAS2208 6Gbit/s RAID-on-Chip</li><li>■ 1GB 1333MHz DDRIII cache memory</li><li>■ Optional Flash Backup Unit (FBU)</li></ul> | <ul style="list-style-type: none"><li>■ Connect up to 32 HDDs and SSDs</li><li>■ RAID levels 0, 1, 5 and 6 for more data security</li><li>■ RAID spans 10, 50 and 60 for more data security</li><li>■ Ensures the integrity in case of power outage</li><li>■ Long-term, secure store of data and better serviceability compared to BBU</li><li>■ Seamless merging of the RAID management into system management</li></ul> |
| <ul style="list-style-type: none"><li>■ User Management Options</li></ul>                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                            |

# Technical details

## Technical details

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|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Controller Silicon               | RoC (RAID on Chip) LSI SAS2208                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 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       | <a href="http://support.ts.fujitsu.com/Download/Index.asp">http://support.ts.fujitsu.com/Download/Index.asp</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Number of ports                  | 8 ports int.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Connector internal               | 2x SSF-8087                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Data transfer rate up to         | 6 Gbit/s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Bus type                         | PCIe 2.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Bus width                        | x8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| RAID Management                  | ServerView RAID Manager<br>MegaCLI (command-line interface)<br>WebBIOS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Key RAID Data Protection Feature | <ul style="list-style-type: none"> <li>- RAID levels 0, 1, 5 and 6</li> <li>- RAID spans 10, 50 and 60</li> <li>- Online Capacity Expansion (OCE)</li> <li>- Online RAID level Migration (RLM)</li> <li>- Auto resume after loss of system power during array rebuild or reconstruction (RLM)</li> <li>- Fast initialization for quick array setup</li> <li>- Single controller multipathing (failover)</li> <li>- Load Balancing</li> <li>- Configurable stripe size up to 1MB</li> <li>- Fast initialisation for quick array setup</li> <li>- Check consistency for background data integrity - Make Data Consistent (MDC)</li> <li>- Patrol read for media scanning and repairing</li> <li>- Up to 64 logical drives per controller</li> <li>- S.M.A.R.T support</li> <li>- Global and dedicated Hot Spare with Revertible Hot Spare support <ul style="list-style-type: none"> <li>- Automatic rebuild</li> <li>- Enclosure affinity</li> </ul> </li> <li>- Enclosure management <ul style="list-style-type: none"> <li>- SES (inband)</li> <li>- SGPIO (outband)</li> </ul> </li> </ul> |
| RAID level                       | 0, 1, 10, 5, 50, 6, 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| RAID cache backup unit           | Optional FBU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| RAID controller notes            | (based on LSI SAS2208)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Interface technology             | SAS/SATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Order code      | Product Name                 | Height of bracket         | RAID controller cache size | Number of Connectors |
|-----------------|------------------------------|---------------------------|----------------------------|----------------------|
| S26361-F3669-E1 | RAID Ctrl SAS 6G 1GB (D3116) | Matching to system        | 1 GB                       | 2                    |
| S26361-F3669-E2 | RAID Ctrl SAS 6G 1GB (D3116) | Matching to system        | 1 GB                       | 2                    |
| S26361-F3669-L1 | RAID Ctrl SAS 6G 1GB (D3116) | Full Height / Low Profile | 1 GB                       | 2                    |

| Order code        | Product Name                         | Notes                                                                                                                                       |
|-------------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| S26361-F3669-E125 | RAID Ctrl FBU option with 25cm cable | installed - Super-capacitor incl. cable                                                                                                     |
| S26361-F3669-L110 | FBU option with 25/55/70 cm cable    | loose delivery - Super-capacitor incl. cables for all systems                                                                               |
| S26361-F3669-E100 | TFM Module for FBU option on D3116   | installed - Transportable Flash Module - contains flash memory and control logic for Flash Backup Unit (FBU) – required for FBU option      |
| S26361-F3669-L100 | TFM Module for FBU option on D3116   | loose delivery - Transportable Flash Module - contains flash memory and control logic for Flash Backup Unit (FBU) – required for FBU option |

|                  |                                                                                                         |
|------------------|---------------------------------------------------------------------------------------------------------|
| Compliance       |                                                                                                         |
| Compliance notes | According to the corresponding system                                                                   |
| Compliance link  | <a href="https://sp.ts.fujitsu.com/sites/certificates">https://sp.ts.fujitsu.com/sites/certificates</a> |

# More information

## Fujitsu products, solutions & services

In addition to Fujitsu with RAID Controller SAS 6Gbit/s 1GB (D3116) , 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/](http://www.fujitsu.com/global/products/computing/)

### Software

[www.fujitsu.com/software/](http://www.fujitsu.com/software/)

## More information

Learn more about FUJITSU Server RAID Controller SAS 6Gbit/s 1GB (D3116) , please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website. <http://www.fujitsu.com/primergy>

## Fujitsu green policy innovation

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**Green  
Policy  
Innovation**

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