

# Mini-SAS HD Active Optical Cable Assemblies

## INTEROPERABILITY, RELIABILITY, COMPATIBILITY

Amphenol ICC's Mini-SAS HD Active Optical Cable is fully compliant to SAS 2.1 and SAS 3.0 industry standards as well as the SFF-8636 interface standard. Used primarily for external Enterprise storage applications (box-to-box, server to storage, server to switch), this cable is part of Amphenol ICC's comprehensive Mini-SAS HD product offerings that address all board connector and cabling applications, from 1 to 100 meters. This wide offering gives system architects full flexibility and a complete range of products to meet all high speed storage and high density IO system needs.

- Fully compliant to SAS 2.1 (6Gb/s) and SAS 3.0 (12Gb/s) industry standards
- Support PCI Express Gen3 (8Gb/s) applications
- Operate up to 48Gb/s aggregate bandwidth
- Transmission distance up to 100m (MMF)



## FEATURES

- Optical connectivity enables length up to 100m
- Full SAS 3.0 compatibility ensures plug and play operation
- 8 cores multimode loose fiber with a 3.0mm round jacket
- Backwards compatible one generation for interoperability with SAS 2.1 equipment
- Accessible through two-wire Serial Interface
- Programmable output amplitude, pre-emphasis
- Customized labeling and EEPROM memory map extensions
- 0°C to +70°C operating case temperature

## BENEFITS

- Allow for more flexible installation and build-out options
- Supports four SAS channels per connection for efficient installations
- Allow for easy cable routing in any direction without concern of signal loss
- Hybrid connections are possible between SAS 3.0 and SAS 2.1
- Allows for connection discovery and cable management and improved serviceability
- Provide maximum flexibility for optimization
- Full flexibility to meet specific requirements
- Supports commercial temperature range

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### TECHNICAL INFORMATION

#### MATERIAL

- OM3 and OM4 fiber cable is selectable with plenum rated or LSZH rated
- Die Cast Covers: Zinc with nickel plating
- Halogen free PCB material

#### ELECTRICAL PERFORMANCE

- Power Supply Voltage: 3.3V
- Data rate per lane: 12Gb/s
- Transmitter Type: 850nm VCSEL
- Receiver Type: PIN-diode
- Bit Error Rate:  $< 10^{-12}$

#### MECHANICAL PERFORMANCE

- Mating Force: 150N max.
- Unmating Force: 50N max.
- Durability: 250 cycles

#### ENVIRONMENTAL

- RoHS 6/6 Compliant
- Storage Temperature Range:  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$
- Operating Case Temperature Range:  $0^{\circ}\text{C}$  to  $70^{\circ}\text{C}$
- Storage Humidity Range: 0 to 85% RH
- Operating Humidity Range: 0 to 85% RH

#### SPECIFICATION

- SFF-8449: Management interface for SAS shielded cables
- SFF-8636: Common management interface
- SFF-8644: Mini-Multilane shielded integrated high density connector

#### PACKAGING

- ESD Bag

#### TARGET MARKETS/APPLICATIONS



External Storage Connections



Enterprise Storage  
SAS 3.0 (12Gb/s) and SAS 2.1 (6Gb/s)

### PART NUMBER SELECTOR

FO	HH	XX	X	X	00	XXX
Cable Type						Assembly Length
Fiber Optics						001 1M
						002 2M
						003 3M
						.
						.
						.
						.
						100 100M
Product Family						Standard Product
HH	4X HD-SAS TO 4X HD-SAS					00 AHSP
Data Rate						Rating
B2	SAS 3.0					P PLENUM
Cable Type						L LSZH
3	OM3					
4	OM4					

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