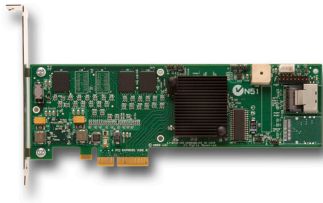


MegaRAID® SAS 8704ELP

Four-Port 3Gb/s PCI Express SAS RAID On Chip Adapter



Protect Business Critical Data with the Industry's Most Trusted SAS/SATA RAID Adapters

KEY ADVANTAGES

- LSISAS1078 storage processor with RAID 6 support
- Fastest cache available – 667MHz DDRII
- Low height form factor for 2U servers
- Multi-lane connectors for easier cable routing and improved system airflow
- Universal management suite for all MegaRAID serial solutions

Low-Cost SAS/SATA RAID Solution

The four-port MegaRAID SAS 8704ELP, a second-generation SAS/SATA RAID product from LSI, eliminates the need to choose between cost and performance by supporting both high-value SATA drives and high-performance SAS drives. With this adapter, based on the same proven MegaRAID technology used by the world's most powerful servers, users can rest assured that they are enjoying maximum protection for the critical data that drives their business. It features the LSISAS1078 IC, a powerful storage I/O engine that transparently performs all the data protection, data checking and restoration tasks. Additionally, the low-profile MegaRAID SAS 8704ELP offers four internal SAS/SATA ports on one multi-lane connector (SFF8087), 128MB DDRII cache, and a PCI Express host interface.

RAID 6 for Advanced Data Protection

The second-generation SAS/SATA RAID adapters from LSI support all key RAID levels including RAID 6 and 60. RAID 6 tolerates two simultaneous failures, and thus the ability to manage unrecoverable media errors during rebuilds. This is particularly useful when using large quantities of high-capacity SATA disk drives.

Performance Advantage

The MegaRAID SAS 8704ELP is designed to excel in both high I/O transaction and high bandwidth processing. With an integrated 500MHz PowerPC core and industry-leading 667MHz write cache, the 8704ELP delivers impressive performance numbers: 900MB/s reads and 300MB/s writes. Furthermore, steaming video or data backup applications run faster than ever with 1MB stripe configurations.

Advanced 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 as well a full spectrum of online RAID management utilities. This new 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. Extending to enterprise deployments, the powerful tools easily scale to efficiently configure, monitor and manage RAID volumes locally or over the LAN network.

FEATURES

- Four internal SAS/SATA ports
 - One SAS SFF8087 x4 connector
- 3Gb/s throughput per port
- LSISAS1078 RAID on Chip
 - 500MHz power-PC
 - RAID parity engines
- Low-profile form factor
- Fits x4 or x8 PCI Express slots
- Greater than 2TB array support
- 128MB DDRII 667MHz Cache
- Optional battery backup module
 - Rated 72 hours
- RAID levels 0, 1, 5 and 6
- RAID spans 10, 50 and 60
- Auto-resume on rebuild
- Auto-resume on reconstruction
- Online Capacity Expansion (OCE)
- Online RAID Level Migration (RLM)
- Comprehensive RAID management suite
- LED fault indicator headers

Management Indicators

The MegaRAID SAS 8704ELP supports industry standard SGPIO, SES and also an option to directly drive 8 LED fault indicators. When disks do fail, these schemes provide visual assistance

to quickly pinpoint faulty hardware.

Intelligent Battery Backup Support

The MegaRAID LSIiBBU05 is a battery-backup module that protects the integrity of the cached data on a MegaRAID controller in the event of a complete power or server failure.

This add-on module, which connects directly to the adapter, has the added functionality to automatically charge the battery pack and communicate with the host system the battery status, such as voltage, temperature, and capacity.

MegaRAID® SAS 8704ELP	
Solution Provided	Four-port SAS solution for servers and workstations requiring the flexibility to use either SAS or SATA II drives, or a combination of both
Environment	Internal sub-systems with up to 8 SAS or 3Gb/s SATA drives
Internal Connector	One SAS SFF8087 x4
Device Support	Up to 4 devices direct-connect; Up to 8 devices with SAS expander
Data Transfer Rates	Up to 3Gb/s per port
I/O Processor/SAS Controller	LSISAS1078 RAID on Chip (ROC)
Cache Memory	128MB DDR II SDRAM integrated
Physical Dimensions	Low profile, extended half-length (7.71" x 2.536")
Host Bus Type	x4 lane PCI Express 1.0a compliant PCI Power Management Specification 1.1 compliant
Battery Backup Unit	Optional Intelligent Battery Backup Unit (LSIiBBU05)
RAID and Fault Tolerant Features	<ul style="list-style-type: none">RAID levels 0, 1, 5, and 6Online Capacity Expansion (OCE)Configurable stripe size up to 1MBCheck Consistency for background data integrityHot Spare support<ul style="list-style-type: none">Automatic rebuildGlobal and dedicatedEnclosure affinityEmergency SATA hot spare for SAS arraysEnclosure management<ul style="list-style-type: none">SES (inband)SGPIO (sideband)One 8-pin header to illuminate fault LEDRAID spans 10, 50 and 60Online RAID Level Migration (RLM)Fast initialization for quick array setupPatrol read for media scanning and repairing64 logical drive supportDDF compliant Configuration on Disk (COD)S.M.A.R.T supportAuto resume after loss of system power during array rebuild or reconstruction (RLM)Up to 32TB LUN supportEmergency SATA hot spare for SAS arrays
Operating Temperature	Maximum ambient: 50°C (40°C w/ iBBU)
Operating Voltage	+3.3V
Warranty	3 years, free advanced technical support, advanced replacement option
Regulatory Certifications	EN55022, EN50082, EN60950; FCC Class A, Class B; UI1950; UL; CSA C22.2; VCCI; AS3548; BSMI; MIC
RAID Management	MegaRAID Management Suite <ul style="list-style-type: none">MegaRAID Storage ManagerMegaCLI (Command-Line Interface)WebBIOS
OS Support	Extensive support includes Microsoft® Windows® Server 2003/2000/XP, Linux® and more. * Visit the LSI download Center for the most complete list of supported operating systems: lsi.com/support

Warranty

For more than 25 years, LSI host adapters have been providing high-performance SCSI solutions to leading server, disk array and computer systems worldwide. Each host adapter carries a powerful chip built in LSI's ISO 9001-certified fabrication facilities. Using only the highest quality components, LSI host adapters are assembled and tested in world-class facilities to assure superior product reliability and performance. Because of stringent quality management programs, our host adapters carry a three-year limited warranty.



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