12G Mini–SAS HD Cable Assemblies

THE MOST RELIABLE 12G SAS 3.0 I/O CABLE SOLUTION IN THE INDUSTRY

Amphenol ICC's 12G Mini–SAS HD product is the present generation SAS storage interface addressing multi–channel bandwidth requirements of 6Gb/s and 12Gb/s while meeting or exceeding SAS 2.1 and SAS 3.0 specifications. The Mini–SAS HD HD product provides greater port density (11mm port–to–port) versus the legacy Mini–SAS HD 2.0 product (19.01mm port–to–port).

Our Mini–SAS HD product is fully compliant to SFF–8644 industry specifications. External connector configurations of the Mini–SAS HD product support x4 and x8 external cable assembly solutions with the added system intelligence of EEPROM support.

The Mini–SAS HD mechanical profile is PCI Express compatible and can be utilized in PCI Express architecture applications.

- x4 and x8 configurations available to flexible system design
- Same interface and connector system to be used when moving to 24Gb/s SAS 4.0 signaling speeds
- Enjoy a reduced power budget and lower port cost compared to optical
- Supports up to a maximum of 10 meter lengths for passive plus active copper solution
- Fully compatible with other competitive industry standard connector systems

TARGET MARKETS

FEATURES	BENEFITS
Cable assemblies are offered in x4 and x8 configurations	Flexible for system data bandwidth design and can use for PCI Express 4x & 8x
Optimized PCB with auto soldering process and separate Tx and Rx board designs	Exceed 12G electrical performance requirement and lower cross–talk
Latch design with 180N maximum latch retention	Maintains cable connection under mechanically stressed conditions
Pull tabs are available in multiple lengths in various Pantone colors to meet application needs	Wide variety of options in the lanyard color and length based on actual system design requirement
A connector backshell is offered in a low profile design for 28AWG and smaller AWG sizes	Higher density I/O panel port layout can be achieved when application distance is under 3 meters
EEPROM in cable assembly	Industry memory map compliance or customized to customer requirements
Hybrid external cables (Mini–SAS HD to Mini–SAS) available	Allow for backwards compatibility to legacy system hardware
30AWG – 26AWG cable sizes	Supports cable lengths from 0.3 to 6 meters
RoHS2 compliant	Environmentally friendly

TECHNICAL INFORMATION

MATERIAL

- Nickel plated zinc die cast shells & latching mechanism parts
- EM–888k laminated PCB with gold finger pads and solder pads
- Differential 8–pair cable with EMI shielding braid and LSZH or PVC jacketing
- Thermoplastic cable pull tab

ELECTRICAL PERFORMANCE

- Differential impedance: 100Ω +/– 10Ω
- SI performance per SAS 3.0
- Dielectric withstanding voltage per EIA 364–20

MECHANICAL PERFORMANCE

- Durability: 50 cycles
- Mating force: 40N max.
- Latch Strength; Axial Load: 180N min.
- Cable Axial Strain Relief: 90N min.
- Cable Flex: 180° flex; 15 cycles per EIA 364–41

ENVIRONMENTAL

- Thermal shock: EIA 364–32, Condition 1, 25 cycles, –55°C to 85°C
- Temperature life: EIA 364–17, Method A, Condition 2, Time Condition C, 500 hours, 70°C

APPROVALS AND CERTIFICATIONS

- STA Interoperability compliance
- PCI Interoperability compliance

SPECIFICATIONS

- Product Specification: 60176xxxx & 60177xxxx Cable Assemblies, passive un–equalized, 62462xxxx Cable Assemblies, Linear active equalized.
- SFF–8644

PACKAGING

- Individually packed in anti–static bags
- Cable ends packaged with dust covers

TARGET MARKETS/APPLICATIONS

Switches

Data Center
High Performance Computing (HPC)
Storage
Servers

www.amphenol-icc.com

Disclaimer
Please note that the above information is subject to change without notice.

PART NUMBERS

Description	Length	Type	Part Numbers
Hybrid –Mini–SAS to Mini–SAS HD	0.5 meter	30AWG, passive	601740001
Hybrid –Mini–SAS to Mini–SAS HD	0.5 meter	28AWG, passive	601740002
Hybrid –Mini–SAS to Mini–SAS HD	1.0 meter	30AWG, passive	601740003
Hybrid –Mini–SAS to Mini–SAS HD	1.0 meter	28AWG, passive	601740004
Hybrid –Mini–SAS to Mini–SAS HD	2.0 meter	30AWG, passive	601740005
Hybrid –Mini–SAS to Mini–SAS HD	2.0 meter	28AWG, passive	601740006
Hybrid –Mini–SAS to Mini–SAS HD	3.0 meter	28AWG, passive	601740008
Hybrid –Mini–SAS to Mini–SAS HD	4.0 meter	26AWG, passive	601750005
Hybrid –Mini–SAS to Mini–SAS HD	5.0 meter	26AWG, passive	601750001
Hybrid –Mini–SAS to Mini–SAS HD	6.0 meter	26AWG, passive	601750004
Mini–SAS HD to Mini–SAS HD	0.5 meter	30AWG, passive	601760001
Mini–SAS HD to Mini–SAS HD	0.5 meter	28AWG, passive	601760002
Mini–SAS HD to Mini–SAS HD	1.0 meter	30AWG, passive	601760003
Mini–SAS HD to Mini–SAS HD	1.0 meter	28AWG, passive	601760004
Mini–SAS HD to Mini–SAS HD	2.0 meter	30AWG, passive	601760005
Mini–SAS HD to Mini–SAS HD	2.0 meter	28AWG, passive	601760006
Mini–SAS HD to Mini–SAS HD	3.0 meter	28AWG, passive	601760008
Mini–SAS HD to Mini–SAS HD	4.0 meter	26AWG, passive	601770005
Mini–SAS HD to Mini–SAS HD	5.0 meter	26AWG, passive	601770006
Mini–SAS HD to Mini–SAS HD	6.0 meter	26AWG, passive	601770004
Mini–SAS HD to Mini–SAS HD	8.0 meter	26AWG, passive	624620001
Mini–SAS HD to Mini–SAS HD	9.0 meter	26AWG, passive	624620002
Mini–SAS HD to Mini–SAS HD	10.0 meter	26EXD, passive	624620003

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