

Avago® SAS 9302-16e

16-Port, 12Gb/s SAS+SATA to PCI Express Host Bus Adapter



Key Features

- 16 external 12Gb/s SAS+SATA ports
- 16 lanes, PCI Express 3.0 for maximum performance
- Four x4 external - mini-SAS HD connectors (SFF8644)
- Two SAS 3008 12Gb/s SAS+SATA Controllers
- Supports up to 1024 SAS or SATA end devices per controller
- Supports SSDs, HDDs and tape drives
- Up to 12.8Gb/s sequential write throughput
- Up to 2.8M IOPs @ 4KB block sizes

Key Advantages

- High performance with 12Gb/s data transfer rates with full size form factor
- 16 Lanes of PCI Express 3.0 provides increased throughput for high-bandwidth applications

16-port SAS HBA Provides Maximum Connectivity and Performance for External JBOD and External RAID enclosures

Overview

The Avago SAS 9302-16e 16-port, 12Gb/s SAS host bus adapter (HBA) provides increased connectivity and high performance for high-end servers and storage applications. The SAS 9302-16e HBA is based on the Avago SAS 3008 IO controller that integrates the latest enhancements in SAS and PCI Express technology and can achieve 2.8 million IOPS.

The Avago SAS 9302-16e has four (x4) external mini SAS HD connectors (SFF8644) and supports 16 PCI Express lanes that comply with the latest PCI Express 3.0 specification with 8Gb/s per lane in a single direction. The HBA also supports 16 individual SAS ports operating at 12Gb/s. The HBA is backward compatible with previous PCIe and SAS generations through automatic negotiation and provides SAS data transfer rates of 12, 6, and 3Gb/s per lane, and SATA data transfer rates at 6 and 3Gb/s per lane. Avago provides a complete suite of industry standard operating system drivers.

Avago Storage by LSI™

Avago Technologies products serve four primary target markets: wireless communications, wired infrastructure, enterprise storage, and industrial. Avago Storage by LSI offers the industry's broadest portfolio of storage solutions, backed by decades of experience and trusted by the world's leading server and storage suppliers. Avago provides the building blocks for storage solutions that help customers understand, prioritize, store and protect critical data.

The Avago 12Gb/s SAS portfolio includes MegaRAID® controller cards, HBAs, advanced software options, Syncro® shared DAS solutions and SAS storage ICs, including RAID-on-Chip (ROCs), I/O controllers and expanders.

Fusion-MPT™ Architecture

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

Avago SAS 9302-16e Host Bus Adapter

IO Controller	Two, SAS 3008/ Fusion MPT 2.5
Storage Connectivity Data Transfer Rates	16 ports; 12Gb/s SAS 3.0 compliant
SAS Bandwidth	Half Duplex (x8 wide bus) 9600 MB/s
Port Configurations	16 ea, x1 ports (individual drives) 4 ea, x4 wide ports 2ea, x8 wide ports
Host Bus	x16 lane, PCI Express 3.0 compliant
PCI Data Burst Transfer Rates	Half Duplex x16, PCIe, 16000 MB/s
Physical Dimensions	4.4" x 6.6"
Connectors	Four (x4) mini-SAS HD external connector (SFF8644)
Brackets	Full height
Cable Support	Passive Copper, Active Copper
Operating Voltage	+12V +/-8%; 3.3V +/-9%
PCI Power (Nominal)	30W
Device Support	1024 Non-RAID SATA/SATA devices per controller
Environmental	Operating: 0°C to 55°C Storage: -45°C to 105°C 5 to 90% Non-condensing Airflow: 200 LFM
MTBF	>1,500,000 hours
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); 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; with advanced replacement option Free technical support at http://www.lsi.com/channel/support

Ordering Information

Ordering part Number	LSI00461
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