

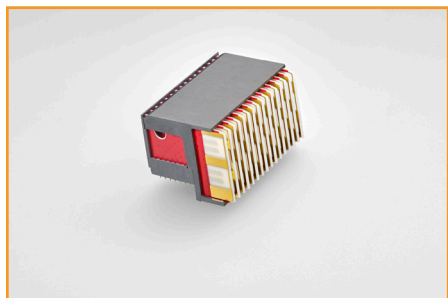
# MULTIGIG RT 2-S and MULTIGIG RT 3 Connectors

VPX advances with TE Connectivity's (TE) MULTIGIG RT connector platform:

- Data transfer rates to 25+ Gb/s
- Modular design with backward interoperability
- Ruggedized multipoint contact system meets VITA vibration standards

# MULTIGIG RT 2-S AND MULTIGIG RT 3 CONNECTORS

## VPX Advances with TE's MULTIGIG RT Connector Platform



### FAST

- Enhanced PCB wafer and contact design supports increased bandwidth up to 25+ Gb/s

### FLEXIBLE

- Meets interface requirements for VITA 46 connectors allowing backward compatibility with legacy VPX products
- Customizable to meet unique application requirements

### MODULAR

- Modular design enables numerous configurations by interchanging higher-speed MULTIGIG RT 3 connectors with the legacy MULTIGIG RT 2 and MULTIGIG RT 2-R connectors.

### RUGGED

- Contact design utilizes quad redundant contacts for optimum performance in shock and vibration

TE Connectivity's (TE) MULTIGIG RT 2-S and MULTIGIG RT 3 next generation lightweight, rugged, high speed backplane connectors meet the interface dimensions for VITA 46 VPX connectors.

They are backward compatible with legacy MULTIGIG RT products and offer the same reliable interface.

The new contact and wafer designs optimize signal integrity, extending data rates from 16-25+ Gb/s.

### APPLICATIONS/MARKETS

- Military Electronics/C4ISR
- Avionics
- Ground Defense
- Missile Defense
- Space

### STANDARDS AND SPECIFICATIONS

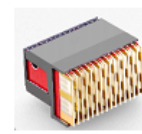
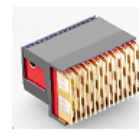
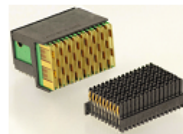
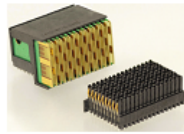
- Application Specification: 114-163004 (MULTIGIG RT 2, RT 2-R and MULTIGIG RT 3 Connectors)
- Product Specification: 108-2072 (MULTIGIG RT 3)
- Qualification Test Report: 501-544 (MULTIGIG RT 2-R) and 501-134091 (MULTIGIG RT 3)
- Electrical Performance Report: 505-2 (RT 3)
- Backplane Connector Removal: 408-10127 (RT 3)
- Daughtercard Connector Removal: 408-10454 (RT 3)
- Standards and Test Reports: #204690 (VITA 72 VPX Connector Report)

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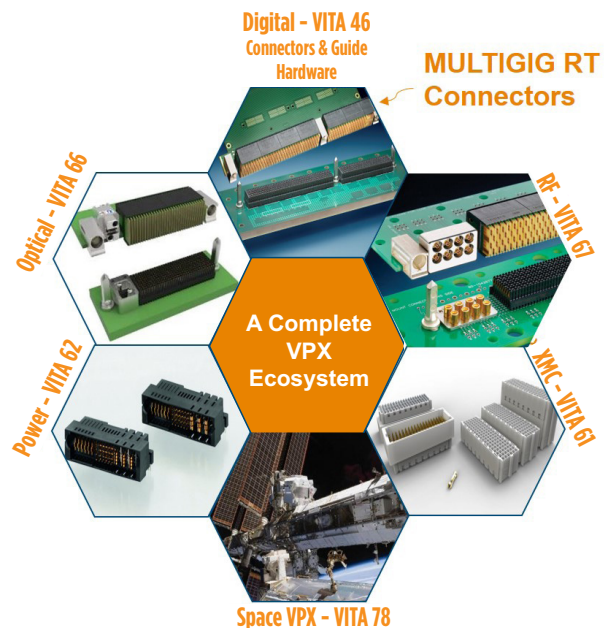
## PRODUCT OFFERING



	MULTIGIG RT 2 Connector	MULTIGIG RT 2-R Connector	MULTIGIG RT 2-S Connector	MULTIGIG RT 3 Connector
<b>Speeds</b>	10+ Gb/s	10+ Gb/s	16+ Gb/s	25+ Gb/s
<b>Ruggedized</b>	--	✓	✓	✓
<b>Mating Cycles</b>	200	500	500	500
<b>Quad-redundant contact system</b>	--	✓	✓	✓
<b>Flexibility with wafer configuration</b>	✓	✓	✓	✓
<b>VITA 46 compliant and intermateable</b>	✓	✓	✓	✓
<b>PCB Hole Dimension (Backplane)</b>	0.56 (Ref)	0.56 (Ref)	0.56 (Ref)	.037 (Ref)
<b>PCB Hole Dimension (Daughtercard)</b>	0.46 (Ref)	0.46 (Ref)	0.46 (Ref)	.032 (Ref)
<b>Release Date</b>	2003	2013	2019	2019
<b>Open VPX Standard</b>	VITA 46.0	VITA 46.0	VITA 46.0	VITA 46.30

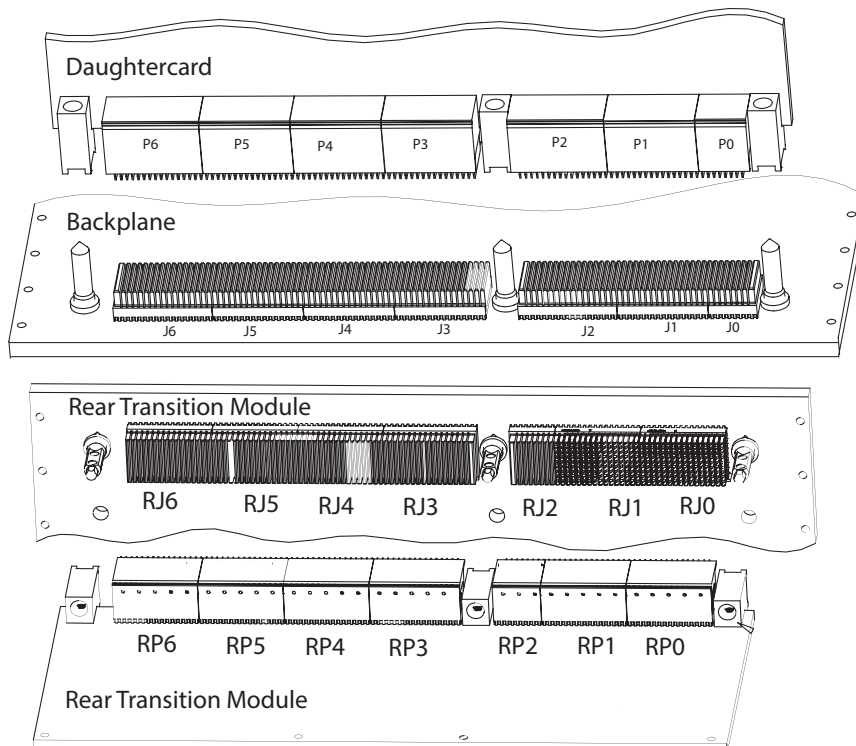
A VERSATILE PORTFOLIO THAT SUPPORTS FLEXIBILITY IN APPLICATIONS:

- PLUG-IN MODULES
- SYSTEMS
- POWER SUPPLIES
- BACKPLANES
- MEZZANINE (XMC) CARDS





## ORDERING INFORMATION

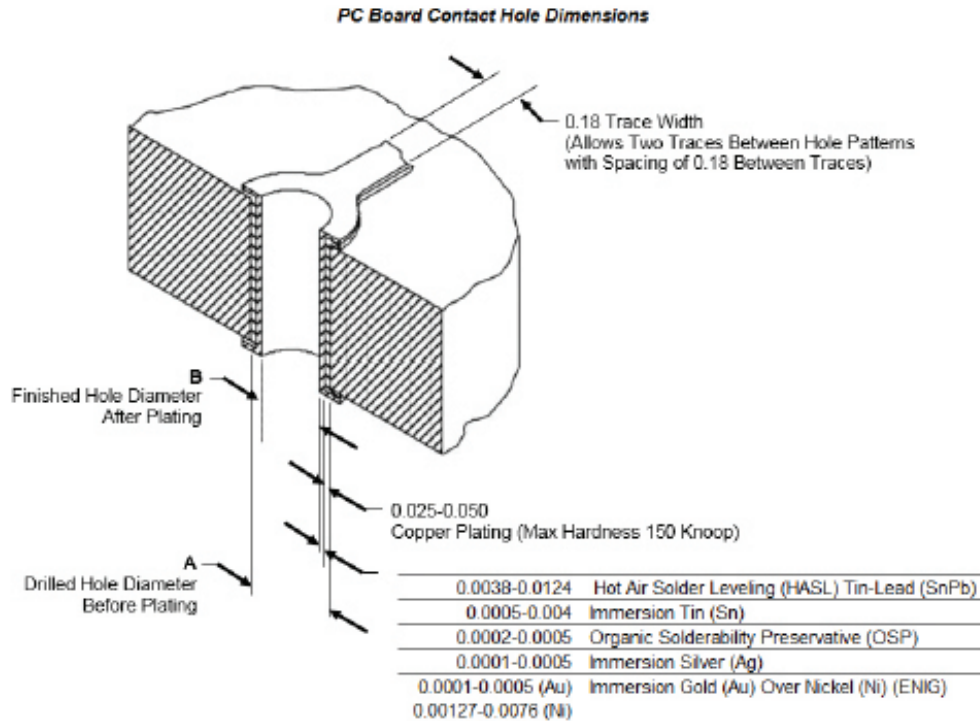


Note:  
RT 2 or RT 2-R P0 connector can be used assuming wafers 7 and 8 (diff pairs) do not require higher data rates. These connectors have smaller compliant pins in columns 7 and 8 and RT 2 compliant pins in columns 1-6 (mixed hole pattern). RT 3 P0 BS J0 (2332816-1 & 2332817-1) have smaller compliant pins in columns 7 and 8.

TE Part Numbers for VITA 46 VPX									
	RT 2 (10Gb/s)		RT 2-R (Rugged 10Gb/s)		RT 2-S (16+ Gb/s)		RT 3 (25+ Gb/s)		RT 3 Highspeed with Power
Position	Differential	Single Ended	Differential	Single Ended	Differential	Single Ended	Differential	Single Ended	
P0	1410189-3		2102772-1		2102772-1 (RT 2-R)		2102772-1 (RT 2-R)		2332816-1
P1, 2, 3, 4, 5, 6	1410187-3	1410190-3	2102771-1	2102847-1	2302317-1		2302785-1		
J0	1410186-1		2102735-1		2102735-1 (RT 2-R)		2102735-1 (RT 2-R)		2332817-1
J1, 3, 4, 5	1410140-1		2102736-1		2102736-1 (RT 2-R)		2302789-1		
J2, 6	1410142-1		2102737-1		2102737-1 (RT 2-R)		2302790-1		
DC Guide	1-1469492-X		2000713-X		2000713-X		2000713-X		
BP Pin	1-1469491-X		2000676-X		2000676-X		2000676-X		
VITA 46.10 RTM Part Numbers									
	RT 2 (10Gb/s)		RT 2-R (Rugged 10Gb/s)		RT 2-S (16+ Gb/s)		RT 3 (25+ Gb/s)		
Position	Differential	Single Ended	Differential	Single Ended	Differential	Single Ended	Differential	Single Ended	
RP0	1410968-3		2102773-1		2302319-1		2302794-1		
RP1, 3, 4, 5, 6	1410975-3	1410970-3	2102774-1	2102849-1	2302320-1		2102849-1	2302795-1	
RP2	1410971-3	1410972-3	2102775-1	2102848-1	2302321-1		2102848-1	2302796-1	
BP	RT2		RT2-R		RT 2-S		RT3		
Position	Full Load	Select Load	Full Load	Select Load	Full Load	Select Load	Full Load	Select Load	
RJ0	1410964-1	1410965-1	2102768-1	2102850-1	2102768-1 (RT 2-R)		2102850-1 (RT 2-R)	2302791-1	
RJ1	1410140-1	1410966-1	2102736-1	2102851-1	2102736-1 (RT 2-R)		2102851-1 (RT 2-R)	2302789-1	
RJ2	1410186-1		2102735-1		2102735-1 (RT 2-R)			2302788-1	
RJ3	1410142-1		2102737-1		2102737-1 (RT 2-R)			2302790-1	
RJ4, 5, 6	1410140-1		2102736-1		2102736-1 (RT 2-R)			2302789-1	
RTM DC Guide	1-1469492-X		2000713-X		2000713-X		2000713-X		
RTM BP Pin	1410956-1		2226127-1		2226127-1		2226127-1		
Modules for VITA 66.4 and 67.1 3U applications									
Position	RT 2 (10Gb/s)		RT 2-R (Rugged 10Gb/s)		RT 2-S (16+ Gb/s)		RT 3 (25+ Gb/s)		
P0 + P1A	1410326-3		2286250-1		2345723-1		2313237-1		
J0 + J1A	1410140-1		2102736-1		2102736-1 (RT 2-R)		2313238-1		



## PC BOARD CONTACT HOLE DIMENSIONS



TIER	CONNECTOR	DIMENSIONS	
		A	B (nominal)
RT 2	Vertical Receptacle (Backplane)	0.63-0.67	0.56 (Ref)
RT 2-R	Right-Angle Plug (Daughtercard)	0.53 - 0.57	0.46 (Ref)
RT 2-S			
RT 3	Vertical Receptacle (Backplane)	0.43 - 0.47	0.37 (Ref)
	Right-Angle Plug (Daughtercard)	0.38 - 0.42	0.32 (Ref)

NOTE: All holes in the pc board must be precisely located to ensure proper placement and optimum performance. The pc board layout must be designed using the dimensions provided on the customer drawing.

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Consult TE for the latest dimensions and design specifications.

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