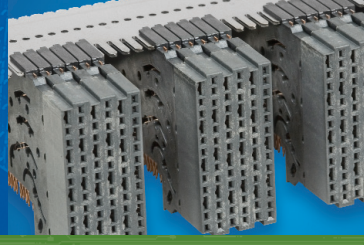
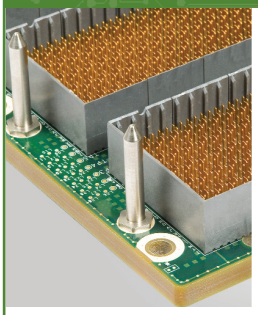
XCede®

Scalable performance from 8 to 25 Gbps



- Meets the IEEE 802.3ap v3.2 10GBASE-KR standard with margin
- Innovative 3D resonance damping shield technology
- De-skewed differential pairs
- Tightly matched impedance
- 85 and 100 ohm impedance
- 27.5 - 82 differential pairs per inch (11 - 32 differential pairs per centimeter)
- Field proven high-density power & guidance
- Integrate all components in one robust package
- Ruggedized backplane contacts
- Embedded capacitors



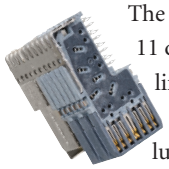
Amphenol's XCede® connector platform is designed to enable future data rate requirements of datacom, telecom, storage and wireless equipment:

- Ethernet
- SONET/SDH
- InfiniBand®
- PCI Express®
- HyperTransport™
- Fibre Channel
- SAS
- SATA

Highest Density To Meet Challenging Design Requirements

Offering today's highest linear density of 82 differential pairs per inch (32 differential pairs per centimeter), the XCede product family meets the true high density needs of architectures with multiple front or rear fabric slots and blade systems with cooling straight through the backplane.

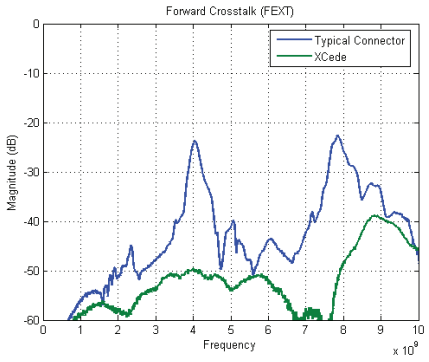
Broad Family of Interconnect Solutions



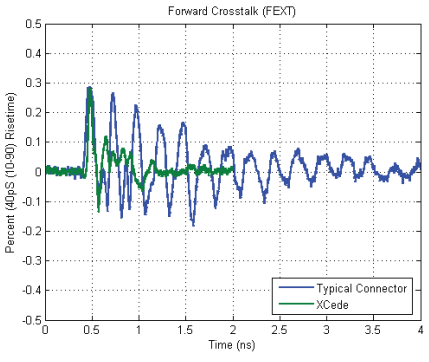
The XCede platform supports 2-Pair (27.5 differential pairs per linear inch, 11 differential pairs per centimeter) through 6-pair (82 differential pairs per linear inch, 32 differential pairs per centimeter) connector sizes with complementary guidance, backplane and bus bar power modules, stacker, cable, and coplanar interconnect solutions.

High Performance

The XCede connector delivers the lowest crosstalk of any backplane connector available today. Innovative design features include a unique resonance damping shield and an optimized footprint with double grounds which enable less than 40 dB crosstalk on any aggressor to 8 GHz.



A unique 3-D resonance damping shield enables very low crosstalk across a wide frequency spectrum.

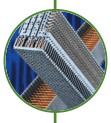


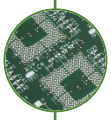
Use of advanced engineering materials in the shield eliminate crosstalk resonances, which appear as ringing through multiple bit periods in time-domain based measurements.

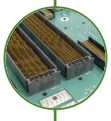
The Amphenol TCS Advantage

"By offering design solutions and advice related to signal integrity between the chip, the design of the PCB, and finally, the connector, Amphenol TCS has the total signal path covered. This type of system solution approach provides an advantage over connector-only manufacturers."

- Fleck Research


Industry Leading Connectors


Printed Circuit Backplanes


Integrated Backplane Systems


Design and Applications Solutions

Amphenol TCS

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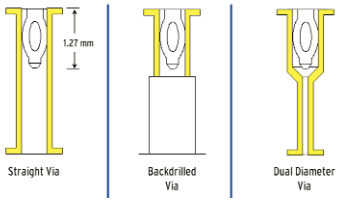
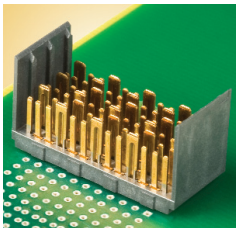
Proven Reliability of Press Fit Attachment with Improved Impedance Performance

The XCede interconnect platform offers multiple compliant pin sizes from 13.7-18 mil (0.35mm - 0.46mm) finished hole size. Available for both daughtercard and backplane plated through holes, these optional compliant pin sizes allow for several backdrilling depths, dual diameter vias, and improved footprint impedance, enabling thinner midplanes with shared vias.

Optimized daughtercard and backplane footprints each have two ground vias between differential pairs, allowing elongated antipads and further improving impedance.



Backplane modules feature wide rib-enhanced shield contacts.

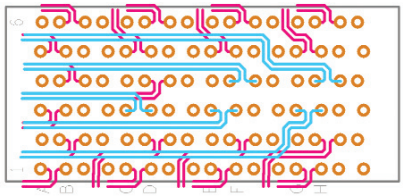


Exceptional Robustness

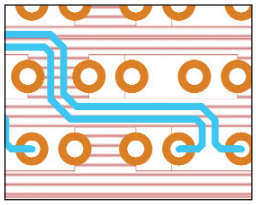
The XCede backplane connector system provides mechanical longevity and ruggedness required by today's systems. Wide shield contacts feature a stiffness enhancing rib and are advanced well ahead of the signals for "drag your finger across" robustness. Daugtercard connectors feature Amphenol's integral stiffener which allows designers to incorporate all components, including power and guidance, into one robust assembly.

User Flexibility

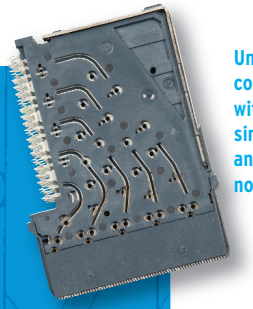
Escape on all four sides of a connector module with secondary routing channels between the double ground vias in each column. This flexibility can cut the number of routing layers in half and help route congested areas.



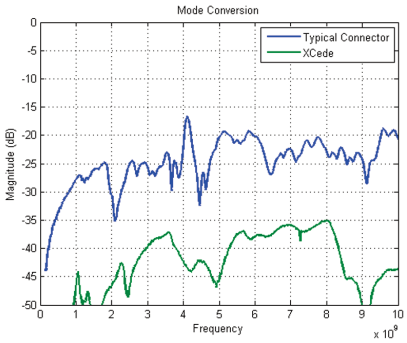
Routing a 4-pair in two layers. First layer shown in blue, second layer shown in red.

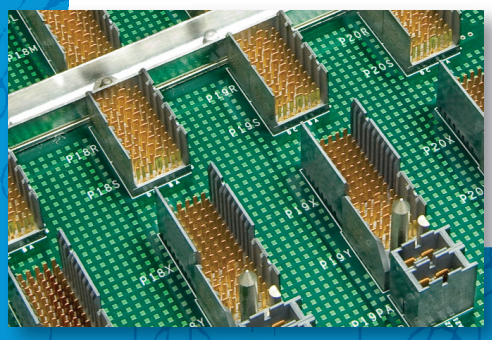


Double ground vias are spaced 1.56mm apart providing a wide secondary routing channel.

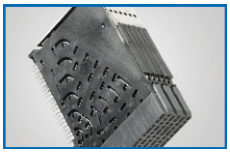
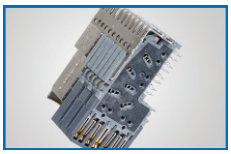
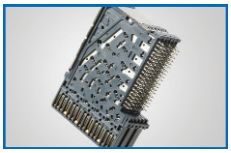
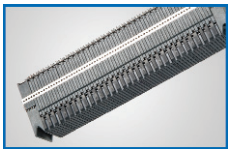
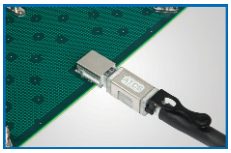
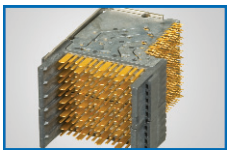


Unique daughtercard construction minimizes skew within any differential pair simplifying board layout efforts and minimizing common mode noise.

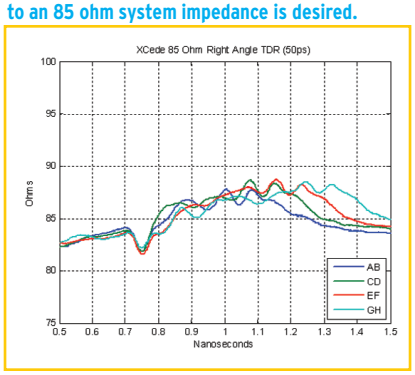




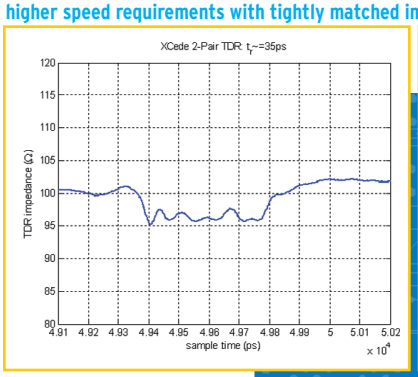
Amphenol's XCede interconnect family includes a broad spectrum of components and application specific derivatives to provide complete solutions for your system requirements.

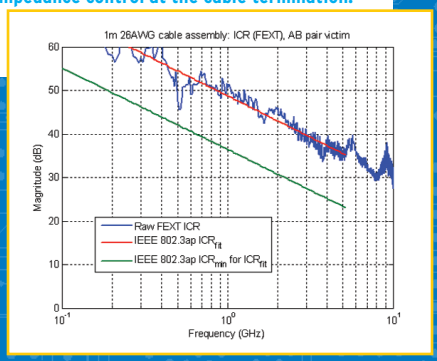
Standard		· Custom right angle daughtercard connectors with female receptacle assembled on an integral stiffener
85 Ohm		· Custom right angle daughtercard connectors with female receptacle assembled on an integral stiffener · Designed for PCI Express 2.0 and 3.0, the Intel® QuickPath Architecture, and other applications where matching the connector impedance to an 85 Ohm system impedance is desired · Utilizes existing tooling, providing designers with readily available solutions without the hassle of retooling and requalification
LC		· Mates with standard XCede backplane modules · Daughtercard wafers designed without resonance damping polymer to optimize cost · Flexibility to design your system with an easy upgrade path to 20+ Gbps performance or take advantage of the highest density of usable pins available instead · Fully compatible with the XCede family of components, including power and guidance · Available for 85 and 100 ohm impedance
Stacker		· Enables parallel board to board designs with the same high levels of performance and reliability as the standard right angle version of XCede · 4-Pair provides the density and mechanical robustness to address increasing I/O counts · Optimize cost by selecting daughtercard wafers designed without resonance damping polymer · Modular construction and guidance options allow optimized connector lengths for each application · Heights available from 15mm up to 44mm · Press fit attachment · Available for 85 and 100 ohm impedance
Cable Connectors & Assemblies		· Ideal for front panel and backplane connections · Provides the same industry leading electrical and mechanical performance as the standard right angle connectors · Available in 2-Pair and 4-Pair configurations · Tightly matched impedance control at the cable termination · Wafers are available for 85 and 100 ohm impedance · Designed to mate with XCede coplanar and backplane connectors · Supports multiple cable designs ranging from 24 to 30 AWG
Coplanar		· Custom right angle daughtercard with male pin assembled on unique stiffener · Mates with standard right angle female daughtercard connectors · Available for 85 and 100 ohm impedance

XCede 85 ohm is designed for PCI Express 2.0 and 3.0, the Intel QuickPath Architecture, and other applications where matching the connector impedance to an 85 ohm system impedance is desired.



XCede cable assemblies provide some of the lowest crosstalk on the market and support higher speed requirements with tightly matched impedance control at the cable termination.





Amphenol TCS

A Division of Amphenol Corporation

Amphenol TCS
200 Innovative Way, Suite 201
Nashua, New Hampshire 03062
603.879.3000

Shanghai, China +86.21.5836.5500
Dublin, Ireland +353.1.241.4000

www.amphenol-tcs.com

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