

Metral® High Speed 4000 Series Backplane Connector

ENHANCED FUTUREBUS+ SUPPORT UP TO 6.25G FOR HIGH SPEED APPLICATIONS

Amphenol ICC's Metral® 4000 Series is a high-speed 2mm backplane connector system consisting of right-angle receptacles and vertical headers. The 4000 Series features a unique stripline structure in both the receptacle and header. Compared to the Metral® 1000 and 2000 Series, Metral® 4000 receptacle connectors employ a modified receptacle contact geometry optimized for 100Ω differential signals.

This yields a better impedance match and lower insertion loss. The headers and receptacles use a press-fit pin designed for 0.60mm drilled holes. The system is designed to conveniently stack end-to-end with other Amphenol ICC Metral® products.

- Data rate: 6.25Gb/s
- Dedicated ground rows in addition to ground shields between columns
- Meets IEEE Futurebus+ standard
- Available in Press-fit and 5x6 module size

FEATURES

- Fully shielded strip-line transmission structure for receptacles and headers
- Stackable end-to-end with other Amphenol ICC Metral® products
- Optimized contact geometry
- Available in 5-row configurations for receptacles and 5/8-row configuration for headers
- Press-fit headers and receptacles
- Smaller Press-fit PCB hole diameter
- Dual-beam receptacle contacts
- Various header loading patterns
- 25 pairs/inch in 5-row connector
- 100 mating cycles
- Lead free and RoHS compliant



TARGET MARKETS



BENEFITS

- Reduced crosstalk & improved signal performance (less than 5% multi-line active NEXT @ 100ps rise time in differential applications)
- Supports blind mating
- Support different applications
- Meets V-by-One HS standards
- Suitable for automotive application
- Better routing and lower via capacitance
- Provides electrical reliability and withstands vibration
- Allows customized selection
- High contact density
- Better durability
- Meets health, safety and environment requirements

TECHNICAL INFORMATION

MATERIAL

- Housings: High-temperature, glass filled LCP, UL94V-0
- Receptacle Contacts: Copper alloy
- Header Pins: Copper alloy
- Ground Shields: Copper alloy
- Plating:
 - Contact Area: per Telcordia™ GR-1217-core for Central Office and Uncontrolled Environment
- Press-fit Tails: Matt tin

ELECTRICAL PERFORMANCE

- Current Rating: 1A when all contacts are powered or 3A when one contact is powered at a 30°C max. temperature rise
- Contact Resistance: 40mΩ max.
- Insulation Resistance: 1000MΩ min.
- Signal Integrity: Data and SPICE models are available at www.fci.com

MECHANICAL PERFORMANCE

- Mating Force: 0.55N max. per contact pair including ground and shield contacts
- Withdrawal Force: 0.20N min. per contact pair including ground and shield contacts

ENVIRONMENTAL

- Operating Temperature: -65°C to +105°C

PART NUMBERS

Number of Rows & Positions	Daughter Card Thickness	Header	Part Numbers
5-Row 5x6	1.27mm (0.050in.) – 2.54mm (0.100in.)	55003-XXXXXX	52057-XXX
5-Row 5x6	2.54mm (0.100in.) – 3.40mm (0.134in.)	59569-XXXXXX	52062-XXX

SPECIFICATIONS

- IEC 61076-4-104
- Product Specification: GS-12-184
- Application Specifications
 - GS-20-014 for headers
 - GS-20-017 for receptacles

PACKAGING

- Tubes

TARGET MARKETS/APPLICATIONS



Transmission
Access
Switches
Routers



Servers
Storage enclosures



Rack-based Systems