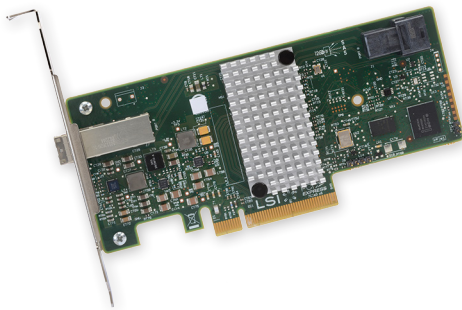**Storage. Networking. Accelerated.**

LSI® SAS 9300 12Gb/s SAS Host Bus Adapter Family

LSI SAS9300-4i4e

12Gb/s SAS HBAs doubles the SAS data rate from previous generations providing high performance

Overview

The LSI SAS 9300 host bus adapter family provides high performance for high-end servers connecting to large scale storage enclosures and for internal drive connectivity in 1U/2U servers and workstations. The SAS 9300 HBA family is based on the LSI SAS 3008 IO controller that integrates the latest enhancements in SAS and PCI Express technology. The adapters can reach over 1 million IOPs from a single IOC.

The LSI SAS 9300 adapter family supports 8 PCI Express® lanes that comply with the latest PCI Express 3.0 specification with 8Gb/s per lane. Each host bus adapter also supports 8 or 4 individual SAS ports operating at 12Gb/s. The adapters are backward compatible with previous PCIe and SAS generations through automatic negotiation and provide SAS data transfer rates of 12, 6, and 3Gb/s per lane, and SATA data transfer rates at 6 and 3Gb/s per lane. LSI provides a complete suite of industry standard operating system drivers.

SAS Leadership

LSI is a storage market leader in SAS, Enterprise RAID, and Application Acceleration, enabling the entire storage ecosystem. LSI offers the broadest product portfolio in the industry including SAS ROCs, IO Controllers, Expanders, Host Bus Adapters, MegaRAID® controller cards, switches, advanced software options, and application acceleration solutions. LSI solutions provide the performance, connectivity, scalability, and manageability required for today's enterprise storage environments.

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.

Key Features:

- Eight/four ports of 12Gb/s SAS + SATA ports
- Eight lanes of PCI Express 3.0
- Low-profile form factor
- Mini-SAS HD connectors
- LSI SAS 3008 12Gb/s SAS+SATA controller
- Supports SSDs, HDDs, and tape drives

Key Advantages:

- Provides connectivity in a low-profile form factor
- 8 lanes of PCI Express 3.0 provides fast signaling for high bandwidth applications
- High performance with 12Gb/s SAS data transfer rates

	SAS9300-8e	SAS9300-8i	SAS9300-4i4e	SAS9300-4i
IO Controller	LSISAS3008 Fusion MPT 2.5	LSISAS3008 Fusion MPT 2.5	LSISAS3008 Fusion MPT 2.5	LSISAS3004 Fusion MPT 2.5
Port Count	8 port, external	8 port, internal	4 port ext/4 port int	4 port internal
Connectors	Mini SAS HD SFF8644 Two (x4)	Mini SAS HD SFF8643 Two (x4)	Mini SAS HD SFF8644 One (x4), SFF8643 One (x4)	Mini SAS HD SFF8643 One (x4)
Storage Connectivity Data Transfer Rates	12Gb/s SAS 3.0 Compliant	12Gb/s SAS 3.0 Compliant	12Gb/s SAS 3.0 Compliant	12Gb/s SAS 3.0 Compliant
SAS Bandwidth	Half Duplex (x8 wide bus) 9600 MB/s	Half Duplex (x8 wide bus) 9600 MB/s	Half Duplex (x8 wide bus) 9600 MB/s	Half Duplex (x4 wide bus) 4800 MB/s
Port Configurations	8 ea, x1 ports (individual drives) 2 ea, x4 wide port	8 ea, x1 ports (individual drives) 2 ea, x4 wide port	8 ea, x1 ports (individual drives) 2 ea, x4 wide port	4 ea, x1 ports (individual drives) 1 ea, x4 wide port
Host Bus	x8 lane, PCIe 3.0	x8 lane, PCIe 3.0	x8 lane, PCIe 3.0	x8 lane, PCIe 3.0
PCI Data Burst Transfer Rates	Half Duplex x8, PCIe 3.0, 8000 MB/s	Half Duplex x8, PCIe 3.0, 8000 MB/s	Half Duplex x8, PCIe 3.0, 8000 MB/s	Half Duplex x8, PCIe 3.0, 8000 MB/s
Form Factor	Low Profile	Low Profile	Low Profile	Low Profile
Physical Dimensions	2.6" x 6.6"	2.6" x 6.0"	2.6" x 6.0"	2.6" x 6.0"
Brackets	Full Height and low profile vented	Full Height and low profile vented	Full Height and low profile vented	Full Height and low profile vented
Cable Support	Passive Copper Active Optical	Passive Copper	Passive Copper Active Optical (Ext only)	Passive Copper
LED Management		Reference SFF-8485 (SGPIO) compliant	Reference SFF-8485 (SGPIO) compliant	Reference SFF-8485 (SGPIO) compliant
Operating Voltage	+12V +/-8%; 3.3V +/-9%	+12V +/-8%; 3.3V +/-9%	+12V +/-8%; 3.3V +/-9%	+12V +/-8%; 3.3V +/-9%
PCI Power (Nominal)	14.5W	13W	14.2W	10.2W
Device Support	1024 Non-RAID devices	1024 Non-RAID devices	1024 Non-RAID devices	1024 Non-RAID devices
Environmental	Operating: 0℃ to 55℃ Storage: -45℃ to 105℃ 5 to 90% non-condensing Airflow: 200 LFM	Operating: 0℃ to 55℃ Storage: -45℃ to 105℃ 5 to 90% non-condensing Airflow: 200 LFM	Operating: 0℃ to 55℃ Storage: -45℃ to 105℃ 5 to 90% non-condensing Airflow: 200 LFM	Operating: 0℃ to 55℃ Storage: -45℃ to 105℃ 5 to 90% non-condensing Airflow: 200 LFM
MTBF	>2,800,000 hours	>2,800,000 hours	>2,800,000 hours	>2,800,000 hours
Regulatory Certifications	EMC: Class B-US (CFR 47, P15B); Canada (ICES-00); Japan (V-3/02.04); Europe (EN55022/EN55024); Australia/New Zealand (AS/NZS 3548); Korea (N-B 2-0001-404); Safety: EN60950; RoHS; WEEE			
OS Support	Microsoft Windows, Linux (SuSE , Red Hat), Solaris, VMware, FreeBSD; See **http://www.lsi.com/support/pages/download-search.aspx** for details on versions * The HBA supports Solaris 10 and Oracle® provides a built in driver; installation of an LSI driver is not required. For more information on the Oracle Solaris 10 driver and installation, sign in at the following Oracle link: **https://support.oracle.com/** Contact Oracle support for Oracle driver or software support.			
Warranty	3 years, free advanced technical support, advanced replacement option			
LSI Ordering Part Number	Single LSI00343	Single LSI00344 Kit LSI00345	Single LSI00348 Kit LSI00349	Single LSI00346 Kit LSI00347

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