

3M Science.
Applied to Life.™

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.



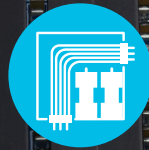
**Highly foldable,
flexible and routable**

Utilizing 3M™ Twin Axial
Cable technology



**Thin, low-profile
ribbon cable**

Allows more routing
options within a case, and
enables many packaging
configurations



**Extremely tight
bend radii**

Foldable ribbon
construction allows for tight
bend radii with minimal
performance impact

Flexible solutions for today and tomorrow's requirements.
Ask us about the future of Twinax.



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

- Up to 400G Ethernet applications
- IEEE 802.3cd
- QSFP-DD MSA
- Signal wire size 30AWG and 26AWG
- Standard lengths available up to 3 m
- Custom EEPROM mapping available
- QSFP-DD to 2xQSFP56 Y-Cable assemblies available
- QSFP-DD to 4xQSFP28/4xQSFP56 and 8xSFP56 breakout assemblies available

Typical Applications: Network Interface Card (NIC) to switch



3M™ External QSFP28 Cable Assembly, Series 9Q

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

Typical Applications: Network Interface Card (NIC) to switch



3M™ External QSFP+ Cable Assembly, Series 9Q

- 40G Ethernet applications
- IEEE 802.bd
- SFF-8436
- Signal wire size 30AWG
- Standard lengths available up to 3 m
- Custom EEPROM mapping available
- InfiniBand DDR (4×5Gbps), QDR (4×10Gbps) and FDR (4×14Gbps) applications
- Tested at Open Network Systems Interoperability PlugFest (UNH IOL)

Typical Applications: Network Interface Card (NIC) to switch



3M™ External SFP28 Cable Assembly, Series 1422

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

Typical Applications: Network Interface Card (NIC) to switch



3M™ External SFP+ Cable Assembly, Series 1410 / 1412

- 10G Ethernet applications
- IEEE 802.3ae
- SFF-8431 and SFF-8432
- Signal wire size 30AWG and 26AWG
- Standard lengths available up to 7 m
- Custom EEPROM mapping available
- Available in black, red or blue PVC jacket options

Typical Applications: Network Interface Card (NIC) to switch



3M™ External miniSAS Cable Assembly, Series 8G26

- x4 configuration
- SAS 2.0 and 2.1 (100 ohm) applications
- SFF-8086, 8088
- Signal wire size 30AWG and 28AWG
- Standard lengths available up to 6 m
- Various keying options and custom cable lengths available

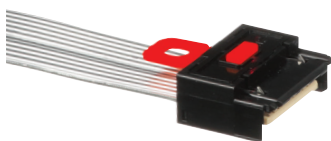
Typical Applications: Network Interface Card (NIC) to switch



3M™ Multi-Channel I/O Twin Axial Cable Assemblies, Series 8MS8

- x4 and x8 configurations
- SFF-TA-1016 straight and right angle
- Signal wire size 30AWG and 31AWG
- Standard lengths 0.5 m, 0.75 m, and 1 m
- PCIe (85 ohm) applications
- Custom folded assemblies available

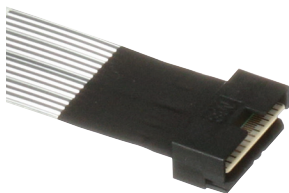
Typical Applications: Motherboard or controller to drive backplane, midboard



3M™ Scalable High Speed I/O Assemblies

- 1C, 2C, 4C configurations
- SFF-TA-1020 straight
- Signal wire size 30AWG and 31AWG
- Standard lengths 0.5 m, 0.75 m, and 1 m
- PCIe (85 ohm) applications
- Custom folded assemblies available

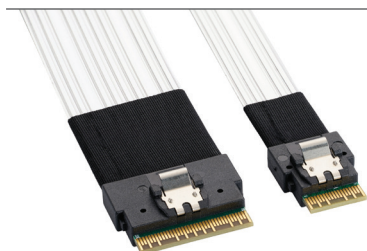
Typical Applications: Motherboard or controller to drive backplane, midboard



3M™ Low Profile I/O Twin Axial Cable Assemblies, Series 8CS8

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

Typical Applications: Motherboard or controller to drive backplane, midboard



3M™ SlimLine Twin Axial Cable Assemblies, Series 8ES8

- 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

Typical Applications: Motherboard or controller to drive backplane, midboard

3M™ Mini SlimLine Twin Axial Cable Assemblies, Series 8EL8

- x8 configurations
- SFF-8654 straight
- Signal wire size 31AWG
- Standard lengths 0.5 m, 0.75 m, and 1 m
- PCIe (85 ohm) applications
- Custom folded assemblies available
- Assembly plug depth reduced 25% compared to standard SlimLine

Typical Applications: Motherboard or controller to drive backplane, midboard

3M™ Compact SlimLine Twin Axial Cable Assemblies, Series 8EC8

- x8 configurations
- SFF-8654 straight
- Signal wire size 30AWG and 31AWG
- Standard lengths 0.5 m, 0.75 m, and 1 m
- PCIe (85 ohm) applications
- Custom folded assemblies available
- Assembly plug width reduced by 8% and depth reduced by 25% compared to standard SlimLine

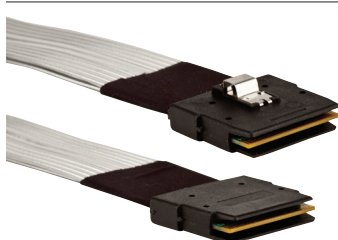
Typical Applications: Motherboard or controller to drive backplane, midboard



3M™ Internal PCI Express Extender and Jumper Cable Assemblies

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

Typical Applications: Flexible riser (extender) motherboard to motherboard (jumper)



3M™ Internal miniSAS Cable Assemblies, Series 8F36 / 8F68 / 8S36

- x4 (36-position) and x8 (68-position) configurations
- SFF-8087 straight and right angle
- 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

Typical Applications: Motherboard or controller to drive backplane, midboard



3M™ Internal miniSAS HD Cable Assemblies, Series 8U54 / 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

Typical Applications: Motherboard or controller to drive backplane, midboard



3M™ Internal SATA Cable Assemblies, 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

Typical Applications: Motherboard or controller to drive backplane, midboard



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