

New Development Kit from 3M Helps Design Engineers Achieve Multi-Gigahertz Performance in 2 mm Footprint

3M innovators have developed a way for design engineers to achieve multi-gigahertz performance from industry standard 2 mm printed-circuit-board connectors, using 2 mm shielded controlled impedance cable assemblies. New development kits from 3M let design engineers test drive these innovative cable assemblies for their applications.

[The Shielded Controlled Impedance \(SCI\) Cable Assembly Development Kit, 2 mm](#) from the 3M Electronic Solutions Division is designed to help engineers assess, test and design the appropriate high performance 2 mm SCI cable-to-board solution for their application.

When used with standard 2 mm latch/eject headers from 3M for multi-gigahertz cable-to-board applications , the SCI connectors save valuable board real estate without sacrificing performance compared to the BNC or SMA connectors frequently used with coaxial, and the specialized twinaxial connectors used with twinaxial cable. This is particularly true for applications where multiple high-speed coaxial or twinaxial cable-to-board connectors need to be bundled together.

This solution is ideal for a variety of high-performance or high-signal integrity cable-to-board applications in the industrial control/factory automation, medical, test and instrumentation, video post production equipment and military electronics industries.

Designers can use the development kit to verify signal integrity, impedance matching and crosstalk performance for designs that require up to 1 Gbps single-ended performance per signal line or 5 Gbps differential performance per signal pair, bundled multi-line cable-to-board solution requiring mechanical reliability such as that offered by a latch/eject connector.

The development kit contains everything required to assess, test and design a high performance 2 mm cable-to-board solution, including:

CD-ROM containing application note, test instruction sheet, technical sheets. The application note is illustrated with graphical data from actual lab tests under different test conditions.

Postage-paid reply card to request product updates and register the kit

2 mm SCI differential and single-ended cable assemblies (twinaxial and coaxial), 24" length

2x25 surface mount or through-hole 2 mm latch/eject headers

2x25 carrier used for bundling together the SCI cable mount connectors

Optional specialized printed circuit board for testing

SMA connectors for testing, mounted on the PCB for development kits that include a printed circuit board

SMA connectors specified for development kits that do not include a printed circuit board

Test procedures document

Application note describing how the SCI Assembly can be used. The note is illustrated with graphical data from

actual lab tests under different test conditions.

Pricing and Availability

The development kits are available in four configurations:

9401 includes all development kit elements with a surface-mount header without the optional printed circuit board (PCB)

9402 includes all development kit elements with a surface-mount header with a customized test PCB

9403 includes all development kit elements with a through-hole header without the optional PCB

9404 includes all development kit elements with a through-hole header with a customized test PCB

Prices for development kits without a PCB (9401 and 9403) start at \$100. Prices for development kits with a PCB (9402 and 9404) start at \$250. Development kits can be purchased from 3M distributors. Call 800-225-5373 for a list of distributors. More information is also available at www.3m.com/interconnects.

[About 3M Electronic Solutions Division](#)

3M Electronics Solutions Division offers innovative solutions to the electronics market, such as static control products; copper interconnect systems; cables and cable assemblies; carrier and cover tapes and trays; flexible circuits; embedded capacitor materials; and Textool brand test and burn-in sockets.

[About 3M](#)

A recognized leader in research and development, 3M produces thousands of innovative products for dozens of diverse markets. 3M's core strength is applying its more than 40 distinct technology platforms - often in combination - to a wide array of customer needs. With \$24 billion in sales, 3M employs 79,000 people worldwide and has operations in more than 60 countries. For more information, visit www.3M.com.

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Release Summary:

3M innovators have developed a way for design engineers to achieve multi-gigahertz performance from industry standard 2 mm printed-circuit-board connectors, using 2 mm shielded controlled impedance cable assemblies. Development kit now available.

Keyword Tags:

2 mm, 2mm, 3m, cable assemblies, connectors, development kit, high performance, pcb, sci

3MJane Kovacs, 512-984-6747jkovacs@mmm.com

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