

12G & 24G Mini-SAS HD Cable Assemblies

THE MOST RELIABLE 12G/24G SAS 3.0/4.0 HSIO CABLE SOLUTION IN THE INDUSTRY

Amphenol's 12G / 24G Mini-SAS HD product is the next-generation SAS storage interface addressing multi-channel bandwidth requirements of 12Gb/s or 24Gb/s while meeting or exceeding SAS 3.0/4.0 specifications. The Mini-SAS 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 with the SFF-8643 and 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 for flexible system design
- Enjoy a reduced power budget and lower port cost compared to optical
- Supports up to a maximum of 5 meter (4.0) and 10 meter (3.0) lengths for passive cable
- Fully compatible with other competitive industry standard connector systems

FEATURES

- Cable assemblies are offered in x4 and x8 configurations
- Optimized PCB with auto soldering process and separate Tx and Rx board designs
- Latch design with 180N maximum latch retention
- Pull tabs are available in multiple lengths in various Pantone colors to meet application needs
- A connector back shell is offered in a low-profile design
- EEPROM in cable assembly
- Controlled wire management and termination process
- 30AWG – 26AWG cable sizes
- RoHS 2 compliant



TARGET MARKETS



BENEFITS

- Flexible for system data bandwidth design and can use for PCI Express® 4x & 8x
- Exceed 12/24G SAS 3.0/4.0 electrical performance requirement and lower crosstalk
- Maintains cable connection under mechanically stressed conditions
- Wide variety of options in the lanyard color and length based on actual system design requirement
- Higher density I/O panel port layout can be achieved when application distance is under 3 meters
- Industry memory map compliance or customized to customer requirements
- Assures consistent high speed electrical performance
- Supports cable lengths from 0.3 to 5 meter
- Environment 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 EMShielding braid and LSZH or PVC jacketing
- Thermoplastic cable pull tab

ELECTRICAL PERFORMANCE

- Differential impedance: $100\Omega \pm 10\Omega$
- SI performance per SAS 3.0/4.0
- 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.

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

SPECIFICATIONS

- INCITS/ANSI
- Serial Attached SCSI (SAS)
- Specifications SFF-8643 and SFF-8644

APPROVALS AND CERTIFICATIONS

- STA Interoperability compliance
- PCI Interoperability compliance

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

PART NUMBERS

Description	Length	AWG	Part Numbers
Mini-SAS HD to Mini-SAS HD	1.0 meter	30	NBCCEF-0001
Mini-SAS HD to Mini-SAS HD	1.0 meter	28	NBCCEG-0001
Mini-SAS HD to Mini-SAS HD	2.0 meter	30	NBCCEF-0002
Mini-SAS HD to Mini-SAS HD	2.0 meter	28	NBCCEG-0002
Mini-SAS HD to Mini-SAS HD	3.0 meter	28	NBCCEG-0003
Mini-SAS HD to Mini-SAS HD	4.0 meter	26	NBCCEJ-0004
Mini-SAS HD to Mini-SAS HD	5.0 meter	26	NBCCEJ-0005
Hybrid –Mini-SAS to Mini-SAS HD	0.5 meter	30	601740001
Hybrid –Mini-SAS to Mini-SAS HD	0.5 meter	28	601740002
Hybrid –Mini-SAS to Mini-SAS HD	1.0 meter	30	601740003
Hybrid –Mini-SAS to Mini-SAS HD	1.0 meter	28	601740004
Hybrid –Mini-SAS to Mini-SAS HD	2.0 meter	30	601740005
Hybrid –Mini-SAS to Mini-SAS HD	2.0 meter	28	601740006
Hybrid –Mini-SAS to Mini-SAS HD	3.0 meter	28	601740008
Hybrid –Mini-SAS to Mini-SAS HD	4.0 meter	26	601750005
Hybrid –Mini-SAS to Mini-SAS HD	5.0 meter	26	601750001
Hybrid –Mini-SAS to Mini-SAS HD	6.0 meter	26	601750004
Mini-SAS HD to Mini-SAS HD	0.5 meter	30	601760001
Mini-SAS HD to Mini-SAS HD	0.5 meter	28	601760002
Mini-SAS HD to Mini-SAS HD	1.0 meter	30	601760003
Mini-SAS HD to Mini-SAS HD	1.0 meter	28	601760004
Mini-SAS HD to Mini-SAS HD	2.0 meter	30	601760005
Mini-SAS HD to Mini-SAS HD	2.0 meter	28	601760006
Mini-SAS HD to Mini-SAS HD	3.0 meter	28	601760008
Mini-SAS HD to Mini-SAS HD	4.0 meter	26	601770005
Mini-SAS HD to Mini-SAS HD	5.0 meter	26	601770006
Mini-SAS HD to Mini-SAS HD	6.0 meter	26	601770004
Mini-SAS HD to Mini-SAS HD	8.0 meter	26	624620001
Mini-SAS HD to Mini-SAS HD	9.0 meter	26	624620002
Mini-SAS HD to Mini-SAS HD	10.0 meter	26	624620003

▶ 12G & 24G Mini-SAS HD Cable Assemblies

Description	Length	AWG	Part Numbers
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	1.0 meter	30	NEDDCA-0001
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	2.0 meter	30	NEDDCA-0002
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	2.0 meter	30	NEDDCA-0003
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	0.5 meter	30	NEDDCA-0004
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	1.0 meter	28	NEDDCB-0001
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	2.0 meter	28	NEDDCB-0002
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	2.5 meter	28	NEDDCB-0003
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	3.0 meter	28	NEDDCB-0004
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	0.5 meter	28	NEDDCB-0005
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	1.0 meter	26	NEDDCD-0001
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	2.0 meter	26	NEDDCD-0002
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	3.0 meter	26	NEDDCD-0003
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	4.0 meter	26	NEDDCD-0004
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	1.0 meter	30	NEDDCF-0001
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	2.0 meter	30	NEDDCF-0002
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	3.0 meter	30	NEDDCF-0003
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	0.5 meter	30	NEDDCF-0006
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	1.0 meter	28	NEEECB-0001
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	1.5 meter	28	NEEECB-0002
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	2.0 meter	28	NEEECB-0003
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	2.5 meter	28	NEEECB-0004
Mini-SAS HD PCIe® 3.0 to Mini-SAS HD PCIe® 3.0	3.0 meter	28	NEEECB-0005

HS10MSASHD1224GCA0523EA4