

**Product Brief** 

## APPLICATIONS

- External storage connections
- Mid to high-end servers
- 1U/2U rack servers

#### TYPICAL USES

- Tiered SATA and SAS RAID systems
- Large-scale external JBOD enclosures

#### KEY FEATURES

- 6Gb/s per port data transfer rate
- Two x4 Mini-SAS external connectors (SFF8088)
- Low-profile MD2 small form-factor
- x8 PCI Express 2.0 host interface
- Allows up to 512 SAS or SATA endpoint devices
- High performance IOP
- PowerPC 440 @ 533MHz
- Power management support
- Supports SSP, SMP, STP and SATA protocols
- Consistency Check
- Hot Spare Support
- SMART error detection
- Supports SSDs, HDDs and tape drives
- Environmentally-friendly due to low power consumption

# LSI SAS 9200-8e

## Eight-Port 6Gb/s PCI Express SATA+SAS Host Bus Adapter

## KEY ADVANTAGES

- High performance with 6Gb/s data transfer rates
- PCI Express 2.0 host interface drives superior system performance
- Flexible SATA+SAS array support optimizes costs
- Fusion-MPT<sup>™</sup> Architecture delivers more than 290,000 I/Os per second

#### 6Gb/s SATA+SAS Advantage

The LSI SAS 9200-8e host bus adapter (HBA) enables large-scale storage arrays through high-speed 6Gb/s ports, supporting up to 512 SATA and SAS physical devices. It bolsters high capacity external server storage RAID and non-RAID enclosures by pairing a x8 PCI Express 2.0 host interface with two external x4 SFF8088 Mini-SAS connectors.

LSI SATA+SAS HBAs work easily with SATA and SAS, hard disk drives, solid state drives, and tape drives. The LSI SAS 9200-8e doubles the performance of previous generation SATA+SAS HBAs and is optimal for driving cost-effective and reliable scalability in today's data centers.

Featured enhancements on the LSI SAS 9200-8e include End-to-End CRC with Advanced Error Reporting, power management, and hot plug support. This HBA automatically negotiates between SAS and SATA data transfer rates of 1.5, 3 and 6Gb/s speeds. Other features include the T-10 Protection Model for early detection of and recovery from data corruption, and Spread Spectrum Clocking for EMI reductions. All of these improvements combine to provide an extremely powerful and dependable HBA that is designed to meet all of your unique requirements.

#### **LSI HBAs Deliver**

LSI 6Gb/s SATA+SAS HBAs build upon the industry-leading LSI 3Gb/s SAS technology products, delivering performance and powersaving advantages along with the added assurance gained from robust interoperability testing. Built to handle the constantly changing and complex requirements of enterprise storage, LSI SATA+SAS HBAs effortlessly manage the need for larger capacity, greater density and scalability.

### **Leading the Way**

Since the inception of SAS, LSI has delivered innovative products across its extensive portfolio of controller ICs, expanders, HBAs, motherboard solutions and storage systems. By offering best-in-class SAS technologies, broad interoperability and single one-stop



vendor support, the LSI SATA+SAS portfolio uniquely addresses the full spectrum of server, workstation and enterprise storage architecture requirements for implementing complete SAS solutions.

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.

## **Operating System Support**

The LSI SAS 9200-8e host bus adapter supports Microsoft® Windows®, Linux® (SuSE®, Red Hat®), Solaris®, and VMware operating systems.

All OS drivers are backed by extensive testing and validation to ensure optimum system performance.

For a list of the most current supported drivers, visit Isichannelgateway.com/support.

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	LSI SAS 9200-8E HOST BU	SADAPIER	
PCI Bus	8-lane, 5 GT/s PCI Express 2.0		
PCI Modes	Bus Master DMA		
PCI Data Burst Transfer Rates	Half Duplex X8 PCIe 4000 MB/s	Full Duplex X8 PCIe 8000 MB/s	
SAS Bandwidth	Half Duplex Single Lane – 600MB/s Wide port (2 lanes) – 1200MB/s Wide port (3 lanes) – 1800MB/s Wide port (4 lanes) – 2400MB/s Wide port (2x4) – 4800MB/s	Full Duplex Single lane – 1200MB/s Wide port (2 lanes) – 2400MB/s Wide port (4 lanes) – 4800MB/s	
PCI Card Type	3.3V Add-in Card		
PCI Voltage	+12V ±10%		
PCI Form Factor	6.6" x 2.536" (MD2 Low-Profile)		
PCI Power	13.5W		
Brackets	Full Height and Low-Profile		
Certification Level	PCI Express 2.0		
I/O Bus	2 x 4 6Gb/s SATA and SAS ports		
SAS Controller	LSISAS2008		
Connectors	External Two x4 Mini-SAS SFF8088		
Max Number of Physical Devices	Non-RAID	512	
Environments	Operating 0°C to 70°C 5 to 90% Non-condensing	Storage -45°C to 105°C 5 to 90% Non-condensing	
MTBF	>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 Ha	Microsoft® Windows®, Linux® (SuSE®, Red Hat®), Solaris®, VMware®. See www.lsi.com/support for details on versions	
Ordering Information	LSI SAS 9200-8e Single Pack P/N: LSI0018	LSI SAS 9200-8e Single Pack P/N: LSI00188	
Warranty	3 years, advanced replacement option, for	3 years, advanced replacement option, free advanced technical support at lsi.com/support	



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