



**1.85mm by 1.85mm  
(.073" by .073")  
GbX\* Cable Assembly**

**74552 4-Pair Configuration**

*GbX, the next-generation high-speed backplane interconnect cabling system, delivers over 6 Gbps and signal density of 55 differential pairs per linear inch*

The GbX high-performance backplane cable assemblies and connectors provide the speed and density required by leading-edge backplane designs. With a native differential signaling speed of 6.0 Gbps, the system is well suited for existing and future generations of XAUI (10 Gigabit Attachment Unit Interface) and InfiniBand†- based systems.

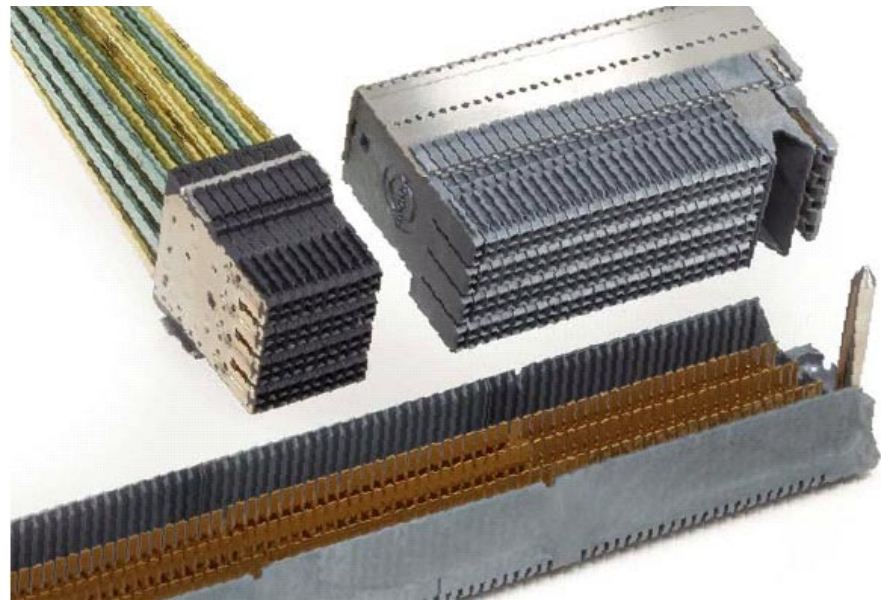
GbX cable assemblies offer improved capabilities to current backplane cable products, with impedance matching, low pair-to-pair crosstalk, within-pair and pair-to-pair skew control and a variety of raw-cable designs to meet customer-specific loss budgets. Cables are available in a 4-pair (column) configuration.

GbX High Performance Cable Assemblies complement Molex's existing line of GbX products. For more information on Molex's extensive GbX product offering, please visit: [www.molex.com/ads/GbX.html](http://www.molex.com/ads/GbX.html).

**Features and Benefits**

**Design**

- 4-pair configuration provides 55 real-differential pairs per linear inch (2, 3 and 5 pair configurations are possible extensions)‡ allowing high density with more differential pairs than similar backplane products
- Bifurcated contact beams assure greater reliability with two points of contact to header pins
- Ground shield for individual pairs reduces crosstalk at the mating interface for improved system performance



**GbX Cable Assembly (left), Daughter Card Connector (right), Backplane Header (front)**

**Process**

- Opposed gap-resistance welding re-flows cable conductor into the signal contact, providing a clean electrical path
- Zinc or Aluminum die-cast backshells provide shielding protection for custom Input/Output backplane designs
- Integrated stiffeners and latches provide mechanical robustness and solid mating to vertical or right-angle mating (RAM) headers
- Low-pressure, strain-relief insert molding provides strain relief for the termination area and allows tighter cable shield to conductor tolerances for better impedance control

**SPECIFICATIONS**

**Reference Information**

Mates With:

GbX right-angle male connector (Series 75717)

GbX standard 4-pair header (Series 75235)

Designed In: Millimeters

**Electrical**

Current: 1.0A

Dielectric Withstanding Voltage: 250V

Insulation Resistance: 40 Megohms min.

**Mechanical**

Contact Insertion Force:

44.48N (10.00 lbf) typical per contact

Contact Retention to Housing:

8.90N (2.00 lbf) min. per contact

Insertion Force to PCB:

0.59N (0.13 lbf) max. per contact

Mating Force: 0.59N (0.13 lbf) max. per contact

Unmating Force: 0.29N (0.07 lbf) min. per contact

Durability: 250 cycles max.

**Physical**

Housing: LCP, UL 94V-0

Contact: Copper (Cu) Alloy

Plating:

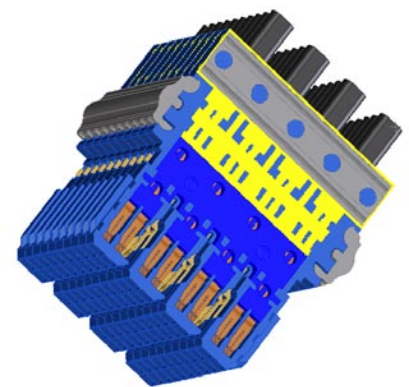
Contact Area — 0.76 um (30u") Gold (Au) min.

Solder Tail Area — Tin (Sn)

Underplating — Nickel (Ni)

PCB Thickness: 1.60mm (.062") typical

Operating Temperature: -55 to +105°C



**GbX 4-Pair Wafer – Signal View**

\*GbX is a registered trademark of Amphenol, Corp.

†InfiniBand is a registered trademark of the InfiniBand Trade Association

‡Contact Molex for tooling justification

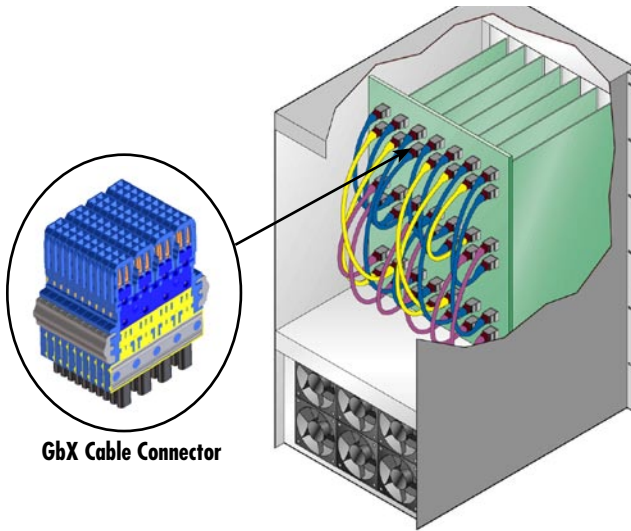
## APPLICATIONS

- Networking equipment
  - Storage racks
  - High-end servers
- Telecommunications
  - Edge routers
  - Switches
  - Digital cross connects
- Automated test equipment
  - Integrated chips
  - Memory and diagnostic testers
- Supercomputers and high-end data equipment
  - Server farms

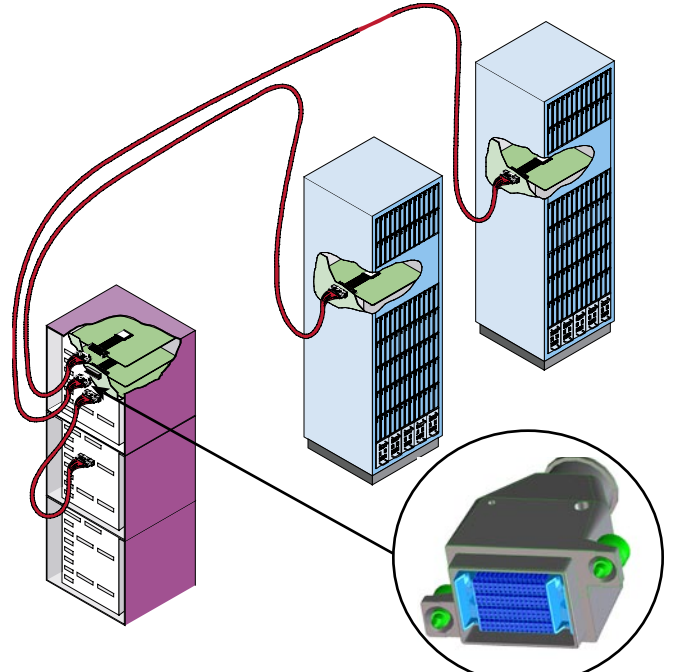


# 1.85mm by 1.85mm (.073" by .073") GbX\* Cable Assembly

## 74552 4-Pair Configuration



GbX Cable Connector



GbX Input/Output  
Cable Connector

### Internal Backplane - GbX

### External Backplane - GbX

## ORDERING INFORMATION

### Cable Assembly Order Number Supplied as Example Only

Order No.	Component	Wafer Configuration	Cable Length <sup>1</sup>
74552-0001	GbX Cable Assembly	4 pair	1.00m (3.28')

GbX cables only sold as terminated cable assemblies. Part numbers and sales drawings will be established based on specific customer design requirements.

<sup>1</sup>Cable Length: Dependent upon customer design. Contact Molex with specific requirements.

### GbX Right-Angle Male Connector Series Number Supplied as Example Only

Order No.	Component	Wafer Configuration
75717-XXXX	GbX Right-Angle Male Connector	4 pair

GbX right-angle male connectors sold as customized assemblies. Part numbers and sales drawings will be established based on specific customer design requirements.

### GbX Standard 4-Pair Headers

Order No.	Modularity	Header	Circuits	Tooling Order No.
75235-0104	10-Column	Open	80	62202-2000
75235-0204	25-Column	Open	200	62202-2020
75235-2104	10-Column	Left Guide	80	62202-2000
75235-2204	25-Column	Left Guide	200	62202-2020
75235-4104	10-Column	Right Guide	80	62202-2000
75235-4204	25-Column	Right Guide	200	62202-2020

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