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## Product Brief

# 9380-8i8e

## High Port Count 12 Gb/s PCI Express SATA + SAS RAID Controller

### Unlock Storage Performance with Broadcom 12 Gb/s SAS Solutions



### Key Features

- High performance 12 Gb/s data transfer rates
- Eight internal+eight external 12 Gb/s SATA+SAS ports
- Two mini-SAS SFF8643 internal connectors (horizontal mount)
- Two mini-SAS SFF8644 external connectors
- SAS3316 RAID-on-Chip
  - Dual-core 1.2 GHz PowerPC 476
  - 16 Native 12 Gb/s SAS/SATA ports
- PCI Express 3.0 host interface
- 2 GB DDR3 cache memory

### Key Advantages

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

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 12 Gb/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 6 Gb/s SAS solutions, 12 Gb/s SAS allows the SAS infrastructure to deliver bandwidth that can fully utilize that of PCI Express 3.0 with a single controller card.

### Next-Generation High Port Count SAS RAID

The MegaRAID® SAS 9380-8i8e, with eight internal and eight external ports in a low-profile form factor, delivers two 1.2 GHz PowerPC processor cores and a 72-bit DDR3 interface that drives 2 GB cache memory. Powered by the SAS3316 dual-core ROC, with 16 native SAS/SATA ports, the 9380-8i8e controller can take full advantage of the latest PCI Express 3.0 interface to provide higher performance and increased throughput. The 12 Gb/s MegaRAID SAS 9380-8i8e is designed to direct connect eight drives inside the box or eight drives outside the box. By leveraging SAS expander technology, users can expand to up to 240 drives increasing inside the box drive count or through supporting external JBOD storage enclosures.

### Enterprise Data Protection

The MegaRAID SAS 9380-8i8e RAID controller supports data retention by using NAND flash memory down on the controller, backed up by a CacheVault Power Module 02 (CVPM02). The CVPM02 module is a supercapacitor pack that provides power for the backup of your data in case of host power loss or server failure. The CVPM02 module is connected to the controller remotely by cable. The data is backed up to the NAND flash memory on the MegaRAID controller board.

Standard support for the most popular RAID levels, including RAID 5 and RAID 6, further strengthens the data protection capabilities of the MegaRAID SAS 9380-8i8e. A new enterprise feature employed by the 12 Gb/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.



MegaRAID SAS 9380-8i8e Controller Card	
Solution Provided	Eight-port internal/eight-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 (6.600" x 2.712")/(167.65 mm x 68.90 mm)
Connectors	Two SFF8643 x4 Two SFF8644 x4
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 12 Gb/s per port
I/O Processor/SAS Controller	SAS3316 dual core RAID on Chip (ROC)
Key RAID Data Protection Features	<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>• Single controller multipathing</li> <li>• Load balancing</li> <li>• Configurable stripe size up to 1 MB</li> <li>• Fast initialization for quick array setup</li> <li>• Check Consistency for background data integrity</li> <li>• SSD support with SSD Guard technology</li> <li>• Patrol read for media scanning and repairing</li> <li>• 64 logical drive support</li> <li>• DDF compliant Configuration on Disk (COD)</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> <li>- Emergency SATA hot spare for SAS arrays</li> </ul> </li> <li>• Enclosure management <ul style="list-style-type: none"> <li>- SES (inband)</li> <li>- SGPIO (sideband)</li> </ul> </li> <li>• DataBolt bandwidth optimizer technology support for compatible expander-based enclosures</li> <li>• Shielded state drive diagnostic technology</li> </ul>
Operating Temperature	Maximum ambient: Controller Card: 55°C, with optional CacheVault accessory (CVPM02): 55°C
Operating Voltage	+3.3V, +12V
MTBF (Calculated)	>2,500,000 hours at 40°C
Hardware Warranty	3 years; with advanced replacement option
MegaRAID Management Suite	<ul style="list-style-type: none"> <li>• LSA (LSI Storage Authority)</li> <li>• MegaRAID Storage Manager</li> <li>• StorCLI (command-line interface)</li> <li>• CTRL-R (BIOS configuration utility)</li> <li>• HII (UEFI Human Interface Infrastructure)</li> </ul>
SSD Optimization	MegaRAID CacheCade Pro 2.0 Software leverages SSDs in front of HDD volumes to create high-capacity, high-performance controller cache pools (Optional Upgrade)
Regulatory Certifications	USA (FCC 47 CFR part 15 Subpart B, class B); Canada (ICES -003, Class B); Taiwan (CNS 13438) ; Japan (VCCI V-3); Australia/New Zealand (AS/NZS CISPR 22);Korea (RRA no 2013-24 & 25); Europe (EN55022/EN55024); Safety: EN/IEC/UL 60950; RoHS; WEEE
OS Support	Microsoft Windows, Linux (Oracle, SuSE , Red Hat), Solaris, VMware, FreeBSD, CentOS, Canonical, Citrix, FreeBSD, Fedora, Debian See <a href="http://www.broadcom.com/support/download-search">www.broadcom.com/support/download-search</a> for details on versions. Contact Oracle support for Oracle driver or software support..
Ordering Information	
MegaRAID SAS 9380-8i8e	05-25716-00 (Single Pack)
CVPM02	05-50038-00 (Kit)