

# LSI SAS 9211-4i

## 4-Port, 6Gb/s SAS+SATA to PCI Express Host Bus Adapter



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### KEY FEATURES

- 4 internal 6Gb/s SAS+SATA ports
- 4 lanes, PCI Express 2.0
- Low profile form factor design
- One x4 internal mini-SAS connectors (SFF8087)
- LSI SAS2004 6Gb/s SAS+SATA Controller
- Supports up to 256 SAS or SATA end devices
- Supports SSDs, HDDs and tape drives
- Offers Integrated RAID (0, 1, 1E and 10)

### KEY ADVANTAGES

- Provides state of the art connectivity for entry level servers with internal storage
- 4 lanes of PCI Express 2.0 provides fast signaling for high-bandwidth applications
- High performance with 6Gb/s data transfer rates

## 4-Port SAS HBA Provides State of the Art Connectivity for Internal Storage Connections

### Overview

The LSI SAS 9211-4i, host bus adapter provides high performance for internal drive connectivity in 1U and 2U servers and workstations. The LSI SAS 9211-4i provides 4 lanes of 6Gb/s SAS and is matched with 4 lanes of PCI Express 2.0 5Gb/s performance to eliminate bottlenecks. Performance is based on the LSI SAS2004 IO controller that highly integrates the latest enhancements in PCI Express and SAS technology. The HBA supports up to 256 SAS or SATA devices.

The LSI SAS 9211-4i has one (x4) internal mini-SAS connector (SFF8087) enabling a low profile solution which provides SAS and SATA data transfer rates of 1.5, 3 and 6Gb/s per lane through automatic speed negotiation that can achieve over 160,000 IOPs. Enhanced features include T-10 Protection Information Model for early detection of and recovery from data corruption, and Spread Spectrum Clocking (SSC) for minimal EMI.

### SAS Leadership

LSI offers the broadest SAS product portfolio in the industry with true end-to-end solutions including controllers, expanders, active-active multiplexers, ROCs, host bus adapters, RAID solutions, and external storage. LSI's proven SAS core has completed extensive stress and interoperability testing resulting in the industry's most robust, interoperable solution. LSI has supplied leading edge serial technology to systems throughout the world for over seven generations, making LSI the most experienced enabler of serial interconnect for storage in the world. Integrators can be assured that their LSI adapter is providing the most advanced and robust serial technology available.

### Fusion MPT Architecture

The LSI SAS host bus adapters are based on the Fusion MPT™ architected SAS controllers, which implements LSI's Fusion-MPT (Message Passing Technology) architecture. Each controller features embedded PowerPC™ processors that deliver maximum host CPU offload. The built-in intelligence enables LSI to publish a single binary OS driver to operate any Fusion MPT controller or adapter. The architecture enables high performance, reduced software development, and faster time to market.



LSI SAS 9211-4i Host Bus Adapter		
I/O Controller	LSI SAS2004/ Fusion MPT 2.0	
Storage Connectivity ; Data Transfer Rates	4 ports; 6Gb/s SAS 2.0 compliant	
SAS Bandwidth	Half Duplex 600 MB/s per lane	
Port Configurations	4 ea, x1 ports (individual drives) 1 ea, x4 wide port	
Host Bus	x4 lane, PCI Express 2.0 compliant	
PCI Data Burst Transfer Rates	Half Duplex X4, PCIe 2000 MB/s	
Physical Dimensions	Low Profile (2.7" x 6.6")	
Connectors	Two mini-SAS external connectors (SFF8088)	
Brackets	Full height and low profile	
Cable Support	Passive Copper	
Host Bus Type	x4 lane, PCI Express 2.0	
PCI Card Type	3.3 V Add-in Card	
Operating Voltage	+12V +/-8%; 3.3V +/-8%	
PCI Power (Nominal)	7W typical (Airflow min 200 LFM)	
Device Support	256 Non-RAID SAS/SATA devices	
Integrated RAID (IR)	14 spread across 2 volumes	
	RAID 0	10 per volume
	RAID 1	2 per volume plus hot spare
	RAID 1E	10 per volume
	RAID 10	10 per volume
Environmental	Operating 0oC to 55oC 5 to 90% Non-condensing	Storage -45°C to 105°C 5 to 90% Non-condensing
Regulatory Certifications	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; RoHS; WEEE	
OS Support	Microsoft Windows, Linux (SuSE , Red Hat), Solaris, VMware See <a href="http://www.lsi.com/channel/ChannelDownloads">http://www.lsi.com/channel/ChannelDownloads</a> for details on versions	
Warranty	3 years; with advanced replacement option Free technical support at <a href="http://www.lsi.com/channel/support">http://www.lsi.com/channel/support</a>	



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