

3M™ Twin Axial Cable

SL8800 Series

Your system should be built around performance, not around your cables.

The 3M Internal Twin Axial Ribbon Cable SL8800 Series is a revolutionary ultra low-profile, high-speed, high signal density cable. 3M offers a broad line of available pair counts to cover many of the latest differential pair cable applications.

3M SL8800 Series Cable is an optimal solution for space-constrained systems. This cable is unjacketed, extremely thin and can even be folded with minimal loss or performance impact. SL8800 Series Cable can route along the sides of cabinets and through narrow openings in densely packaged equipment. Some high density offerings sacrifice performance to achieve density. Flex circuits are often used for tight packaging requirements, but flex circuitry can be cost prohibitive and can have limited bandwidth in some applications. Long high-speed runs over FR4 materials may require redrive chips adding cost and complexity to your system. SL8800 Series Cable is being installed in some of today's most powerful enterprise and high-performance computing systems to address both performance and packaging.

No compromises

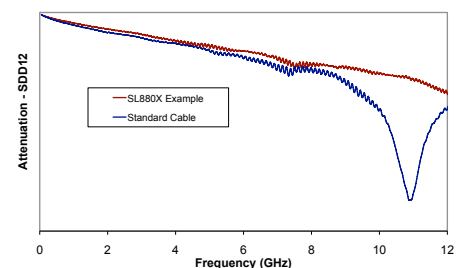
The SL8800 Series Cable is not just for densely packaged systems. The electrical performance places this cable in an elite category for skew control, low attenuation and high bandwidth. Even if your system does not require low-profile cable, the SL8800 Series Cable still provides you with a quality high performance cable for your high-speed signal requirements.

SL8800 Series Cable is a longitudinally shielded cable construction made to exacting tolerances. The cable suffers little to no resonance or “suck out,” where traditionally spiral wrapped twin axial cables exhibit an enormous loss of signal at a particular range of frequency. The cable is also low skew, and the ribbon construction allows customers to further control any skew that can sometimes be introduced when trying to manage individual channels. This is especially critical at speeds beyond 10 Gbps. High-speed applications continue to demand more performance out of the cables, and the SL8800 Series Cable is designed to deliver that performance.

As signal speeds continue to increase, cable can improve but the termination can still be a weak point. The SL8800 Series Cable standard ribbon format supports high performance termination, repeatability, and a reduced possibility for pinout error. When stripped in parallel, and then applied in parallel, each channel results in an identical termination length. Control and placement of individual channels is not required, eliminating the variation in performance and rework due to incorrect placement. This simultaneous processing can also yield manufacturing efficiency benefits.



3M™ Twin Axial Cable SL8800 Series is longitudinally shielded and made to exacting tolerances. It is also flexible, foldable and highly-routable.



3M™ Twin Axial Cable SL8800 Series exhibits low loss and no “suckout.”



The 3M™ Twin Axial Cable SL8800 Series is ideally suited for paddle card terminated cable assemblies, such as mini serial attached SCSI (miniSAS) and similar SFF 8087 type cable assemblies, including a four-pair, with four sidebands on the side version, SL8802/08-XXXXXX. When laid side-by-side, this cable can be used in 8x channel 68-position SFF 8087 applications, with sidebands. The two-pair cable can benefit your implementation of the new Serial Attached SCSI (SAS) high-density internal assemblies, SFF XXXX, combining performance, density and flexibility. The cable has been functionally tested in SAS 2.0 applications and passes those requirements in a 6 Gbps environment. Applications to 10 Gbps and beyond can be implemented with SL8800 Series Cable, subject to length and attenuation requirements. 3M will continue to support you and your system requirements as bandwidth demands increase. Look for future versions of 3M high-speed cable in other wire gauges, form factors and performance.

Cables should not be a design constraint. Make them a design enabler.

Part Number	Plating	Typical application	Drawing	Pairs	Sidebands	Cross Section
SL8801/12-10DA5-00 SL8801/12-11DA5-00	Silver Tin	MiniSAS SFF 8087 with sidebands	78-5100-2412-4	4	4	
SL8802/08-20DN5-00 SL8802/08-21DN5-00	Silver Tin	MiniSAS SFF 8087 without sidebands	78-5100-2413-2	4	0	
SL8803/08-10DN5-00 SL8803/08-11DN5-00	Silver Tin	SFF 8087 to SATA Fanout cable	78-5100-2414-0	4	0	
SL8802/04-10DN5-00 SL8802/04-11DN5-00	Silver Tin	HD SAS SFF 8643	78-5100-2401-7	2	0	
SL8802/04-50DN5-00 SL8802/04-51DN5-00	Silver Tin	HD SAS SFF 8643	78-5100-2400-9	2	0	
SL8801/12-20DA5-00 SL8801/12-21DA5-00	Silver Tin	SFF 8087 68 posn Half wide cable	78-5100-2463-7	4	4	
SL8801/11-10DA5-00 SL8801/11-11DA5-00	Silver Tin	PCIe on SFF 8087 extra pair for clock	78-5100-2462-9	5	1	

Product Spec	PS-0079
Attenuation	Silver, 3 db/m Tin, 4 db/m
Skew	<10ps/m

Technical Information

- 100 Ohm differential pairs
- Four pairs with and without sidebands
- Solid polyolefin insulation
- .88 mm thick
- RoHS* compliant
- The cable used in this assembly is UL AWM 21008 (150V, 80C); file number E42769
- The connector materials (resin/PCB) are rated 94 V-0
- Halogen-free**

Cable Preparation Support Documentation

Document Number	Title
78-9101-4118-9	3M Twin Axial Cable SL8800 Series - Preparation and Termination Process

*"RoHS Compliant 2002/95/EC" means that the product or part ("Product") does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. 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.

** Halogen-Free is defined as both 1) no halogen compounds that are intentionally added to the product or used in the manufacturing process for the product and 2) any impurities present are less than 900 ppm bromine, less than 900 ppm chlorine and/or less than 1500ppm total bromine and chlorine. The latter are the levels set forth in certain industry standards for printed circuit boards, such as the International Electrotechnical Commission (IEC) 61249-2-21 standard. This information represents 3M/s knowledge and belief which may be based in whole or in part on information provided by 3rd party suppliers to 3M.

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