For SATA or SAS functionality, design Right First Time™ with scalable LSI HBAs and MegaRAID® SAS adapters coupled with turnkey chassis from Advanced Industrial Computer (AIC)

AIC XTORE Extreme Storage

Market: Storage

Executive Summary

Challenge

- Demand for secure and readily available data is rapidly rising
- IT managers must minimize total cost of storage ownership
- Drive life cycles have been extended, storage components need to maintain ROI

Solutions

- Fully tested LSI controllers with AIC server mid-planes, expander and Xtore storage subsystems
- Ability to integrate LSI SAS/SATA MegaRAID controllers and HBAs into AIC SA1-SD™ series SAS storage chassis
- For storage expansion, Xtore XJ1100™ JBOD can be implemented

Results

- Readily available AIC-Xtore and LSI products through major distributors such as Bell Micro and ASI
- Right First Time storage solutions with high reliability and performance
- LSI and AIC-Xtore product development and tech support
- Simplified cabling and enhanced cooling

LSI LOGIC

LSI and AIC Minimize Total Cost of Storage Ownership with SAS/SATA Solutions for a Broad Range of Markets

Case Study

Multi-level Partnership

Advanced Industrial Computer (AIC) *(http://www.aicipc.com)* is one of the industry's leading designers and manufacturers of rack-mount Server and Data Storage enclosure solutions. With over 100 years of combined experience between the mechanical, electronic, and system-level engineering teams, AIC leads the industry in all categories. With a complete silicon-to-systems portfolio of storage solutions, LSI develops multi-level partnerships with companies such as AIC to assure differentiated solutions that are valued by the end customer.

"Together, LSI and AIC are addressing the needs of IT managers challenged with business continuance and regulatory standards that demand data be secure and readily available," said John Roeser, director of channel sales at LSI. "Requirements for privacy, fraud, and identity theft protection are also pushing businesses to manage data in high performance, complex systems. As the sheer volume of data increases along with rich content and the velocity of data center activity, the need to store data economically and retrieve it quickly in an energy-efficient manner continues to rise."

Storage Interface Technologies

As servers are pushed to meet these advancing system and computing requirements, reducing total cost of storage ownership becomes increasingly critical. Applications such as streaming multimedia, e-commerce, email and management of large medical images are causing IT managers to look for improved productivity in the way storage is used. The result has been a new evolution of storage interface technologies.

When computing engines, server and high-end workstations were suddenly available to small offices, schools, and homes, many manufacturers began introducing entry-level ATA as a more cost-effective to SCSI solution. Then came Serial ATA (SATA). Fundamentally, SATA is the same as ATA except that instead of data flowing in parallel, it flows in a serial stream. The new Serial ATA standard came out silently and was driven by very practical reasons such as the need to ensure data transfer at reliable speeds while maintaining cooling requirements.

Similar to its ATA counterpart, SCSI has also recently transitioned to a serial architecture. As the latest generation of the SCSI interface, Serial Attached SCSI (SAS) is now meeting the demands of today's business through improved performance, flexibility and deployment topologies, while still maintaining the legacy SCSI cost structure.

With its serial interface, SAS provides better signal integrity and greater device addressability. Using an expander, one or more SAS host controllers can connect to a large number of drives. Each expander allows connectivity to 128 physical links, which may include other host connections, other SAS expanders, or hard disks. This highly scalable connection scheme enables enterprise-level topologies that easily support multi-node clustering for automatic fail-over availability or load balancing. Numerous other features of SAS such as the full duplex architecture effectively doubles the throughput.