

LSI LOGIC®

Providing Maximum Throughput for External Storage Arrays, in a Low-Profile Adapter

Key Advantages

- Flexible SAS/SATA array architecture optimizes cost
- Eight external high-speed SAS ports
- 3Gb/s per port delivers 2400 MB/s to external enclosures
- Maximum mass-storage connectivity from a low-profile HBA
- SAS/SATA interconnect proven through LSI Logic's robust serial technology



Industry's First 8-port External SAS Controller

The LSI SAS3801E card enables large-scale direct attach storage (DAS) arrays through eight external 3Gb/s miniSAS ports, driving up to 244 Serial Attached SCSI (SAS) and Serial ATA (SATA) devices. This host bus adapter supports large capacity external server storage RAID and non-RAID enclosures by connecting a PCI Express bus with two external x4 SFF-8088 miniSAS connectors. LSI SAS3801E doubles the performance of dual channel Ultra320 SCSI HBAs and is ideal for today's data centers.

Cost-Optimization of External Storage with SAS

As the first-to-market leader in SAS, LSI is providing more bandwidth to cost-optimized external drive arrays. System integrators can use the LSI SAS3801E to build large-scale storage array infrastructures that support both SAS and SATA devices. By utilizing lower-cost SATA drives for data backup and SAS drives for mission-critical applications, end-users will receive high-capacity, high-performance data storage while enjoying an interrupt-free high-activity environment. The performance advantage and cost savings can be felt immediately when using the LSI SAS3801E to develop a tiered storage array.

Maximum External Bandwidth in a Low-Profile Adapter

The LSI SAS3801E offers two x4 miniSAS external connectors, allowing unprecedented external throughput in a low-profile HBA. By reducing the height on this SAS card, integrators have greater flexibility to plug the LSI SAS3801E into servers as thin as 2U. These adapters, with PCI Express, also capitalize on maximum system performance for those systems needing it.

SAS Connectivity from the Serial IO Experts

The LSI SAS3801E is a part of the first generation of Serial Attached SCSI controllers. Successful implementation of these serial adapters is effortless because of LSI experience and know-how. Having a supplier who fully understands the physical, electrical and protocol requirements of each new serial standard will reduce the time for system bring-up and offer greater flexibility in system topography.

LSI has supplied cutting edge serial technology to systems throughout the world for over six generations, making LSI the most experienced enabler of serial interconnect for storage in the world. Integrators can be assured that their LSI adapter provides the most advanced and robust serial technology available in the market.

APPLICATIONS

- High performance workstations
- Mid to high-end servers
- External storage connections

TYPICAL USES

- Large-scale external RBOD enclosures
- Tiered SAS/SATA RAID arrays
- Mission-critical applications running from SAS drives

FEATURES

- 3 Gb/s per port
- Two x4 external miniSAS connectors (SFF-8088)
- Low-profile HBA (PCI Express form factor)
- Connects to both SAS and SATA HDDs and tape drives
- Allows more than 244 total end-point devices
- Fusion-MPT™ architecture providing over 140,000 I/Os per second
- Supports all major operating systems



LSI Logic SAS3801E

3Gb/s miniSAS 8-PORT HOST BUS ADAPTER

Operating System Support

The LSI SAS3801E HBA supports all 32-bit and 64-bit versions of Microsoft Windows, Linux, Solaris, Netware as well as the x86, IA64, SPARC, AMD64 and EM64T system architectures. 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 www.lsi.com/support.

TECHNICAL SPECIFICATIONS

| | | |
|--|--|---|
| PCI Bus | PCI Express x8 lanes | |
| PCI Modes | Bus master DMA | |
| PCI Express Data Burst Transfer Rates | Half Duplex 1x – 250MB/s 4x – 1000MB/s 8x – 2000MB/s | Full Duplex 1x – 500MB/s 4x – 2000MB/s 8x – 4000MB/s |
| SAS Bandwidths per Connector | Half Duplex Single lane – 300MB/s Wide port (2-lanes) – 600MB/s Wide port (4-lanes) – 1200MB/s | Full Duplex Single SAS lane – 600MB/s Wide port (2-lanes) – 1200MB/s Wide port (4-lanes) – 2400MB/s |
| PCI Card Type | 3.3V add-in card | |
| PCI Voltage | +12V ±10% | |
| PCI Form Factor | 6.6" x 2.7" (low-profile) | |
| PCI Power | 7.5W | |
| Bracket | Full height and low-profile | |
| Certification Level | PCI Express 1.0a | |
| PCI Express 1.0a SAS Bus | Eight external 3GB/s SAS/SATA ports | |
| SAS Processor | LSISAS1068E | |
| Connectors | 2 external miniSAS – x4 connectors (SFF-8088) | |
| LED Indicators | Internal Activity per Phy 8 | Internal Fault per Phy 8 |
| Max No. of Physical Devices | 244 | |
| Environments | Operating 0°C to 60°C 5 to 90% non-condensing | Storage -45°C to +105°C 5 to 90% non-condensing |
| MTBF | >200,000 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 | |
| Software: MyStorage | Drive monitoring, HBA management, drive topology | |
| OS Support | <ul style="list-style-type: none">• Microsoft™ Windows® 2000, Server 2003 32-bit (x86 and AMD64), XP• Red Hat® Linux® RHEL 3• Novell® NetWare®• SuSE® Linux®/SLES• Sun SPARC Solaris 2.6 thru 2.10 | |
| Support | | |
| Ordering Information | LSISAS3801E Kit P/N: LSI00138 | LSISAS3801E 5 Pack P/N: LSI00139 |
| Warranty | 3 years, advanced replacement option | |
| Technical Support | Free technical support: http://www.lsi.com/support | |

Warranty

For more than 15 years, LSI Logic 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 Logic's ISO 9001-certified fabrication facilities. Using only the highest quality components, LSI Logic 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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