3M Science. Applied to Life.™

Flexible cable. Flexible design.

3M™ Twin Axial Internal Cable Assemblies

Internal twin axial cable solutions from 3M. More cable assemblies, more capabilities for challenging server, switch and storage designs.

Join the fold.

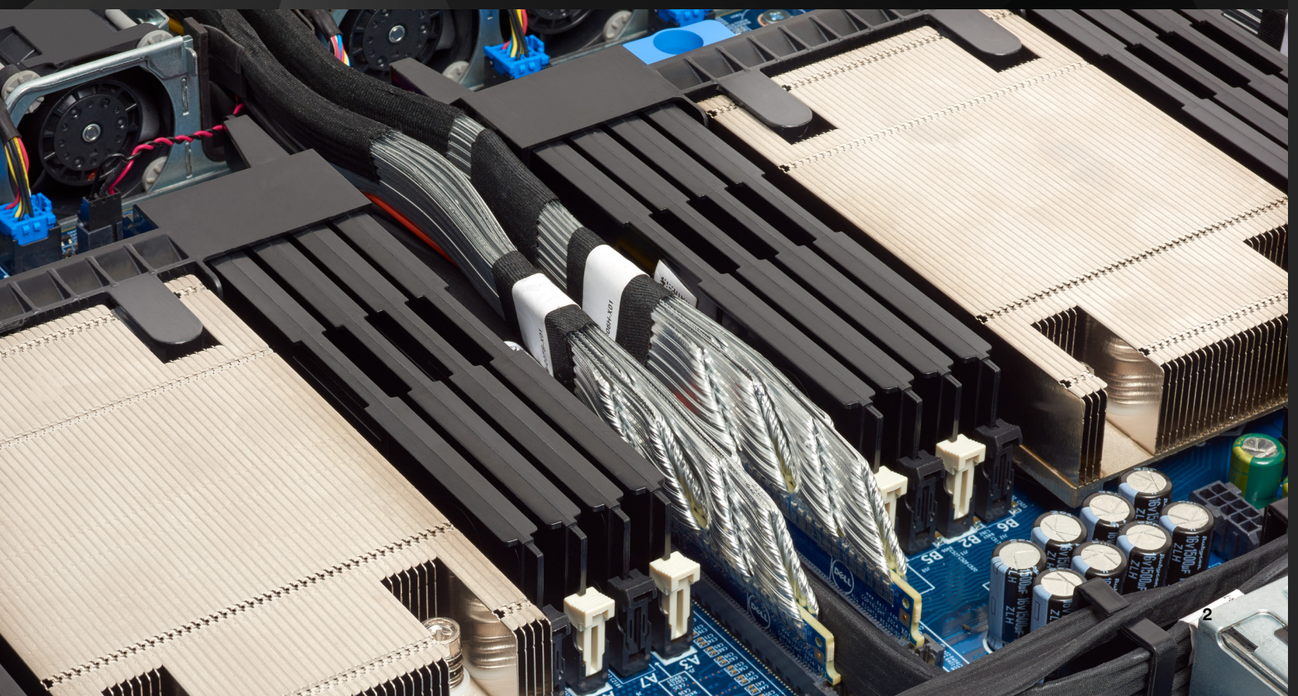
Imagine having true design flexibility: re-locating PCI card slots, bridging between PCBs, placing peripheral cards in virtually any orientation within a chassis. Imagine you could do all of it with excellent SI performance.

Now, you've got it. 3M™ Twin Axial Cable Assemblies help create that flexibility – flat, flexible cable can be folded back on itself at extremely tight bend radii, with little to no signal loss. It's an important key to unlocking broad possibilities in high-speed, high-density architectures.

The cable bends back. Your designs can leap forward.

This is the next generation of high-speed computing equipment: PCIe® Gen 5 SSDs, graphics cards and other powerful components present new challenges in configuration, cooling and SI performance for intensive I/O workloads. 3M™ Twin Axial Cable Assemblies feature 3M™ Twin Axial Cable technology – flexible, foldable cable allows you to replace PCB traces compact, custom folded cable assembly designs. Precision-formed, continuously laminated shielding maintains resonance-free signal integrity.

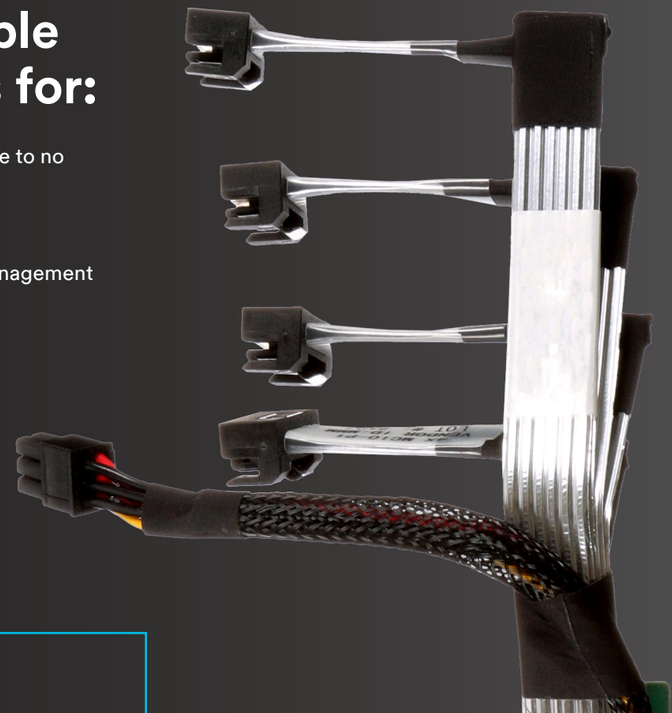
The result: greatly expanded capabilities. With multiple connector options and combinations available, you can configure components in virtually any orientation for aesthetics, for functionality and for maximized airflow. And you can do it all at the latest PCIe Gen 4 and Gen 5 speeds, with very little impact on your signal loss budget.



3M™ Twin Axial Internal Cable Assemblies

3M Twin Axial Cable technology allows for:

- Custom-folded cable designs with little to no signal loss
- More routing options within a case
- More efficient airflow and thermal management
- Less space required



Available form factors:

- PCIe© CEM
- PCIe© Card Edge
- SFF-TA-1020
- SFF-TA-1016
- SFF-8654
- SFF-8087 to 7-position SATA fan-out assemblies
- SFF-8643
- Internal SATA

3M™ Twin Axial PCI Express Extender Assemblies Gen 4.0 8Kxx Series

High-speed data transmission
- x8 and x16 configurations
- PCIe© CEM
- PCIe© Card Edge
- Signal wire size 31 AWG and 30 AWG
- Standard lengths 0.25 m and 0.5 m
- PCIe Gen 4.0 (85 ohm) applications
- Straddlemount and SMT connector types

Typical Applications: Flexible riser cable assembly

3M™ Twin Axial PCI Express Extender Assemblies Gen 5.0 8KDx Series

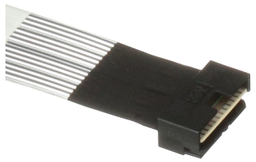
High-speed data transmission
- x8 and x16 configurations
- PCIe© CEM
- PCIe© Card Edge
- Signal wire size 30 AWG
- Standard lengths 0.25 m and 0.5 m
- PCIe Gen 5.0 (85 ohm) applications
- Straddlemount and SMT connector types

Typical Applications: Flexible riser cable assembly

3M™ Multi-Channel I/O Twin Axial Cable Assemblies, 8MSx (x4 is 8MS4)

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

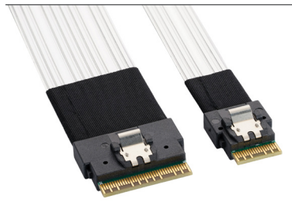
Typical Applications: Motherboard or controller to drive backplane, midboard



3M™ Low Profile I/O Twin Axial Cable Assemblies, 8CSx (x4 is 8CS4)

- x4 and x8 configurations
- Straight and right angle
- Signal wire size 30 AWG and 31 AWG
- 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, 8ESx (x4 is 8ES4)

- x4 and x8 configurations
- SFF-8654 straight and right angle
- Signal wire size 30 AWG and 31 AWG
- 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, 8EL8 Series

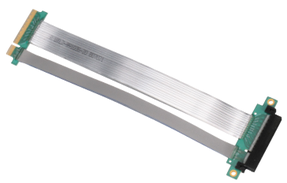
- x8 configurations
- SFF-8654 straight
- Signal wire size 31 AWG
- Standard lengths 0.5 m, 0.75 m, and 1 m
- PCIe (85 ohm) applications
- Custom folded assemblies available
- Assembly plug depth reduced 25% compared to standard SlimLine

Typical Applications: Motherboard or controller to drive backplane, midboard

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

- x8 configurations
- SFF-8654 straight
- Signal wire size 30 AWG and 31 AWG
- 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 30 AWG
- Standard lengths 0.25 m and 0.5 m
- PCIe Gen 3.0 (85 ohm) applications
- Includes aux signals

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

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

- 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 30 AWG, 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, 8US4 / 8UH4 Series

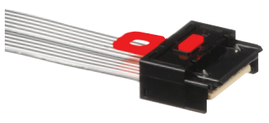
- x4 configuration
- SFF-8643 straight short body, straight, and right angle
- SFF-8643 hybrid to SFF-8087
- Signal wire size 30 AWG
- Available with or without sidebands
- Available with mesh sleeve
- SAS (100 ohm) applications (contact 3M regarding PCIe 85 ohm applications)
- Standard lengths available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

Typical Applications: Motherboard or controller to drive backplane, midboard

3M™ Internal SATA Cable Assemblies, 5602 Series

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

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 30 AWG
- 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

Over 50 years of interconnect innovation

3M™ 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.

Safety Data Sheet: Consult Safety Data Sheet before use.

Regulatory: For regulatory information about this product, contact your 3M representative.

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Electronics Materials Solutions Division
3M Center, Building 223-3S-23
St. Paul, MN 55144-1000 USA

Web 3M.com/twinax
Phone 1-800-810-8513

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