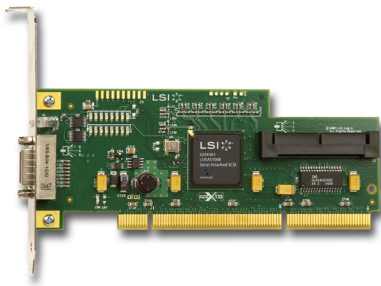


# LSISAS3442X-R

## 3G/s SAS Eight-Port Host Bus Adapter with Integrated RAID



### Providing Full-Duplex High-Performance Connectivity for Internal and External Storage Arrays

#### KEY ADVANTAGES

- Integrated RAID avoids additional host CPU overhead
- Flexible SAS/SATA array architecture optimizes cost
- Complete product package includes all the necessary cables and brackets
- SAS/SATA interconnect proven through LSI's robust serial technology

#### Highest Performance SAS Host Bus Adapter Available

The LSISAS3442X-R card provides ultrahigh speed data transfer for data back-up and mission-critical applications. The HBA offers eight 3Gb/s ports, driving up to 122 Serial Attached SCSI and Serial ATA RAID and non-RAID devices. The low-cost host bus adapter supports medium to large capacity internal server storage applications by connecting a 64-bit PCI-X 133MHz bus with one external x4 SFF8470 connector and one internal x4 SFF8484 connector. Performance advantages over parallel SCSI are seen from the huge increase in data throughput and device support from SAS, utilizing LSI's Integrated RAID solution.

#### Low-Overhead RAID Architecture

As the performance leader in SCSI/SAS controllers, the LSISAS3442X-R leverages the LSISAS1068 controller ASIC's advanced Fusion-MPT architecture. While other SAS cards drive large RAID software stacks between the host CPU and controller, the LSISAS3442X-R HBA utilizes the embedded CPU in the LSI SAS1068 ASIC to perform Integrated RAID 0, 1, 1E and 10E operations. The result is an ultra-thin low overhead device driver communicating over the PCI-X host-bus. By avoiding the PCI-X bus traffic and reducing RAID code overhead, the LSISAS3442X-R is first in READ/WRITE operation execution.

#### Unsurpassed Host Bus and SAS/SATA Signal Quality

LSI has always lead the way on next-generation signal interface technology. This leadership continues with LSI's serial interconnect capabilities. The LSISAS3442X-R HBA leverages five generations of achievement in serial technology to drive a robust connection between the PCI-X bus and storage devices. The combination of Integrated RAID with LSI's proven interconnect technology ensures an interrupt-free experience for mission-critical applications.

#### MyStorage – Simple Storage Array Management

Managing several drives in a storage array can be difficult when running a mixture of SAS and SATA. LSI's MyStorage management software makes storage array optimization easy. MyStorage fully automates the task of deploying and maintaining server to storage array connectivity. From the most modest, small-scale DAS replacement to an ambitious data center, MyStorage keeps it simple. Through an intuitive Graphical User Interface (GUI), this powerful utility helps customers manage storage quickly and easily. Using MyStorage, users can inspect and control all LSI adapters with point and click simplicity. A rich suite of tools enables remote

#### APPLICATIONS

- High performance workstations
- Mid to high-end servers
- External and internal storage connections
- 1U/2U rack servers

#### TYPICAL USES

- Direct-attach internal SAS/SATA HDDs
- External and Internal JBOD enclosures
- Mixed SAS/SATA RAID
- Mission-critical applications running from SAS drives

#### FEATURES

- 3Gb/s per port
- x4 internal SFF8484/x4 external SFF8470
- Integrated RAID 0, 1, 1E and 10E
- MD-2 small form-factor design
- Connects to both SAS and SATA HDDs and tape drives
- Allows more than 122 total end-point devices
- Fusion-MPT™ architecture providing over 140,000 I/Os per second
- Supports all major operating systems

firmware update, drive monitoring, link tuning, load balancing, path monitoring, diagnostics and error reporting. Altogether, MyStorage delivers a complete set of management tools that are simple to use.

## Operating System Support

The LSI SAS3442X-R HBA supports all key 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 [lsi.com/support](http://lsi.com/support).

| LSISAS3442X-R HOST BUS ADAPTER |                                                                                                                                                                            |                                                                                                                 |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| PCI Bus                        | 64-bit, 133MHz PCI-X, Backward Compatible with PCI                                                                                                                         |                                                                                                                 |
| PCI Modes                      | Bus Master DMA                                                                                                                                                             |                                                                                                                 |
| PCI Data Burst Transfer Rates  | 132MB/s (PCI 32-bit bus @ 33MHz)<br>264MB/s (PCI 64-bit bus @ 33MHz)<br>528MB/s (PCI 64-bit bus @ 66MHz)                                                                   | 800MB/s (PCI-X 64-bit bus @ 100MHz)<br>1064MB/s (PCI-X 64-bit bus @ 133MHz)                                     |
| SAS Bandwidth                  | Half Duplex<br>Single lane – 300MB/s<br>Wide port (2-lanes) – 600MB/s<br>Wide port (3 lanes) – 900MB/s<br>Wide port (4 lanes) – 1200MB/s<br>Wide port (8 lanes) – 2400MB/s | Full Duplex<br>Single lane – 600MB/s<br>Wide port (2-lanes) – 1200MB/s<br>Wide port (4-lanes) – 2400MB/s        |
| PCI Card Type                  | 3.3V Add-in Card                                                                                                                                                           |                                                                                                                 |
| PCI Voltage                    | +3.3V ±0.3V                                                                                                                                                                |                                                                                                                 |
| PCI Form Factor                | 6.6" x 2.5" (MD2 Low-Profile)                                                                                                                                              |                                                                                                                 |
| PCI Power                      | 7.5W                                                                                                                                                                       |                                                                                                                 |
| Bracket                        | Full Height and Low-Profile                                                                                                                                                |                                                                                                                 |
| Certification Level            | PCI 2.2, PCI-X 1.0a, PCI-X 2.0 mode1                                                                                                                                       |                                                                                                                 |
| SAS Bus                        | FTwo x4 3Gb/s SAS/SATA Ports                                                                                                                                               |                                                                                                                 |
| SAS Processor                  | LSISAS1068                                                                                                                                                                 |                                                                                                                 |
| Connectors                     | Internal<br>One SFF8484 SAS Connector                                                                                                                                      | External<br>One SFF8470 SAS Connector                                                                           |
| LED Indicators                 | Internal Activity per PHY (4)                                                                                                                                              | Internal Fault per PHY (4)                                                                                      |
| Integrated RAID                | RAID 0, 1, 1E and 10E                                                                                                                                                      |                                                                                                                 |
| Max Number of Physical Devices | Non-RAID<br>Integrated RAID (IR)<br>IR RAID 0<br>IR RAID 1<br>IR RAID 1E<br>IR RAID 10E                                                                                    | 122<br>10 spread across 2 volumes<br>8 per volume<br>2 per volume plus hotspare<br>8 per volume<br>8 per volume |
| Environments                   | Operating<br>0°C to 60°C<br>5 to 90% Non-condensing                                                                                                                        | Storage<br>-45°C to 105°C<br>5 to 90% Non-condensing                                                            |
| MTFB                           | >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                       |                                                                                                                 |
| OS Support                     | Microsoft® Windows® 2000, Server 2003 32-bit and 64-bit (x86 and AMD64), XP<br>Red Hat® Linux® RHEL 3                                                                      | Novell® NetWare® 5.1 and 6.5<br>SuSE® Linux®/SLES<br>Sun SPARC Solaris 2.6 thru 2.10                            |
| Ordering Information           | LSISAS3442X-R Kit – P/N: LSI00100<br>LSISAS3442X-R 5-pack – P/N: LSI00104                                                                                                  |                                                                                                                 |
| Warranty                       | 3 years, advanced replacement option, free advanced technical support at <a href="http://lsi.com/support">lsi.com/support</a>                                              |                                                                                                                 |



For more information and sales office locations, please visit the LSI web sites at: [lsi.com](http://lsi.com) [lsi.com/contacts](http://lsi.com/contacts)

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