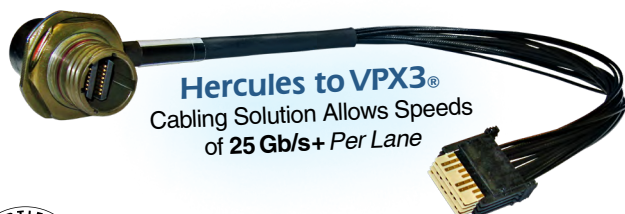


Meritec's VPX3<sup>®</sup> is a deployable backplane cable interconnection system which has superior signal integrity to meet the requirements of the RTM3 (compliant with VITA 46.0 and VITA 65 Open VPX specifications). These backplane cables are used in place of rear transition modules to allow the user to Design, Test, and Deploy.

## Features & Benefits

- Deployable with locking rails included with the housing kit.
- The locking rails are over 0.5 inches lower than the current deployment rails for RTM2 which allows improved cable routing.
- Housings are molded of dielectric material for weight savings over the previous zinc die-castings for RT2.
- New design installs over existing guideposts.
- Locking feature has no exposed conductive surfaces and can be installed without a tool.
- Housing can be pre-populated with wafers and gang installed in the RTM3 modules.
- Allows for hybrid applications along with multi-gig connectors on the same backplane.
- RoHS Compliant products available.



**Hercules to VPX3**<sup>®</sup>  
Cabling Solution Allows Speeds  
of 25 Gb/s+ Per Lane

## Specifications

### Electrical

- 25 Gb/s Impedance: 100 ± 10 ohms
- Insertion loss: <10 dB up to 13.5 GHz
- Return loss: <10 dB up to 13.5 GHz
- Crosstalk: <-30 dB up to 13.5GHz, wafer to wafer
- Above Electrical Specifications are based on measured data for an assembly including 2 board wafers mated with RTM3 connectors and 12 inches of cable.

### Mechanical

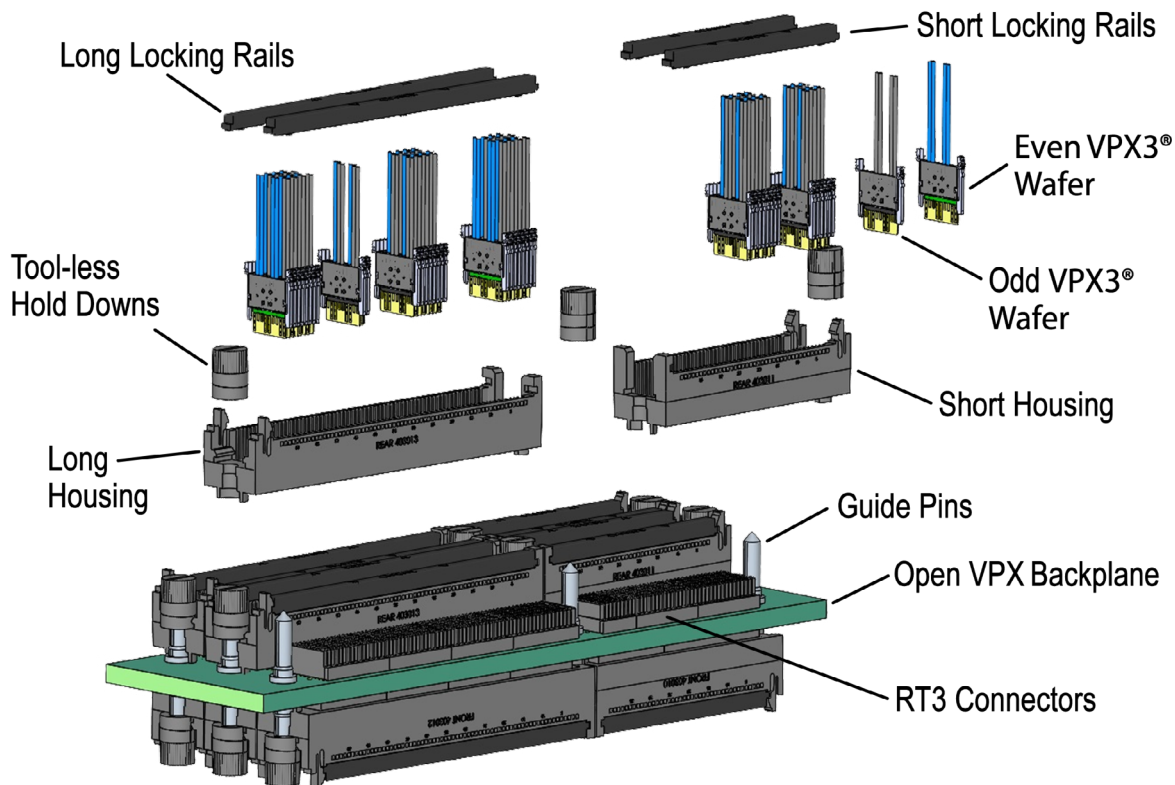
- Shock and vibration testing on the 3U and 6U hardware has been conducted and passed the VITA standard for the mechanical aspects.

### Environmental

- Operating temperature: -40 °C to +105 °C



## Exploded View of the New VPX3® System



## Frequently Asked Questions

**Q:** How fast is VPX3®?

**A:** VPX3® is capable of speeds up to and including 25Gbps per lane.

**Q:** If I have a VPX2 standard product how do I order the same cable in VPX3®?

**A:** Replace the first numbers, 98141 in your VPX2 standard part number with 98144. This will turn a VPX2 standard product number into a VPX3® standard product number. To order please call 1-888-860-9014 or send an email to [cs@meritec.com](mailto:cs@meritec.com).

**Q:** What is included in a VPX3® housing kit?

**A:** The VPX3® housing kit includes everything needed to adapt the backplane to accept VPX3® cables. The kits will include an injection molded housing(s), retaining rails, and housing hold downs.

**Q:** What tools are needed to install a housing kit?

**A:** Meritec's VPX3® housing kits are designed to be installed without tools. The components install over industry standard guide pins used with RTM daughter boards.

**Q:** How do I install a housing kit?

**A:** Please see Meritec's VPX3® Installation Instructional Video.

**Q:** Are VPX3® wafers stackable like VPX2 wafers?

**A:** Yes, Meritec's VPX3® wafers stack together and match the pitch of RT3 connectors.

**Q:** What VPX3® standard products are available?

**A:** Please see Meritec's standard product list on [www.meritec.com](http://www.meritec.com).

**Q:** What kind of VPX3® wafers are available?

**A:** Meritec has six different VPX3® wafers, each to fill a specific role in the backplane.

1. Power Wafers to bring power out of J01, RJ01, J02, RJ02, J03, and RJ03.
2. Single Ended Wafers for use in J04, RJ04, J05, RJ05, J06, and RJ06.
3. Odd Wafers for use in all Odd number positions.
4. Even Wafers for use in all Even number positions.

5. Even Loopback Wafers to move signals through one position to another in the same even numbered row.

6. Odd Loopback Wafers to move signals through one position to another in the same odd numbered row.

**Q:** What kind of protocols can be used with VPX3®?

**A:** Meritec can terminate to many industry standard protocols such as; USB 2.0, USB 3.0, Ethernet, HDMI, DisplayPort, QSFP, DB Connectors, PCIe etc. For questions about custom VPX3® cables please call 1-888-860-9014 or send an email to [cs@meritec.com](mailto:cs@meritec.com).

**Q:** What kind physical testing has been done on VPX3®?

- A:**
- Shock and vibration testing per VITA 47.0.
  - Wire pull testing: Requires 3.6 lbf to remove a single cable from the VPX3® wafer.
  - Mating cycle testing: Capable of 10,000 cycles before signal degradation.
  - Environmental testing: VPX3® components can operate between -40°C and +105°C. (The cables used in VPX3® assemblies will affect this number).
  - SI test data available upon request.

