

# 3M™ High-Speed Cable Assembly Solutions

High-speed cable assemblies are essential for the efficient operation of systems that process large volumes of data. For high-performance computing, routers, storage and switches, 3M has the cabling solutions you need to connect devices with the latest industry standard physical interfaces.

- Utilizing 3M™ Twin Axial Cable technology: Highly routable, foldable, flexible
- Thin, low-profile ribbon cable allows more routing options within a case, and enables many packaging configurations
- Foldable ribbon construction allows for extremely tight bend radii with minimal performance impact

## Internal Cable Assemblies

### 3M™ SlimLine Twin Axial Cable Assembly (SFF-8654)

- x4 and x8 configurations
- SFF-8654 straight and right angle
- Signal wire size 30AWG and 31AWG
- Standard lengths 0.5 m, 0.75 m, and 1 m
- PCIe (85 ohm) and SAS (100 ohm) applications
- Custom folded assemblies available



### Internal miniSAS Cable Assembly, Series 8F36 / 8F68 / 8S36

- x4 (36-position) and x8 (68-position) configurations
- SFF-8087 straight (contact 3M regarding right angle and side exit)
- SFF-8087 to 7-position SATA fan-out assemblies
- Signal wire size 30AWG, available in either silver or tin
- Available with and without sidebands
- SAS (100 ohm) applications
- SFF-8087 hybrid to SATA
- Standard lengths available up to 1 m
- Custom folded assemblies available



### Internal miniSAS HD Cable Assembly, Series 8US4 / 8UH4

- x4 configuration
- SFF-8643 straight short body, straight, and right angle
- SFF-8643 hybrid to SFF-8087
- Signal wire size 30AWG
- Available with or without sidebands
- Available with mesh sleeve
- SAS (100 ohm) applications (contact 3M regarding PCIe 85 ohm applications)
- Standard lengths available up to 1 m
- Custom lengths available



### Internal SATA Cable Assembly, Series 5602

- 7-position configuration
- Straight and right angle with either passive or active latch
- Signal wire size 30AWG
- SATA (100 ohm) applications
- Standard lengths available up to 1 m



### Internal PCI Express Extender and Jumper Cable Assemblies, Series 8K

- x4, x8 and x16 configurations
- Signal wire size 30AWG
- Includes aux signals
- PCIe (85 ohm) applications
- Standard lengths 0.25 m and 0.5 m



# External Cable Assemblies

## External QSFP28 Cable Assembly, Series 9Q

- IEEE 802.3bj and SFF-8665, -8661, -8662
- Tested at Open Network Systems Interoperability PlugFest (UNH IOL)
- Signal wire size 30AWG and 26AWG
- Standard lengths available up to 4 m
- 100G Ethernet applications
- Custom EEPROM mapping available
- QSFP28 (100G) to 4xSFP28 (25G) break out assemblies available
- QSFP28 (100G) to 2xQSFP28 (50G) Y-cable assemblies available



## 3M™ 400G QSFP-DD Direct Attach Copper Cable Assemblies, 9V Series

- Delivers aggregate data bandwidth up to 400 Gbps (8x 50Gbps) with passive copper assemblies:
  - Up to 2 m with 30 AWG
  - 2 to 3.25 m, 3.5\* meter with 26 AWG
- Designed to meet the following industry-standard protocols:
  - QSFP-DD MSA; IEEE 802.3cd
  - 400G Ethernet applications
- Custom EEPROM mapping available
- RoHS 2011/65/EU compliant\*\*



- Product specifications: PD-0352 / 78-5102-0352-9
- Data sheet / Customer drawing: TS-2701 / 78-5100-2701-0
- QSFP-DD to 2xQSFP56 Y-Cable assemblies available
- QSFP-DD to 4xQSFP28 / 4xQSFP56 and 8xSFP56 breakout assemblies available

## External QSFP+ Cable Assembly, Series 9Q

- SFF-8436
- Signal wire size 30AWG
- Standard lengths available up to 3 m
- 40G Ethernet applications
- InfiniBand DDR (4x5Gbps), QDR (4x10Gbps) and FDR (4x14Gbps) applications
- Custom EEPROM mapping available



## External SFP28 Cable Assembly, Series: 1422

- IEEE 802.3by and SFF-8431
- Tested at Open Network Systems Interoperability PlugFest (UNH IOL)
- Signal wire size 30AWG and 26AWG
- Standard lengths available up to 4 m
- 25G Ethernet applications
- Available in black (red or blue PVC jacket options available)
- Custom EEPROM mapping available



## External miniSAS Cable Assembly, Series 8G26

- x4 configuration
- SFF-8088
- Signal wire size 30AWG and 28AWG
- SAS (100 ohm) applications
- Various keying options and custom cable lengths available
- Standard lengths available up to 6 m



## External SFP+ Cable Assembly, Series: 1410 / 1412

- SFF-8431 and SFF-8432
- Signal wire size 30AWG and 26AWG
- Standard lengths available up to 7 m
- 10G Ethernet applications
- Available in black, red or blue PVC jacket options
- Custom EEPROM mapping available



\* 3.25 meter cable assembly meets IEEE802.3cd and 3.5 meter assembly meets IEEE802.3cd Channel Operating Margin (COM).

\*\*RoHS 2011/65/EU Compliant: the product or part ("Product") does not contain any of the substances in excess of the maximum concentration values ("MCVs") in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, and/or in the recast RoHS Directive 2011/65/EU, Annex II, unless the substance is in an application that is exempt under the RoHS Directive 2002/95/EC, as amended, and/or under Annex III or Annex IV to the recast RoHS Directive 2011/65/EU. The MCVs are by weight in homogeneous materials.

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