

# Z-PACK 2mm HM Products



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# Primary Market Z-Pack 2mm HM Product

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- Telecommunications
- ATM
- Multiplexers
- Switching Equipment
- Transmission Equipment
- Base Stations

# Z-PACK 2mm HM Product Range

	<u>Positions</u>	<u>Vertical</u> <u>Male</u>	<u>R.A</u> <u>Female</u>	<u>R A</u> <u>Male</u>	<u>Vert.</u> <u>Female</u>
<b>A</b>	110	√	√	√	√
<b>B</b>	125	√	√	√	√
<b>19 COL. B</b>	95	√	√	√	√
<b>22 COL. B</b>	110	√	√	√	√
<b>C</b>	55	√	√	√	√
<b>L</b>	6	√	√		
<b>M</b>	55 + 3	√	√		
<b>N</b>	3	√	√		
<b>A/B</b>	125/110/95	√	√	√ √	√
<b>D/E</b>	200	√	√		√
<b>D</b>	176	√	√		√
<b>E</b>	200	√	√		√
<b>F</b>	88	√	√		

# Z-Pack 2mm HM Product Overview

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- 2 Piece 2mm pitch connector system
- Meets IEC 1076-4-101 and Compact PCI standards
- Standard & Inverse sex configurations
- Modular design
- 4,4+1,5,5+2,8,8+2 and 12 Row product offerings
- Full family offering to include coax, fiber, power, keying, cable and shielding options

Compact PCI is a trademark of PICMG..

# Z-Pack 2mm HM Product (Continued)

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## Features:

Action pin contacts

Upper and/or lower shielding

Modular unit design

Extensive breadth of product

## Benefits:

High retention force and eliminates soldering

Improved signal integrity and reduced cross-talk

Flexibility in configuration and spacing

Range of signal, power, coaxial and fiber board-to-board and cable-to-board option

# MECHANICAL FEATURES

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## Features

- Entire product line action –pin contacts
- Keying
- 3 Levels of sequencing
- 5 Row base system
- Complete shielding program
- Cable connectors

## Benefits

- Reduces applied cost
- Flexibility
- Live insertion
- Higher density
- Enhanced electrical performance
- Cabling flexibility

# BASIC MODULE WITH SERVICE CENTER

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3 Contact lengths

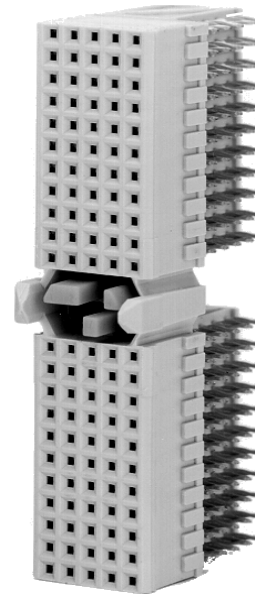
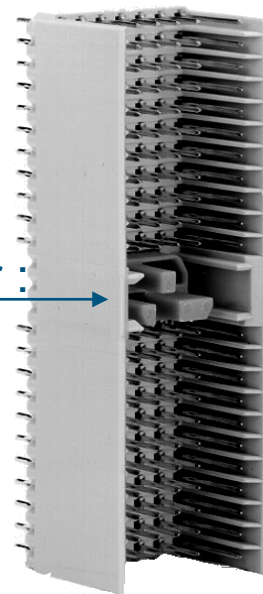
Additional contact rows for grounding

ACTION PIN Contact

Service center for :

- Guiding
- Coding
- Polarizing

Walls to protect contacts & guide the connector



50,0 mm

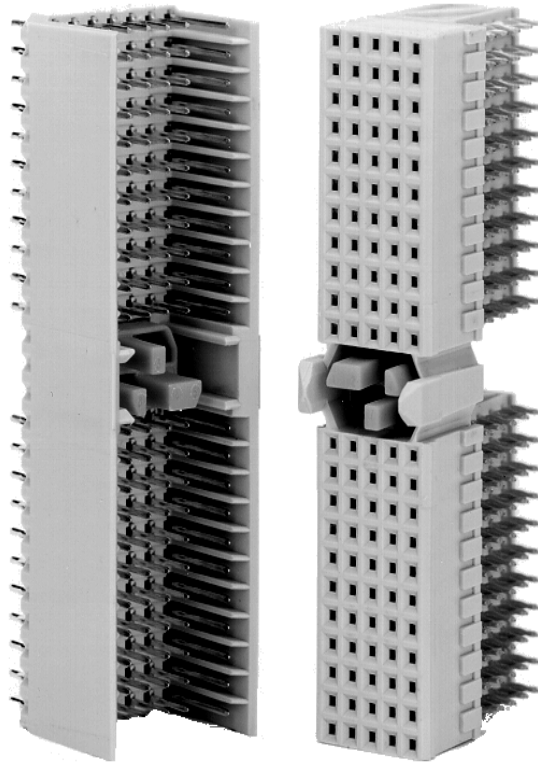
TYPE A

ACTION PIN Contact

# ELECTRICAL CHARACTERISTICS

## 5-row connector

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Signal pin current	:	1,5 A at 70° C / contact		
		(requirement: 1A)		
Nominal resistance	:	< 13,5 mOhm		
Creepage / clearance:	:	>= 0,8 mm		
Propagation delay	:	104ps (correct for board effects)		
S/G ratio	:	4:1	1:1	Diff.pair
Impedance (Ohm)	:	50-58	49-55	86-89
Backward x-talk (%)				
Row-to-row	:	4 - 10		2 - 3
Column-to-column	:	< 3	< 1	< 1
Diagonal	:	< 2	<< 1	<< 1

Values at 333 ps rise time (10-90%)



# DAUGHTERBOARD CONNECTOR

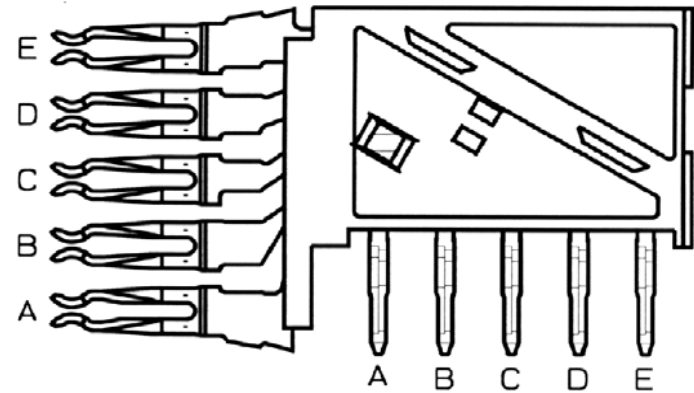
## Basic female sub-assembly

### Features:

- Overmolded column of 5 contacts

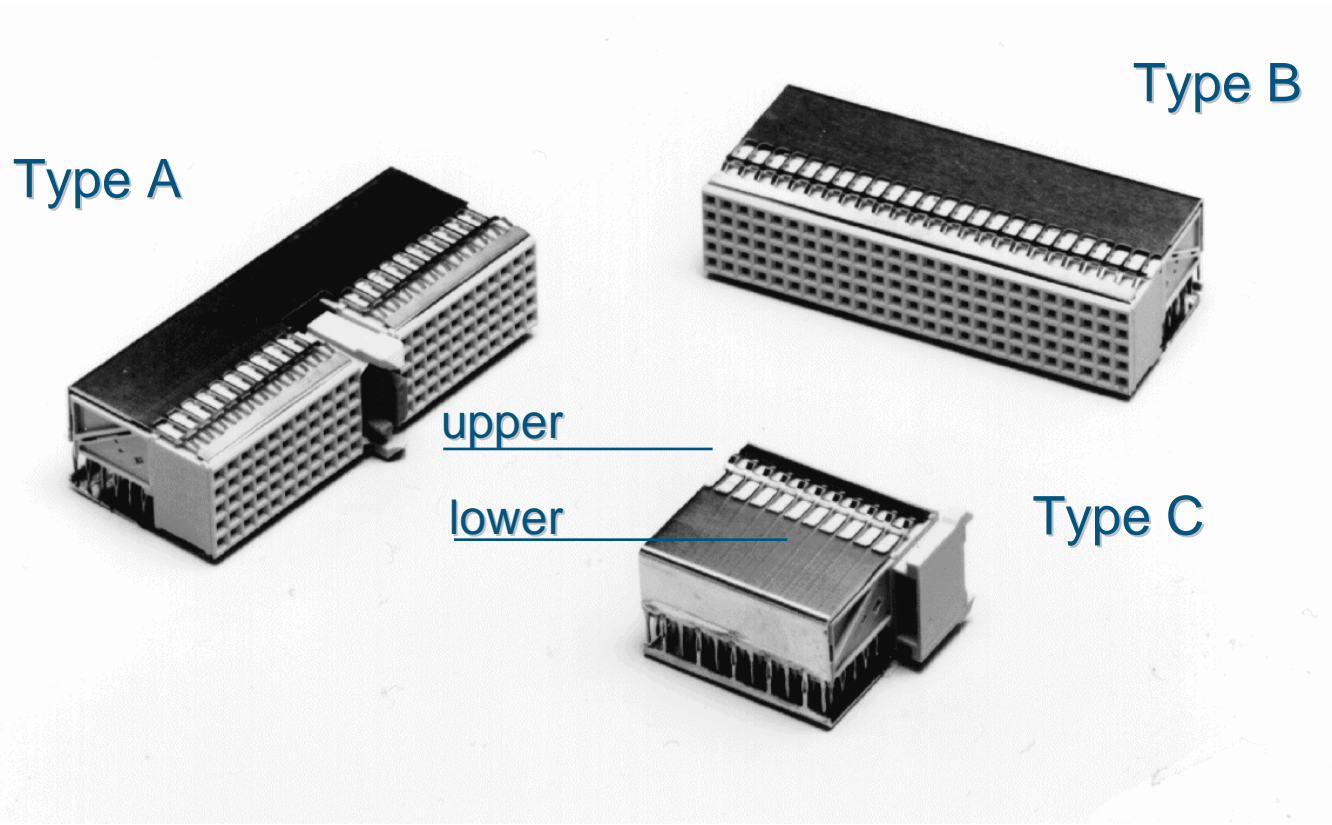
### Benefits:

- Safety isolation to contacts
- Controlled impedance: fixed contacts
- Minimised propagation delay
- Minimised difference in propagation delay
- Creepage / clearance:  $> 0,8\text{mm}$
- High current carrying capacity:  $1,5\text{A}$  at  $70^\circ\text{C}$  / contact
- Compliant press-fit



# Ground Return Shielding

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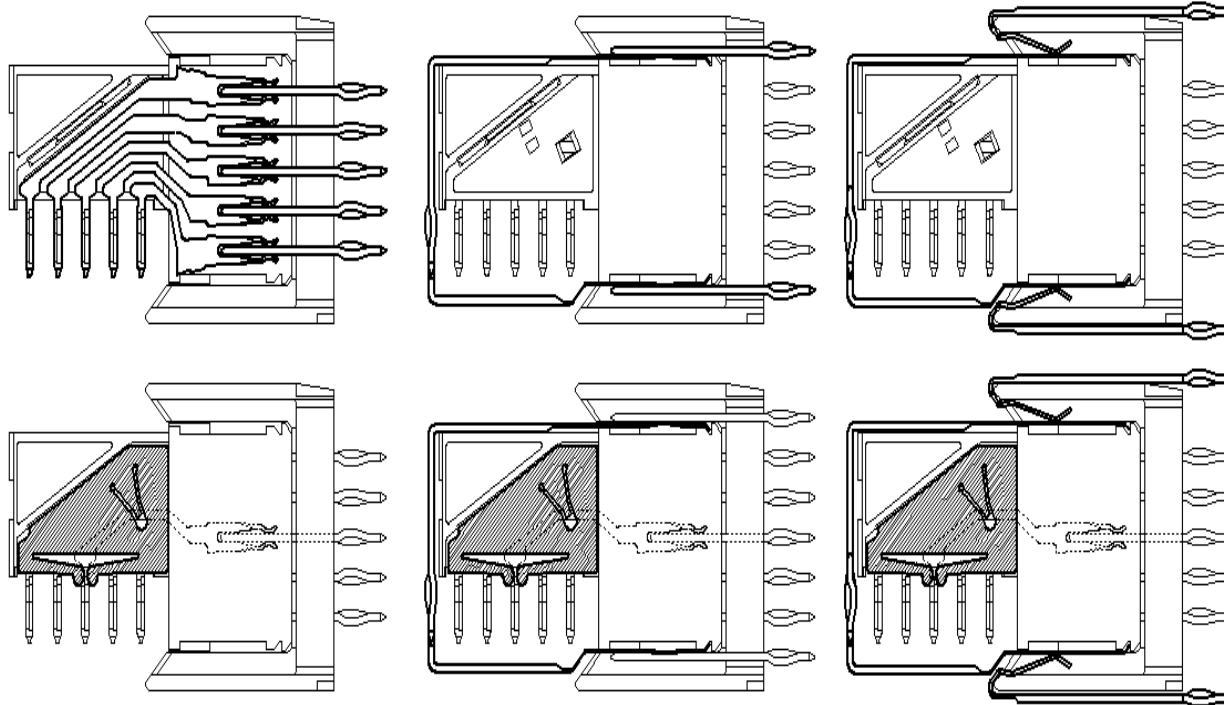


# COMPLETE SHIELDING PROGRAM

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Basic 5 row

Ground return shield

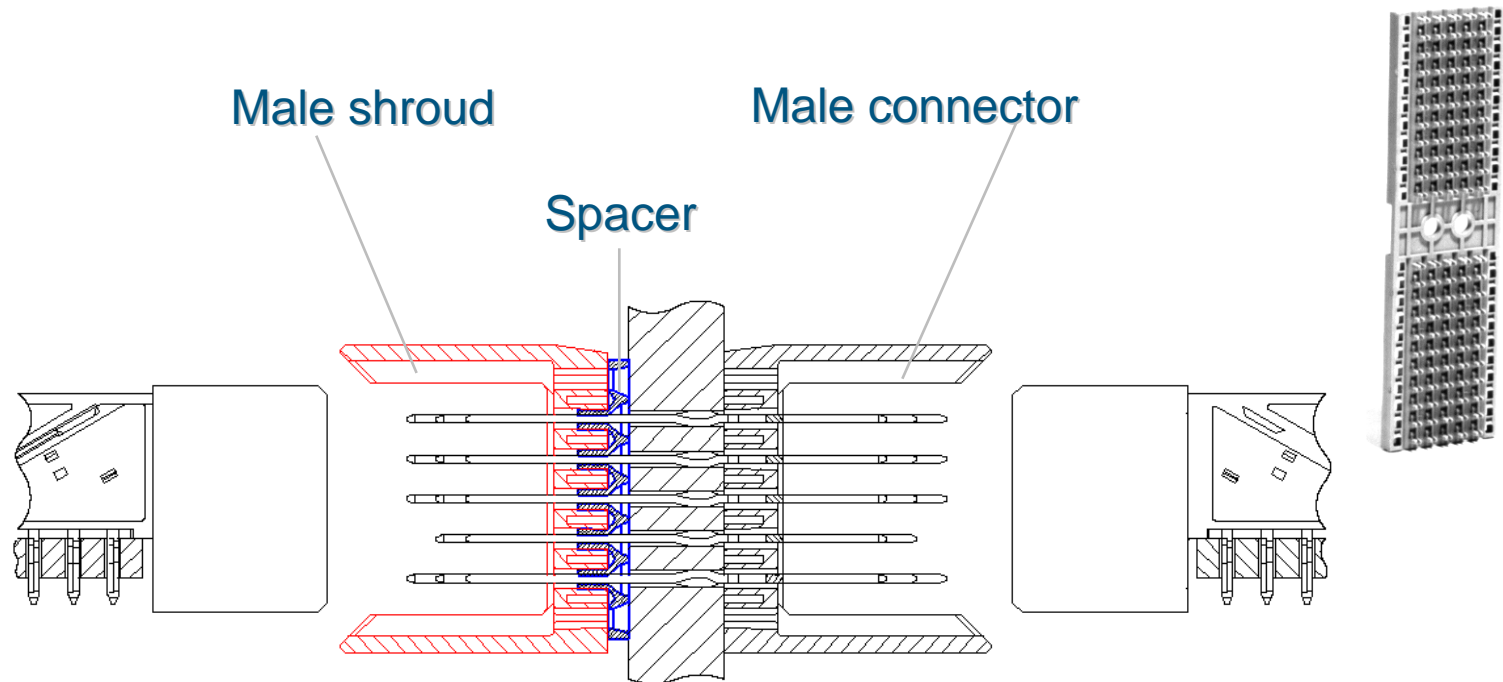


+ Reduced Cross Talk Shield

# MIDPLANE APPLICATIONS

## Spacers for type A, B and C shrouds

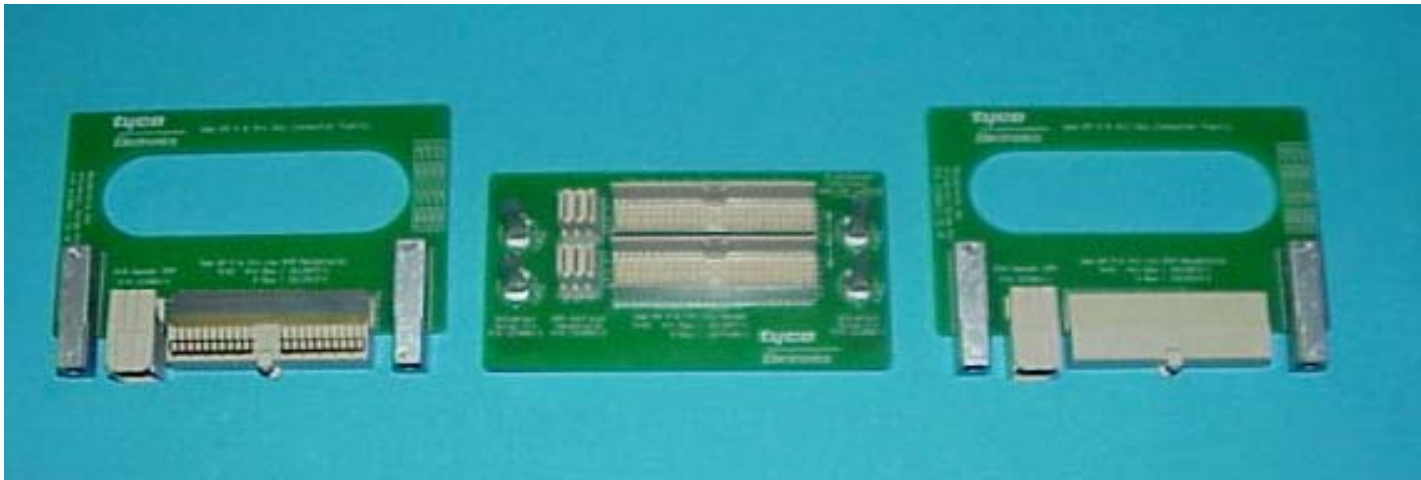
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- Provide a firm retention of the male shroud to feed-through posts
- Available for PCB thicknesses from 1,4 to 7,7mm
- Provide 1,2 or 3 mating levels for feed-through posts

# Z-Pack 2mm HM 4 Row Product

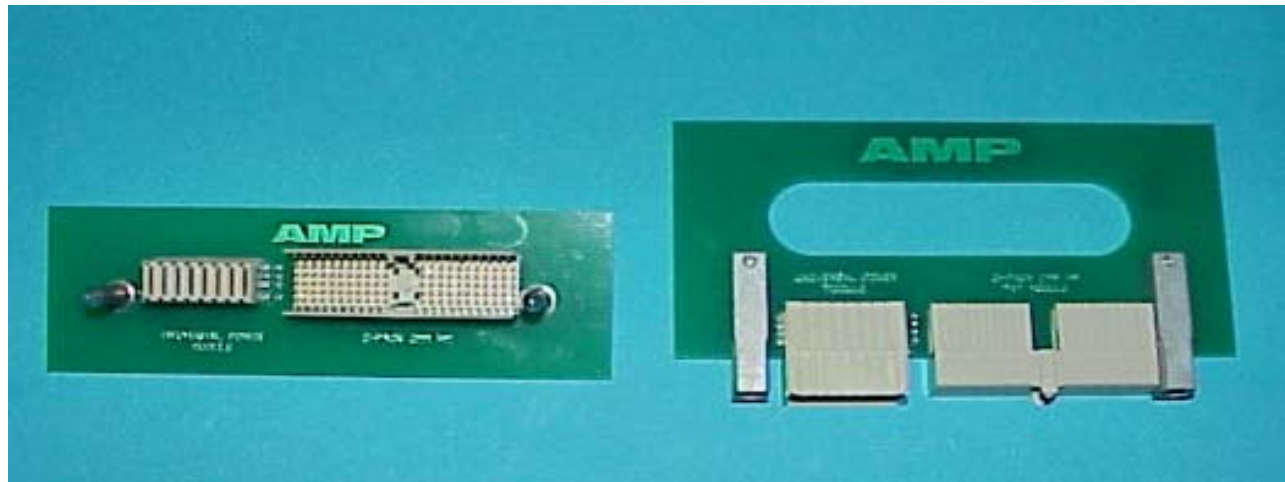
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- Vertical males and Right/Angle females
- Type A/B 4 & 4 + 1 row offering
- Offers 100 signals and guidance ability
- Offers 15mm slot to slot spacing

# Z-Pack 2mm HM 5 Row Product

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- Vertical males and Right/Angle females
- 5 & 5 +2 Row product for ground return
- Type A has 110 signal pins & guidance
- Type B has 125 signal pins
- Type C has 55 signal pins & guidance

# Z-Pack 2mm HM 8 Row Product

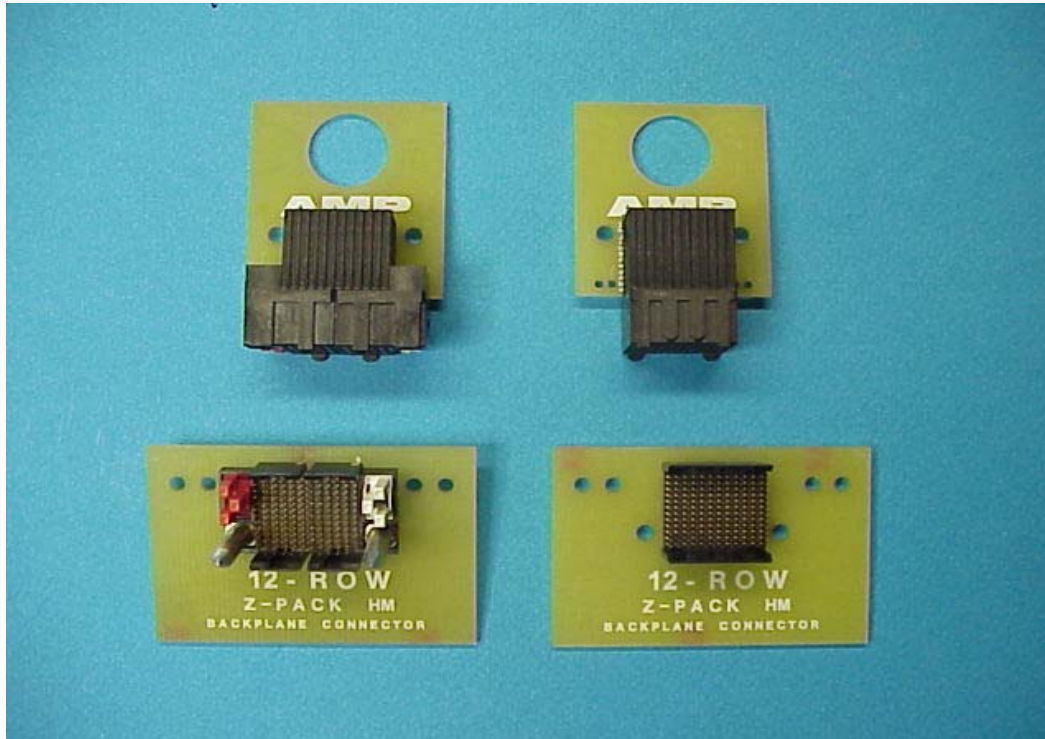
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- Vertical males & Right/Angle females 8 & 8+2 row offering
- Type D has 176 signal contacts and guidance
- Type D/E 200 signals and guidance
- Type E 200 signal contacts
- Type F 88 signals and guidance

# Z-Pack 2mm HM 12 Row Product

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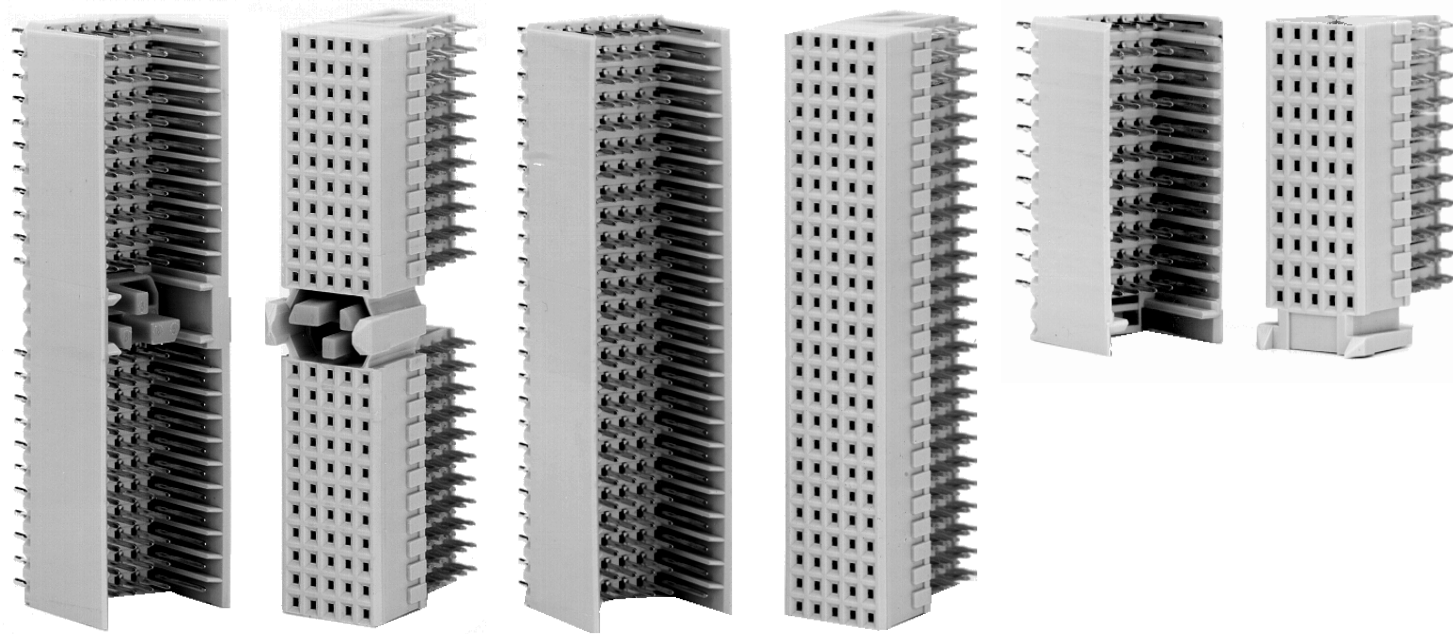


- 144 Position Modules on 2mm x1.5mm grid
- Right/Angle receptacles and mating vertical headers
- Guidance and keying included in left hand modules



# STANDARD CONNECTOR TYPES

## Type A, B and C, signal contacts



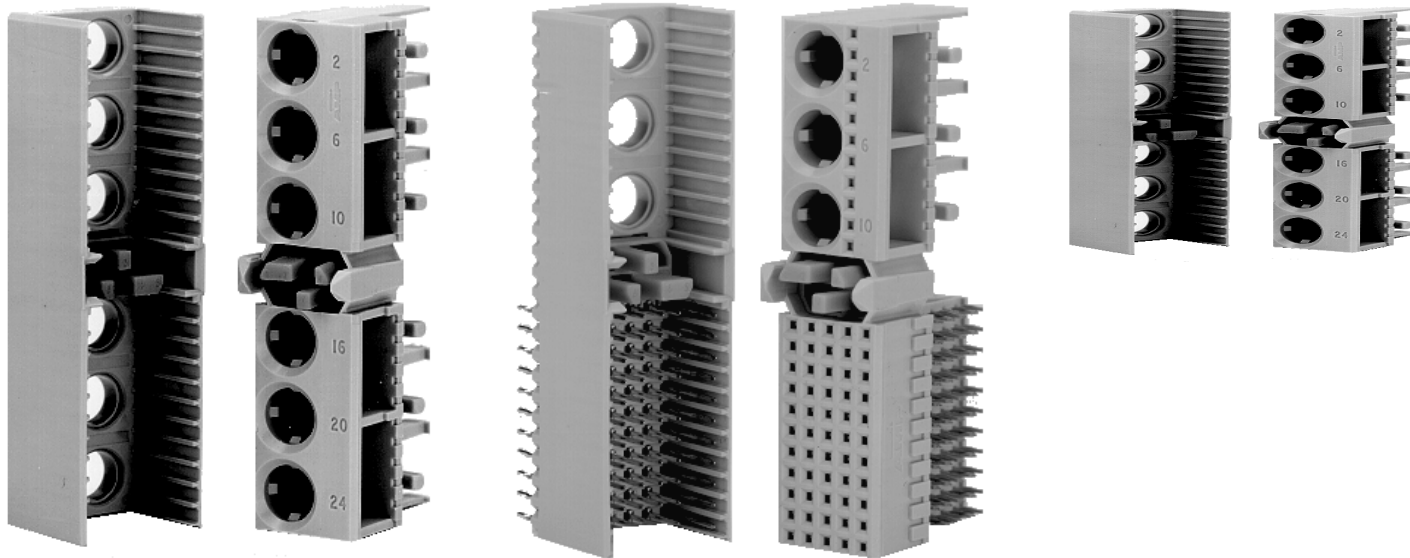
Type A  
50 mm length  
5 Row - 110 pos.

Type B  
50 mm length  
5 Row - 125 pos.

Type C  
25 mm length  
5 Row - 55 pos.

# HYBRID CONNECTOR TYPES

Type L, M and N - Signal and DIN 41626 contacts



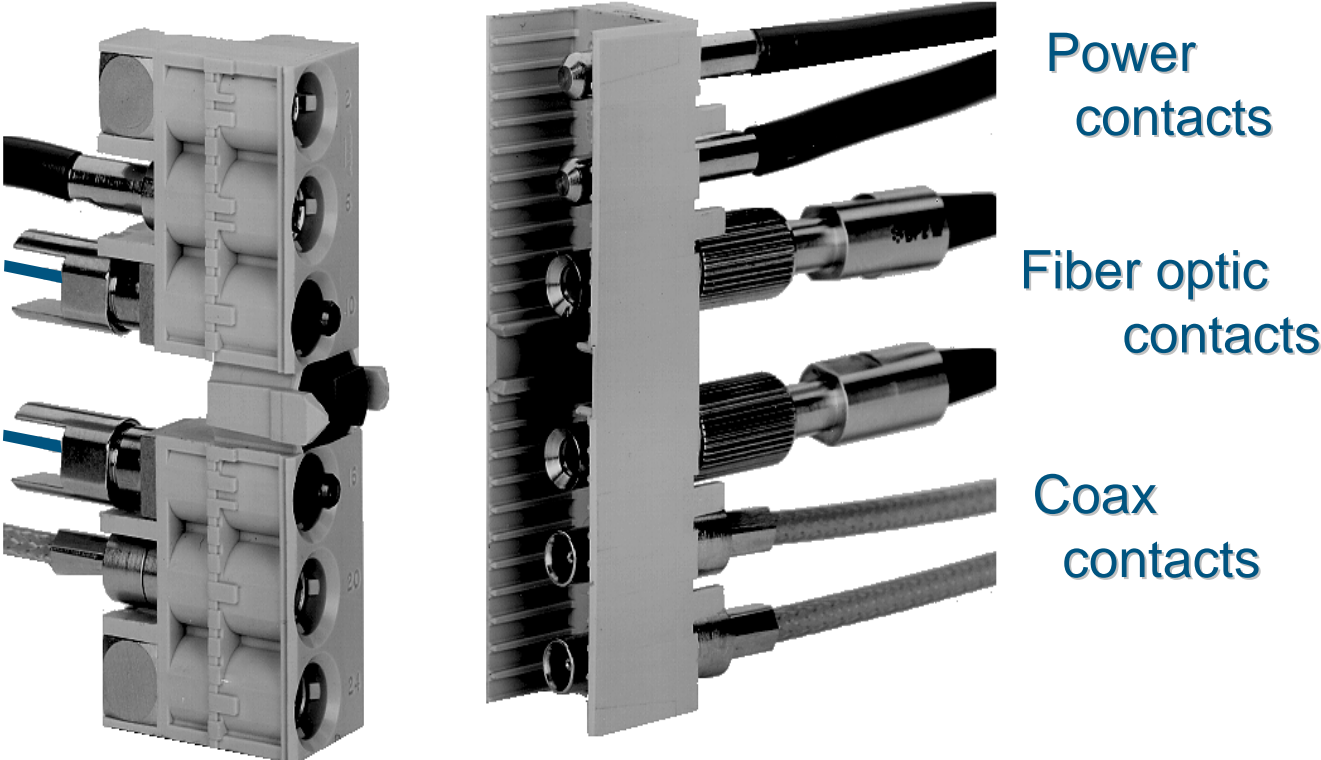
Type L  
50mm length  
6 x DIN cavity

Type M  
50mm length  
55 pos./ 3 x DIN cavity

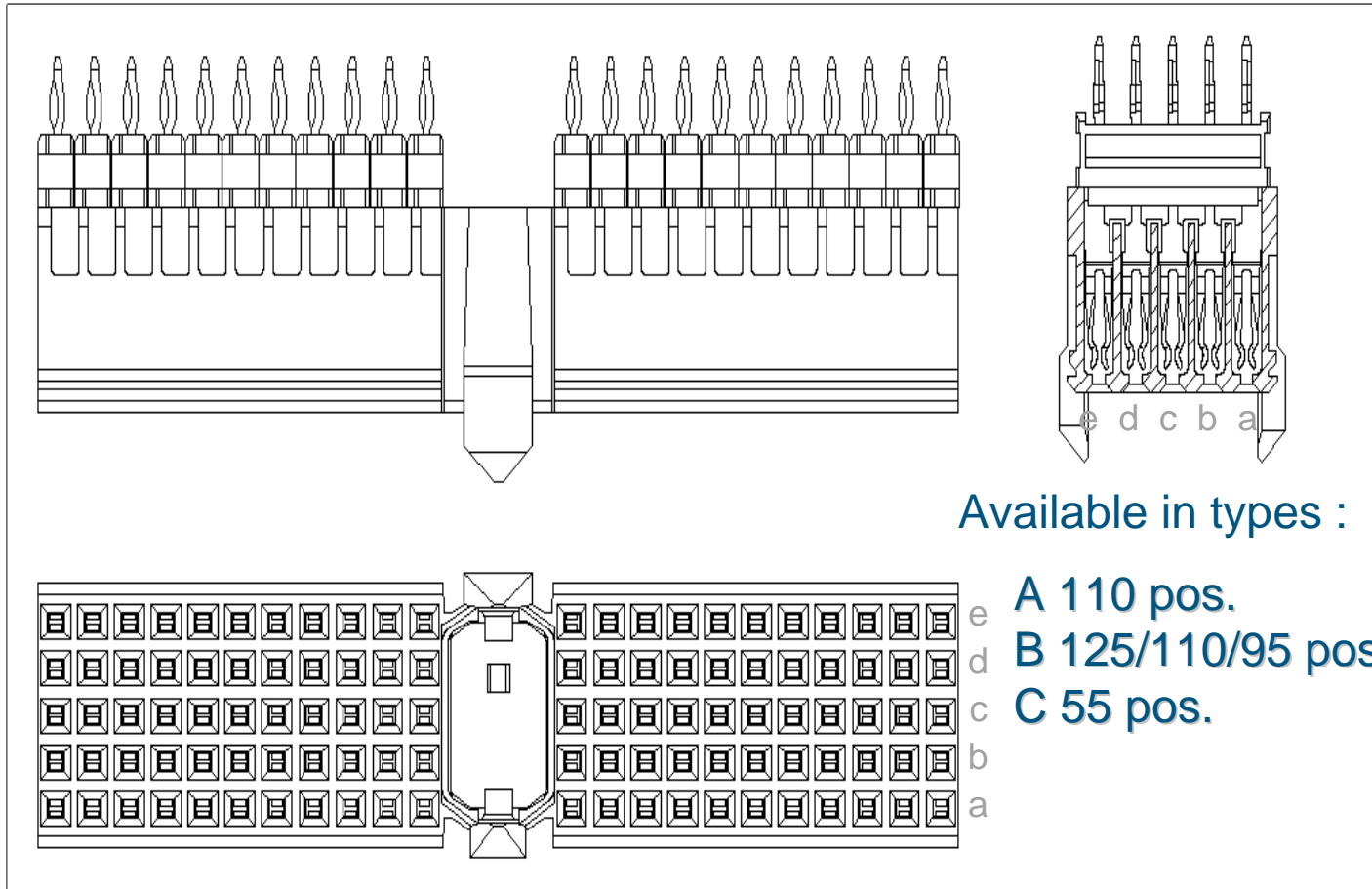
Type N  
25mm length  
3 x DIN cavity

# POWER, COAX AND FIBER OPTIC ACCORDING DIN 41626 STANDARD

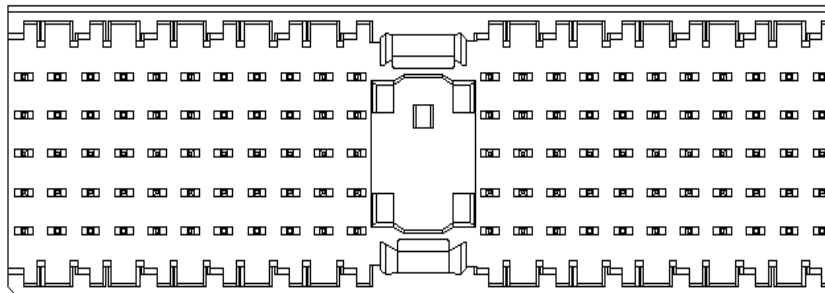
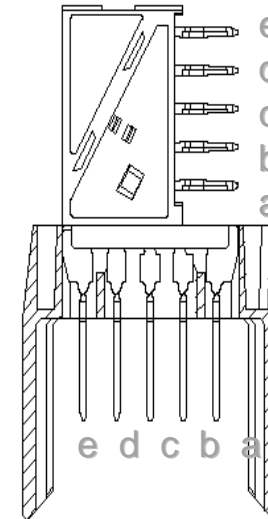
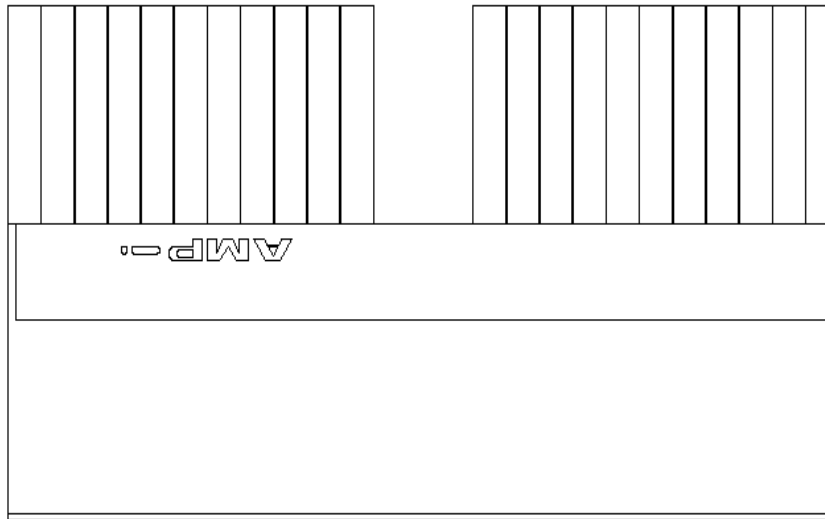
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# VERTICAL FEMALE

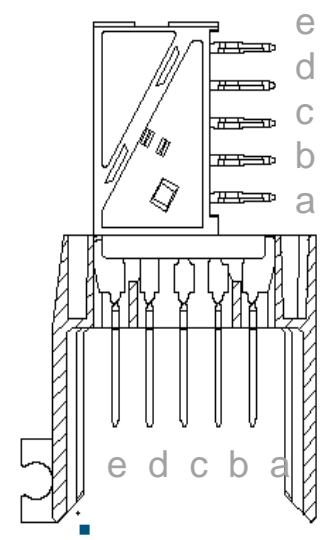
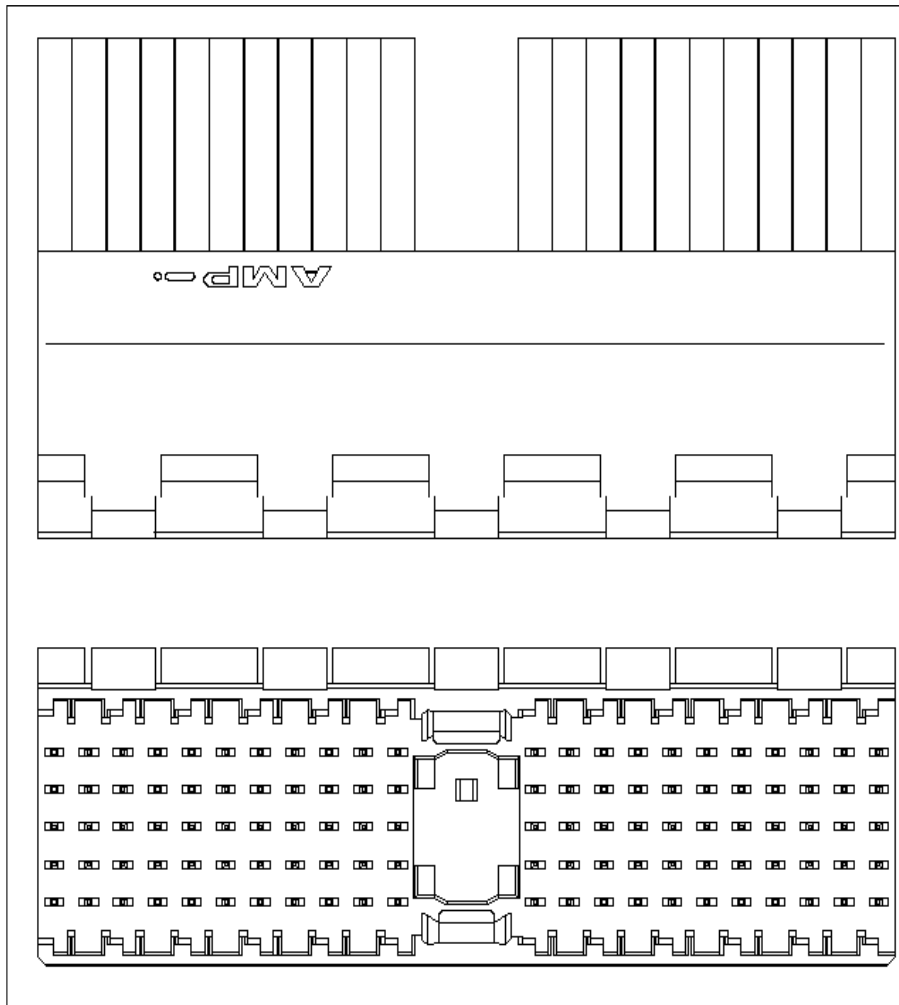


# RIGHT ANGLE MALE (RAM)



Available in types :  
A 110 pos.  
B 125/110/95 pos.  
C 55 pos.

# RIGHT ANGLE MALE (RAM) FOR CABLE CONNECTORS



## LATCH HINGE

Available in types :

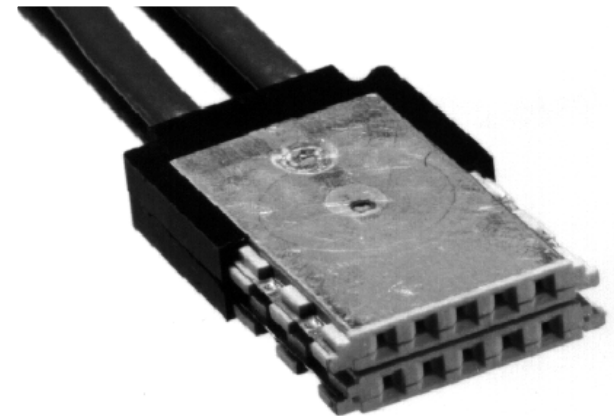
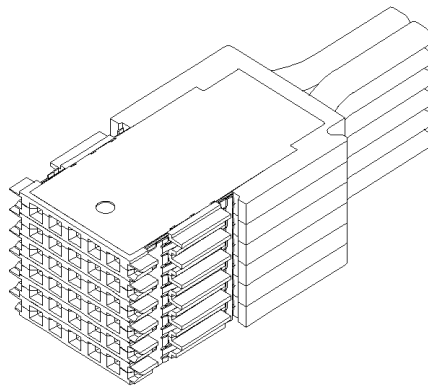
- A 110 pos.
- B 125 pos.
- C 55 pos.

# HF CABLE CONNECTOR

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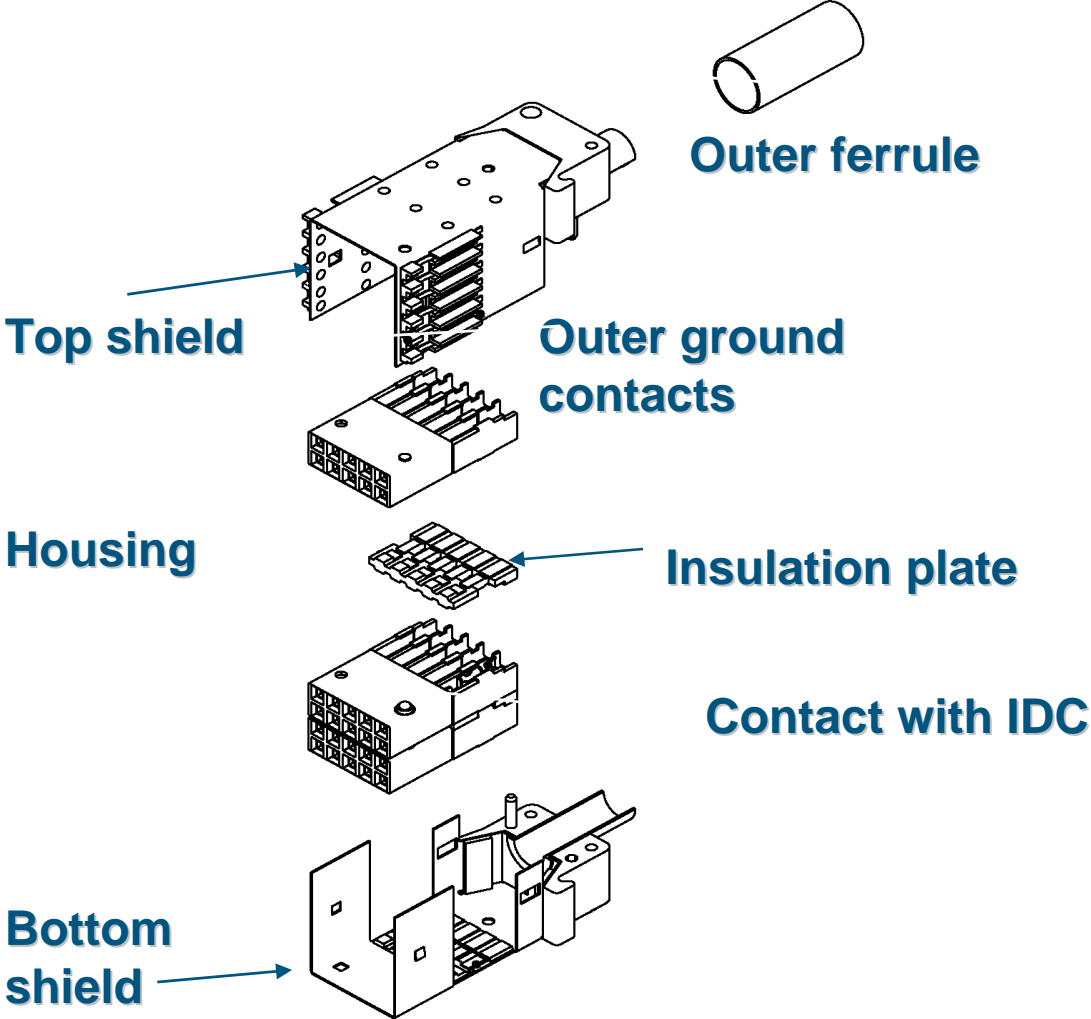
## Features:

- Shielded version, 360° braid to shield connection
- 2x7 to 6x7 pos. overmoulded lead assemblies
- 50  $\Omega$  or 75  $\Omega$  coax
- Differential pair 100  $\Omega$
- Contact system same as board-to-board system



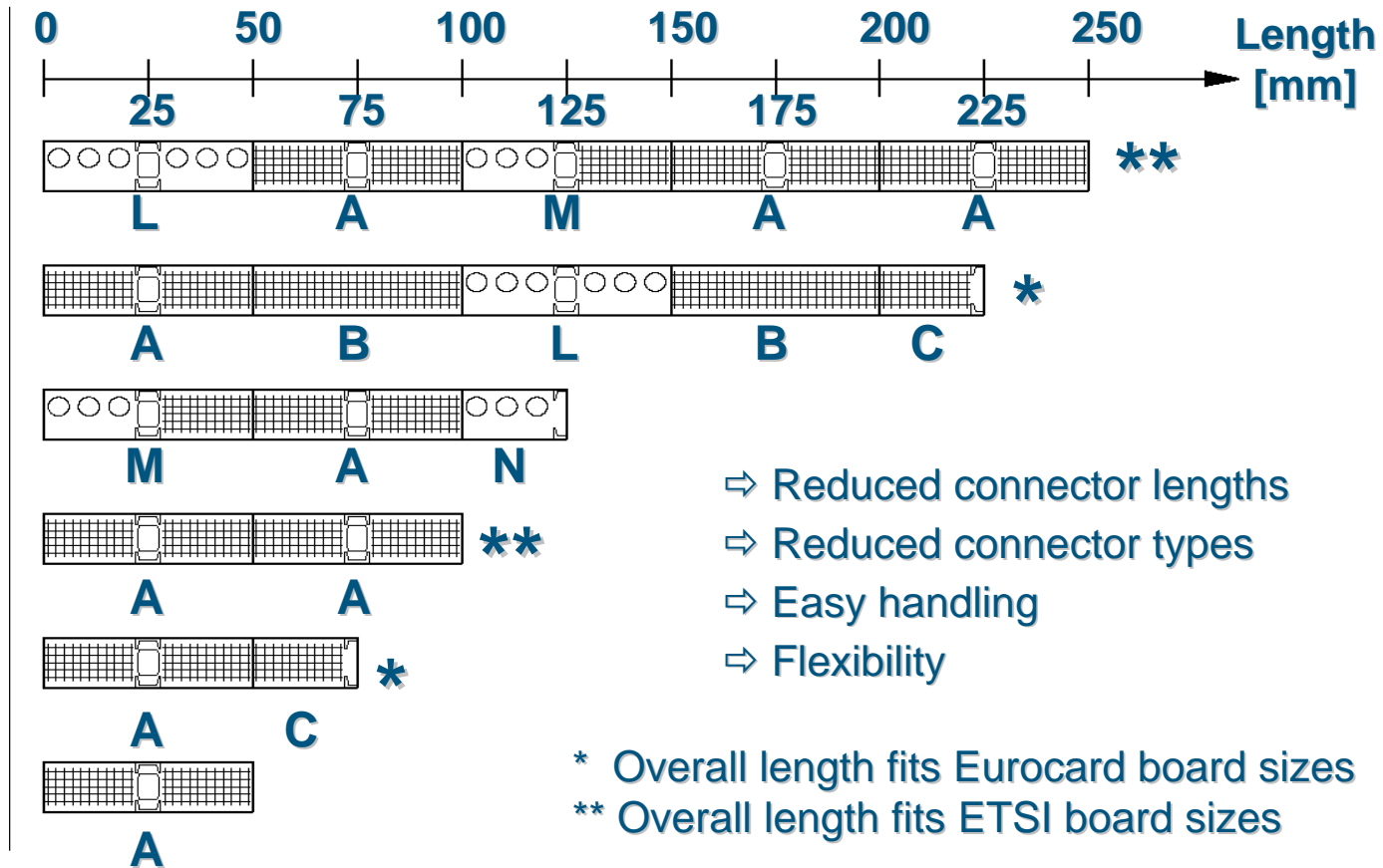
# Z-PACK 2mm HM Shielded LF Cable Connector

- 10, 20, 30 and 40 Positions
- Shielded
- Field installable (IDC termination) or lead assembly
- End to end stackable without contact loss

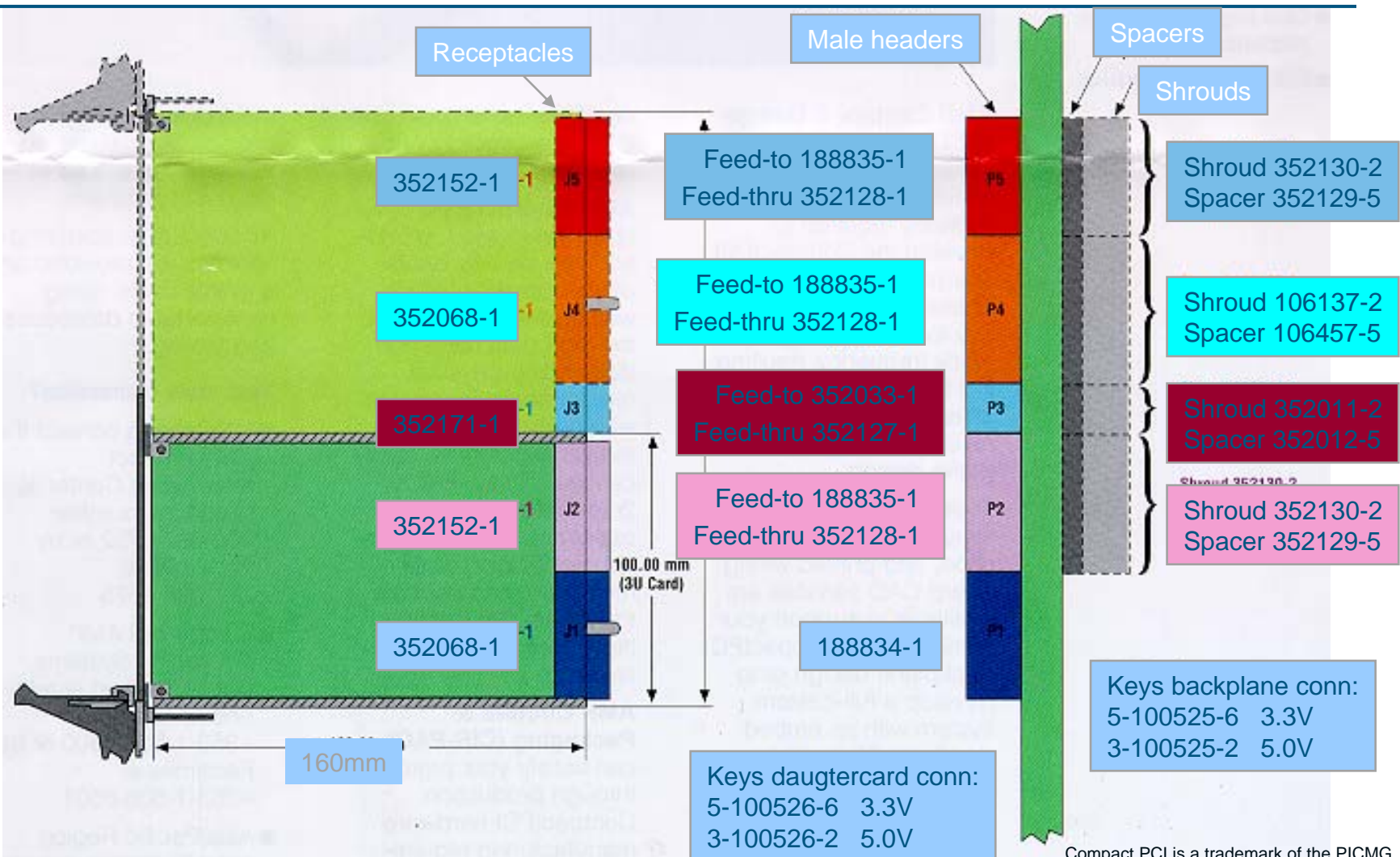




# Examples of Combinations



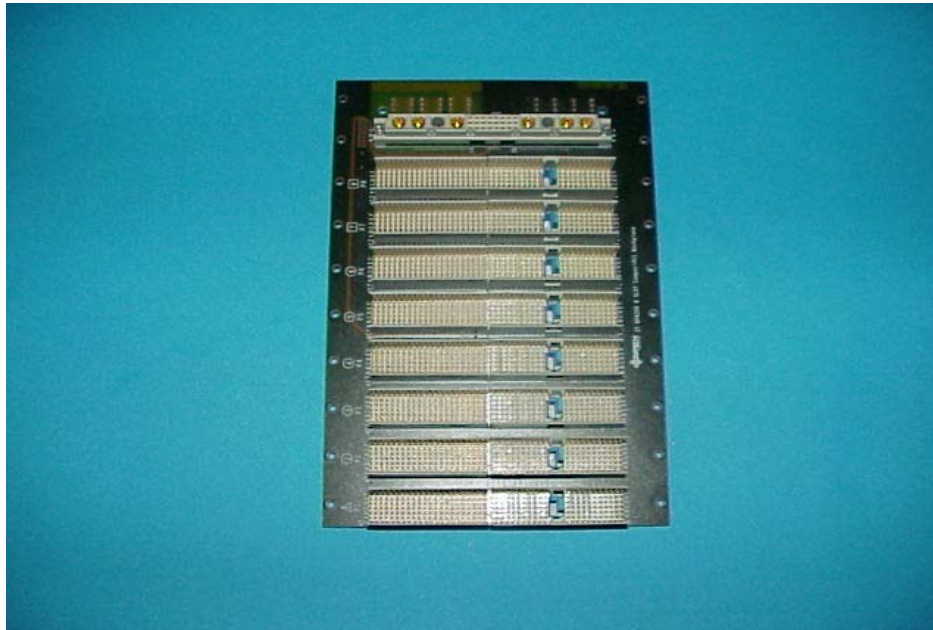
# Product to CompactPCI Standard



Compact PCI is a trademark of the PICMG.

# Compact PCI Backplane Standard

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- Compact PCI Std. uses Eurocard style packaging
- Compatible with PCI (peripheral component interconnect) Std.
- Offers hot-swap capability without operation disruption
- Type A & 22 Column B; 5 +2 row product
- DIN style power receptacle 24 signal 6 power contacts

Compact PCI is a trademark of PICMG.  
PCI is a trademark of PIC-SIG.

# Product Specifications

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Compact PCI Specifications utilizes Z-Pack 2mm HM Product

IEC 61076-4-101 and IEC 917

VME 64 Extensions

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VME is a trademark of Motorola, Inc.

# Products Support Materials

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- Product Specifications

108-19082

5 Row Board-to-Board Products

108-1622

8 Row Board-to-Board Prods

- Product Catalog

65911 Tyco Electronics' Z-Pack 2mm HM Connectors

- Application Specifications

114-19029

Board to Board Connectors

114-19036

Ground Return Shields