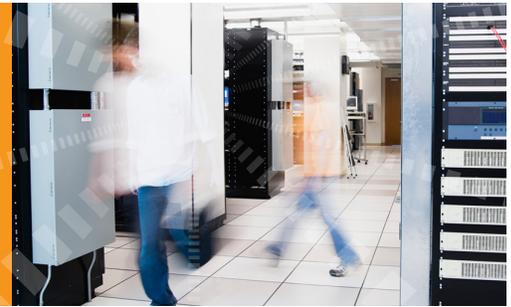


# LSISAS1064

## PCI-X to 4-Port 3Gb/s SAS Controller



Extends 20 Years of SCSI Technology to Next Generation Product Platforms for High Performance, Scalability, Flexibility and RAID Capability.

### Overview

The LSISAS1064 is a 4-port 3Gb/s Serial Attached SCSI (SAS) controller that is based on the Fusion MPT (Message Passing Technology). The LSISAS1064 controller provides 1.5 and 3Gb/s data transfer rates per port and enables Integrated RAID solutions in storage environments including servers, workstations and blade servers. The LSI SAS controller is ideal for today's data centers and leverages existing SCSI infrastructure for investment protection. The serial interface allows for point-to-point connection, increased device bandwidth, higher availability with dual ported drives, and enhanced reliability when compared to parallel SCSI.

LSI SAS controllers comply with the SAS standard which includes improved performance, simplified cabling, smaller connectors, a lower pin count, and lower power requirements. The 4-port controller doubles the performance of dual channel Ultra320 SCSI with aggregate bandwidth of 1.2GB/s and also runs in full duplex. In addition, the LSI SAS controllers leverage an electrical and physical connection interface that is compatible with Serial ATA technology. This provides users with unprecedented choices for server and storage sub-system deployment.

The LSISAS1064 controller key features include 133MHz, PCI-X host interface, 3Gb/s data transfer rates per port, hot plug/hot swap capability, and Integrated RAID for enhanced data protection. SAS controllers support command queuing to maximize drive performance. Interrupt coalescing is another advanced feature of the controllers that improves system performance by reducing the number of interrupts per I/O to less than one. Combined with LSI SAS expanders, the controllers support topologies requiring greater connectivity within server and storage environments.

### Fusion-MPT Architecture

LSI's Fusion-MPT architecture provides unparalleled performance, binary compatibility of host software with LSI's Ultra320 SCSI, Serial Attached SCSI, and Fibre Channel products, and significantly reduces software development time. With advanced architecture, the LSI product family can be quickly adapted to respond to emerging I/O interfaces.

### Applications

- Entry-level servers
  - 1U/2U rack mount servers
  - Blade servers
- Mid-range, high-end servers
- Workstations
- Storage subsystems

### Features

- 64-bit, 133MHz PCI-X host interface
  - Backward compatible with 33/66MHz PCI
- Integrated controller solution
- 1.5 and 3Gb/s per port, full duplex
- 4-port controller
  - Supports 2, 3 or 4 PHY wide SAS port configurations
- Port independent auto-negotiation
- ARM® 9 processor
- GigaBlaze® integrated transceivers
- Point-to-point SAS/SATA drive connection
- Fusion-MPT™ architecture
- GfiX™ technology

**Features (Continued)**

- RAID Levels
  - Integrated Mirroring™ and Integrated Striping
- Hot plug/hot swap support
- Supports SSP, SMP, STP, and SATA protocols
- PCI power management (D0, D3hot, D3cold)
- Supports 3.3V signaling levels
- Interrupt coalescing
- Independent power states per port
- Flash and local memory interface
- 472 EPBGA package

**OS Support**

- Windows® Server 2003
- Windows® 2000
- Windows® XP
- Linux® Red Hat®, SuSE® Enterprise Editions
- Solaris SPARC® 9.X
- NetWare®
- SCO® UnixWare® and Open Server

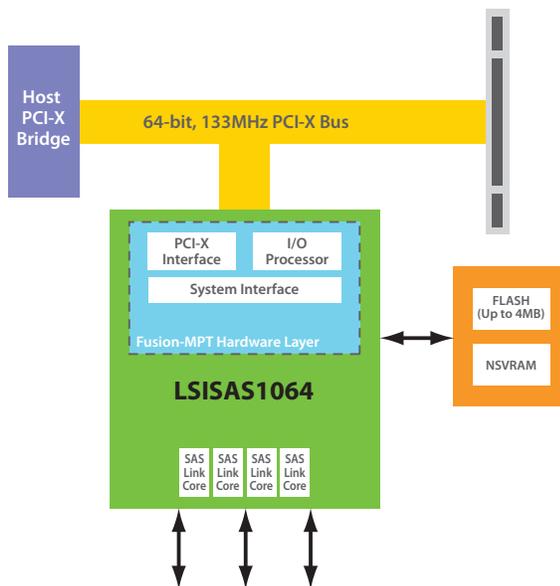


Figure 1. SAS Controller Block Diagram

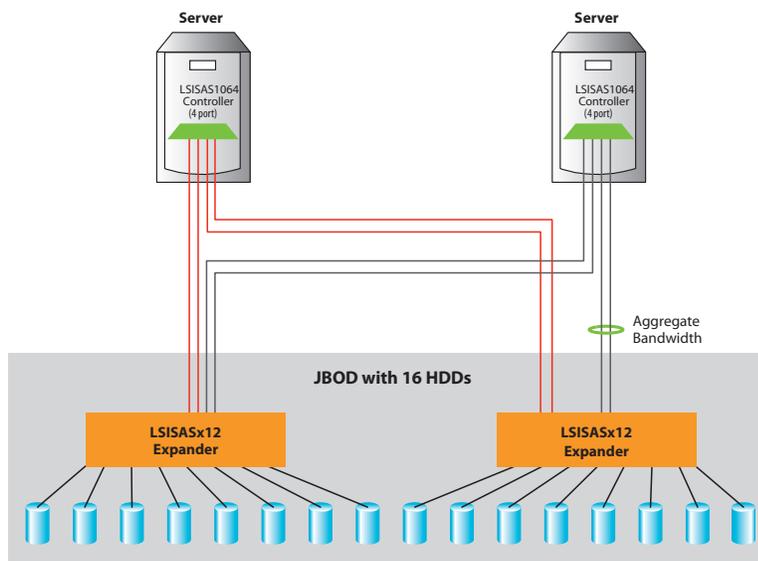


Figure 2. SAS Topology Offers Flexible Link Configuration and Redundancy



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



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