

LSI® SAS6160 Switch



LSI SAS6160 Switch

Key features:

- Simple, easy integration
- Industry-standard SAS infrastructure
- Enables direct-attached-storage to be scaled as a low-cost storage network
- 16 SAS ports (4 SAS phys per port)
- 24Gb/s SAS connections, aggregate bandwidth of 384Gb/s
- 1U 1/2 wide form factor
- SAS and SATA connectivity of up to 1,000 devices
- T10 zoning compliant
- Out-of-band management utility
- OS independent

Key Advantages:

- Tiered storage solution with SAS and SATA drives
- Lowers acquisition cost without sacrificing expansion capabilities
- Efficiently connect multiple servers to multiple storage systems
- Increase connectivity and reliability by using multiple switches in topology
- Share and pool storage – fewer, larger storage arrays

The LSI SAS6160 Switch is a ½ width, 16-port switch that fits into the 1U form factor. The switch extends the capabilities of SAS in direct-attached storage (DAS) environments by allowing multiple servers to connect to one or more independent storage systems. The LSI SAS6160 is designed to provide customers with a low-cost and easy to use storage networking option for storage installations in cloud computing, mega datacenter and small- to medium-sized business (SMB) environments, over separations of up to 25 meters.

By allowing storage resources to be shared across multiple hosts and managed effectively through the SAS Domain Manager (SDM) utility program, the LSI SAS Switch helps customers maximize storage resource utilization, reduce islands of storage and simplify storage management, backup and upgrades.

Simple plug-and-play integration is further enhanced by having complete SAS management available through an embedded utility via an HTML browser. The embedded utility is designed to create and modify port configurations and zoning, view the topology of the SAS domain and perform firmware maintenance. It also offers the flexibility to reconfigure without reconnecting cables or adding hardware.

SAS 2.0 compliance helps assure broad compatibility with other 6Gb/s SAS interfaces, enabling a single switching infrastructure to address multiple classes of storage, supporting a mix of 3Gb/s and 6Gb/s, SAS and SATA end devices. Incorporation of active cable support on two of the ports enables the SAS Switch and any connected devices to be placed up to 25 meters from the Switch itself.

A single SAS Switch can be used in a normal configuration, or two switches can be configured for a High Availability (HA) application where both ports of the storage system are connected using redundant paths. Should one of the switches fail, the second one will continue normal operation. This flexibility adds additional value to the SAS6160 Switch.

Software Features

- Embedded SAS Domain Manager (SDM)
- GUI & CLI management utility
- SAS in-band and Ethernet out-of-band management interface
- T10 zoning
- Switch-based discovery, self configuration
- Configuration/topology validation
- Event logging and error reporting
- SES support of switch environment

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SAS Ports	Sixteen x4 Wide Ports
Port Configuration	x4 Wide Port
Performance	384Gb/s aggregated throughput
SAS Addresses	Up to 1,000
SAS Connector Configuration	Sixteen x4 MiniSAS Connectors (SFF8088)
Visual Indicators	Activity and Fault/Status LEDs for Each Port
Management Interfaces	SAS in-band and Ethernet out-of-band

LSI® SAS6160 SWITCH SPECIFICATIONS

SAS Compliances	SAS-2.0	
SAS Protocols	SSP, STP and SMP	
SAS Ports Configuration	Sixteen x4 Phy Wide	
SAS Bandwidths	Half Duplex Wide Port (4 phys) – 24Gb/s	Full Duplex Wide Port (4 phys) – 48Gb/s
Storage Types	1.5, 3.0 or 6.0Gb/s SAS and/or SATA End Devices	
Zoning	T10 Compliant Zoning	
Zone Groups & Zone Sets	Embedded SAS Domain Manager (SDM) Up to 192 zone groups Up to 16 zone sets	
Management Interface	SAS in-band or 10/100 Ethernet out-of-band	
Firmware	Field upgradeable	
Connectors	SAS Fourteen x4 SFF8088 (MiniSAS) - Passive connectors Two x4 SFF8088 (MiniSAS) - Active connectors that provide active copper cable support	Ethernet One RJ-45
LED Indicators	Activity – 1 per port	Link/Fault – 1 per port
Real time clock	Battery backup RTC	
Power Consumption	25 watts nominal (no active cables); 50 watts max	
Power Supply	External 12 Volt ±5% with 100-240 VAC @ 50/60Hz external power supply	
Cooling	Dual fans	
Size	1/2W – 1.65" x 8" x 10" (Two will fit in a standard 1U rack space)	
Environments	Operating Temperature: 5°C to 50°C Relative Humidity: 5 to 90% Noncondensing	Storage Temperature: -45°C to 105°C Relative Humidity: 5 to 90% Noncondensing
MTBF	640,000 hours	
Compliances	FCC Class B; Canada ICES-003 Class B, CE Europe (EN55022/EN55024); Japan VCCI Class B)	
Warranty	3 years	
SAS Switch Accessories	SAS6160 1U Mounting Tray; SAS6160 Replacement Power Supply; Active Cables available in different lengths	
Ordering Information	LSI SAS6160 Switch P/N: LSI00269	

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