

Metral® 1000 Series

ENHANCED FUTUREBUS+ SUPPORT WITH STRIPLINE STRUCTURE FOR HIGH SPEED APPLICATIONS

Amphenol's FCI Basics Metral® 1000 Series is a high-speed 2mm backplane connector system consisting of right-angle receptacles and vertical headers. The 1000 Series features a unique stripline structure in the receptacle and outer ground shields in the header. Apart from these features, the connectors are similar to the standard Metral® connectors. The stripline structure allows the Metral® 1000 Series to have improved signal performance when routed in either a single-ended or a differential pair configuration.

The Metral® 1000 Series is available in 5×6 and 8×12 module sizes with shrouds for midplane applications. The system also features dedicated ground rows. Two-, three-, and four-module monoblocks for the 5-row connector are available.

Metral® 1000 Series connectors are designed to conveniently stack end-to-end with other Metral® products. The Metral® 1000 Series right-angled receptacles are also available with pin-in-paste termination.

- Dedicated ground rows in addition to ground shields between columns
- Meets IEEE Futurebus+ standard
- Available in press-fit and 5×6, 8×12 module sizes
- Stripline structure for improved signal performance
- Supports Rear Plug-Up (RPU) applications



FEATURES

- Fully shielded stripline transmission structure for receptacles & outer ground shields for headers
- Stackable end-to-end with other Amphenol FCI Metral® Products
- All contacts can be used for signals since the grounds are built into the receptacle stripline and header shield structure
- Available in 5 and 8 row configurations
- Press-fit headers and receptacles
- Receptacles also available with Pin-in-Paste termination
- Dual beam receptacle contacts
- Various header loading patterns available
- Rear plug up options
- 250 mating cycles as per IEC Performance Level-1
- RoHS compliant

BENEFITS

- Reduced cross talk & improved signal performance (Less than 5% multi-line active NEXT @ 200ps rise time in differential applications)
- No loss of pitch and adaptable to the Metral® Platform
- Higher contact density
- Flexibility of connector size
- Easy application on boards and repair
- Application flexibility
- Ensure reliable connection
- Customized selection
- Midplane application
- Better durability
- Meet environmental, health, and safety requirements

TECHNICAL INFORMATION

MATERIALS

- 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: 1 A when all contacts are powered or 3 A when one contact is powered at a 30 °C max. temperature rise
- Contact Resistance: 20 mΩ max.
- Insulation Resistance: 1000 MΩ min.
- Signal Integrity: Data and SPICE models are available at www.amphenol-cs.com

ENVIRONMENTAL

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

MECHANICAL PERFORMANCE

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

SPECIFICATIONS

- IEC 61076-4-104
- Amphenol Product Specifications
 - GS-12-110 for 5-row connectors
 - GS-12-134 for 8-row connectors
- Amphenol Application Specifications
 - GS-20-010 for headers and shrouds
 - GS-20-017 for receptacles

SPECIFICATIONS

- Recognized per UL/CSA
- Qualified per Telcordia® GR-1217-CORE, Central Office (CO) and Uncontrolled Environment (UE)

PACKAGING

- Tubes: Pressfit
- Tape and Reel: Pin-in-Paste

TARGET MARKETS/APPLICATIONS



Transmission
Access
Switches
Routers



Servers
Storage Enclosures



Rack-Based Systems

PART NUMBERS

Number of Rows & Positions	Daughter Card Thickness	Header	Receptacle	Shroud
5-Row 5x6	1.27 mm (0.050in.) – 2.54mm (0.100in.)	84817-101001LF	84688-102LF	73993-1002LF
5-Row 5x6	1.27 mm (0.050in.) – 2.54mm (0.100in.)	73983-1001LF	73981-102LF	73993-1002LF
5-Row 5x6	2.54 mm (0.100in.) – 3.40mm (0.134in.)	84881-101001LF	84854-102LF	74993-102LF
8-Row 8x12	1.27mm (0.050in.) – 3.40mm (0.134in.)	74983-102001LF	74981-102LF	74993-102LF

Note: The above table captures only a representative list of parts. Please refer our website, www.amphenol-cs.com or contact Amphenol for other part number details.

Lead-free and RoHS compliant products are designed by the addition of LF as a suffix to the dash number.

WHERE INNOVATION CONNECTS

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