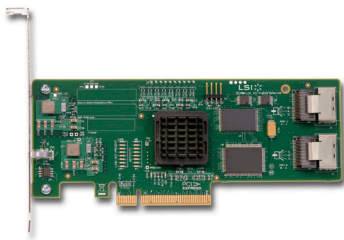


LSISAS3081E-R

3Gb/s SAS Eight-Port Host Bus Adapter



Unsurpassed Internal Storage Connectivity with Point-to-Point Connections for Greater Availability and Reliability

KEY ADVANTAGES

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

APPLICATIONS

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

TYPICAL USES

- Direct-attach internal SAS/SATA HDDs
- Small form-factor internal drive expansion
- Mixed SAS/SATA RAID
- Internal JBOD enclosures
- SAS Drives: mission-critical operations
- SATA Drives: data archive and back-up

FEATURES

- 3Gb/s per port
- Two internal miniSAS connectors – 2 x4 SFF8087
- Integrated RAID 0, 1, 1E and 10E
- 8 lane 2.5Gb/s PCI Express
- Connects to both SAS and SATA hard disk drives
- Allows up to 244 total end-point devices
- Low-profile MD2 form factor PCI card
- Fusion-MPT™ architecture providing over 140,000 I/Os per second
- Supports all major operating systems

Remarkable Performance with Advanced SAS/SATA Technology

The LSISAS3081E-R doubles the performance of today's dual channel Ultra320 SCSI HBAs by connecting an 8-lane 2.5Gb/s PCI Express bus with eight 3Gb/s SAS/SATA ports. It also offers leading SAS and SATA RAID and non-RAID data off-load for medium to high-capacity internal server storage applications. The LSISAS3081E-R is ideal for today's data centers and leverages existing SCSI infrastructure for investment protection and ease of migration. The serial interface allows for point-to-point connections offering higher performance, increased aggregate bandwidth, higher availability with dual-ported drives, and enhanced reliability when compared to parallel SCSI. The LSI SAS HBA will support 1.5 and 3Gb/s SAS and SATA hard disk drives.

The SAS interface provides universal interconnect with Serial ATA, while still offering logical SCSI compatibility along with the reliability, performance and manageability available with SAS drives. Common electrical and physical connections allow for the application to dictate the technology of choice for disk drives.

LSI SAS Outperforms Competition with Integrated RAID

As the performance leader in SAS controllers, the LSISAS3081E-R leverages advanced Fusion-MPT architecture that is truly scalable. While other SAS cards drive large RAID software stacks between the host CPU and controller, the LSISAS3081E-R HBA utilizes the embedded CPU in the LSISAS1068E 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 Express host-bus. By reducing RAID code overhead, the LSISAS3081E-R offers the greatest internal READ/WRITE performance available.

Flexibility From an Internal Storage Array

Flexibility is a key advantage of SAS when considering compatibility with either SAS or SATA drives. LSI maximizes flexibility by offering eight internal SAS/SATA drive connects, allowing integrators to build large capacity tiered storage arrays without leaving the server. The flexibility of eight SAS ports controlling an internal SAS/SATA drive configuration lowers costs while providing the necessary performance for mission critical operations.

Unrivaled Host Bus and SAS/SATA Signal Quality

LSI has always lead the way in next-generation signal interface technology. This leadership

continues with LSI serial interconnect capabilities. The LSI SAS3081E-R HBA leverages five generations of achievement in serial technology to drive a robust connection between the

PCI Express bus and storage devices. This, in combination with Integrated RAID, ensures an interrupt-free experience for mission-critical applications.

LSI SAS3081E-R HOST BUS ADAPTER

PCI Bus	PCI Express	
PCI Modes	Bus Master DMA	
PCI 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	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	3.3 Volt Add-in Card	
PCI Voltage	+12V ±10%	
PCI Form Factor	6.6" x 2.5" (Low Profile)	
PCI Power	10 Watts	
Bracket	Full Height and Low Profile	
PCI Certification	PCI Express 1.0a	
SAS Bus	Eight 3Gb/s SAS/SATA Ports	
SAS Controller ASIC	LSISAS1068E	
Connectors	Internal Two – x4 Connectors (SFF-8087)	External N/A
LED Indicators	Eight – Internal Activity per PHY	Eight – Internal Fault per PHY
Integrated RAID Levels	RAID 0, 1, 1E and 10E	
Max. Number 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
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	
Software	Graphical utility for creating, monitoring and managing RAID arrays Microsoft® Windows® 2000, Server 2003 32-bit (x86 and AMD64), and XP Red Hat® Linux® RHEL 3 Novell® Netware® SuSE® Linux®/SLES Sun SPARC Solaris 2.6 thru 2.10	
Operating System Support	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	
Support	SAS3081E-R Kit P/N: LSI00151 3 years, Advanced Replacement Option Free Technical Support: lsilogic.com/support support@lsi.com +1 800 633 4545 +44 (0) 1344 413 441	

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