



MIRROR MEZZ PRO™ (MM PRO)

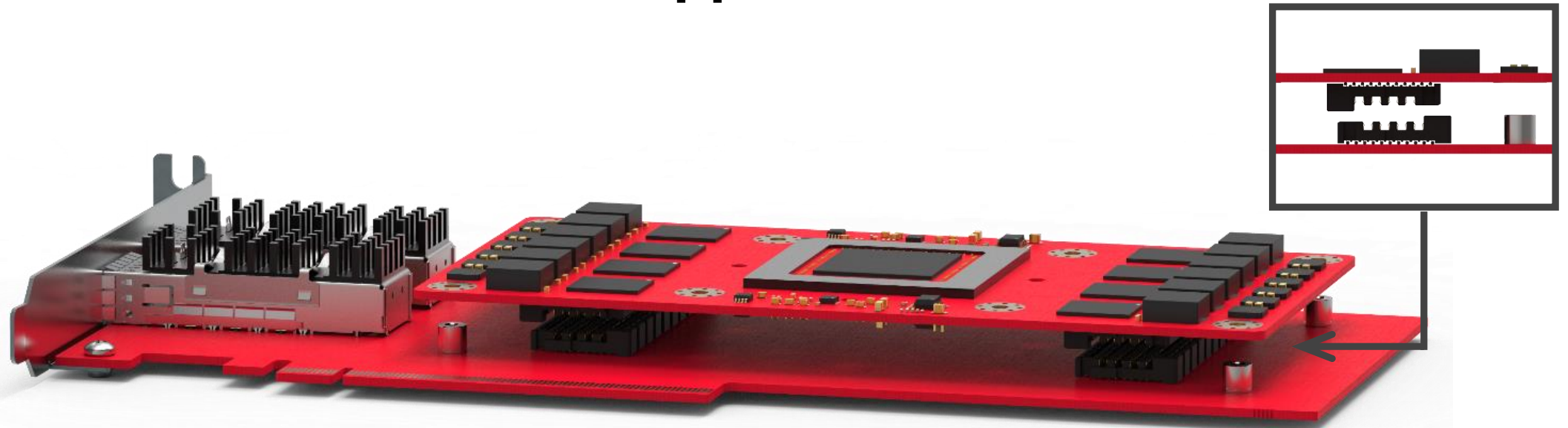
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MM PRO

What is MM Pro and what is the difference between MM Pro and MM?

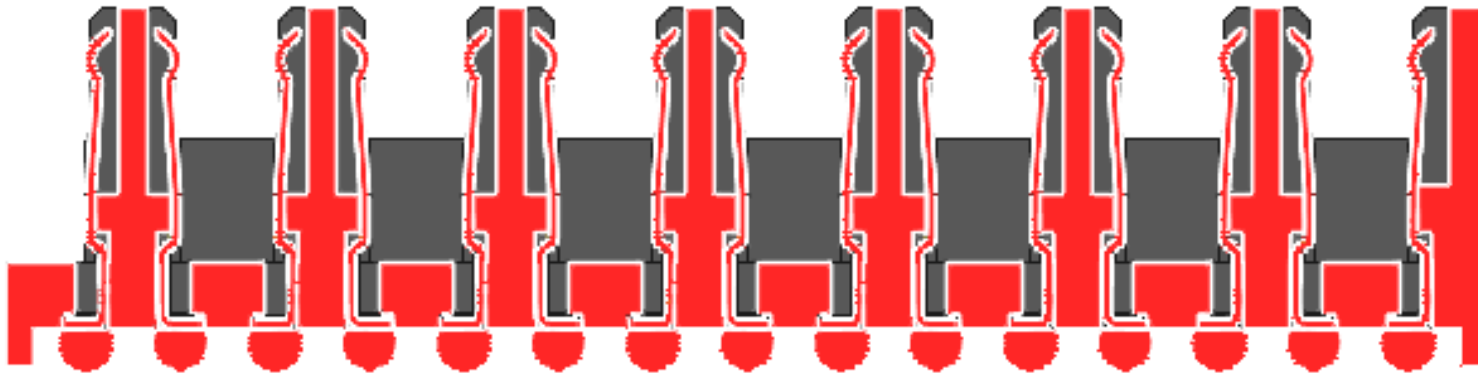
Mirror Mezz Pro™ (MM Pro) is the next generation Mirror Mezz™ (MM) High Speed Board to Board Connector that supports a speed of up to 112Gbps for telecommunications, networking & other applications.



MM PRO

MM Pro maintains the same hermaphroditic mating interface as Mirror Mezz™

- Only 1 part number needed for a mated set
- Improved manufacturing efficiencies
- Less part numbers for customers to manage their BOM & inventory
- Minimal tooling needed for additional stack heights



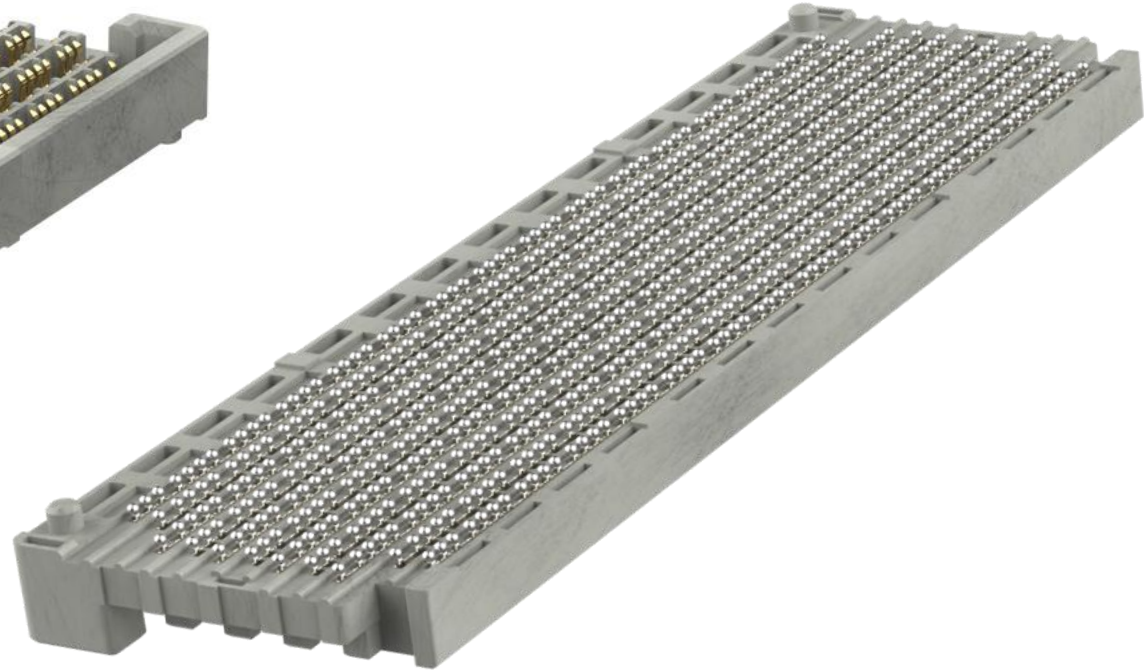
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MM Pro Design

- Same footprint as current Mirror Mezz TM with up to a maximum of 270 DPs
- Very dense connector pin field: 107-115 DPs/in²



Terminal Side

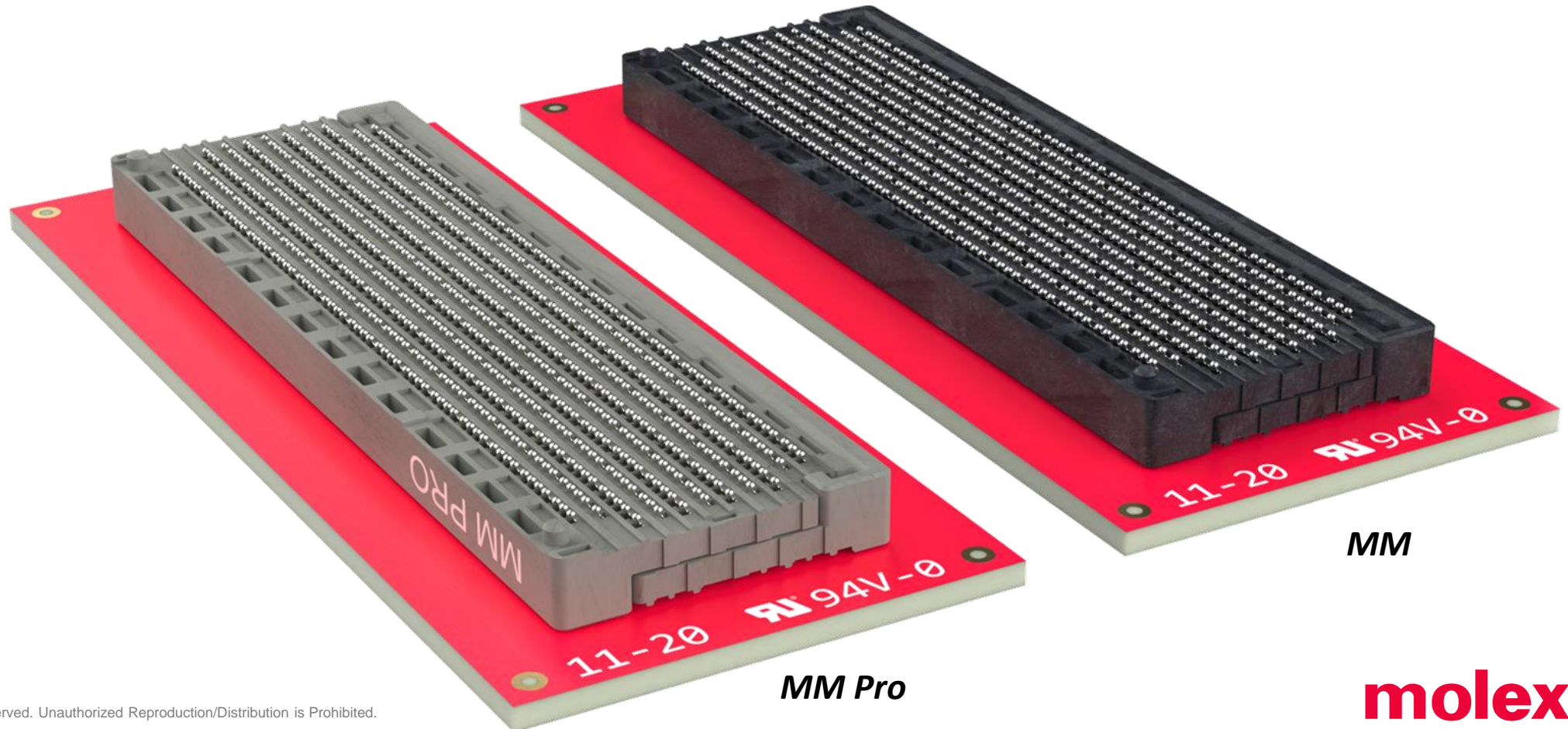


Solder Ball Side

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MM Pro Vs. MM

- As both Mirror Mezz TM and Mirror Mezz Pro TM footprints are the same, we are using color to differentiate the 2 versions

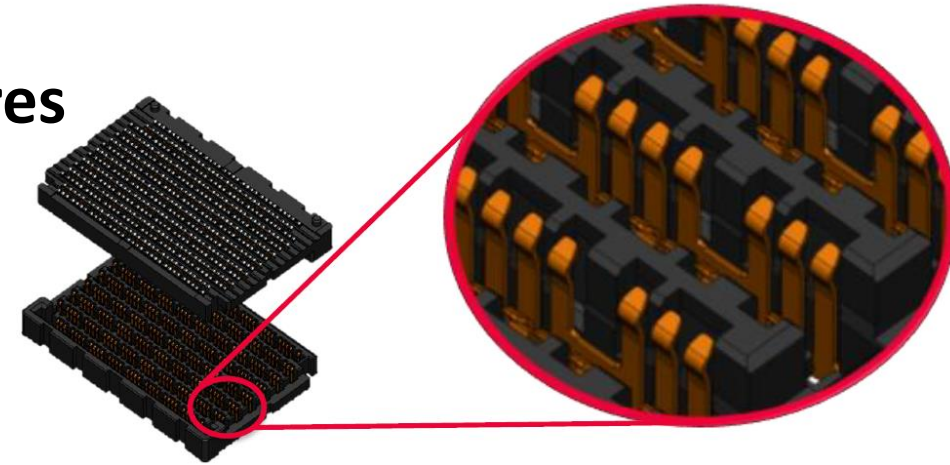


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Features and Benefits

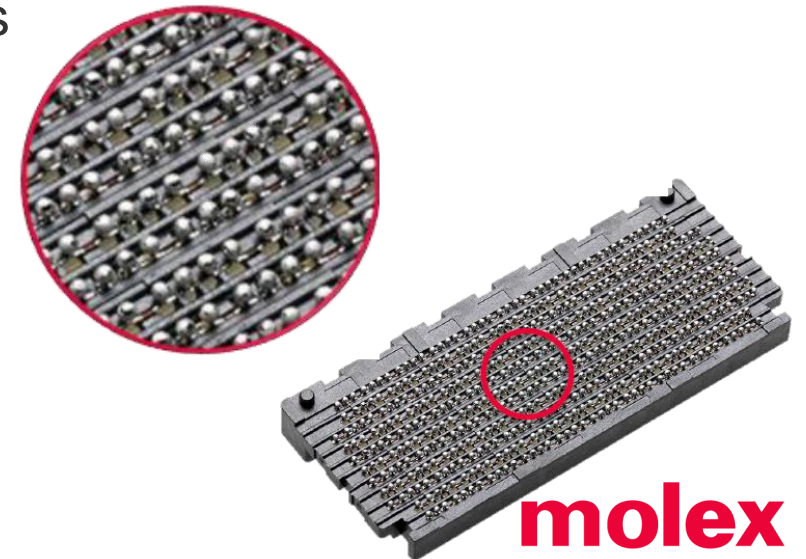
Robust blind mating guidance & pin shrouding features

- Protects contact tips from stubbing or other damage
- Offers fine alignment of 0.7mm in blind mating scenarios
- Designed to pass the “thumb test”



Stitched BGA Design

- Offers more cost savings than insert-molded BGA attachments
- Familiar termination method for CMs and ODMs (same as legacy processor sockets)
- Low-profile solder option compared to other termination methods



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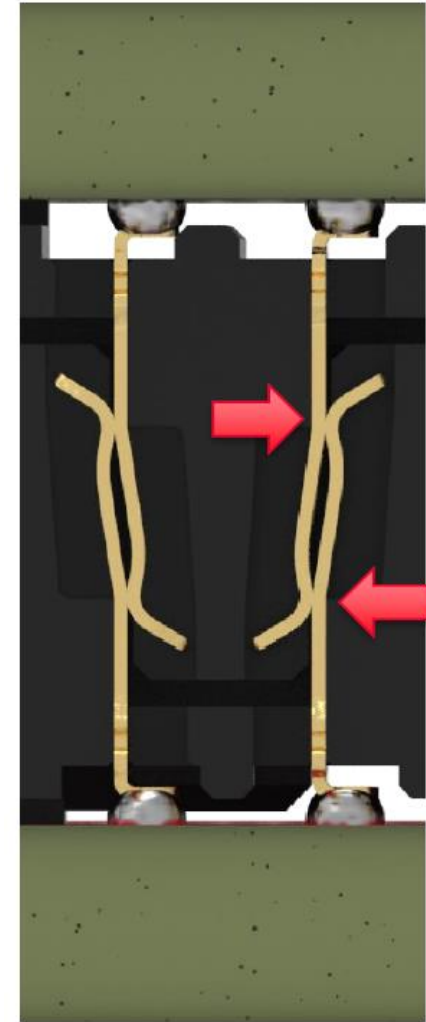
Features and Benefits

“Stubless” contact interface

- Superior SI performance
- Minimum stack height of 5mm
- Two points of contact on every beam for reliability

Opposing Beam Support

- Full support for mated beams at mated condition
- Close to rigid cantilever support at maximum disengagement
- 1.5mm maximum wipe, 0.15mm back off

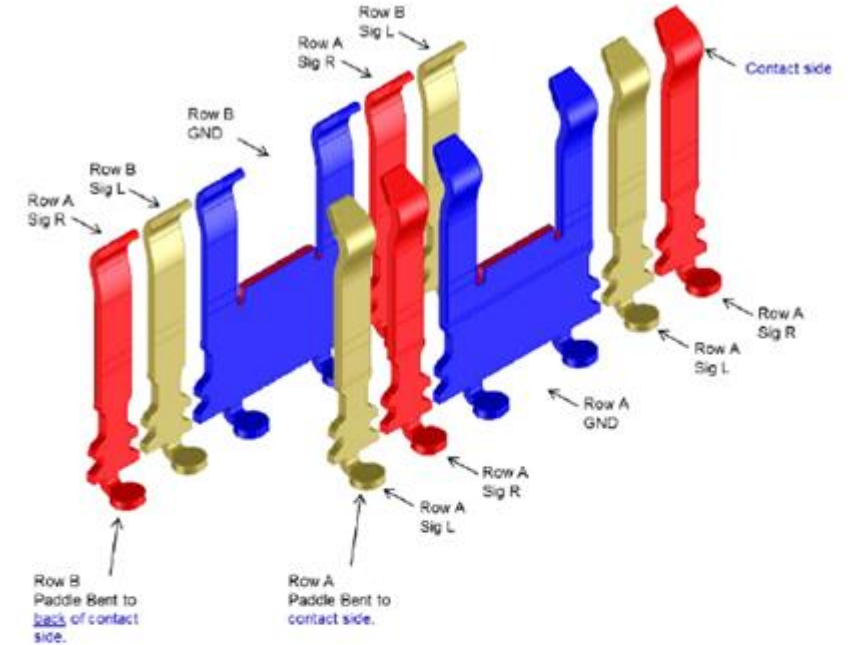


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Features and Benefits

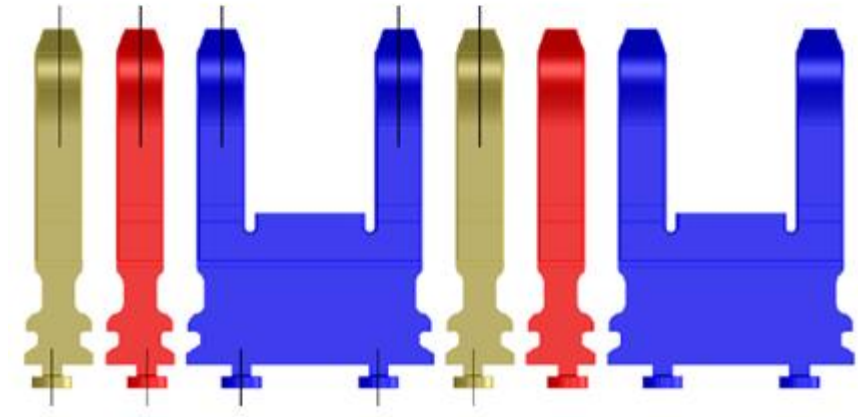
Contact Differences between rows

- Bend direction of “paddle” to contact alternates to minimize crosstalk between rows (1.5mm row pitch)



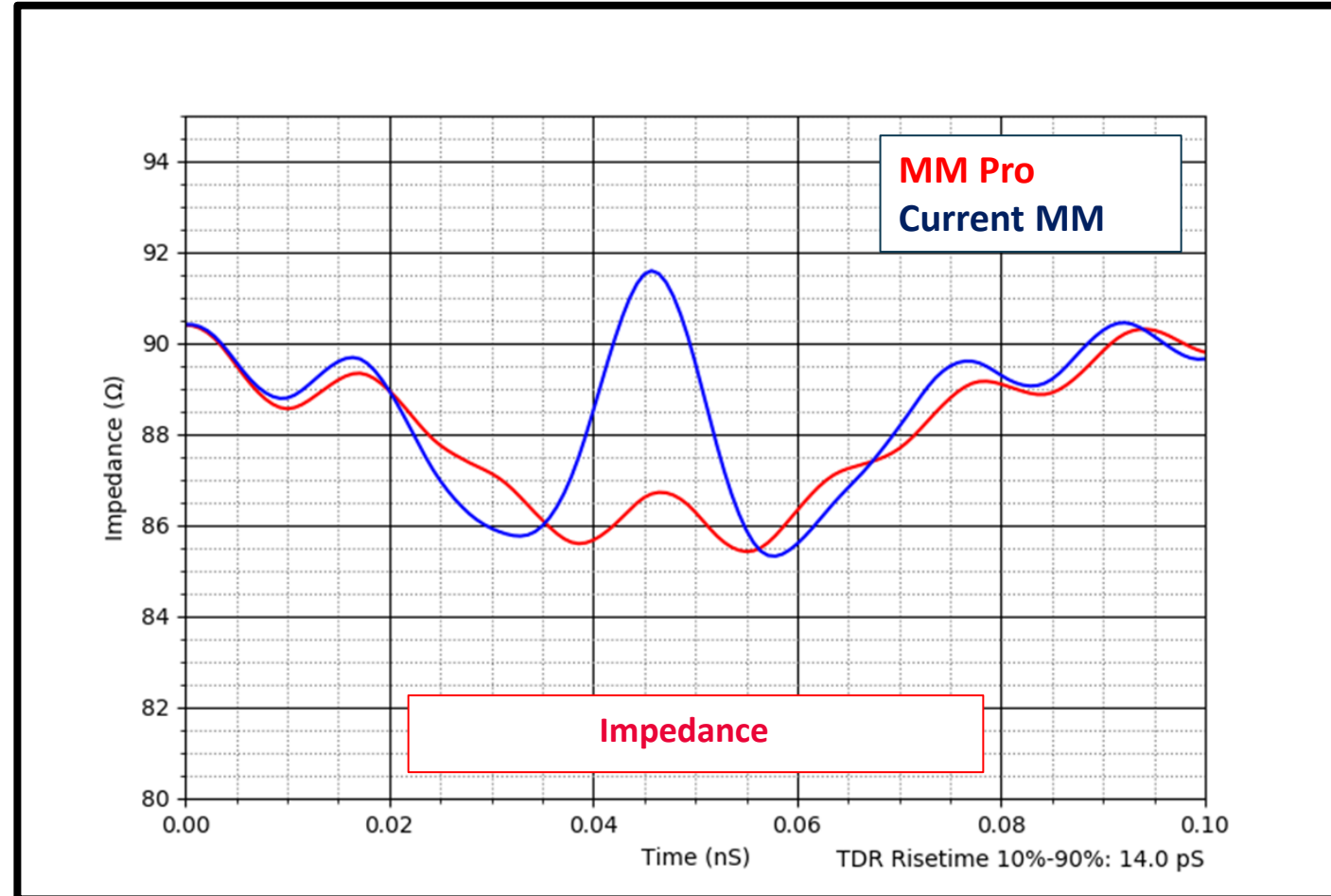
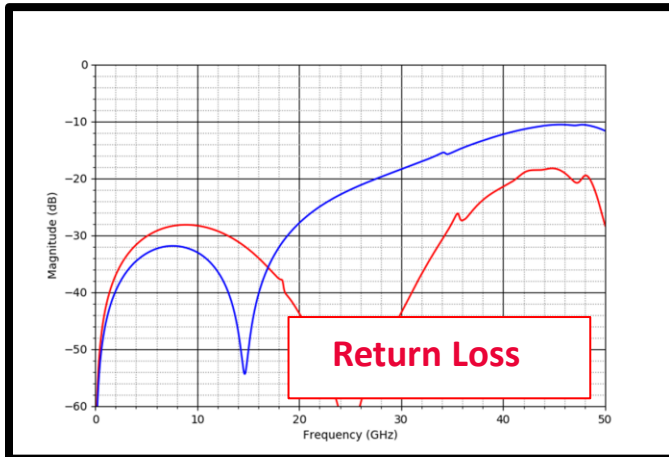
Pitch: Contact Vs. Solder Paddle

- Pitch is different between contacts and “paddles” to optimize impedance through the channel (4.0mm DP pitch)



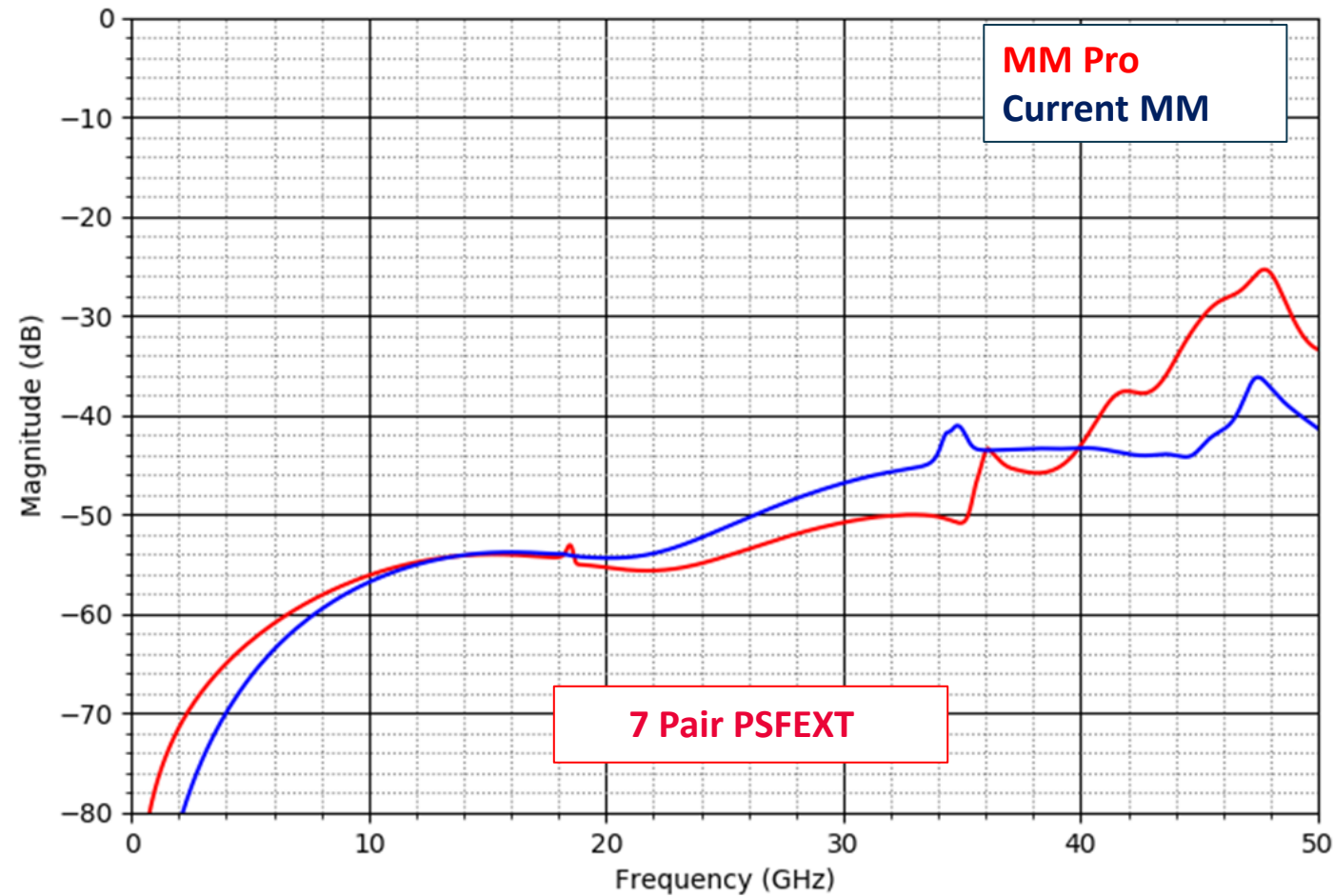
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Improved SI Performance up to 112Gbps

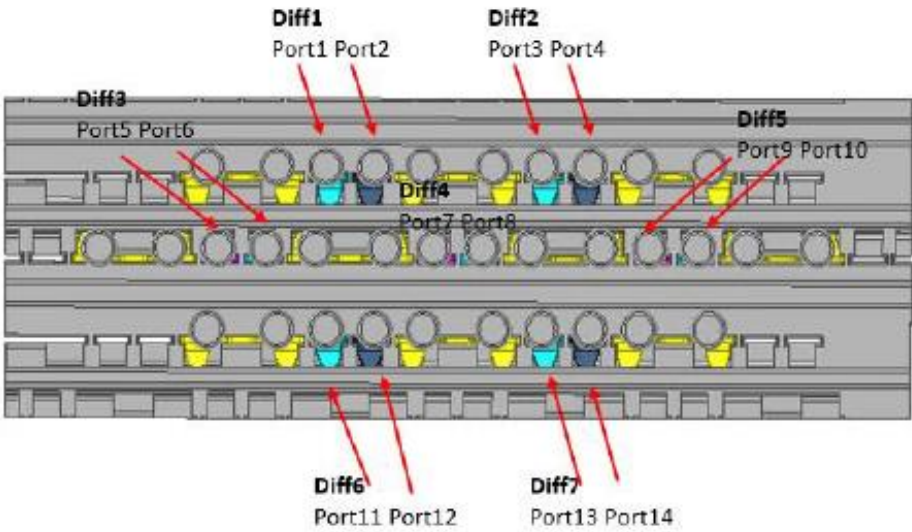


MM PRO

Improved SI Performance up to 112Gbps



Condition	FEXT ICN
Nominal	0.86mv
MM pro	0.70mv



MM PRO

Conclusion

- **Mirror Mezz Pro™ will retain the same hermaphroditic mating interface**
Mirror Mezz™
- **Superior SI performance of up to 112Gbps**
- **Other MM Pro features include:**
 - Familiar & Proven BGA Attach Process
 - Stitched contacts for lower cost and more customizable than insert molding
 - Robust blind mating guidance & pin shrouding features
 - Two points of contact for better reliability with 1.5mm wipe

THANK YOU

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