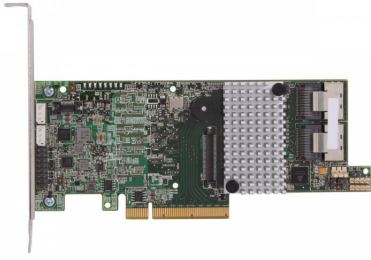# Broadcom 9266-8i Datasheet

Broadcom LSI 9266-8i LSI00295 PCIe 2.0 x8 LSISAS2208 8 Internal Ports 6Gb/s SATA SAS RAID Controller

9266-8i

Highest Server RAID Performance for Database and Multimedia Applications

As storage demands expand and processing loads grow, it becomes increasingly more difficult for administrators to achieve maximum performance from their applications. The newest line of MegaRAID® 6Gb/s SATA+SAS controller cards, built on the LSI SAS 2208 dual-core ROC, offer unmatched I/O performance for database applications and streaming digital media environments. The MegaRAID SAS 9266-4i controller, with four internal ports, delivers two 800MHz PowerPC processor cores and a 72-bit DDRIII interface that drives 1GB cache memory. Users can deploy the MegaRAID SAS 9266-8 i controller in existing HDD-based server environments for significant performance gains. Alternatively, for users implementing server platforms based on solid-state storage, these next-generation MegaRAID controllers exploit the potential of SSDs for unsurpassed performance and enterprise-class reliability.

Protect Cached Data with MegaRAID CacheVault™ Technology or BBU

RAID caching is a cost-effective way to improve I/O performance by writing data to a controllers' cache before it is written to disk. In write-back mode, data written to cache is vulnerable until it is made permanent on disk. To avoid the

possibility of data loss or corruption during a power or server failure, Broadcom offers the CacheVault flash cache protection module or the LSIiBBU09 battery backup unit for the MegaRAID SAS 9266-8i controller. CacheVault flash cache protection uses NAND flash memory powered by a super-capacitor to help protect data stored in the MegaRAID controller cache. The RAID controller automatically writes the data in cache to flash when a power failure occurs, while the super-capacitor keeps the current going during the process. When the power comes back, the DRAM is recovered from flash and the system goes on without loss of data. Customers have the flexibility to choose a traditional LiON battery solution or a greener, lower TCO cache protection solution with MegaRAID CacheVault technology.

Support for Advanced Software Options

The LSI family of 6Gb/s MegaRAID controllers are designed to support advanced software options that provide white box channel partners with enhanced performance and data protection capabilities. These new software options help enable end users to address key business challenges while helping to deliver a higher return on their IT investments. MegaRAID CacheCade® software and MegaRAID Fast Path software boost transactional I/O performance of solid state disk configurations, while MegaRAID Recovery software and MegaRAID SafeStore™ software enable enhanced data protection and security.

Intuitive RAID Management Utility

The MegaRAID Management Suite™ of software provides essential tools to manage MegaRAID products, whether deployed in an enterprise or small business. Broadcom offers a collection of applications and tools including a pre-boot setup utility and a full spectrum of online RAID management utilities. This suite of applications allows administrators to adjust SAS or SATA topology views from the system host, controller and disk enclosure down to the logical and physical drive level. Extending to enterprise deployments, these tools scale to more easily configure, monitor and manage RAID and JBOD volumes locally or over the LAN network.

Features

- Eight Internal 6Gb/s SATA+SAS ports
- Two Mini-SAS internal connector (SFF8087)
- LSI SAS 2208 Dual- core 6Gb/s ROC
- –x2 800MHz PowerPC Processors
- 1GB DDRIII cache memory
- RAID Levels 0, 1, 5, 6, 10, 50 and 60
- Support for NAND flash or BBU cache protection solution

Key Advantages

- Unmatched RAID performance
- Connect up to 128 3Gb/s and 6Gb/s SATA and SAS hard drives or SSDs
- Helps users realize potential of solidstate storage deployments
- CacheVault technology option for greener, lower total cost cache protection (LSICVM01)
- Heat-tolerant battery backup option (LSIiBBU09)

Specifications

- Product: MegaRAID SAS 9266-8i
- MPN: L5-25413-16
- OPN: LSI00295
- Solution Provided: Eight-port internal SAS solution for performance-hungry applications using up to 128 SAS, SATA and solid state drives (SSDs)
- Physical Dimensions: MD2 Low profile (6.6" X 2.536")
- Connectors: Two Mini-SAS SFF8087 Internal connector (side mount)
- Device Support: Up to 128 SAS and/or SATA hard drives and SSDs
- Host Bus Type: x8 lane PCI Express 2.0 Compliant

- Data Transfer Rates: Up to 6Gb/s per port

- I/O Processor/SAS Controller: LSI SAS 2208 Dual-Core RAID on Chip (ROC)

- Cache Memory: 1 GB 1333MHz DDRIII SDRAM

- Cache Protection:

  - MegaRAID CacheVault flash cache protection (optional – LSICVM01 / LSI00297)

  - MegaRAID LSIiBBU09 (optional – LSIiBBU09 / LSI00279)

- Key RAID Data Protection Features:

  - 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 initialization for quick array setup

  - Check Consistency for background data integrity

  - Patrol read for media scanning and repairing

  - 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

    - Emergency SATA hot spare for SAS arrays

  - Enclosure management

    - SES (inband)

    - SGPIO (sideband)

- Operating Temperature: Maximum ambient: Controller Card: 55°C, with optional CVM01: 55°C, with optional LSIiBBU09: 55°C

- Operating Voltage: +3.3V, +12V

- MTBF (Calculated): 1,031,514 hours

- Warranty: 3 years, free advanced technical support, advanced replacement option

- Regulatory Certifications: EN55022, EN55024, EN60950, EN 61000-3-2, EN 61000-3-3; FCC Class A, Class B; UL1950; UL; CSA C22.2; VCCI; RRL for MIC; BSMI; C-tick

- RAID Management:

  - MegaRAID Management Suite

- - MegaRAID Storage Manager™
  - MegaCLI (command-line interface)
  - WebBIOS
- Optional SSD Optimization:
  - MegaRAID CacheCade Software leverages SSDs in front of HDD volumes to create high-capacity, high-performance controller cache pools
  - MegaRAID Fast Path Software provides high-performance I/O acceleration for SSD arrays connected to 6Gb/s MegaRAID SATA+SAS controllers
- OS Support: Extensive support includes Microsoft® Windows® Vista/2008/Server 2003, Linux® , Solaris™ (x86), FreeBSD® , VMware® and more.

For more information of this Broadcom MegaRAID SAS 9266-8i SATA+SAS RAID Controller, please visit Broadcom website: https://docs.broadcom.com/doc/12351959

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