MegaRAID® SAS 9240-4i

Four-Port 6Gb/s PCI Express SATA+SAS RAID Controller

Power Workstations and Entry Level Servers with a Low-Cost, Green RAID Solution

KEY ADVANTAGES

- **High performance with 6Gb/s data transfer rates**
- **PCI Express® 2.0 host interface drives superior system performance**
- **MegaRAID Entry delivers robust RAID functionality with simplicity**
- **Flexible SATA+SAS array architecture optimizes cost**
- **Complete kit package includes necessary cables and brackets**

MegaRAID SATA+SAS Entry Product Line

LSI MegaRAID® SATA+SAS entry controller cards allow small to medium business owners and gaming enthusiasts to enjoy the latest RAID technology at affordable prices with low power consumption. This product line delivers trusted MegaRAID reliability with minimal maintenance effort. MegaRAID entry controller cards offer users a straight-forward solution that includes essential RAID levels and uncomplicated configuration options. In addition, they are able to connect to SATA and SAS hard disk drives and solid state drives, allowing for tiered storage that optimizes cost and performance. SAS drives are optimal when speed and reliability are of the utmost concern while SATA drives are appropriate when capacity and cost are more important. MegaRAID entry controllers cover the spectrum of tiered storage requirements for cost-sensitive applications that require robust data protection.

Seamless Migration to MegaRAID Value and Feature Products

A unique feature of the MegaRAID SATA+SAS entry line is the ability to seamlessly migrate from these low-cost RAID 5 controllers to the more full-featured MegaRAID product lines.

Users can simply plug in a new controller to recognize and import the existing array without requiring any reconfiguration. Plus, a single management client provides a consistent user interface to manage any MegaRAID SATA and/or SAS arrays.

6Gb/s SAS Performance Advantage

6Gb/s SAS is designed for backward compatibility with 3Gb/s SAS as well as with 6Gb/s and 3Gb/s SATA hard drives. Regardless of the drive speed, 6Gb/s MegaRAID controllers will deliver significant performance improvements in both read and write applications as compared to their 3Gb/s predecessors. Other new features of 6Gb/s MegaRAID SATA+SAS controllers include greater signal integrity using Decision Feedback Equalization, support for more sophisticated SAS topologies using Expander Self-discovery/Self-configuration, and additional safeguards to enhance data protection.

LSI MegaRAID SAS 9240-4i

APPLICATIONS

- **Internal storage connections**
- **1U/2U rack servers**
- **File, Web, Database and Email servers**
- **High-performance workstations**

TYPICAL USES

- **Direct-attach internal SAS or SATA hard disk drives and solid state drives**
- **Internal enclosures**

KEY FEATURES

- **6Gb/s data transfer rate**
- **Four internal 6GB/s SATA+SAS ports**
- **One x4 Mini-SAS internal connector (SFF8087)**
- **LSISAS2008 controller – PowerPC 440 @ 533MHz**
- **RAID 0, 1, 5, 10, 50 and JBOD mode**
- **Hardware RAID solution**
- **x8 PCI Express 2.0 host interface**
- **Low-profile form factor**
- **Supports up to 64 physical devices – Up to 16 physical devices in a RAID configuration**
- **Patrol read**
- **Consistency Check**
- **S.M.A.R.T. error detection**
- **Power management support**
- **MegaRAID Storage Manager**
- **Environmentally friendly with a low-power controller and cardboard packaging**

Intuitive RAID Management Utility

The MegaRAID Management Suite™ provides the essential software tools to efficiently manage MegaRAID products, whether deployed in an enterprise or small business. LSI 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 allow administrators to adjust SAS topology views from the system host, controller and disk enclosure down to the logical and physical drive level. And now intuitive configuration wizards make creating storage arrays even faster and simpler. MSM allows administrators to efficiently configure, monitor and manage RAID volumes locally or over the network. Extending to enterprise deployments, these tools scale to easily configure, monitor and manage RAID volumes locally or over the LAN network.

MegaRAID SAS 9240-4i CONTROLLER CARD

Solution Provided	Low-cost, green SATA+SAS RAID solution for high-density servers and workstations with the flexibility to use both SATA and SAS hard drives and solid state drives
Physical Dimensions	6.6" x 2.536" (Low-Profile)
Connector	Internal One X4 Mini-SAS SFF8087 (vertical orientation)
Max Number of Physical Devices	Non-RAID: 64 RAID 0: 16 per volume RAID 1: 2 per volume plus hotspare RAID 5: 16 per volume RAID 10: 16 per volume RAID 50: 16 per volume
Host Bus Type	8-lane, 5 GT/s PCI Express 2.0 Compliant
Data Transfer Rates	Up to 6Gb/s per port
SAS Controller	LSISAS2008

Key RAID Data Protection Features	• RAID levels 0, 1, 5, 10, 50 and JBOD mode
	• Selectable logical drive as boot drive
	• Consistency Check
	• Fast initialization for quick array setup
	• Native Command Queuing
	• Staggered spin up for SATA drives
	• Hot plug support
	• Global hot spare support
	• Online Capacity Expansion (OCE)
	• Online RAID Level Migration (RLM)
	• Single controller Multipathing (failover)
	• Load balancing
	• SafeStore Encryption Services
	  – Instant Secure Erase
	• SSD support with SSD Guard
	
	• Automatic rebuild of hot spare drives
	• Auto resume during array rebuild
	• Fault LED support through SGPIO
	• >2TB logical drive support
	• Soft bad block management
	• Error recovery support
	• DDF compliant Configuration on Disk
	• S.M.A.R.T. support
	• Patrol read for media scanning and repairing
	• Enclosure management
	  – SES (inband)
	  – SGPIO (sideband)

RAID Management	MegaRAID Management Suite - MegaRAID Storage Manager™ - MegaCLI (command-line interface) - WebBIOS
Environments	Operating 0°C to 70°C 5 to 90% Non-condensing Storage -45°C to 105°C 5 to 90% Non-condensing
PCI Card Type	3.3V Add-in Card
PCI Voltage	+12V ±10%
PCI Power	13.5W
PCI Modes	Bus Master DMA
LED Indicators	Internal Activity/Fault per x4 port – Heartbeat
MTFB	>2,000,000 Hours
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	Microsoft® Windows®, Linux® (SuSE®, Red Hat®), Solaris®, Vmware®. See www.lsi.com/support for details on versions.
Ordering Information	LSI SAS 9240-4i Single Pack P/N: LSI00199, LSI SAS 9240-4i Kit P/N: LSI00203
Brackets	Full Height and Low-Profile
Warranty	3 years, advanced replacement option, free technical support at lsi.com/support

For more information and sales office locations, please visit the LSI web sites at:

lsi.com   lsi.com/channel