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Innovative-Interconnect Solutions

A Qnnect Company

VPX3®

Backplane-Cabling System

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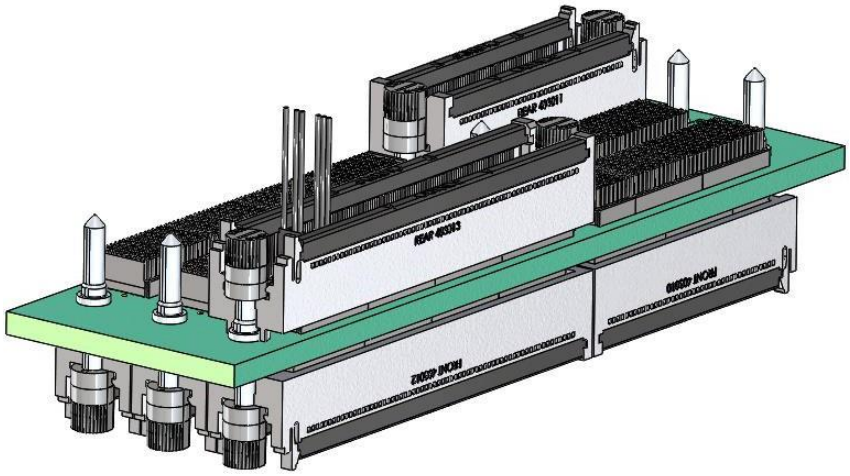
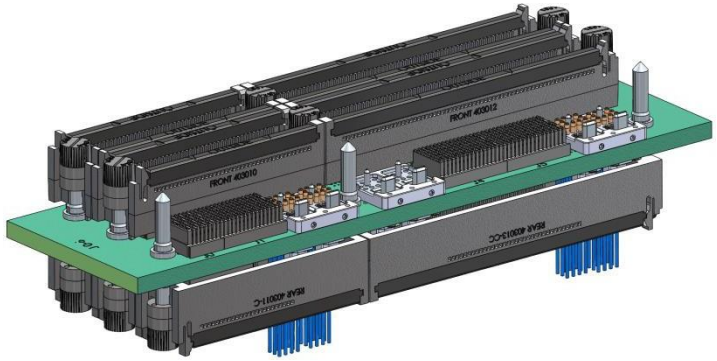
VITA
Open Standards, Open Markets

VPX3®
Backplane-Cabling System





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Introduction to VPX3

With the Introduction from TE of the RT3 Multigig connector it is now possible to obtain speeds of 25Gbs+.

Tocoincide with this development Meritec has redeveloped the VPX Cabling Solution to offer higher speeds enabling PCI Gen4 and 100KR Ethernet

The New design is packaged to fit in reduced spaces

Note that the current VPX+ cabling solution is available and will continue to be stocked.

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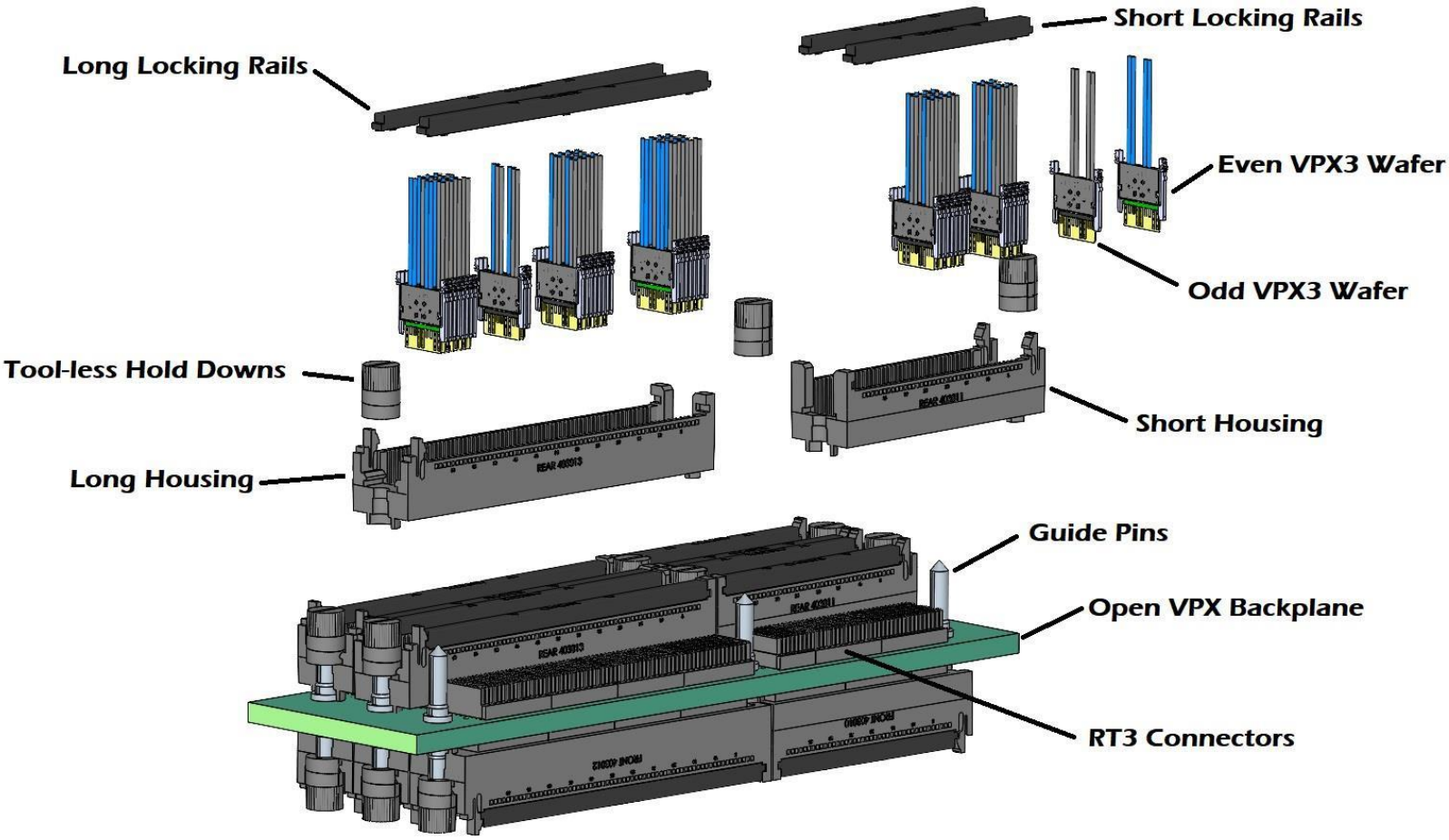
Ruggedized Solution



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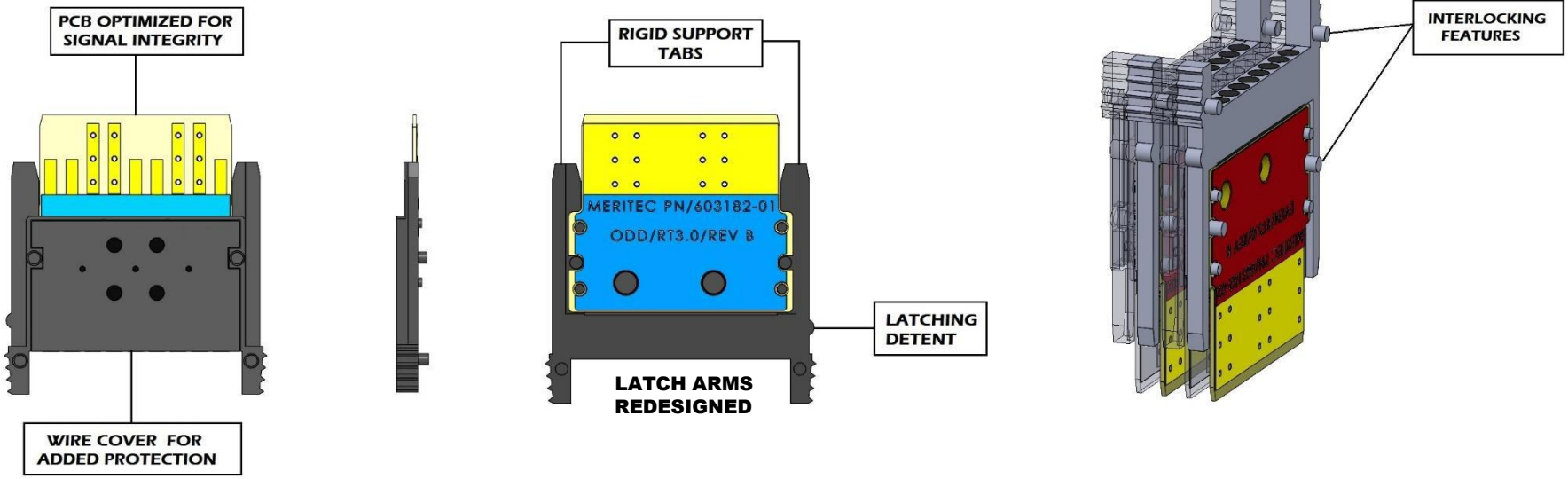
Improved Latching



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VPX3 Wafers

Eight - 9 Position Wafer Configurations

- Even H.S.- Signal Positions C,D,G,H, Common Grounds A,B,E,F,I – *Tachyon**
- Odd H.S. - Signal Positions A,B,E,F,I Common Grounds C,D,G,H – *Tachyon**
- Even Hookup - Signal Positions C,D,G,H, Common Grounds A,B,E,F,I - FR4
- Odd Hookup - Signal Positions A,B,E,F,I Common Grounds C,D,G,H - FR4
- Power Wafer – A,B,C,D Bussed to 3 lines / F,G,H,I Bussed to 3 lines - FR4
- Single Ended – Signal Positions B,C,E,G,H Common Grounds A,D,F,I - FR4
- Even Loop-Back – C to G/D to H– Common GND A,B,E,F,I –*Tachyon**
- Odd Loop-Back - A to E / B to F – Common GND C,D,G,H – *Tachyon**

*Tachyon- Stable Electrical Properties up to 100GB/s, Temp -55°c – 125°c

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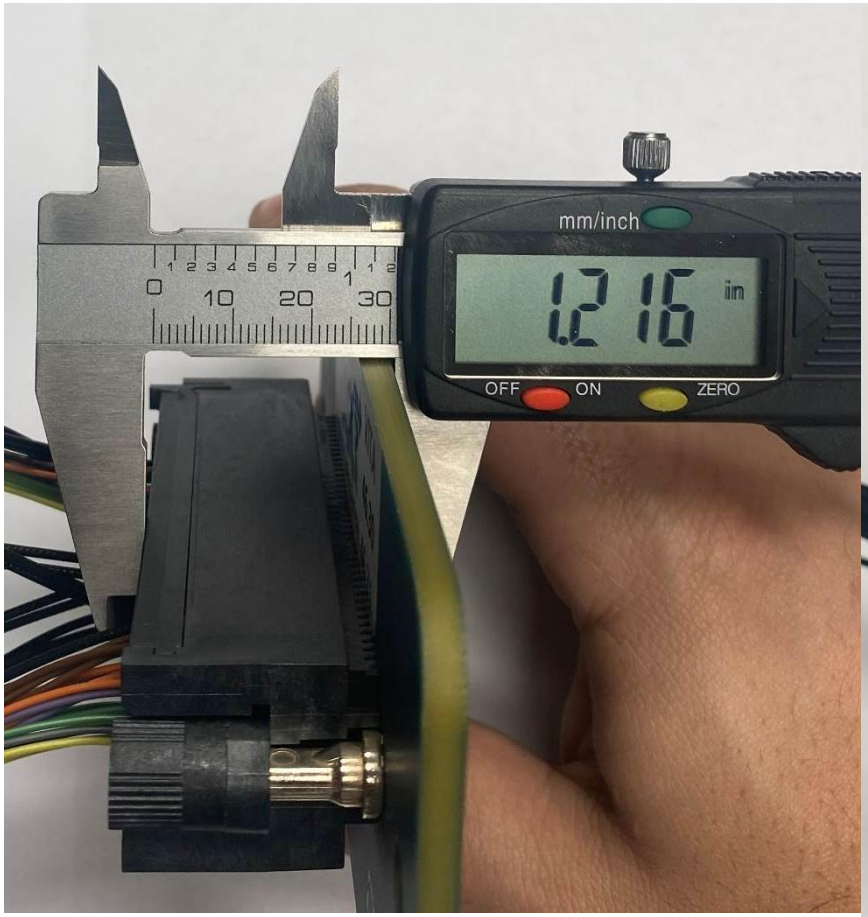
Wafers shortened

New wafer is 0.567" shorter in Height than VPX-Plus version



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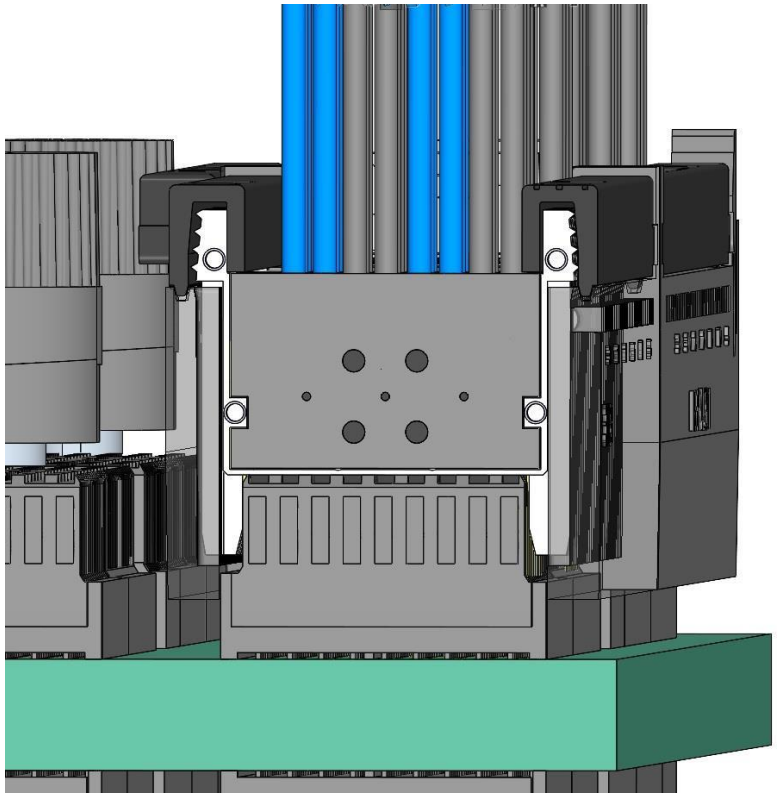
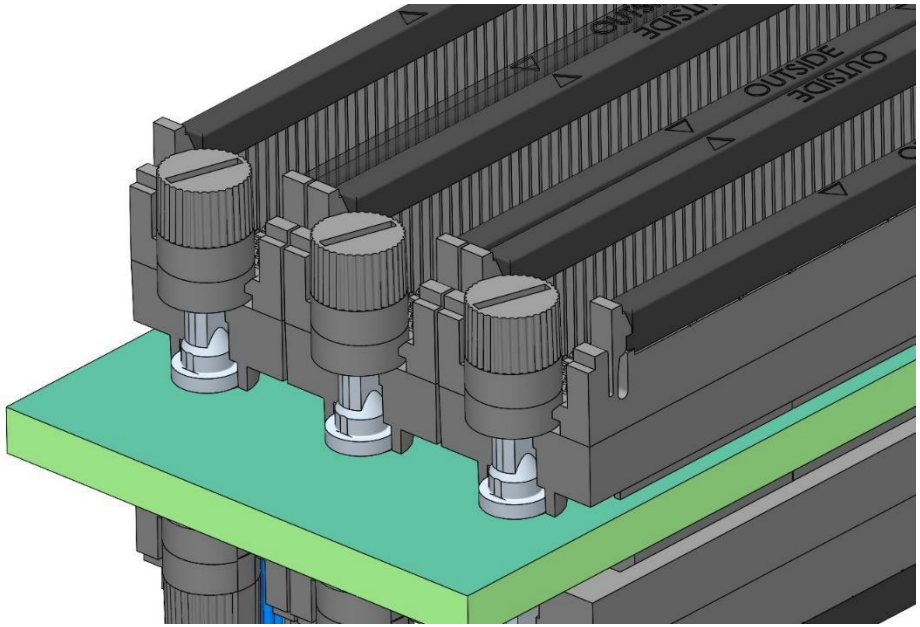
Retaining features





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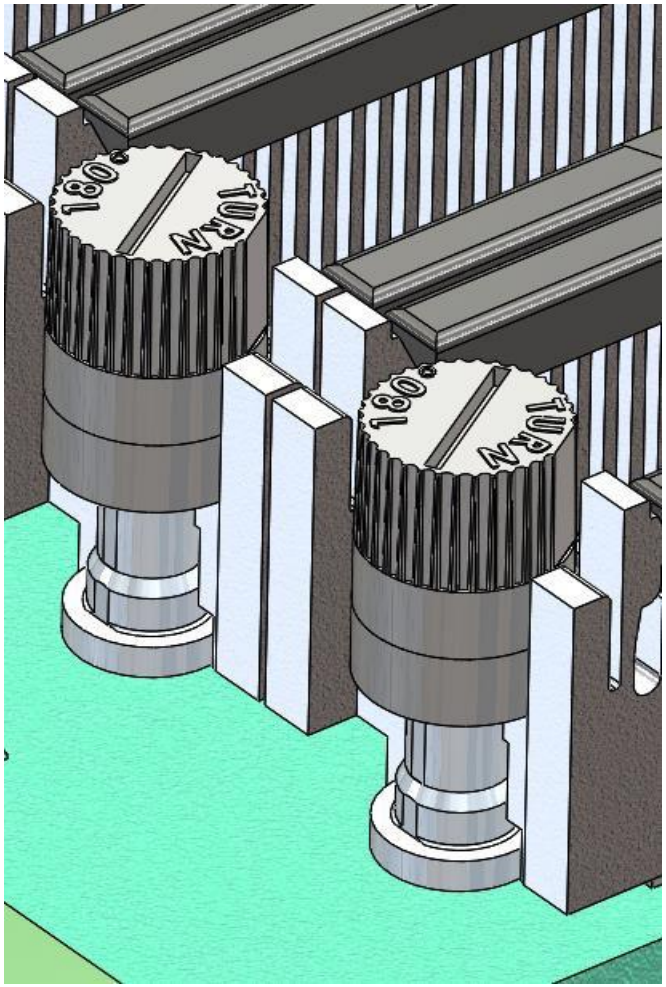
Simplified Housing Lockdown



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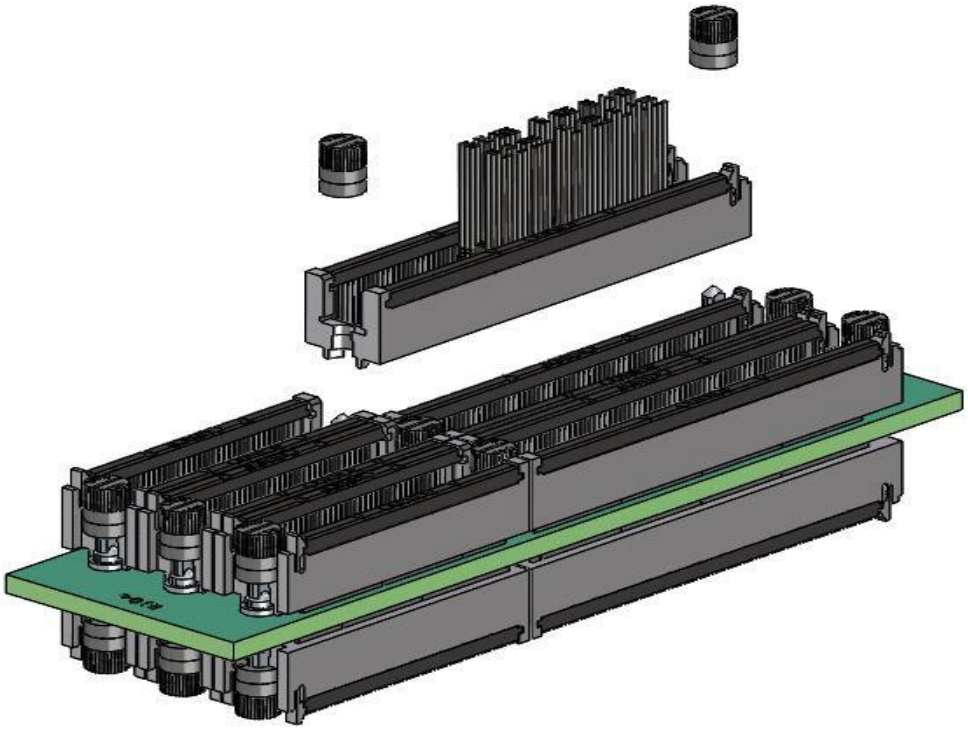
Assembly Sequence

Place Housing(s) over RT3 connector; can prefill with cables at this point



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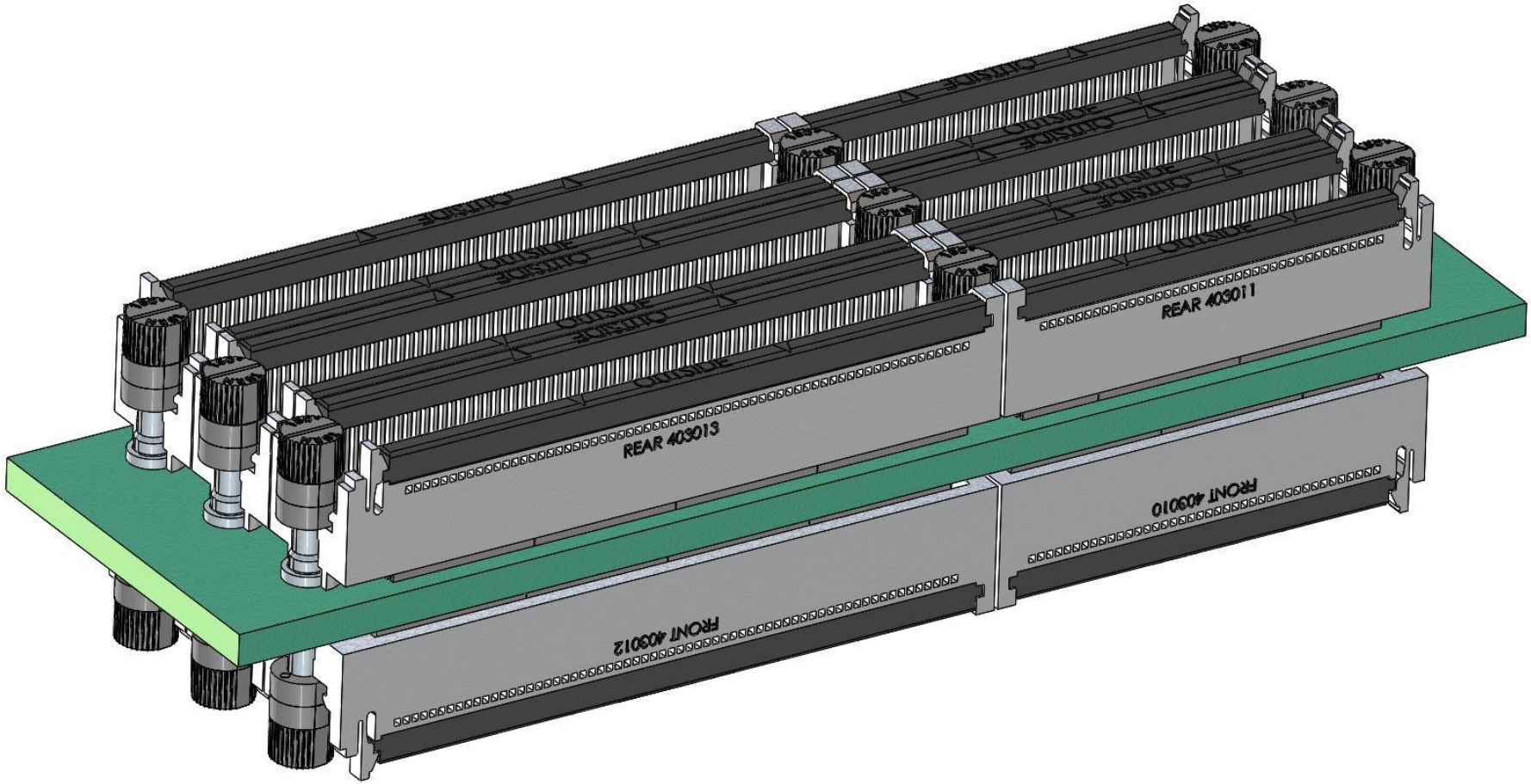
Front and Rear Housings Available



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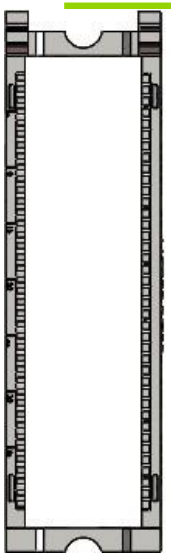
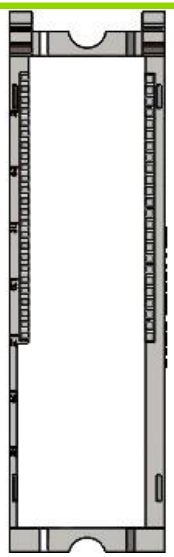
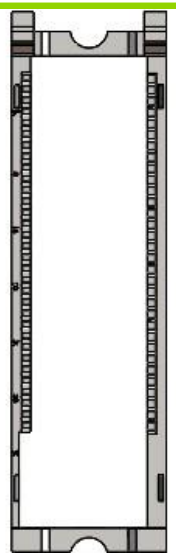
Short Rear Housing Options for Modules



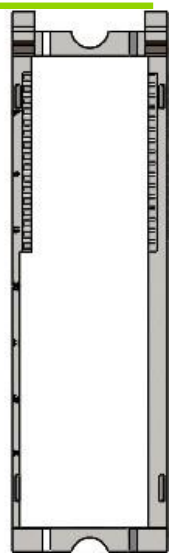
Standard Short housing



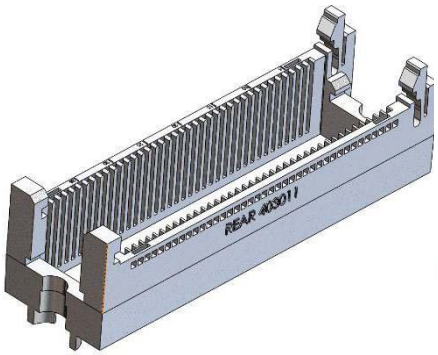
C Module

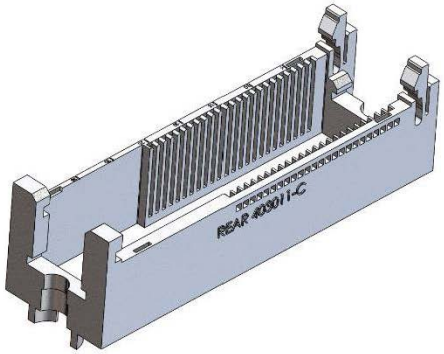


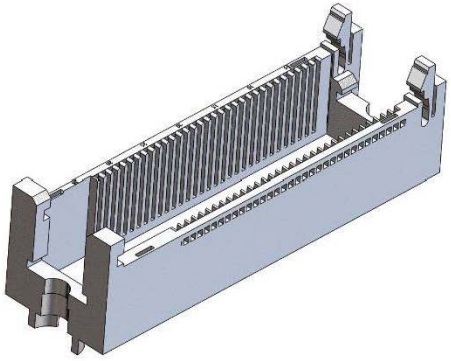
D Module

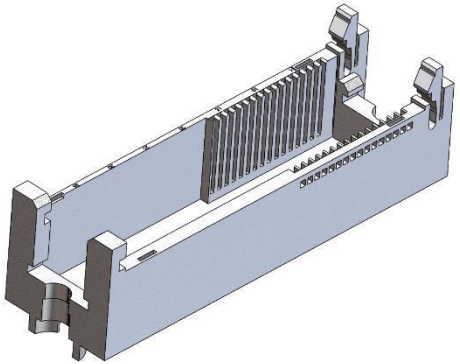


E Module Not initially

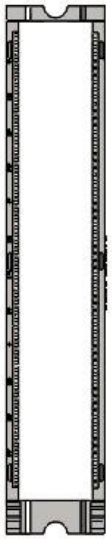




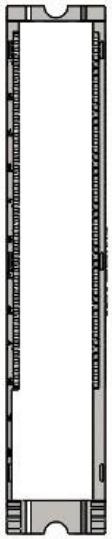




Long Rear Housing Options for Modules

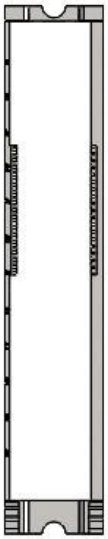


Standard Long housing

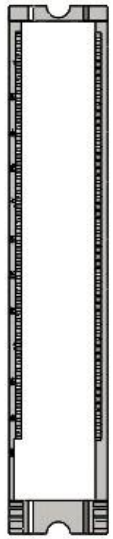


C Single Module

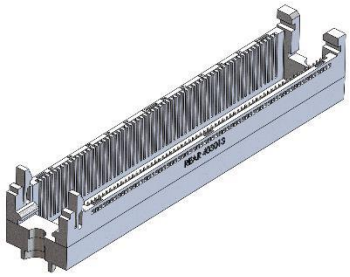
C Double Module

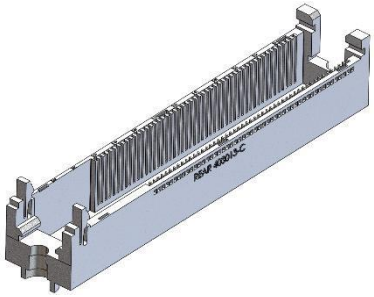


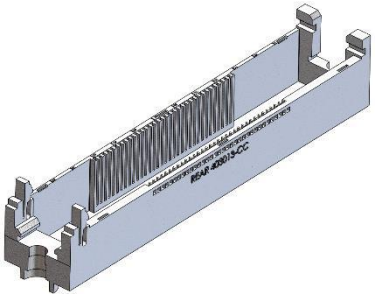
C Triple Module Not initially

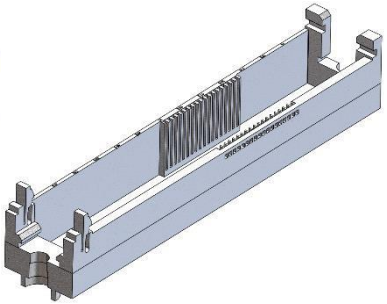


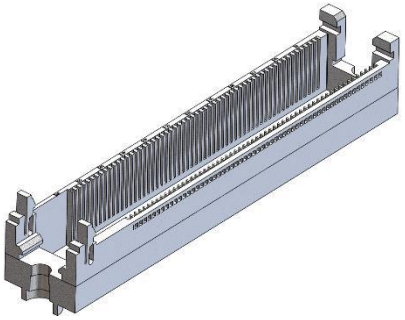
D Single Module Not initially









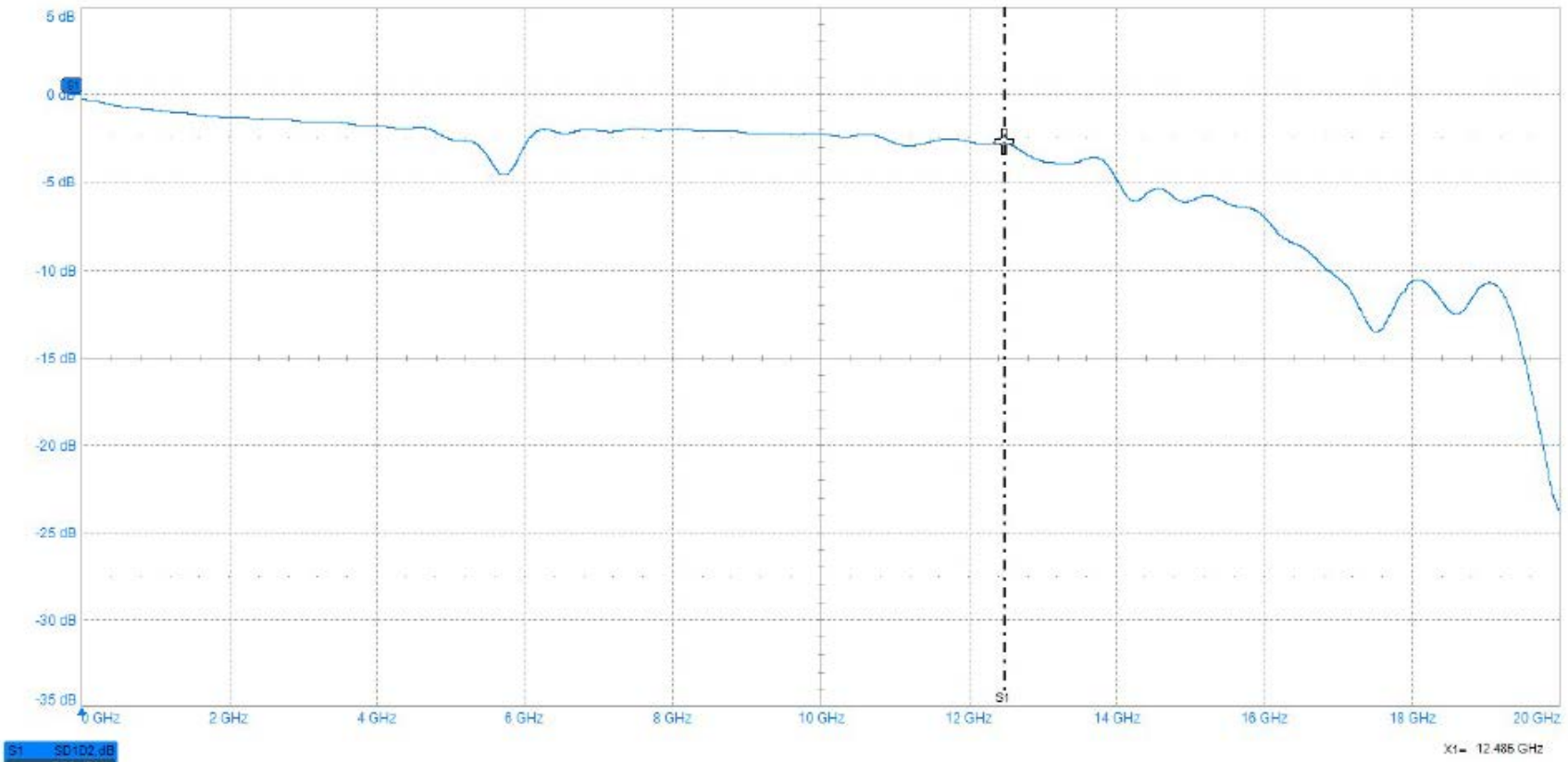


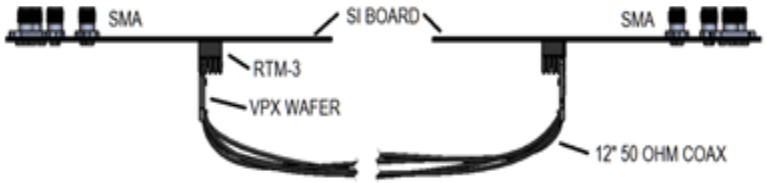
Measured Signal Integrity Data

VPX3 Testing Summary:

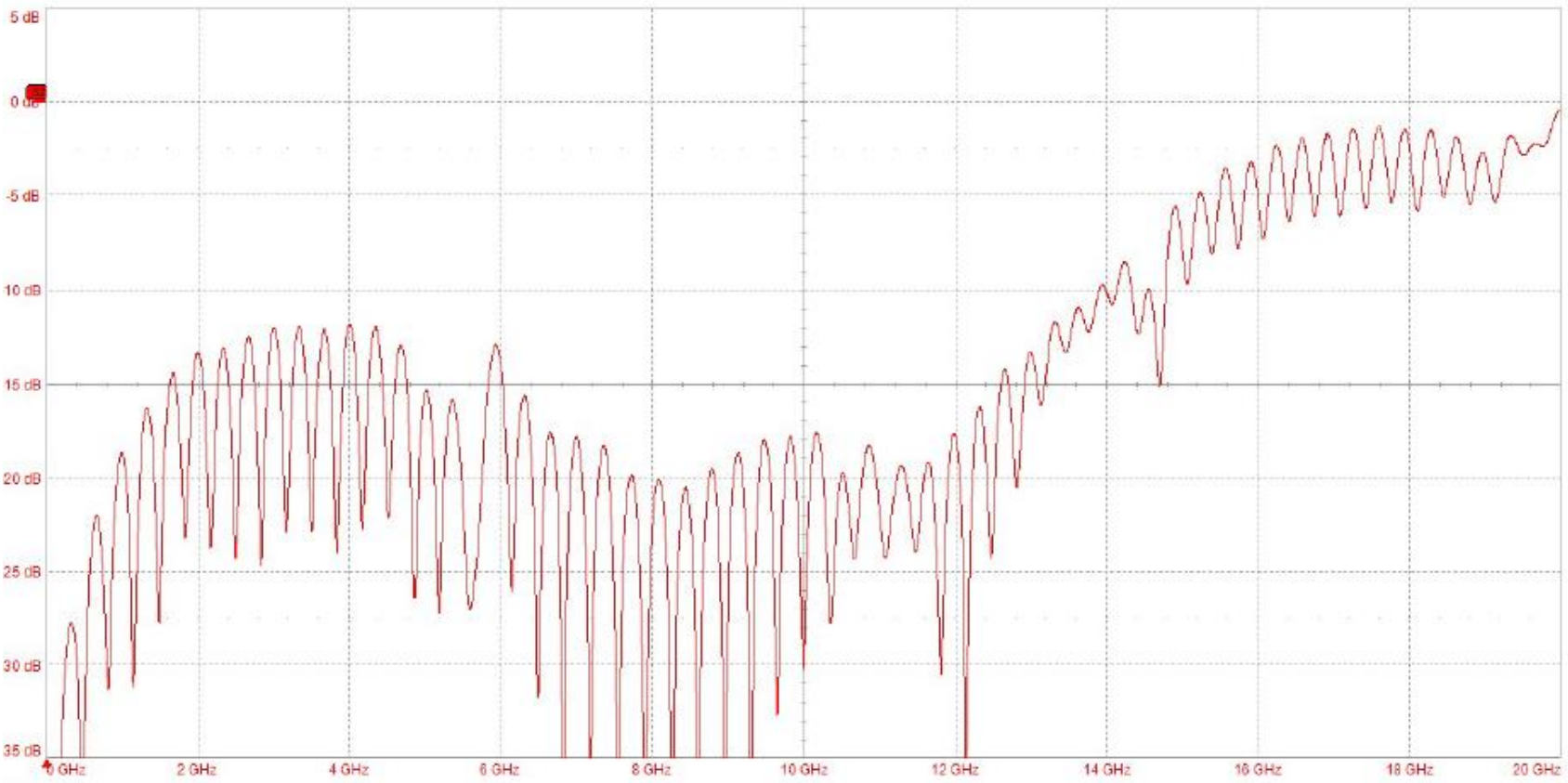
- Test data was acquired utilizing the Teledyne LeCroy Wavepulser 40IX.
- SI test fixture, RT-3 connectors, SMAs and testing leads are de-embedded in the S-Parameter measurements.
- The following slides is an example part, which was pulled from the production floor December 2nd, 2021. Please refer to the VPX3 Datasheet for electrical specifications.

Measured Signal Integrity Data





Measured Signal Integrity Data



VPX3 Advantages & Benefits

- Speed, 25+ Gb/s
- New encasement design over wafer terminations
- Installs using existing Hardware – use existing guide posts
- Tool-less installation
- Housings Can be Pre-Loaded
- Slot Location Positions molded on Housings
- Housing LCP for weigh savings
- Overall Height Reduction of .5”
- Backward-compatible with the legacy MULTIGIG RT products for both 3U and 6U applications
- Locking Rails incorporated in housing design.
- Up to 10,000 Mating Cycles RT2S & RT3 Rated @ 500
- Robust, no latch arms
- Manufactured in Painesville Ohio
- Large selection of Off-the-Shelf Standard Products
- Tested in accordance to VITA 47.0-2019 Shock & Vibe
- Housings for multiple RF/Fiber Module configurations
- Combine with Meritec Hercules for complete I/O box solutions

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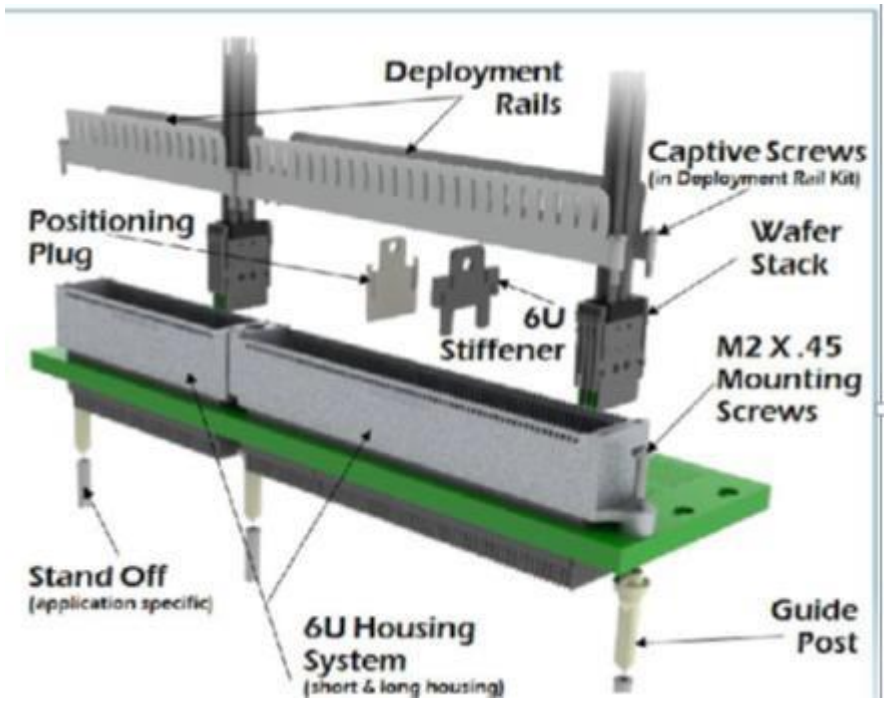
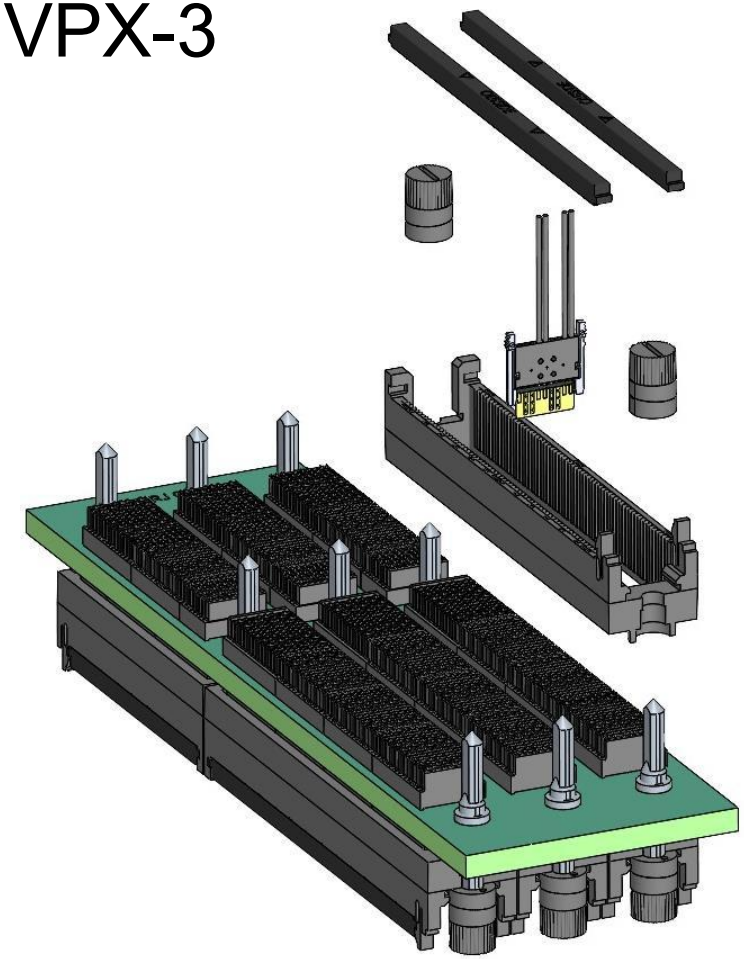
Comparasion

- VPX-Plus



- VPX-3



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Thank You

Lynn Waller
Business Development Manager

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