

# MILLIPACS® 2MM HARD METRICS SERIES – RIGHT ANGLE HEADER CONNECTORS

## OVERVIEW

Milipacs® Hard Metric Right Angle header Modules are available in all popular versions – Type A, B, C, B19, B22, AB22 and AB25 with shielding row option.

A variety of pin layout configurations are available to support PCI modules for standard form factors.

The system is designed for applications requiring co-planar board-to-board connection within the normal Hard metric environment. When used in conjunction with Right Angle Receptacles, this system is suitable for Extender or Test Card designs. In addition to co-planar design, these Right Angle Headers can also be used in applications that require an industrial Backplane. Vertical receptacles can be used in place of Vertical Headers on the Backplanes and Right Angle Headers are used on the Daughter Cards. Right angle header connectors are provided with cable latch lock feature which allow mating to receptacle cable connectors which extends the usage to input – output applications.

Right angle Hard metric (HM) connectors are targeted on the communication and I&I segments and for applications like Plug in Unit, Embedded computer, CPCI racks and Highend router.



## FEATURES & BENEFITS

- Millipacs right angle connectors are offered in Types A, B, C, B19, B22, AB22 and AB25
- Housings are with cable latch lock feature
- Custom contact loading patterns are available

## TECHNICAL INFORMATION

### PERFORMANCE CHARACTERISTICS

- Operating temperature: -55°C to +125°C
- Operating current:
  - 1.5A at 20°C
  - 1.0A at 70°C
- Contact resistance: 20mΩ max.
- Insulation resistance: 104MΩ min.
- Mating force: 0.75 N max. per contact pair
- Performance level: 2; 250 Matings, Other performance levels are available on request

**MILLIPACS® 2MM HARDMETRIC SERIES  
RIGHT ANGLE HEADER CONNECTORS**



## IMLA PATTERNS/COMBINATIONS

### OVERVIEW

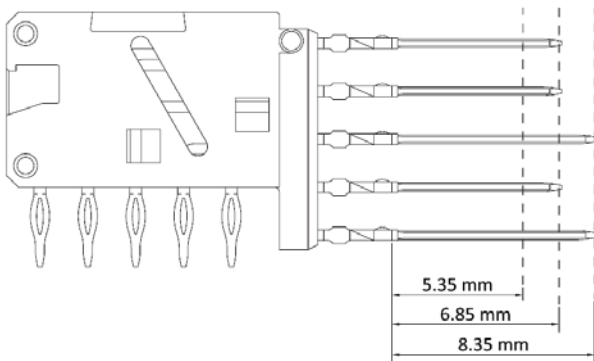
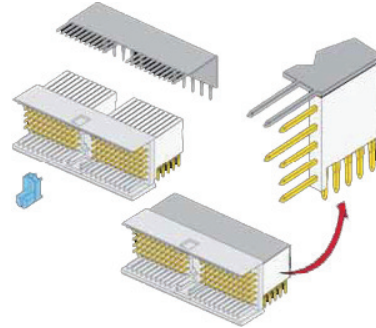
Right angle connectors are based on IMLA based contact assembly process. IMLAs are assembled vertically to the housing as shown in the picture.

Terminal length of the IMLA is 3.7mm and with eye of needle press-fit.

Pin section is 0.4 \* 0.5mm.

IMLA s are available in three different contact mating lengths

- Code no. 4 – 5.35mm
- Code no. 5 – 6.85mm
- Code no. 6 – 8.35mm



0	0	0	0	0	0	0	0	0
4	5	5	5	5	5	5	6	4
4	5	5	6	4	4	5	6	4
4	5	6	5	5	5	6	6	5
4	5	5	5	5	4	5	5	4
4	5	5	5	5	5	6	6	4
0	0	0	0	0	0	0	0	0
#1	#2	#3	#4	#5	#6	#7	#8	#9

Nine different combinations are supported with these 3 contact mating lengths.

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**MATING PRODUCTS**

No. of Signal Rows	Header			Mating Receptacle/Cable Connector	
	Type	Series	Pin Orientation	Series	Pin Orientation
5	Type A	HM2J07PE..	Right angle	HM2R01P /HM2R10P	Right angle receptacle
				HM2S01P /HM2S10P	Vertical receptacle
				HM2C	Cable connector
	Type A with latch	HM2J01PE..	Right angle	HM2R02P	Right angle receptacle
				HM2S02P	Vertical receptacle
				HM2C	Cable connector
	Type B	HM2J08PE..	Right angle	HM2R70P	Right angle receptacle
				HM2S70P	Vertical receptacle
				HM2C	Cable connector
	Type B with latch	HM2J02PE..	Right angle	HM2R71P	Right angle receptacle
				HM2S71P	Vertical receptacle
				HM2C	Cable connector
Type B22	HM2J70PE..	Right angle	HM2R66P	Right angle receptacle	
			HM2S66P	Vertical receptacle	
			HM2C	Cable connector	
Type B19	HM2J71PE..	Right angle	HM2R67P	Right angle receptacle	
			HM2S67P	Vertical receptacle	
			HM2C	Cable connector	
Type AB22	HM2J66PE..	Right angle	HM2R03P /HM2R30P	Right angle receptacle	
			HM2S30P	Vertical receptacle	
			HM2C	Cable connector	
Type AB25	HM2J65PE..	Right angle	HM2R03P /HM2R30P	Right angle receptacle	
			HM2S30P	Vertical receptacle	
			HM2C	Cable connector	
Type C	HM2J09PE..	Right angle	HM2R03P /HM2R30P	Right angle receptacle	
			HM2S30P	Vertical receptacle	
			HM2C	Cable connector	
Type C with latch	HM2J03PE..	Right angle	HM2R03P /HM2R30P	Right angle receptacle	
			HM2S30P	Vertical receptacle	
			HM2C	Cable connector	





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## TYPE C HEADER WITH 55 SIGNAL PINS

### OVERVIEW

Millipacs Type C right angle header connector provides 55 signal contacts in a 5 row configuration with press-fit termination.

Connectors are with cable latch lock feature and with optional top shielding.



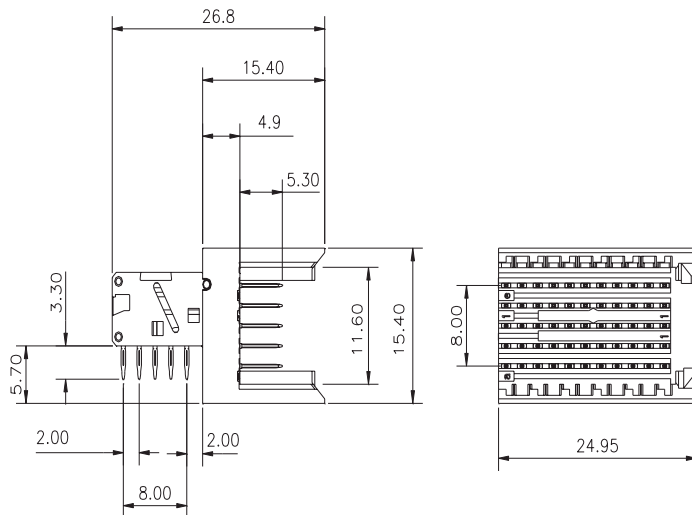
### LOADING PATTERNS SUPPORTED

Standard loading pattern  
HM2J09PE5110N9LF

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

Custom loading patterns are available up on request.

### DIMENSIONAL DRAWING



For more information,  
please contact: [Communications@fci.com](mailto:Communications@fci.com)  
or visit us at [www.fci.com](http://www.fci.com)

#### Disclaimer

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

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**TYPE B19 HEADER WITH 95 SIGNAL PINS**

**OVERVIEW**

Millipacs Type B19 right angle header connector provides 95 signal contacts in a 5 row configuration with press-fit termination.

Connectors are with optional top shielding.



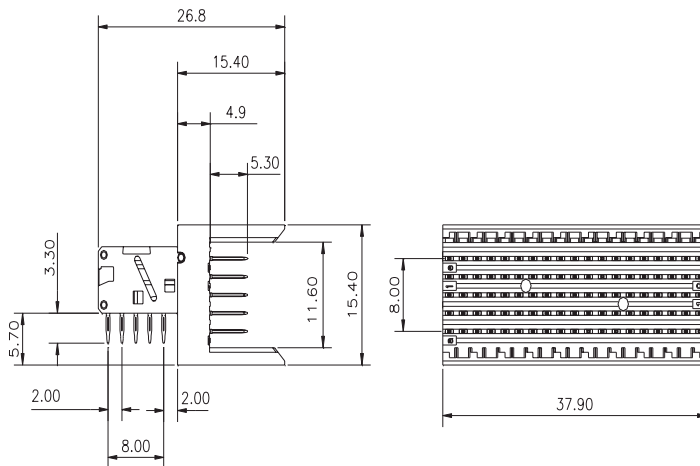
**LOADING PATTERNS SUPPORTED**

Standard loading pattern  
HM2J71PE5110N9LF

F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
D	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
C	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
B	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
A	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

Custom loading patterns are available up on request.

**DIMENSIONAL DRAWING**





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# TYPE AB22 HEADER WITH 110 SIGNAL PINS

## OVERVIEW

Millipacs Type AB22 right angle header connector provides 110 signal contacts in a 5 row configuration with press-fit termination.

Connectors are with optional top shielding.

**NEW**



## LOADING PATTERNS SUPPORTED

Standard Loading pattern  
HM2J66PE5110N9LF

F	6	6	6	6	6	6	6	6	6	0	0	6	6	6	6	6	6	6	6	6	6	6
E	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
D	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
C	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
B	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
A	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

Custom loading patterns are available up on request.

## DIMENSIONAL DRAWING

