3M Science. Applied to Life.™

Rev it up.

3M™ Round Conductor Flat, Controlled Impedance Cable, 7700 Series

A breakthrough in high-speed ribbon cable design that delivers up to 20 Gbps. Flexible and foldable, to accommodate tight spaces with minimal impact to performance.

Fit for IDC.

A versatile solution for internal wiring.

3M™ Round Conductor Flat, Controlled Impedance Cable, 7700 Series is an excellent choice for a wide range of controlled impedance, wire-to-board applications including automated test equipment, communications network equipment and more. It is designed for low voltage differential signaling applications.

The cable's exceptional versatility means it offers a variety of connection options. Flexible pinout configurations can be determined by end users to manage a wide range of custom I/O requirements including up to 100 positions of programmable differential pairs, grounds and power. It installs quickly and can be used in end-to-end terminations or directly soldered to a PCB.

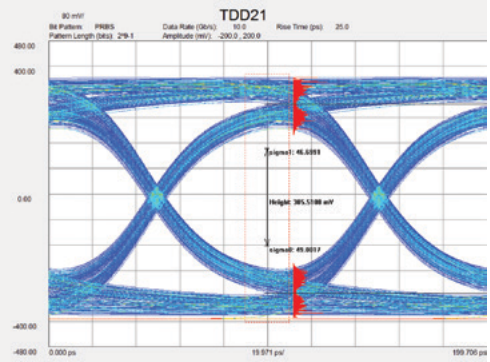
Flat out fast.

The revolutionary solution for high-speed transmission lines.

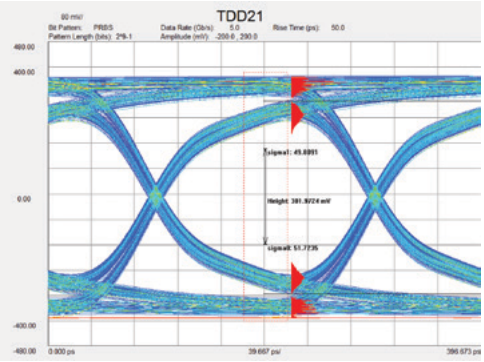
In today's data-driven world, there is an ever-increasing demand for devices that are faster, more compact and feature-rich. Powering this new generation of devices will require a new generation of cabling that can offer higher data rates and greater bandwidth – while controlling impedance and attenuation.

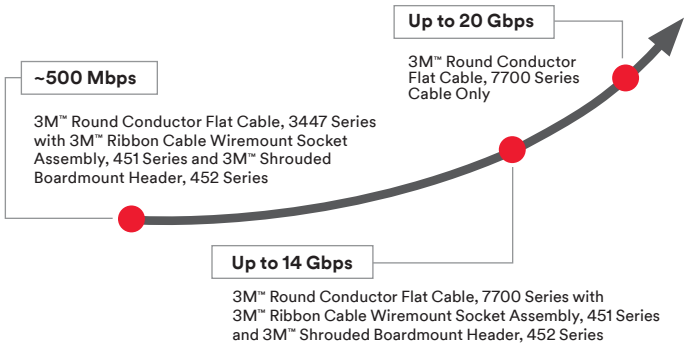
Now, 3M introduces a major advance in electronics cabling technology that meets these needs today. New 3M™ Round Conductor Flat, Controlled Impedance Cable, 7700 Series, is a 0.025" flat ribbon cable that can support up to 14 Gbps when terminated to an IDC connector or up to 20 Gbps cable only.

3M Cable 7700 Series 1.00m Cable Only 10 Gbps Data Rate – 50% Eye Height

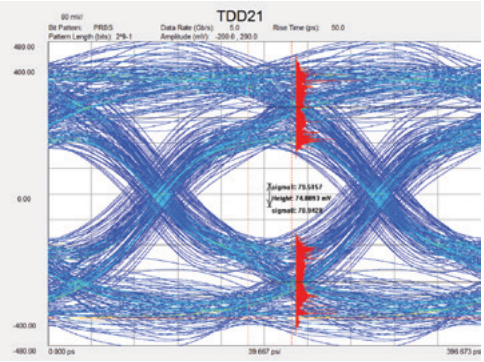


3M Cable 7700 Series 1.00m with 3M Socket, 451 Series and 3M SMT Header, 452 Series 5 Gbps Data Rate – 50% Eye Height

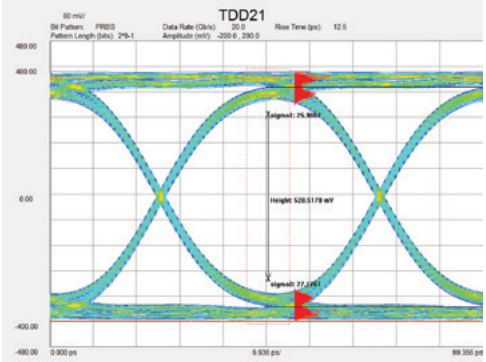




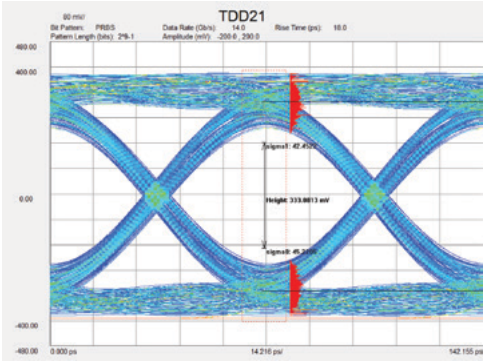
3M Cable 3447 Series, 0.25m with 3M Socket, 451 Series and 3M SMT Header, 452 Series
5 Gbps Data Rate – 29% Eye Height

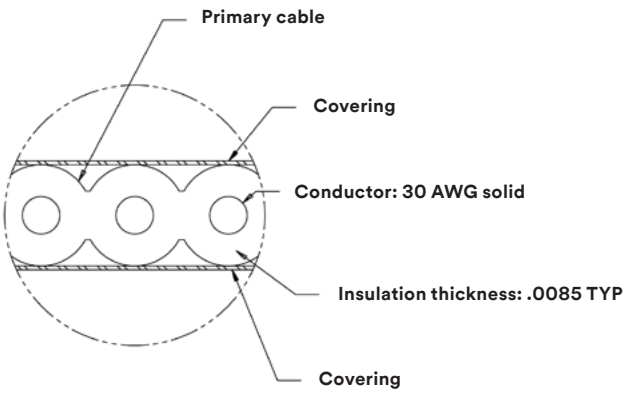


3M Cable 7700 Series 0.25m Cable Only
20 Gbps Data Rate – 73% Eye Height



3M Cable 7700 Series 0.25m with 3M Socket, 451 Series and 3M SMT Header, 452 Series
14 Gbps Data Rate – 53% Eye Height





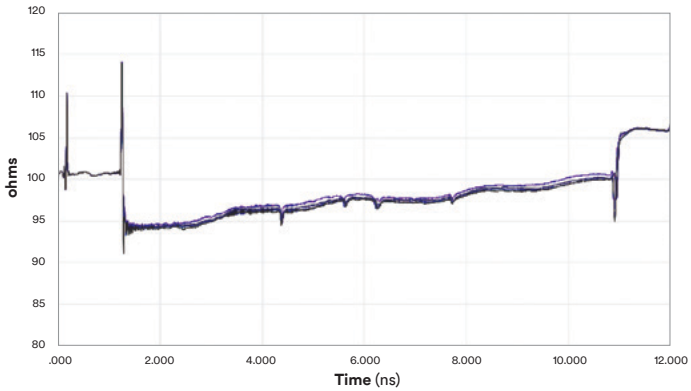
Foldable.

Re-defining ribbon cable design.

The performance of 3M™ Round Conductor Flat, Controlled Impedance Cable, 7700 Series is made possible because of a revolutionary construction that not only enables outstanding throughput, but also accommodates tighter folding than conventional jacketed shielded cables – with minimal performance impact.

- Constructed using 30 AWG solid conductor and polyolefin insulator
- Outer insulation is laminated with a flexible foil covering to control impedance at 95 ohms (±5 ohms)
- Features programmable differential pairs, grounds and power. 20 position cable configuration example: GG SS GG SS GG SS GG SS GG PP
- Can be terminated to .050" spaced IDC connectors using a standard bench press
- Available in conductor counts in increments of 10 through 100

3M Cable 7700 Series Impedance Profile After 1008 hr 85° Heat Age with 5 Folds



Over 50 years of interconnect innovation

3M™ Round Conductor Flat, Controlled Impedance Cable, 7700 Series is the latest in a long line of 3M firsts in electronics cabling technology, including the first 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 designed to enable manufacturers to improve device performance, speed assembly and add more value to their products.

Note on device testing
Eye patterns are representative examples. Device under test for Cable Only results included the specified length of 3M cable 7700 series 95Ω±5 and a custom cable test fixture. For testing with 3M Cable 450 Series, device under test included the specified length of 3M cable 7700 series 95Ω±5, 2 each 3M™ Ribbon Cable Wiremount Socket Assemblies, 451 Series, 2 each 3M™ Shrouded Boardmount Headers, 452 Series, 2" PCB traces and 2 SMA connector systems.

Regulatory: For regulatory information about this product, visit 3M.com/regs or contact your 3M representative.

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Electronics Materials Solutions Division
6801 River Place Blvd.
Austin, TX 78726-9000

Web 3M.com/interconnect
Phone 1-800-225-5373

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