FCI Basics

Amphenol

Metral® 2000 Series

ENHANCED FUTUREBUS+ SUPPORT WITH MINIMIZED CROSSTALK FOR HIGH-SPEED APPLICATIONS



Amphenol's FCI Basics Metral® 2000 Series is a high-speed 2mm backplane connector system of vertical headers. The 2000 Series features a unique stripline structure. Apart from this stripline structure, it is similar to the Standard Metral® Connector. This stripline structure allows the Metral® 2000 Series to have improved signal performance when routed in either a single-ended or a differential pair configuration.

TARGET MARKETS

The Metral® 2000 Series is available in 5×6 and 8×12 module sizes for midplane applications. The system also features dedicated ground rows. For the 5-row connector, the dedicated ground row is the 3rd row.
For the 8-row connector, the dedicated ground rows are the 3rd and 5th rows. Two, Three & Four-module monoblocks for the 5-row connector are available.

Metral® 2000 Series connectors are designed to conveniently stack end-to-end with other Metral® products and are mateable with Metral® 1000/4000 series receptacles.

- 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
- Supports Rear Plug-Up (RPU) applications

FEATURES	BENEFITS
Fully shielded stripline transmission structure for vertical headers	Reduced cross talk & improved signal performance (Less than 2.5% multi-line active NEXT @ 200ps rise time in differential applications)
Stackable end-to-end with other Amphenol FCI Metral® Products	No loss of pitch and adaptable to the Metral® Platform
Dedicated ground row contacts	Improved signal integrity
Available in 5 and 8 row configurations	Flexibility of connector size
Press-fit headers	Easy application on boards, and repair
Various header loading patterns available	Customized selection
Rear plug up options	Midplane application
250 mating cycles as per IEC Performance Level-1	Better durability
RoHS compliant	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

SPECIFICATIONS

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

PACKAGING

- Tubes

TARGET MARKETS/APPLICATIONS



Transmission
Access
Switches
Routers



Servers
Storage Enclosures



Rack-based Systems

Disclaimer
Please note that the above information is subject to change without notice.

PART NUMBERS

Number of Rows & Positions	Header	Shroud
5–Row 5x6	74977–101001LF	84621–101LF
5–Row 5x6	84809–101001LF	84621–101LF
8–Row 8x12	74978–102001LF	84625–102LF

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.

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