# 3M™ Twin Axial Cable

## SL8800 Series

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

The 3M Internal Ribbon Twin Axial Cable SL8800 Series is a new ultra low profile, high speed, high signal density cable. These are only the first of a new line of high performance cables from 3M.

Currently available in four channel 100 ohm 30AWG versions, the SL8800 Series Cable is the optimum solution for space constrained systems. This cable is unjacketed, extremely thin, very flexible 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.

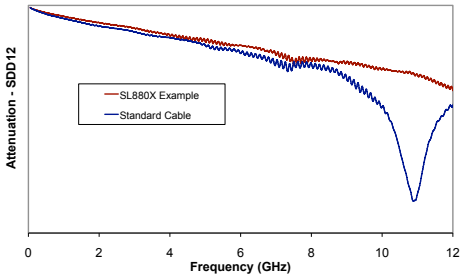
## No compromises

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 Cables still provide you with a quality high performance cable for your high speed signal requirements.

SL8800 Cable Series is a longitudinally shielded cable construction and is 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 will deliver that performance for years to come.

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.

3M™ Twin Axial Cable SL8800 Series is longitudinally shielded and made to exacting tolerances




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

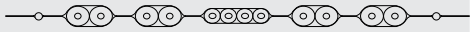
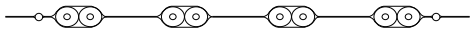
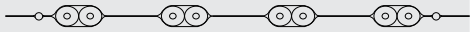
3M™ Twin Axial Cable SL8800 Series is flexible, foldable and highly routable.

The 3M™ Twin Axial Cable SL8000 Series is ideally suited for paddle card terminated cable assemblies, such as mini serial attached SCSI (miniSAS). The cable has been functionally tested in SAS 2.0 applications and passes those requirements in a 6 Gbps environment. Depending on length and attenuation requirements, applications to 10 Gbps and beyond can be implemented with SL8800 Series Cable.

3M will 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 increased performance.

Cable assemblies should not be a design constraint. Make them a design enabler.

## Initially released versions are as follows:

| 3M Part Number | Configuration | Drawing # | Spec# | Attenuation (@ 5 GHz) | Skew | Cross Section |
|---|---|---|---|---|---|---|
| SL8801/12-111A5-00 | 4 Pairs, 100ohm, 2 outside grounds with 4 Sidebands Sn plated, Solid Polyolefin dielectric | 78-9101-1415-2 | PS-0079 | 4 db/m | <10ps/m | |
| SL8801/12-101A5-00 | 4 Pairs, 100ohm, 2 outside grounds with 4 Sidebands Ag plated, Solid Polyolefin dielectric | 78-9101-1415-2 | PS-0079 | 3 db/m | <10ps/m |  |
| SL8802/08-211N5-00 | 4 Pairs, 100ohm, 2 outside grounds No-Sideband Sn plated, Solid Polyolefin dielectric | 78-9101-1416-0 | PS-0079 | 4 db/m | <10ps/m |  |
| SL8802/08-201N5-00 | 4 Pairs, 100ohm, 2 outside grounds No-Sideband Ag plated, Solid Polyolefin dielectric | 78-9101-1416-0 | PS-0079 | 3 db/m | <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)
- The connector materials (resin/PCB) are rated 94 V-0
- Halogen free**

## Cable Preparation Support Documentation

| Document Number | Title |
|---|---|
| 78-9101-2706-3 | 3M Twin Axial Cable SL8800 Series - Stripping Blades - Application |
| 78-9101-2705-5 | 3M Twin Axial Cable SL8800 Series - General Cable Prep |

*"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.

3M is a trademark of 3M Company.

**For more information, please visit us at www.3M.com/twinax**

### Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

**Warranty; Limited Remedy; Limited Liability.**
This product will be free from defects in material and manufacture for a period of one year from the time of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE**. If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**

**Electronic Solutions Division**
**Interconnect Products**
6801 River Place Blvd.
Austin, TX 78726-9000
1-800-225-5373
www.3M.com/twinax

Please recycle. Printed in USA
© 3M 2010. All rights reserved.
80-4000-1998-2