Millipacs® High Speed Connectors

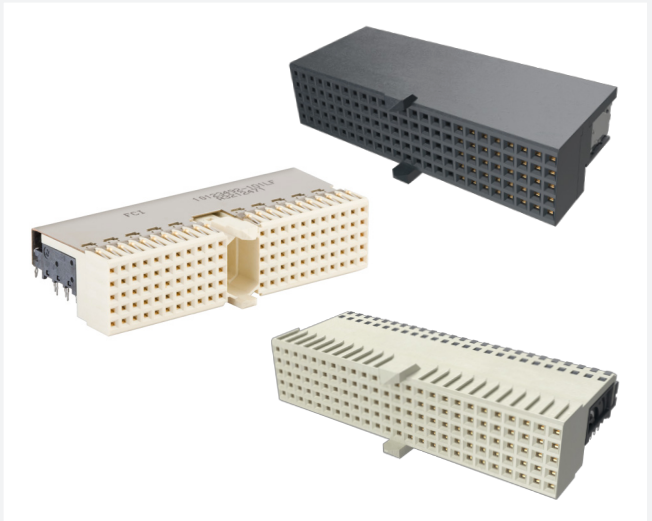
MILLIPACS® 2MM HARD METRIC HIGH SPEED CONNECTOR

Amphenol ICC offers Millipacs® high speed (HS) versions with mating compatibility to IEC 61076-4-101 series Hard Metric (HM) connectors which enables cost-effective upgrade to data rates up to 25Gb/s.

Millipacs® is a 2.00mm modular, board-to-board and cable-to-board interconnection system in HM configuration designed in accordance with IEC 917, IEC 61076-4-101 and Telcordia GR-1217-CORE standards. Due to the need for improved signal integrity and higher bandwidth, Telecom and Data markets demand connectors with higher speed differential signals. Millipacs® HS versions addresses this requirement:

Broad side coupling:
- 25Gb/s HS right angle receptacle & 25Gb/s vertical header
- 10Gb/s HS right angle receptacle

Edge side coupling:
- 12.5Gb/s HS right angle receptacle



TARGET MARKETS

- Very low cross talk
- Mating compatibility with standard and 10G Millipacs
- Retains same outer board space as the standard product
- Retains existing backplane architecture and signal pinning layout
- Two beam tulip contact for receptacle
- Balanced differential pairs. Up to 30DP / 50mm length
- Top and bottom shielding option for 10Gb/s and 12.5Gb/s versions

FEATURES	BENEFITS
Backward mating compatibility to IEC 61076-4-101 2mm HM	Cost-effective upgrade as it retains existing backplane architecture Co-exists with all HM compatible connectors and accessories
Broad side / Edge side coupling	No change is required to existing signal pinning
2-beam tulip contact	Equalised signal path and contact reliability
Small press-fit section Same outer physical dimensions (except pcb footprint) of IEC 61076-4-101 series	Reduces crosstalk at higher frequencies Lower impedance resulting in faster signal speeds Retains existing board space and card slot width

TECHNICAL INFORMATION

MATERIAL

- 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

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.

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: 10^4 MΩ min
- Operating Temperature: -55 °C to +125 °C

PACKAGING

- Tray

APPROVALS AND CERTIFICATIONS

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

SPECIFICATION

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

TARGET MARKETS/APPLICATIONS

Base Station
Communications IP, Internet backbone
High speed/ High bandwidth data communication
Router
Transmission, Access Systems
Wireless Base Station

Server
Storage Units

Control Systems for Process
Digital Image Processing
Data Acquisition Systems for Test & Measurements
Energy & Power Industries
In-flight Entertainment & Communication for Avionics
Railway Traffic Management & Control Systems
Radar
Sonar System
UAV

Factory Automation Equipment
Industrial Equipment

TYPICAL PINNING RECOMMENDATION

- 12.5G Type-AB (Edge Side)

F																									
E	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S
D	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S
C	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
B	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S
A	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S
Z																									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**

- 25G Type-AB (Broad Side)

F																									
E	G	G	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G
D	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G	G	LS
C	G	G	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G
B	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G	G	LS
A	G	G	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G	G	S	S	G
Z																									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**

S –High speed signal pins
LS –Low speed signal pins
G –Ground pins

*Please contact us for any custom pinning configuration requirements

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