

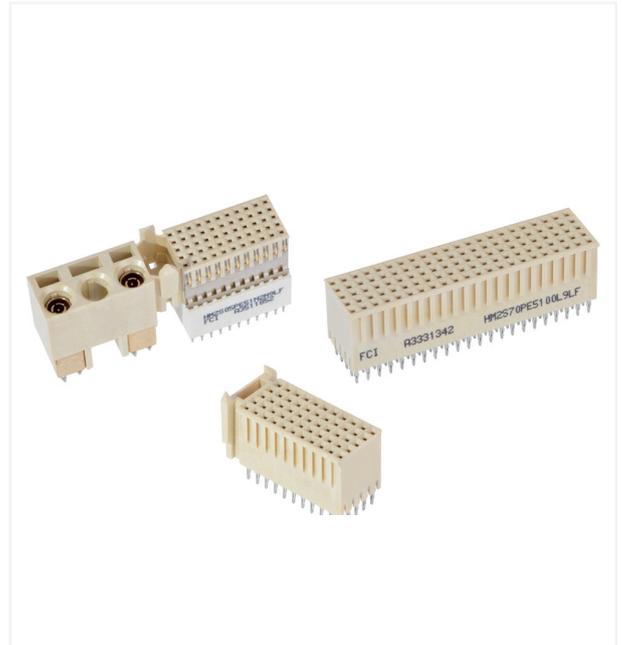
# MILLIPACS® 2mm HARD METRIC SERIES – VERTICAL RECEPTACLE CONNECTORS

## OVERVIEW

Millipacs® is a 2mm modular, Board-To-Board or 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.

2mm HM connector is one of the most popular backplane connector systems. Millipacs® series offers attractive propositions for all market segments due to the cost effectiveness, user flexibility, standardization and availability of its broad range. Millipacs® connector system is extensively used for chassis-based packaging in the communications, data, medical and industrial & instrumentation segments.

Millipacs® HM vertical receptacles are offered in standard 5 row signal modules and up to maximum of 125 signal contacts per 50mm. Vertical receptacle module, when mated to a standard straight header are suitable for parallel Board-To-Board applications. Vertical receptacle can also be used in backplane in the place of vertical header and mated with right angle header on the daughter card.

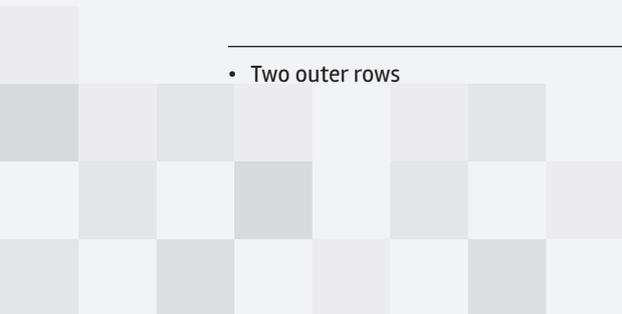


## FEATURES

- Hard Metric
  - 2mm pitch
- 
- Modular and Scalable by 25mm to 50mm
- 
- One piece receptacle housing design
  - Multipurpose center, Coding feature, location peg
- 
- Customized loading pattern
- 
- Long pin connector
  - Rear plug up
- 
- Two outer rows

## BENEFITS

- Popular equipment practice standard. Millipacs® co-exists with all HM compatible connectors and accessories
  - Adequate spacing for routing PCB traces and thereby optimizing board layers, Reduces PCB real estate Vs 2.54mm
- 
- Standard Modular length, without any loss of position
- 
- Robustness
  - Easy guiding and visual identification. Prevents wrong mating
- 
- Cost-effective solutions for product extensions and customized requests
- 
- Extended stack height in mezzanine applications
  - Extended mating applications via shrouds on the rear side of the PCB
- 
- Optional shielding





## 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 PERFORMANCES

- Operating current: 1.5 A at 20°C  
: 1.0 A at 70°C
- Test voltage: 750 Vrms
- Contact resistance: 20 mΩ max
- Insulation resistance: 10<sup>4</sup> MΩ min

### MECHANICAL PERFORMANCE

- Mating force: 0.75 N max per contact pair
- Withdrawal force: 0.15 N min per contact pair
- Hertz stress: 200 Kpsi min
- Misalignment: Longitudinal ± 2.0mm  
Transversal ± 2.5mm
- Inclination: ±2.0°

### SPECIFICATIONS

- Product specification: GS-12-203
- Application specification: GS-20-022

### ENVIRONMENTAL

- Operating temperature: -55°C to +125°C

### APPROVALS AND CERTIFICATIONS

- Designed in accordance with IEC 917 and IEC 61076-4-101
- Fits DIN 43356 and IEEE 1301 Hard Metric Practice
- Telcordia GR-1217-CORE standards
- UL and CSA recognized

### PACKAGING

- Tray Packaging

### TARGET MARKETS/APPLICATIONS

- Communications
  - IP, Internet backbone driving high bandwidth requirements
  - LAN / WAN interfaces & data over public networks
  - Core Switches
  - Routers
  - Hubs
  - 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
  - Multimedia
  - Signage
  - Video Surveillance
  - Radar
  - Sonar System
  - UAV
- Medical
  - MRI Scanners
  - Diagnostic Equipment

**MILLIPACS® 2mm HARD METRIC  
SERIES – VERTICAL RECEPTACLE CONNECTORS**

## PART NUMBERS

No. of signal rows	Type	Features	Vertical Receptacle series	Max. No. of signal pins	Mounting style
5	A	22 column, 50mm + MPC	HM2S10P	110	Press-fit
		22 column, 50mm + MPC+ location peg	HM2S01P	110	Press-fit
		22 column, 50mm + MPC + long pin	HM2S10PE51N	110	Press-fit
	B	25 column, 50mm	HM2S02P	125	Press-fit
	B22	22 column, 44mm	HM2S70P	110	Press-fit
	B19	19 column, 38mm	HM2S71P	95	Press-fit
	C	11 column, 25mm + end polarization	HM2S30P	55	Press-fit
		11 column, 25mm + end polarization + location peg	HM2S03P	55	Press-fit
		11 column, 25mm + end polarization + long pin	HM2S30PE51N	55	Press-fit
	M	50mm, 55 signal + 3 power/coax + MPC + long pin	HM2S05PE51N	55	Press-fit

\* MPC – Multi purpose center for polarization and coding

\* Application tooling are available on request

\* Performance levels: 3 – 50 mating cycles;  
2 – 250 mating cycles;  
1 – 500 mating cycles.

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