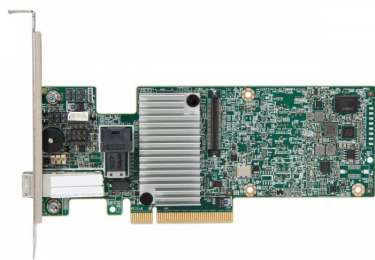


Broadcom 9380-4i4e Datasheet



Broadcom LSI 9380-4i4e 05-25190-02 LSI00439 PCIe 3.0 x8 SAS3108 4 Internal 4 External Ports 12Gb/s SATA+SAS RAID Controller

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The explosive growth of data in cloud and enterprise data centers is driving the need for a higher performance storage interface to speed the ability of critical applications to access data. Broadcom first-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. Offering 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 9380-4i4e, with four internal and four external ports, delivers two 1.2GHz PowerPC® processor cores and a 72-bit DDRIII interface that drives 1GB cache memory. Powered by the LSISAS3108 dual-core ROC, the 9380-4i4e controller includes the latest PCI Express 3.0 and 12Gb/s SAS technology and is designed for configuring both internal storage and external JBOD storage enclosures with high-performance SAS hard drives, high-capacity SATA hard drives or application-accelerating 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 9380-4i4e. 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 shield 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 Broadcom family of 12Gb/s MegaRAID controllers are designed to support 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 configurations, while SafeStore™ software enables enhanced data protection and security when used with encryption capable devices.

Features

- High performance 12Gb/s data transfer rates
- Four internal / Four external 12Gb/s SATA+SAS ports
- One mini-SAS SFF8643 internal connector
- One mini-SAS SFF8644 external connector
- LSISAS3108: 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 flash cache protection

Key Advantages

- 12Gb/s solutions accelerate performance for next-generation data centers, web and cloud
- Delivers enterprise-class data protection and security
- Preserves investment in 6Gb/s and 3Gb/s drives
- Support for Broadcom Advanced Software options
- Connect up to 240 3Gb/s, 6Gb/s, or 12Gb/s SATA and SAS devices

Specifications

- Product: MegaRAID SAS 9380-4i4e
- MPN: 05-25190-02
- OPN: LSI00439
- Solution Provided: Four port internal / Four port external SATA+SAS solution for internal drive storage and external JBOD expansion in a wide variety of performance and capacity-oriented environments using up to 240 SAS or SATA devices
- Physical Dimensions: MD2 low profile (6.6" X 2.536")
- Connectors
 - One mini-SAS SFF8643 internal connector
 - One mini-SAS SFF8644 external connector
- Device Support: Up to 240 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: LSISAS3108 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)
 - 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): 1,203,345 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 9380-4i4e, please visit Broadcom website:

<https://docs.broadcom.com/doc/12351996>

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