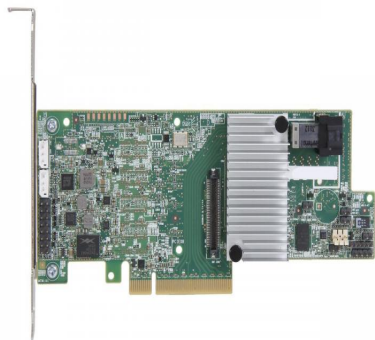# Broadcom 9361-4i Datasheet

Broadcom LSI 9361-4i LSI00415 PCIe 3.0 x8 SAS3108 4 Internal Ports MegaRAID SATA+SAS RAID Controller

9361-4i

Unmatched RAID Performance for Next-Generation Servers and Storage

The explosive growth of data in cloud and enterprise datacenters is driving the need for a higher performance storage interface to speed the ability of critical applications to access data. Broadcom fi rst-to-market 12Gb/s SAS solutions are designed to deliver the performance and data protection capabilities required for the most demanding next-generation server and storage platforms. Off ering up to double the data transfer rate of 6Gb/s SAS solutions, 12Gb/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 MegaRAID SAS 9361-4i, with four internal ports, delivers two 1.2GHz PowerPC® processor cores and a 72-bit DDRIII interface that drives 1GB cache memory. Powered by the LSI SAS 3108 dual-core ROC, the 9361-4i controller includes the latest PCI Express 3.0 and 12Gb/s SAS technology and helps users to support increased scaling of hard disk drives (HDDs) and maximize the performance benefi ts of solid state drives (SSDs).

Enterprise Data Protection

Standard support for the most popular RAID levels and accessories, including RAID 5, RAID 6, and CacheVault® Flash

cache protection module, further strengthen the data protection capabilities of the MegaRAID SAS 9361-4i. A new enterprise feature employed by the 12Gb/s MegaRAID SAS controllers is advanced drive diagnostic technology. In the event of a physical drive failure, the drive is placed in a shielded state and the MegaRAID controller starts drive diagnostics to determine if the drive is indeed failed or can be restored. This saves customers time, money and lost compute time associated with transient drive failures and unnecessary drive returns.

Support for Advanced Software Options

The family of 12Gb/s MegaRAID controllers are designed to support Broadcom advanced software options that provide system integrators and VARs with enhanced performance and data protection capabilities. These software options help enable end users to address key business challenges while helping to deliver a higher return on their IT investments. MegaRAID CacheCade™ Pro 2.0 software (optional) and MegaRAID Fast Path software (included) boost transactional I/O performance of solid state disk confi gurations, while SafeStore™ software enables enhanced data protection and security when used with encryption capable devices.

Key Features

- High performance 12Gb/s data transfer rates
- Four internal 12Gb/s SATA+SAS ports
- One mini-SAS SFF8643 internal connector (horizontal mount)
- LSI SAS 3108: 1.2GHz PowerPC® 476 dual core 12Gb/s ROC
- PCI Express 3.0 host interface
- 1GB DDRIII cache memory
- RAID levels 0, 1, 5, 6, 10, 50, and 60
- Support for CacheVault® fl ash cache protection

Key Advantages

- 12Gb/s solutions accelerate performance for next-generation datacenters, web and cloud
- Delivers enterprise-class data protection and security
- Preserves investment in 6Gb/s and 3Gb/s drives
- Support for Advanced Software options
- Connect up to 128 3Gb/s, 6Gb/s, or 12Gb/s SATA and SAS devices

Specifications

- Product: MegaRAID SAS 9361-4i
- MPN: 05-25420-10
- OPN: LSI00415
- Solution Provided: Four-port internal 12Gb dual core ROC-based SAS solution for data center, cloud, and performance-hungry applications using up to 128 SAS or SATA devices
- Physical Dimensions: MD2 low profile (6.6" X 2.536")
- Connectors: One mini-SAS SFF8643 internal connector (horizontal mount)
- Device Support: Up to 128 SAS and/or SATA devices
- Host Bus Type: x8 lane PCI Express 3.0 compliant
- Data Transfer Rates: Up to 12Gb/s per port
- I/O Processor / SAS Controller: LSI SAS 3108 dual core RAID on Chip (ROC)
- Cache Memory: 1GB 1866MHz DDRIII SDRAM
- Cache Protection: Optional CacheVault Flash Module (LSICVM02) – Includes CVFM04, CVPM02, mounting clip, and cable
- 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
    - Load Balancing
    - Configurable stripe size up to 1MB
    - Fast initialization for quick array setup

- - Check Consistency for background data integrity
  - SSD Support with SSD Guard™ technology
  - 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)
  - Databolt™ bandwidth optimizer technology support for compatible expander-based enclosures
  - Shielded state drive diagnostic technology
- Operating Temperature: Maximum ambient: Controller Card: 55°C, with optional CacheVault accessory (LSICVM02): 55°C
- Operating Voltage: +3.3V, +12V
- MTBF (Calculated): 1,343,187 hours
- Hardware Warranty: 3 years, free 5x8 phone 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
- MegaRAID Management Suite
  - MegaRAID Storage Manager
  - StorCLI (command-line interface)
  - CTRL-R (BIOS configuration utility)
  - HII (UEFI Human Interface Infrastructure)
- SSD Optimization
  - MegaRAID CacheCade Pro 2.0 Software leverages SSDs in front of HDD volumes to create high-capacity, highperformance controller cache pools (Optional Upgrade)
  - MegaRAID Fast Path Software provides high-performance I/O acceleration for SSD arrays connected to 6Gb/s MegaRAID SATA+SAS controllers (Included)
- Compliances: EMC: Class B-US (CFR 47, P15B); Canada (ICES-003); Japan (V-3/02.04); Europe (EN55022/EN55024); Australia/New Zealand (AS/NZS 3548); Safety: EN60950
- OS Support: Extensive support includes Microsoft® Windows® Server 2012/8 & 7/2008/Vista/2003, Linux®, Solaris™ (x86), FreeBSD®, VMware® and more.

For more information of this Broadcom MegaRAID SAS 9361-4i, please visit Broadcom website:

https://docs.broadcom.com/doc/12352133

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