

Amphenol TCS

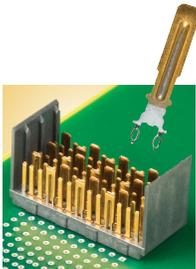
Global Supplier of Total Connection Solutions

Amphenol TCS (ATCS) delivers total connection solutions, with design and manufacturing expertise in backplane systems, printed circuit boards, and the industry's leading high-speed, high-density connectors.

Performance

Amphenol TCS leads the way in product innovation by anticipating and developing products to meet next generation technology requirements — today. Our high-performance connectors, such as VHDM®, GbX®, NeXLev®, and XCede®, are just the beginning. ATCS engineers can assist in the product development process by suggesting optimum connector products, board materials, via constructions, routing, and other specific solutions to meet the most demanding performance needs.

XCede backplane modules feature wide rib-enhanced shield contacts for "drag your finger across" robustness

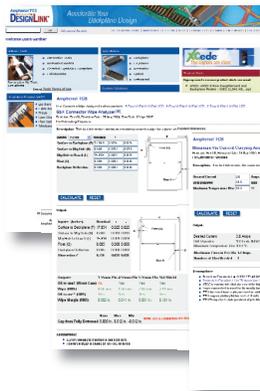


Reliability

Performance is meaningless if you have to deal with bent pins, yield issues or field failures. Amphenol TCS is your reliability solution — from component selection throughout the product life cycle. Our interconnect systems are designed and tested for exceptional mechanical reliability and robustness.

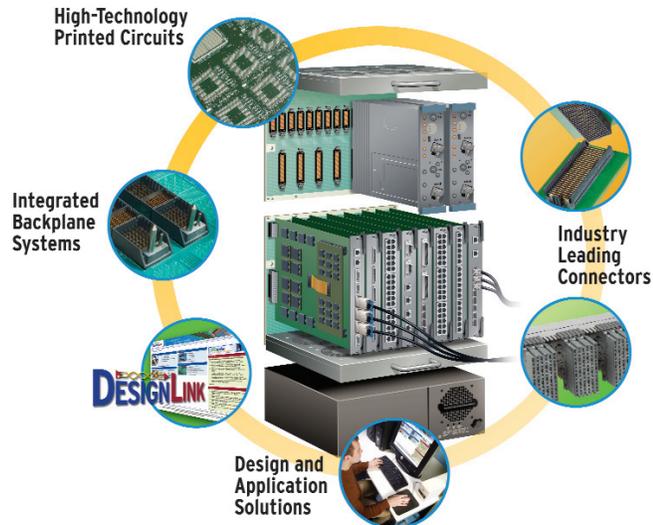
Value

As bandwidth demands increase, the challenge is to achieve higher performance at the lowest possible system costs. With a broad range of packaging solutions and design tools, our engineers help tackle this challenge head-on in the earliest stages of the design cycle.

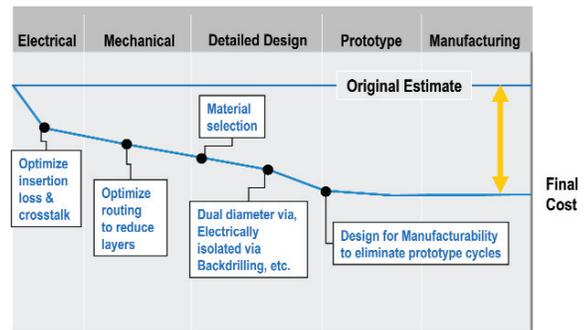


DesignLink tools let you perform trade-off analysis at any phase of a backplane design.

www.amphenol-tcs.com/designlink



- High-speed, high-density connectors deliver today's highest data rate requirements with headroom for tomorrow.
- In-depth engineering knowledge and manufacturing experience in high-technology printed circuit backplanes creates optimal designs.
- Unique system-level expertise delivers integrated backplane systems with superior signal channel performance.

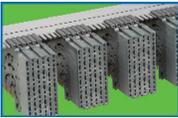
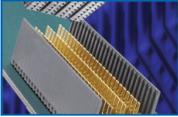
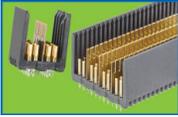
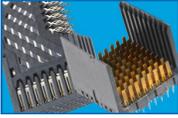


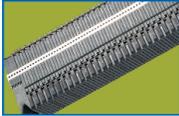
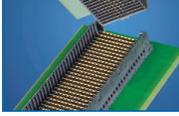
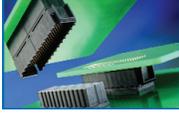
Amphenol's early involvement in the design process can help reduce system cost by as much as 50% without sacrificing performance.

Amphenol TCS
A Division of Amphenol Corporation

Amphenol TCS offers the widest range of low-crosstalk, modular connector solutions using innovative and field-proven technologies:

Backplane, Mezzanine, Orthogonal, Optical, and Co-Planar.

BACKPLANE	<p>XCede® 20+ Gbps</p> 	<ul style="list-style-type: none"> Meets the IEEE 802.3ap v3.2 10GBASE-KR standard with margin Up to 82 differential pairs per inch (32 differential pairs per centimeter) Secondary routing channels significantly lower backplane costs 85 and 100 ohm components are readily available in all configurations without the hassle of retooling and requalification
	<p>XCede® LC 10 Gbps</p> 	<ul style="list-style-type: none"> Mates with standard XCede backplane modules Daughtercard wafer 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
	<p>eHSD® 10 Gbps</p> 	<ul style="list-style-type: none"> Meets the IEEE 802.3ap v3.2 10GBASE-KR standard Fully backwards compatible with VHDM-HSD, delivering up to 10 dB lower crosstalk Scale existing systems to next generation speeds 25 - 38 real differential pairs per linear inch (10 - 15 real differential pairs per centimeter)
	<p>Ventura® 6.25 - 12 Gbps</p> 	<ul style="list-style-type: none"> High-density, high-performance single-ended connector 12 Gbps differential, 6.25 Gbps single-ended 102 - 178 real signals per inch (40 - 70 signals per centimeter) Surface mount attach
	<p>GbX® 5.0 Gbps</p> 	<ul style="list-style-type: none"> 27.5 - 69 differential pairs per inch (11 - 27 differential pairs per centimeter) Ideal for 4 x 3.125 XAUI links Full range of proven components (e.g. power, guidance, polarizing) Robust mechanical design
	<p>GbX® U-Series 10+ Gbps</p> 	<ul style="list-style-type: none"> Enhanced footprint for improved impedance and crosstalk performance Backplane modules are compatible with all generations of GbX daughtercards Up to 10 dB crosstalk improvement on actual backplanes
	<p>GbX® E-Series 6.25 Gbps</p> 	<ul style="list-style-type: none"> Enhanced electrical performance Crosstalk as low as 2% Backplane module shares the same footprint as standard GbX
	<p>GbX® L-Series < 1 Gbps</p> 	<ul style="list-style-type: none"> 1.85mm x 1.85mm open pin field version of GbX Customize signal integrity performance by varying ground-to-signal ratio Ideal for TTL sense and control and other low-speed data lines
	<p>AirMax VS® 2.5 - 6.25 Gbps</p> <p><small>AirMax VS is a registered trademark of FCI</small></p> 	<ul style="list-style-type: none"> Shieldless connector system Cost-effective interconnect for multi-gigabit applications Up to 63 differential pairs/inch 3, 4, and 5-Pair standard and reverse gender available
	<p>Aptera™ 3.125 - 6.25 Gbps</p> 	<ul style="list-style-type: none"> Low-profile, high-reliability 2-piece edge-card connector 6.25 Gbps performance differential; 3.125 Gbps single-ended Low profile construction reduces minimum slot pitch between daughtercards to 10mm (.39") Right angle and stacker versions available
	<p>VHDM-HSD™ 5 Gbps</p> 	<ul style="list-style-type: none"> Optimized for high-speed differential backplane applications 25 - 38 differential pairs per inch (10 - 15 differential pairs per centimeter) Modular design enables mix of single-ended and differential signals within the same connector
	<p>VHDM® 3.125 Gbps</p> 	<ul style="list-style-type: none"> Optimized for single-ended, high-density applications 76 - 101 real signals per inch (30 - 40 real signals per centimeter) Less than 5% crosstalk Stripline shielding allows 100% of the pins to be used for signals
<p>VHDM® H-Series 6.25 Gbps</p> 	<ul style="list-style-type: none"> Superior signal integrity Backwards compatible with the full VHDM product family - design into same slot for fast, easy system upgrades 0.018" (0,045mm) PCB hole for improved performance 	

BACKPLANE	VHDM® L-Series < 1 Gbps		<ul style="list-style-type: none"> · Open pin-field version of VHDM · Fully compatible with the full VHDM product family to optimize cost and performance by mixing high- and low-speed signals on the same connector · Ideal for TTL sense and control and other low-speed data lines
	HDM® HDM® Plus < 1 Gbps		<ul style="list-style-type: none"> · Economical 2mm modular design · 75 real signals per inch (30 contacts per centimeter) · Can operate in applications with rise times as low as 500 pico seconds
ORTHOGONAL	Crossbow™ 20+ Gbps		<ul style="list-style-type: none"> · XCede® technology optimized for orthogonal midplane architectures · Meets the IEEE 802.3ap v3.2 10GBASE-KR standard with margin · Demonstrated 100 Ohms ± 5% impedance across an entire link · Less than 1.5 picoseconds in-pair skew · Crosstalk < 1.5% at 50 picoseconds · 4 x 4, 6 x 6, 8 x 8 and 8 x 9 configurations available
CO-PLANAR	XCede® Co-Planar 20+ Gbps		<ul style="list-style-type: none"> · Right angle male enables co-planar board-to-board or board-to-cable high-speed interconnection · Mates with standard right female daughtercards · Available in 85 and 100 ohm impedance
	GbX® Right Angle Male (RAM) 5.0 Gbps		<ul style="list-style-type: none"> · Enables co-planar board-to-board or board-to-cable high-speed interconnection · Currently available in 2-pair configuration (27 differential pairs per linear inch) · Available in two different heights - standard RAM and extended RAM · High-speed differential and L-Series versions available
	VHDM® Right Angle Male (RAM) 3.125 Gbps		<ul style="list-style-type: none"> · Right angle male enables co-planar board-to-board or board-to-cable high-speed interconnection · 76 - 101 real signals per linear inch (30 - 40 real signals per centimeter) · Grow systems horizontally by creating traditional backplane components in a right angle orientation
MEZZANINE	XCede® Stacker 20+ Gbps		<ul style="list-style-type: none"> · 4-pair size provides density and mechanical robustness to address increasing I/O counts · Modular construction and guidance options allow optimized connector lengths for each application · Heights available from 15mm up to 44mm · Press fit attachment
	NeXLev® 12.5 Gbps		<ul style="list-style-type: none"> · Enhanced BGA attachment process to increase SMT process yields · 125 micron co-planarity · 57 real signals per linear centimeter (145 signals per inch) · 20 stacking heights from 10-33mm
	VHDM® Stacker 3.125 Gbps		<ul style="list-style-type: none"> · Press fit solution for stacking applications · Route single-ended or differentially · 76 - 101 real signals per inch (30 - 40 real signals per centimeter) · Stacking heights from 18mm and up
	Aptera™ Stacker 3.125 - 6.25 Gbps		<ul style="list-style-type: none"> · Mezzanine solution provides the same electrical performance as standard Aptera · Mates with standard backplane modules · Available in 40mm board-to-board stack heights · Uses proven GbX compliant pin technology
	HDM® Stacker < 1 Gbps		<ul style="list-style-type: none"> · Available in 72 pin and 144 pin signal modules in soldertail or press fit configurations · 75 real signals per inch (30 contacts per centimeter) · 30 Amp power module, end stackable · Stacking heights from 15 to 32mm
CABLES	XCede® Cable Connectors & Assemblies 20+ Gbps		<ul style="list-style-type: none"> · 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 cable termination · Wafers are available for 85 and 100 ohm impedance · Supports multiple cable designs ranging from 24 to 30 AWG
OPTICAL	HD-Optyx™		<ul style="list-style-type: none"> · Blind-mate, modular, fiber optic interconnect solution · High fiber count · Supports 1.25mm single-fiber and MT multi-fiber ferrules · Single-mode and multi-mode capable





Amphenol TCS

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ATCS-051-0609-1K