

TECHNOLOGY OVERVIEW

Serial Attached SCSI (SAS)

The new enterprise I/O standard

Storage without compromise:
the ultimate in I/O flexibility from
the leader in serial interfaces



KEY FEATURES AND BENEFITS

- SAS backplanes, host bus adapters and expanders provide compatibility between SAS and Serial ATA (SATA), enabling tiered storage in a single, shared enclosure.
- SAS accelerates storage performance to incredible speeds by utilizing full duplex, point-to-point architecture with dual-port data rates of 3.0 Gbits/sec each.
- SAS liberates storage from prior scalability restrictions of its parallel predecessor by using low-cost switches, known as expanders, to aggregate hundreds of drives while preserving performance.

KEY SPECIFICATIONS

- 3.0 Gbits/sec transfer speed (6.0 Gbits/sec full duplex transfer speed)
- Dual port connectivity with up to 128 drives on bus
- Compatible with SATA (enabled through Serial Tunneling Protocol)

“...The results today from Seagate's Savvio solution and the interoperability it displayed under rigorous testing are a testimony to Seagate's hard work and dedication as an early pioneer in SAS development.”

– Mark Heerema, HP director of engineering, Industry Standard Servers

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PRODUCT DESCRIPTION

SAS is the new enterprise interface standard targeted to OEMs and system builders. SAS supersedes parallel SCSI, for over two decades the industry interface standard for direct attached storage (DAS), as well as entry-level and mid-range network storage systems.

THE SEAGATE ADVANTAGE

- Seagate® SAS products will enable OEMs and system builders to offer more efficient storage solutions that reduce data center infrastructure costs.
- Seagate SAS products protect current IT investment in SCSI storage management and enterprise application software.
- Seagate enterprise disc storage market leadership and a track record of successful serial I/O product introductions, coupled with its early R&D investment into developing SAS, will provide OEMs and system builders with best-in-class, reliable, rapid-time-to-market products.

SPECIFICATIONS

Performance	
Transfer Speed (Gbits/sec)	3.0
Transfer Speed, Full Duplex (Gbits/sec)	6.0
Connectivity	
Drives on Bus	Dual Port Up to 128
External Cable Length, max. (m)	6
SATA Compatibility Protocol	Serial Tunneling
Availability	Multi-initiator Point-to-Point
Driver Model	SCSI

APPLICATIONS

- Direct attached storage (DAS) arrays
- Rack-optimized servers
- Server blades
- High-end workstations

ENABLING NEW OPPORTUNITIES

For the past 20 years, SCSI has served the enterprise market with reliable performance. However, the constraints of its parallel bus architecture and the need for a flexible enterprise serial interface have opened the door to SAS.

IDC predicts SAS drives will quickly be adopted by the industry, with shipments commencing Fall 2004. Currently, parallel SCSI represents approximately 63 percent of enterprise HDD shipments. SAS replaces its parallel predecessor, delivering additional value in the areas of scalability, compatibility and performance.

For more information, go to www.seagate.com

Storage Segments

- Network Storage
- Server Storage
- High-Density Storage
- Nearline Storage
- Low-Cost Server
- PC Commercial
- PC Consumer
- Notebook
- DVR
- Gaming/Audio/Other
- Handheld

