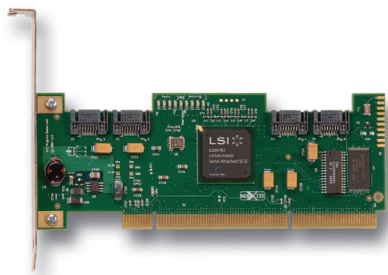


LSISAS3041X-R

3Gb/s SAS Four-Port Host Bus Adapter with Integrated RAID



Cost-Effective Serial Attached SCSI (SAS) Host Bus Adapter (HBA) Increases Performance and Reliability

KEY ADVANTAGES

- **Integrated RAID** – LSI RAID avoids additional host CPU overhead
- **Flexibility** – combined SAS/SATA array architecture optimizes cost
- **Scalability** – addresses up to 122 SAS/SATA devices using expanders
- **Speed** – with 3Gb/s per port, combines to 2.4Gb/s full duplex speed
- **Complete Solution** – kit includes all necessary cables and brackets
- **Market Leader** – LSI SAS powers 80% of SAS worldwide

Most Economical SAS/SATA HBA in the Market Today

The LSISAS3041X-R card offers leading-edge SAS and SATA RAID and non-RAID data off-load at a fraction of the cost for competing products. The low-cost HBA supports medium capacity internal server storage applications by connecting a 64-bit PCI-X 133MHz bus with 4 SAS/SATA ports through SATA 1x connectors. Cost advantages over parallel SCSI are realized by optimizing the HDD array between SAS and SATA drive types, utilizing the lower-cost SATA drives for backup while using the feature-rich SAS drives for mission-critical applications.

Superior LSI SAS Integrated RAID Performance

As the performance leader in SCSI/SAS controllers, the LSISAS3041X-R leverages the LSISAS1064 controller ASIC's advanced Fusion-MPT architecture. While other SAS cards drive large RAID software stacks between the host CPU and controller, the LSISAS3041X-R HBA utilizes the embedded CPU in the LSISAS1064 ASIC to perform Integrated RAID 0, 1, 1E and 10E operations.

By avoiding the PCI-X bus traffic and reducing RAID code overhead, the LSISAS3041X-R is first in READ/WRITE operation execution.

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 firmware update, drive monitoring, HBA management, drive topology. Altogether, MyStorage delivers a complete set of management tools that are simple to use.

APPLICATIONS

- High-performance workstations
- Mid to high-end servers
- Internal connections
- 1U/2U rack servers

TYPICAL USES

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

FEATURES

- 3Gb/s per port
- 4 internal SATA x1 connectors
- Integrated RAID 0, 1, 1E and 10E
- MD-2 small form-factor design
- Connects to both SAS and SATA HDDs and tape drives
- Allows up to 122 SAS or SATA end-point devices
- Fusion-MPT™ architecture providing over 140,000 I/Os per second
- Supports all major operating systems

Proven Gigabit Interface Technology

The LSI SAS3041X-R HBA leverages five generations of achievement in serial interface technology to drive a robust 2.4Gb/s full-duplex SAS interface. Each port provides a high-speed 3Gb/s point-to-point connection that can stretch over a 6m cable. End users will benefit from LSI's high-

speed interface experience when connecting to SAS and SATA drives. LSI's proven interconnect technology ensures an interrupt-free experience for mission-critical applications.

Operating System Support

The LSI SAS3041E-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.

LSISAS3041X-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) 264MB/s (PCI 64-bit bus @ 33MHz) 528MB/s (PCI 64-bit bus @ 66MHz)	800MB/s (PCI 64-bit bus @ 100MHz) 1064MB/s (PCI 64-bit bus @ 133MHz)
SAS Bandwidth	Half Duplex Single lane – 300MB/s Wide port (2-lanes) – 600MB/s Wide port (3-lanes) – 900MB/s Wide port (4-lanes) – 1200MB/s	Full Duplex Single lane – 600MB/s Wide port (2-lanes) – 1200MB/s
PCI Voltage/Card Type	+3.3V ±0.3V Add-in Card	
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	
I/O Bus	Four 3Gb/s SAS/SATA Ports	
SAS Processor ASIC	LSI SAS1064	
Connectors	Internal Four – SATA x1 Connectors	External N/A
LED Indicators	Internal Activity, per Phy (4)	Internal Fault, per Phy (4)
Integrated RAID Levels	RAID 0, 1 and 1E	
Max Number of Physical Devices	Non-RAID Integrated RAID (IR) IR RAID 0 IR RAID 1 IR RAID 1E IR RAID 10E	122 10 spread across 2 volumes 8 per volume 2 per volume plus hotspare 8 per volume 8 per volume
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 Support MyStorage™ OS Support	Drive monitoring, HBA management, drive topology Microsoft® Windows® 2000, Server 2003 32-bit and 64-bit (x86 and AMD64, XP) Red Hat® Linux® RHEL 3	Novell® NetWare® 5.1 and 6.5 SuSE® Linux®/SLES Sun SPARC Solaris 2.6 thru 2.10
Ordering Information	LSISAS3041X-R Kit – P/N: LSI00033-F	LSISAS3041X-R 5-pack – P/N: LSI00047-F
Warranty	3 years, advanced replacement option, free advanced technical support at lsi.com/support	



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

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