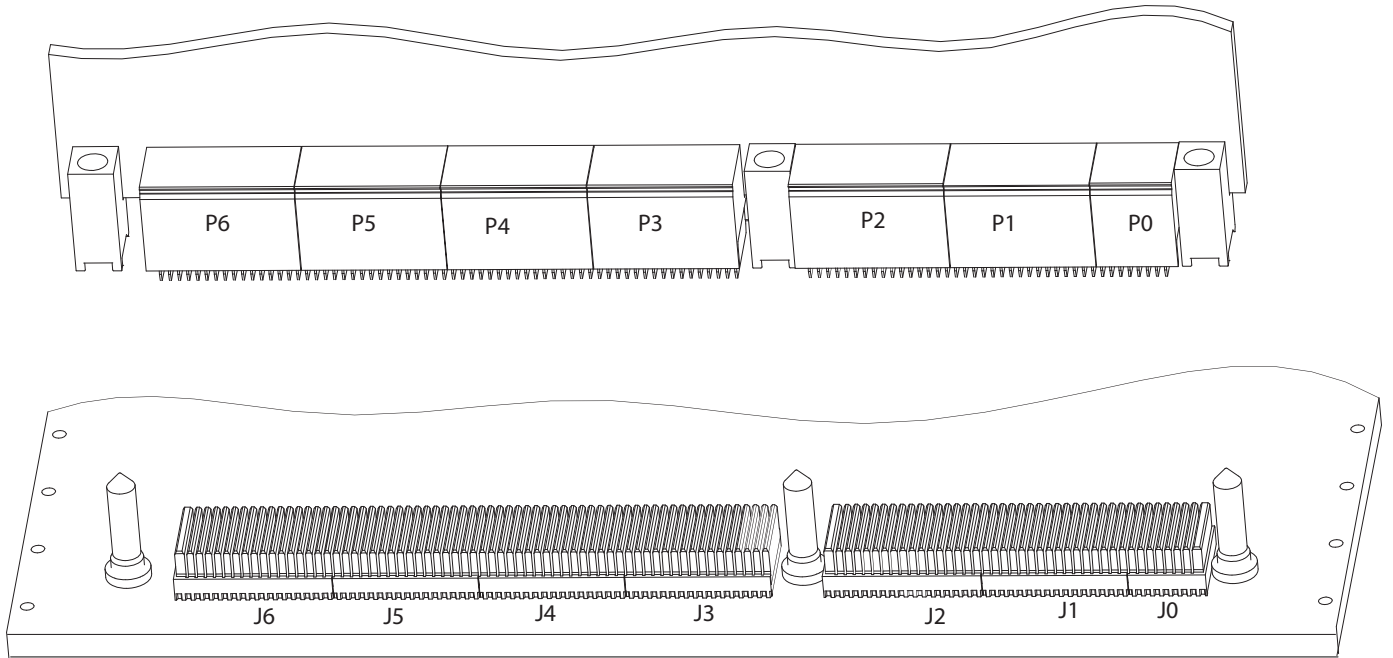


Introducing  
**MULTIGIG RT 2-R**  
Ruggedized Connectors  
for VPX Applications

**VPX**

**TE**  
connectivity

## PART CONFIGURATIONS



### DAUGHTERCARD

Module Position	Part No.	
	MULTIGIG RT 2 Connectors	Ruggedized MULTIGIG RT 2-R (Extended Pad Wafers)
PO	1410189-3	2102772-1
P1, P2, P3, P4, P5, P6	Differential	1410187-3
	Single-Ended	1410190-3
Keying Guide Modules	1-1469492-X	2000713-X
	Standard (Zinc Die Cast) Guide Socket	Machined 6061 Aluminum Guide Socket, w/ESD Contact

See TE drawings for guide module and pin options.

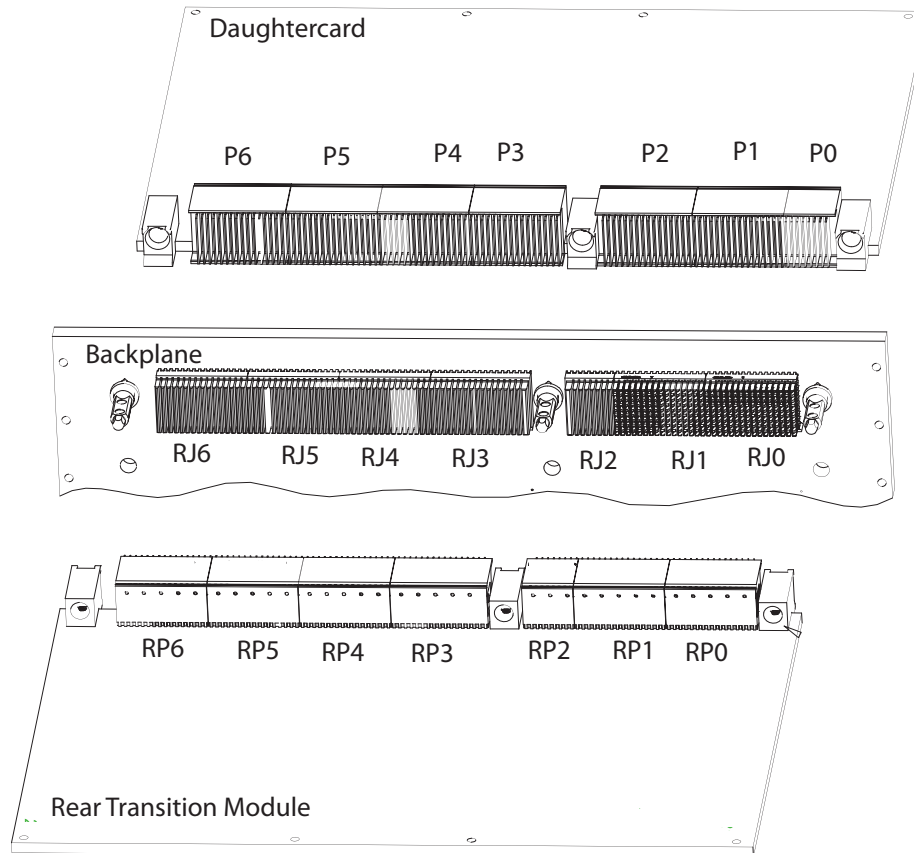
### BACKPLANE

Module Position	Part No.	
	MULTIGIG RT 2 Connectors	Ruggedized MULTIGIG RT 2-R (Quad Redundant Contacts)
JO	1410186-1	2102735-1
J1, J3, J4, J5	1410140-1	2102736-1
J2, J6	1410142-1	2102737-1
Keying Guide Pin	1-1469491-X	2000676-X
	Standard (Zinc Die Cast) Guide Pin	Stainless Steel Guide Pin

See TE drawings for guide module and pin options.

# MULTIGIG RT 2-R Connectors

## PART CONFIGURATIONS



### REAR TRANSITION MODULE

Module Position	Part No.		
	MULTIGIG RT 2 Connectors	Ruggedized MULTIGIG RT 2-R (Extended Pad Wafers)	
<b>RPO</b>	1410968-3	2102773-1	
<b>RP1</b>	Differential	1410975-3	2102774-1
	Differential & Single-Ended	1410970-3	2102849-1
<b>RP2</b>	Differential	1410971-3	2102775-1
	Single-Ended	1410972-3	2102848-1
<b>RP3, RP4, RP5, RP6</b>	Differential	1410975-3	2102774-1
	Single-Ended	1410190-3	2102847-1
<b>Keying Guide Modules</b>	1-1469492-X	2000713-X	
	Standard (Zinc Die Cast) Guide Socket	Machined 6061 Aluminum Guide Socket, w/ESD Contact	

### REAR TRANSITION BACKPLANE

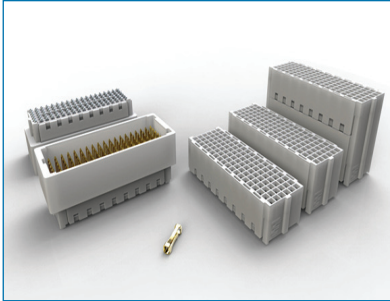
Module Position	Part No.		
	MULTIGIG RT 2 Connectors	Ruggedized MULTIGIG RT 2-R (Quad Redundant Contacts)	
<b>RJO</b>	See Note 1	1410964-1	2102768-1
	See Note 2	1410965-1	2102850-1
<b>RJ1</b>	See Note 3	1410140-1	2102736-1
	See Note 4	1410966-1	2102851-1
<b>RJ2</b>		1410186-1	2102735-1
<b>RJ3</b>		1410142-1	2102737-1
<b>RJ4, RJ5, RJ6</b>		1410140-1	2102736-1
<b>Keying Guide Pin</b>	1410956-1	2226127-1	
	Standard (Zinc Die Cast) Guide Pin	Stainless Steel Guide Pin	

#### Notes (Reference VITA 46.10; Observation 3-6):

- Note 1: 16 column shell, 15 columns of contacts
- Note 2: 16 column shell, 7 columns of contacts present (plus contacts i9-16)
- Note 3: 16 column shell, 16 columns of contacts
- Note 4: 16 column shell, 8 columns of contacts present (plus contacts ii-8)

See TE drawings for guide module and pin options.

## ASSOCIATED VPX SOLUTIONS



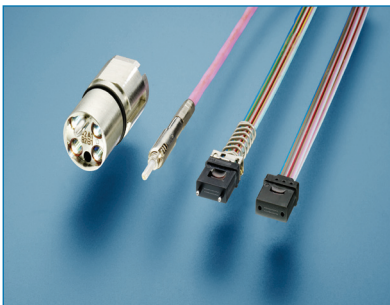
### MEZALOK Mezzanine Connectors (Compliant to VITA 61)

- Utilizes the proven, reliable MIL-55302 Mini-Box contact interface, with four points of contact
- Backwards compatible with XMC board footprint
- Accommodates 10mm, 12mm, 15mm and 18mm stack heights
- Solder ball SMT attach in SnPb and RoHS options
- 114 (6 x 19) positions and 60 (6 x 10) positions
- Protected “stub-proof” socket contacts w/superior signal integrity
- Exceptional solder joint reliability (1000+ cycles thermal shock)



### MULTI-BEAM XLE Power Connectors (Compliant to VITA 62)

- 20A and 50A power contacts, plus signal contacts
- 3-beam high-conductivity-copper contact design allows for a greater angular misalignment between mating connectors and offers a lower mating force
- Slim guide sockets reduce the overall PCB footprint
- Vented housing allows for better heat dissipation
- Hot-plug capable



### Optic Connectors (Compliant to VITA 66)

- Light weight
- High bandwidth
- EMI immunity
- 3 fiber optic interface types available:
  - 66.1 has two MT ribbon ferrules up to 24 fibers each
  - 66.2 four ARINC 801 termini
  - 66.3 one expanded beam lensed insert with four fibers



### RF Modules (Compliant to VITA 67)

- Excellent channel-to-channel isolation and RF performance to 65 GHz
- Modular design permits application specific configuration with high RF contact count
- Float mounted jack maintains positive RF ground
- .240 center-to-center spacing
- 4 and 8 position modules are designed to meet the requirements of VITA 67.1 and VITA 67.2

# MULTIGIG RT 2-R Connectors



## KEY FEATURES

Quad-redundant contact system supports high levels of shock/vibration

Compliant to VITA 46 for Open VPX applications

Supports Ethernet, Fibre Channel, InfiniBand applications, PCIe and Serial RapidIO high speed protocols

Modular, lightweight connector system

Robust “pinless” interface

Differential, single-ended and power

Ruggedized guide hardware available

Supports 0.8 inch card slot pitches

VITA 46 compliance enables upgrade in existing VPX applications

Can be combined with high power modules (VITA 62), RF modules (VITA 67) and Optical modules (VITA 66)

## DESCRIPTION

TE's MULTIGIG RT 2-R ruggedized, light weight, high speed board-to-board interconnect is compliant to VITA 46 standard. This connector system features the modularity and flexibility of the MULTIGIG RT 2 connector, with a new quad-redundant contact structure designed for high vibration levels.

## APPLICATIONS

Rugged embedded computing applications:

- Ground Defense
- Missile Defense
- Electronic Systems / C4ISR
- Space
- Commercial and Military Aerospace

## MATERIALS

Contacts: High performance copper alloy, plated 50  $\mu\text{m}$  Au over 50  $\mu\text{m}$  Ni in mating area, tin-lead on compliant pin tails

Housings: High temperature thermoplastic

Rugged Guide Hardware: Aluminum or passivated stainless steel

## MECHANICAL

Operating Temperature: -55 to +105°C

Mating Force: 0.75 N [2.70 ozf] maximum per contact, same as standard MULTIGIG RT 2 backplane connector

## STANDARDS & SPECIFICATIONS

Compliant to VITA 46 (VPX)

Product Specification: 108-2072

Application Specification: 114-13056

Qualification Test Report: 501-544

## PHYSICAL OR OTHER PROPERTIES

Tested to HALT (Highly accelerated life test) vibration levels (0.2G<sup>2</sup>/Hz) per VITA 72

Connector modules available for 3U and 6U VPX slot profiles, including rear transition modules

Reliable press-fit termination, requiring only flat rock tooling

Lightest weight VPX connector system: mated set of connectors and guide hardware for typical module and backplane slots:  
3U - 62.66g (2.21 oz); 6U - 140.26g (4.95 oz)

## FOR MORE INFORMATION

### Technical Support

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