

3M Science.
Applied to Life.™

Far beyond speed

**3M™ Direct Attach Copper
Twin Axial Cable Assemblies**

External twin axial cable solutions from 3M.
The flexible, foldable future of data centers,
high-performance computing and AI.

Higher speed. Better cable management.

To help you keep servers, switches, storage and other high-speed components performing at the levels your customers demand, you'll need interconnect solutions with plenty of speed. 3M™ Direct Attach Copper Twin Axial Cable Assemblies deliver it, with channel rates up to 100 Gbps and aggregate data rates up to 800G.

But that's just the start. These cable assemblies feature flexible, foldable, fully-shielded cable that can be folded back on itself at an extremely tight bend radius. That means more cable can be installed in smaller spaces, with little to no signal loss. The result: Better cable management. Smoother airflow. Simplified deployment and serviceability. It's the future of high-speed data transfer, and it's available now.

Rack configurations made smarter and simpler

3M Twin Axial Cable technology allows for:

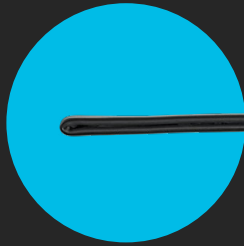
- Excellent rack cable management
- Efficient routing of cable with tight bends and folds
- Extremely tight bend radius reduces required space in front of the port, allowing rack doors to close
- Simplified serviceability with light, flexible cables



3M™ Direct Attach Copper Twin Axial Cable Assemblies, compared to competitive cable

Competitive cable

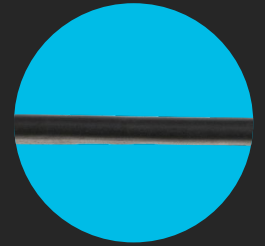
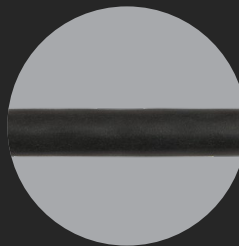
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Foldable, flexible cable

Competitive cable

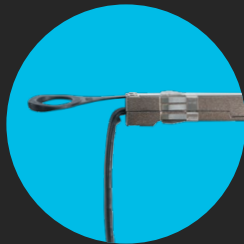
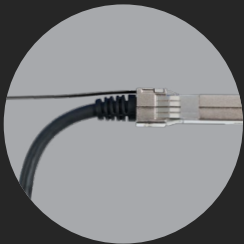
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Thin cable

Competitive cable

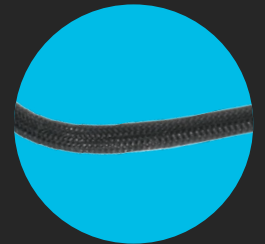
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Tight bends at connector

Competitive cable

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Minimized airflow

Available form factors:

- OSFP
- QSFP-DD
- QSFP28
- SFP28
- QSFP+
- SFP+



3M™ 800G OSFP AEC Cable Assembly, 10Y Series

- Delivers aggregate bandwidth up to 800G (8x 100Gbps) with active electrical cable assemblies:
 - Up to 3 meters with 32 AWG
 - Up to 4 meters with 30 AWG
 - Up to 5 meters with 28 AWG
- Meets the following industry-standard protocols:
 - IEEE 802.3ck; OSFP MSA
 - 800G Ethernet applications
- Standard CMIS EEPROM mapping, custom is available
- OSFP to OSFP & OSFP to 2xQSFP Breakout assemblies available
- RoHS 2011/65/EU compliant*



3M™ 800G OSFP Direct Attach Copper Cable Assemblies, 9Y Series

- Delivers aggregate bandwidth up to 800G (8x 100Gbps) with passive copper assemblies:
 - 0.5 to 0.75 meters with 32 AWG
 - 0.75 to 1.2 meters with 30 AWG
 - 1.2 to 1.5 meters with 28 AWG
 - 1.5 to 2.0 meters with 26 AWG
- Meets the following industry-standard protocols:
 - IEEE 802.3ck; OSFP MSA
 - 800G Ethernet applications
- Custom EEPROM mapping available
- OSFP to 2xQSFP/4xQSFP and 8xSFP breakout assemblies available
- RoHS 2011/65/EU compliant*



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

- Up to 400G Ethernet applications
- IEEE 802.3cd
- QSFP-DD MSA
- Signal wire size 30A WG and 26 AWG
- 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, 9Q Series

- 100G Ethernet applications
- IEEE 802.3bj
- SFF-8665, -8661, -8662
- Signal wire size 30 AWG and 26 AWG
- 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, 9Q Series

- 40G Ethernet applications
- IEEE 802.3bd
- SFF-8436
- Signal wire size 30 AWG
- Standard lengths available up to 3 m
- Custom EEPROM mapping available
- InfiniBand DDR (4x5Gbps), QDR (4x10Gbps) and FDR (4x14Gbps) applications
- Tested at Open Network Systems Interoperability PlugFest (UNH IOL)

Typical Applications: Network Interface Card (NIC) to switch



3M™ External SFP28 Cable Assembly, 1422 Series

- 25G Ethernet applications
- IEEE 802.3by
- SFF-8431
- Signal wire size 30 AWG and 26 AWG
- 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, 1410/1412 Series

- 10G Ethernet applications
- IEEE 802.3ae
- SFF-8431 and SFF-8432
- Signal wire size 30 AWG and 26 AWG
- 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, 8G26 Series

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

Typical Applications: Network Interface Card (NIC) to switch

Over 50 years of interconnect innovation

3M™ Direct Attach Copper Twin Axial Cable Assemblies are part of a long line of 3M firsts in electronics cabling technology. 3M developed the first known mass-termination interconnect system; the first 64-wire termination; color-coded flat cabling; the first IDC solution for I/O applications; foldable twin-ax cable and more – all to help manufacturers improve their device performance, streamline their assembly and add more value to their solutions.

*** RoHS 2011/65/EU Compliant:** “RoHS 2015/863” means that the product or part does not contain any of the substances in excess of the maximum concentration values (“MCVs”) in EU RoHS Directive 2011/65/EU, as amended by EU 2015/863. The MCVs are by weight in homogeneous materials. This information represents 3M's knowledge and belief, which may be based in whole or in part on information provided by third party suppliers to 3M.

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