FCi

Mini-SAS HD Connectors and Cable Assemblies
Next generation SAS storage interface

DESCRIPTION

The Mini-SAS HD product is the next generation SAS storage interface addressing channel bandwidth requirements of 6 Gb/s to 12 Gb/s meeting or exceeding the respective SAS 2.1 and proposed SAS 3.0 specifications. The Mini-SAS HD product provides greater port density (11mm port-to-port) versus the existing Mini-SAS 2.0 product (19.01mm port-to-port). The Mini-SAS HD product is compliant to the SFF-8643 and SFF-8644 industry specifications. Internal and external connector configurations of the Mini-SAS HD product include 1X1 (4x), 1X2 (8x), and 1X4(16x) and enables 4x and 8x cable assembly solutions which include EEPROM communication. The Mini-SAS HD profile design is PCI Express compatible and can be utilized in PCI Express architecture applications.

FEATURES & BENEFITS

- IMLA based board connector insures compliance to the SAS 2.1 & proposed 3.0 electrical performance criteria
- Internal and external board connector and cable assemblies provide end-to-end application solutions
- 1X1, 1X2 and 1X4 connector/cage assemblies offer product family design flexibility
- All board connectors and configurations are fully 6G and 12G compliant allowing for use of same part numbers when system speeds increase from 6G to 12G
- Metal cages on the connector and cables provide 360° EMI shielding and replaces problematic EMC elastomeric gaskets
- Cable assemblies offered in 4x and 8x configurations
- Eye-of-the-needle connector and cage single step termination yields consistent application to the PCB
- The cable strain relief results in an axial pull force in excess of 20 lbs
- Cable latch design reduces cable insertion force and un-mating issues
- Pull tabs are available in multiple lengths in Pantone 279 color to meet many application needs.
- Positive stop feature on the casting prevents cable assembly mating over-travel.
- Hybrid cables (mini-SAS HD to mini-SAS) allow for backwards compatible cabling with older system hardware

TARGET MARKETS / APPLICATIONS

- **DATA**
  - Servers
  - RAID systems
  - Storage racks

- **EXTERNAL STORAGE SYSTEMS**
  - SAS/SATA HBA interfaces
  - Direct-attached storage (DAS)

- **COMMUNICATIONS**
  - Switches

TECHNICAL INFORMATION

▶ MATERIALS
- ▪ Board Receptacle Contact: Copper alloy
- ▪ Board Receptacle Housing: Thermoplastic high temperature UL94V-0
- ▪ Board Receptacle Plating: Gold over Nickel
- ▪ Plug Paddle Card: Copper/FR4 – Gold over Nickel plating.

▶ ELECTRICAL PERFORMANCE
- ▪ Impedance: 100 +/- 15Ω
- ▪ Voltage Rating: 30 Volts AC (RMS)/DC Max
- ▪ Current Rating: 0.5 Amps Max

▶ APPROVALS AND CERTIFICATIONS
- ▪ RoHS conforms to EU directive 2002/95/EC
- ▪ UL Approval

▶ PACKAGING
- ▪ Board Receptacle: Tray
- ▪ Plug/Cable Assembly: Bag

▶ ENVIRONMENTAL
- ▪ Thermal Shock (temperature cycling): conforms to EIA-364-32
- ▪ Temperature life (heat aging): conforms to EIA-361-17, 105°C for 500 hours

▶ MECHANICAL PERFORMANCE
- ▪ Durability: 200 cycles

▶ SPECIFICATIONS
- ▪ Product Spec: GS-12-651

Mini-SAS HD Family   **Cable Assemblies**   **External Assemblies**   **Internal Assemblies**

PART NUMBERS-BOARD CONNECTORS

Part Number	Product Description	Signal Pairs
10112626-101LF	Mini-SAS HD 1 X 1 External Assembly (12 Gb/channel)	8 Pair
10112627-101LF	Mini-SAS HD 1 X 2 External Assembly (12 Gb/channel)	16 Pair
10112628-101LF	Mini-SAS HD 1 X 4 External Assembly (12 Gb/channel)	32 Pair
10112632-101LF	Mini-SAS HD 1 X 1 Internal Assembly (12 Gb/channel)	8 Pair
10112633-101LF	Mini-SAS HD 1 X 2 Internal Assembly (12 Gb/channel)	16 Pair
10112634-101LF	Mini-SAS HD 1 X 4 Internal Assembly (12 Gb/channel)	32 Pair

PART NUMBERS-CABLE ASSEMBLIES

Part Number	Product Description	Signal Pairs
10112041	Mini-SAS HD to Mini-SAS HD passive cable assembly - 4x configuration - SAS 2.1 (6Gb/s) compatible	8 Pair
10117771	Mini-SAS HD to Mini-SAS passive cable assembly- SAS 2.1 (6Gb/s) compatible - 4 x configuration on mini-SAS HD end and universal keying on mini-SAS end	8 Pair
10112359	Mini-SAS HD to Mini-SAS HO passive cable assembly - 8x configuration - SAS 2.1 (6Gb/s) compatible	16 Pair
10117947	Mini-SAS HD to Mini·SAS passive cable assembly- SAS 2.1 (6Gb/s) compatible - 8x configuration on mini-SAS HD end and universal keying on mini-SAS end	16 Pair

Preliminary datasheet

For more information please visit: www.fciconnect.com/hsio or contact: minisashd@fciconnect.com

www.fciconnect.com

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