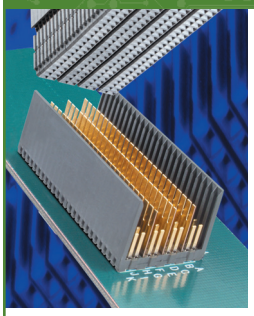
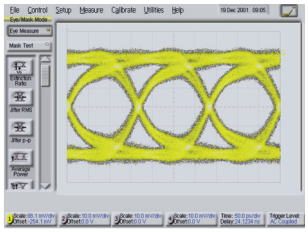
# GbX® Advanced Performance Interconnect

- Vertical and horizontal routing make GbX® the ideal solution for dual star of full mesh backplane architectures
- 27.5-69 real differential pairs per linear inch (11-27 real differential pairs per centimeter)
- Ideal for 10 Gbps (4 x 3.125) XAUI applications
- Power module consumes less card edge space per ampere than any other 2mm solution on the market
- RoHS compliant/lead-free



## More Density at Today's Speeds

Amphenol's GbX® connector platform provides a range of interconnect solutions designed to optimize cost and scale to leading-edge data rates. With increased density, exceptional impedance matching, and low crosstalk, the GbX product family enables data rates up to 6.25 Gbps.



6 inches (152mm) of FR4 using one standard GbX connector at 5.0 Gbps

## GbX®

### Advanced Performance Differential Interconnect

- Delivering data rates of 5 Gbps with ample design margin
- Two points of contact at a separable interface for superior mechanical robustness

| Version | Density | Minimum Slot Pitch |
|---|---|---|
| • 2-Pair | 27.5 real differential pairs per linear inch (11 real differential pairs per centimeter) | .59" (15mm) |
| • 3-Pair | 41 real differential pairs per linear inch (16 real differential pairs per centimeter) | .80" (22,32mm) |
| • 4-Pair | 55 real differential pairs per linear inch (21 real differential pairs per centimeter) | 1.00" (25,4mm) |
| • 5-Pair | 69 real differential pairs per linear inch (27 real differential pairs per centimeter) | 1.25" (31,75mm) |

### 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."

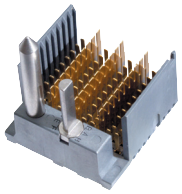
- Fleck Research

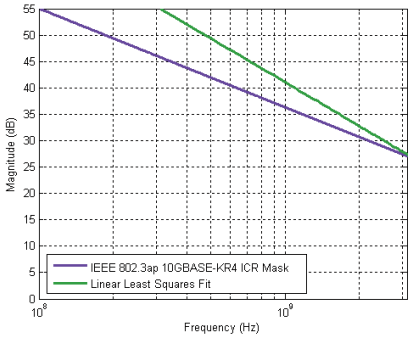
## GbX® E-Series

### Enhanced Electrical Performance Backplane Module

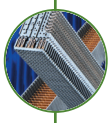
Upgrade your existing backplane platforms to enhanced electrical performance without costly re-design. The GbX E-Series backplane module shares the same footprint as standard GbX, providing a drop-in replacement allowing designers to scale up to 6.25 Gbps data rates.

- 40% reduction in connector crosstalk
- Backplane module shares the same footprint as standard GbX
- GbX 0.018" (.046mm) compliant pin
- Complete backwards compatibility on all pads-only designs

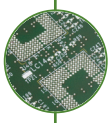




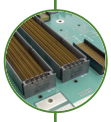

Two GbX® E-Series connectors at 6.25 Gbps over 20 inches of FR-4 with multiple aggressors



Industry Leading Connectors



Printed Circuit Backplanes



Integrated Backplane Systems

Design and Applications Solutions

**Amphenol TCS**

A Division of Amphenol Corporation

GbX L-Series
2-Pair Modules

## GbX® L-Series

### Cost-performance Optimized Solution

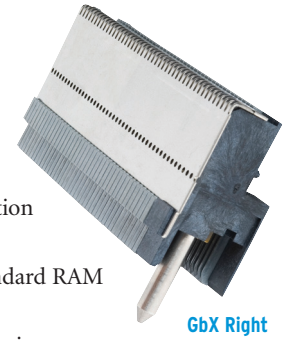
- Ideal for low-speed lines such as TTL sense and control
- Customized signal integrity performance by varying ground-to-signal ratio
- 1,85mm x 1,85mm open pin field version of GbX

| Version | Available Pins per Inch |
|---|---|
| • 2-Pair | 69 |
| • 3-Pair | 110 |
| • 4-Pair | 151 |

## GbX® RAM

### Right Angle Male

- Right angle male 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



GbX Right Angle Male

### Reliability

The GbX connector's enhanced mechanical gathering features provide additional connector robustness needed in today's systems.

- Organizing stiffener provides alignment and daughtercard support
- Large funneling features designed to gather up to 1,525mm radially
- Two points of contact for redundancy and high reliability
- Proven press-fit technology
- Protected receptacle contact eliminates pin stubbing
- Identical, fully intermateable/interchangeable second source

### Vertical and Horizontal Routing

GbX is the ideal solution for designing high-performance dual star or full mesh backplanes. The combination of density, connector modularity, and the ability to route vertically and horizontally reduces the time required to route the backplane and the number of routing layers, resulting in an overall lower system cost.

### Power Module

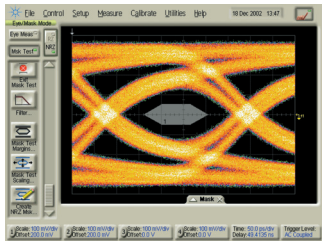
The GbX power module consumes less card edge space per ampere than any other 2mm solution on the market.

- 3 levels of sequencing
- Low inductance
- Up to 10 independent blades
- UL recognized for hot swap applications
- Designed to meet UL specification, Telcordia specification (Bellcore GR-1217-Core), and IEC fickle finger test

### Ideal for 10 Gbps Ethernet Applications (IEEE 802.3 XAUI interface)

The GbX connector is ideal for 10 Gbps (4 x 3.125) XAUI applications.

- 4 high-speed pairs per wafer map to 4 x 3.125 channels



XAUI mask over 24" (609,6mm) of FR-4 using two GbX backplane connectors with 800mV peak-to-peak signal swing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