

MILLIPACS® 2MM HARD METRIC SERIES– HIGH SPEED RIGHT ANGLE RECEPTACLE

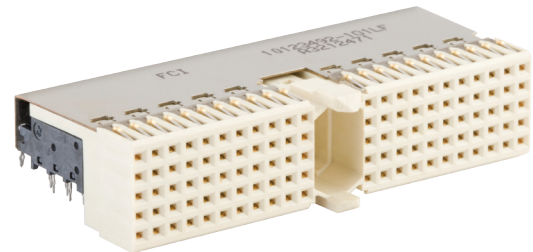
OVERVIEW

Millipacs® is a 2.0mm modular, Board-To-Board and Cable-To-Board Interconnection system in Hard Metric (HM) configuration designed in accordance with IEC 917, IEC 61076-4-101 and Telcordia GR-1217-CORE standards. FCI's Millipacs® 2mm HM series backplane connectors are used extensively for applications that require data rate up to 3Gbps.

Due to the need for improved signal integrity and higher bandwidth, Telecom and Data markets demand connectors with higher speed differential signals. Currently, upgrade options available before legacy backplane users involve extensive and expensive changes to the existing backplane system architecture.

FCI offers Millipacs® high speed (HS) right angle receptacle suitable for data rate up to 10Gbps (IEEE 803.2ap) and with mating compatibility to the IEC 61076-4-101 series 2mm hard metric (HM2) backplane header. The Millipacs HS receptacle and standard 2mm HM vertical header mating combination deliver low cross talk performance at higher frequencies.

Millipacs HS series Receptacle are offered in 5 row version with horizontal pinning assignments which provide up to 24 differential pairs (DP) for Type A or 30 DP for Type AB per 50mm of standard module length. This enables industry to have cost-effective upgrade to higher data rate while retaining existing vertical headers in backplane and most of the backplane system architecture.



FEATURES

- Backward mating compatibility to IEC 61076-4-101 2mm HM header
- Broad side coupling or Horizontal pinning
- 2-beam tulip contact
- IMLA type construction
- Staggered PCB terminals
- Small press-fit section
- Same outer physical dimensions (except pcb footprint) of IEC 61076-4-101 compliant 2mm HM Receptacle

BENEFITS

- Cost-effective upgrade as it retains existing backplane architecture
- Co-exists with all HM compatible connectors and accessories
- Efficient use of board length and maximises the differential pair count
- Equalised signal path and contact reliability
- Unique design enhances SI performance
- Reduces crosstalk at higher frequencies
- Lower impedance resulting in faster signal speeds
- Retains existing board space and card slot width

TECHNICAL INFORMATION

MATERIALS

- Insulator Material: High-Temperature Polymer
- Contact Material: Copper Alloy
- Contact Plating: Gold / Palladium Nickel on mating areas and Tin Over Nickel on press-fit / terminal area

ELECTRICAL PERFORMANCE

- Operating Current: 1.5 A at 20 °C; 1.0 A at 70 °C
- Test Voltage: 750 Vrms
- Contact Resistance: 25 mΩ max
- Insulation Resistance: 10⁴ MΩ min
- Operating Temperature: -55 °C to +125 °C

MECHANICAL PERFORMANCE

- Mating Force: 0.50 N max. per contact pair
- Withdrawal Force: 0.15 N min per contact
- Misalignment: Longitudinal ±2.0mm; Transversal ±2.5mm
- Inclination: ±2.0°
- Contact Wiping Length: 3.0mm for level 1 and 4.5mm for level 2 contacts in signal rows. Level 3 contact mates at the outer shielding rows.

SPECIFICATIONS

- Product Specification: GS-12-1044
- Application Specification: GS-20-022

APPROVALS AND CERTIFICATIONS

- Designed in accordance with IEC 917 and IEC 61076-4-101
- Telcordia GR-1217-CORE standards

PACKAGING

- Tray

PCB DETAILS

- Signal Pins: 0.40 +/- 0.05mm
- Shielding Pins: 0.60 +/- 0.05mm
- PCB Thickness Range: 1.2mm to 3.5mm

PART NUMBERS

Description	Max. No. of Differential Pairs	Part Number
Type A	24	10127112
Type AB	30	10127156
Type C	12	10127169

TYPICAL PINNING RECOMMENDATION

F	0	0	0	0	0	0	0	0	0	0	0
E	G	G	S	S	G	G	S	S	G	G	LS
D	S	S	G	G	S	S	G	G	S	S	G
C	G	G	S	S	G	G	S	S	G	G	LS
B	S	S	G	G	S	S	G	G	S	S	G
A	G	G	S	S	G	G	S	S	G	G	LS
Z											
TYPE C	1	2	3	4	5	6	7	8	9	10	11

S – High speed signal pins

LS – Low speed signal pins

G – Ground pins

TARGET MARKETS/APPLICATIONS

- Communications
 - High speed/High bandwidth data communication applications
 - Communications IP, Internet backbone
 - Routers
 - Base Station
 - Wireless Base Station
 - Transmission, Access Systems
- Data
 - Servers
 - Storage Units
- Industrial & Instrumentation
 - Data Acquisition Systems for Test & Measurements
 - Railway Traffic Management & Control Systems
 - Control Systems for Process
 - Energy & Power Industries
 - In-flight Entertainment & Communication for Avionics
 - Digital Image Processing
 - Radar
 - Sonar System
 - UAV
- Medical
 - MRI Scanners
 - Diagnostic Equipment

BPLHSMILLIRAR015EA4