

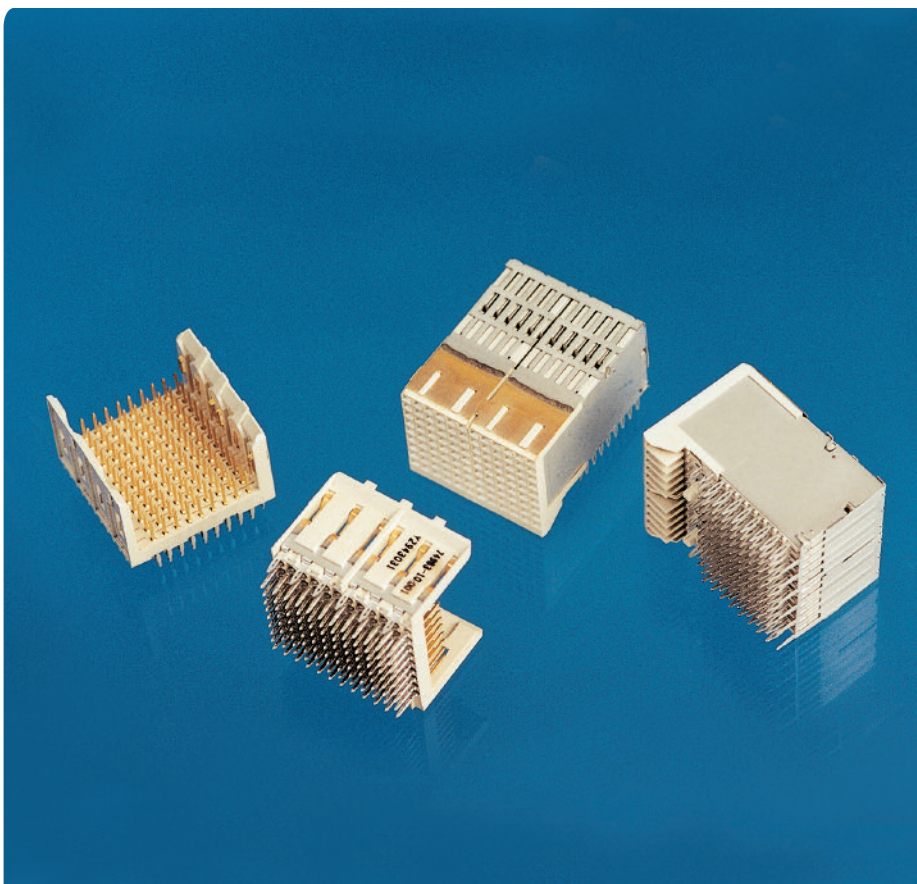
METRAL® 1000 SERIES

DESCRIPTION

FCI's Metral® 1000 Series is a high-speed 2 mm backpanel 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 mid-plane 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.



FEATURES & BENEFITS

- Fully shielded stripline transmission structure
- Reduced crosstalk compared to the FCI Standard Metral Connector System
- Less than 5% multi-line active NEXT @ 200 ps rise time in differential applications
- All contacts can be used for signals since the grounds are built into the receptacle and header shield structures
- Dual-beam receptacle contacts
- 200 mating cycles
- Available in 5- and 8-row configurations
- Rear plug up options
- Stackable end-to-end with other FCI Metral products
- Capability to provide customized select-load patterns in headers
- Press-fit headers and receptacles for easy installation with standard press tooling
- Repairable
- Lead-free and RoHS-compliant versions are available

TARGET MARKETS / APPLICATIONS

- Communications
 - Transmission
 - Access
 - Switches
 - Routers
- Data
 - Servers
 - Storage Enclosures
- I & I
 - Rack-Based Systems



MATERIALS

- Housings: High-temperature, glass filled LCP, UL 94 V-0
- Receptacle contacts: Beryllium-copper
- Header pins: Phosphor-bronze
- Ground shields: Phosphor-bronze
- Plating:
 - Contact area: Selective gold over nickel
 - Press-fit tails: tin-lead or tin

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
- Signal contact normal force: 0.39 N min. (EOL)

ELECTRICAL PERFORMANCE

- Operating temperature: -55°C to +105°C
- Current rating: 1 amp when all contacts are powered or 3 amps 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.fciconnect.com/highspeed. Contact FCI Marketing for additional information.

PART NUMBERS

SPECIFICATIONS

- Product
 - FCI Specification GS-12-110 for 5-row connector and GS-12-134 for 8-row connector
- Application
 - FCI Specification GS-20-010 for headers, BUS-20-071 for 5-row receptacles and BUS-20-072 for 8-row receptacles

APPROVALS & CERTIFICATIONS

- Recognized per UL/CSA
- Qualified per Bellcore GR-1217-CORE, November 1995, Central Office

PACKAGING

- Tubes

Header	Receptacle	Shroud	Number of Rows & Positions	For Card Thickness
73983-XXX*	73981-XXX*	73993-XXX*	5-Row 5x6	1.27 mm (0.050") - 2.54 mm (0.100")
84881-XXX	84854-XXX	84882-XXX	5-Row 5x6	2.54 mm (0.100") - 3.40 mm (0.134")
74983-XXX	74981-XXX	74993-XXX	8-Row 8x12	1.27 mm (0.050") - 3.40 mm (0.134")

* All Dash numbers -XXX represent available options such as plating types, tail lengths for headers. Lead-free and RoHS-compliant products are designated by the addition of LF as a suffix to the dash number. For detailed product information, visit our on-line catalog at www.fciconnect.com/metral.