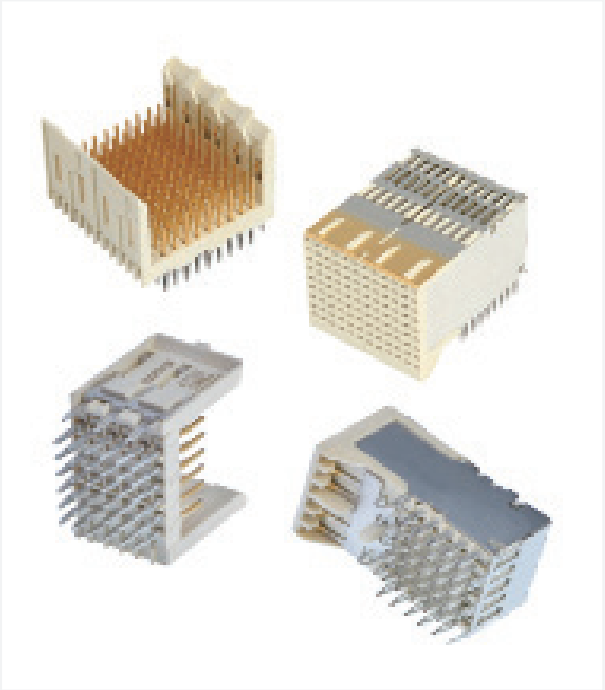
METRAL® 1000 SERIES

OVERVIEW

FCI's 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 FCI 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 5x6 and 8x12 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 FCI Metral products. The Metral 1000 Series Right Angled Receptacles are also available with Pin in Paste Termination.



FEATURES

- Fully shielded strip-line transmission structure for Receptacles & Outer Ground Shields for Headers
- Stackable end-to-end with other FCI Metral® Products
- All contacts can be used for signals since the grounds are built into the receptacle strip-line and header shield structure
- Available in 5 and 8-row configurations
- Press-fit Headers and Receptacles
- Receptacles also available with PIP Termination
- Dual-Beam Receptacle contacts
- Various Header loading patterns available
- Rear Plug up Options
- 200 Mating Cycles
- 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 Flexibilty
- 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: 1A when all contacts are powered or 3A when one contact is powered at a 30°C max. temperature rise
- Contact Resistance: 20mΩ max.
- Insulation Resistance: 1000MΩ min.
- Signal Integrity: Data and SPICE models are available at www.fci.com.

ENVIRONMENTAL

- Operating Temperature: -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
- FCI Product Specifications
  - GS-12-110 for 5-row connectors
  - GS-12-134 for 8-row connectors
- FCI 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 – Press fit
- Tape&Reel – Pin in Paste

TARGET MARKET / APPLICATIONS

- Communications
  - Transmission
  - Access
  - Switches
  - Routers
- Data
  - Servers
  - Storage Enclosures
- Industrial, Instrumentation and Medical
  - Rack-Based Systems

PART NUMBERS

Number of Rows & Positions	For Daughter Card Thickness	Header	Receptacle	Shroud
5-Row 5x6	1.27mm (0.050in.) – 2.54mm (0.100in.)	84817-XXX	84688-XXX/10082662-102LF	73993-XXX
5-Row 5x6	1.27mm (0.050in.) – 2.54mm (0.100in.)	73983-XXX	73981-XXX	73993-XXX
5-Row 5x6	2.54mm (0.100in.) – 3.40mm (0.134in.)	84881-XXX	84854-XXX	84882-XXX
8-Row 8x12	1.27mm (0.050in.) – 3.40mm (0.134in.)	74983-XXX	74981-XXX	74993-XXX

Note: All Dash numbers – XXX represent available options such as plating types, tail lengths for headers.
Lead-free and RoHS-compliant products are designed by the addition of LF as a suffix to the dash number.

BPLMETRAL1K0115EA4

For more information,
please contact: Communications@fci.com
or visit us at www.fci.com