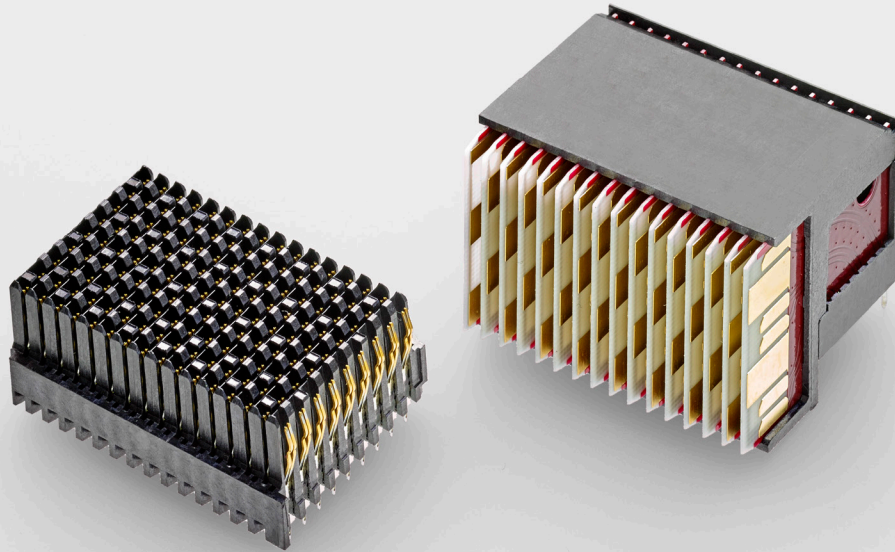




**THE DATASHEET OF**  
**2302788-1**





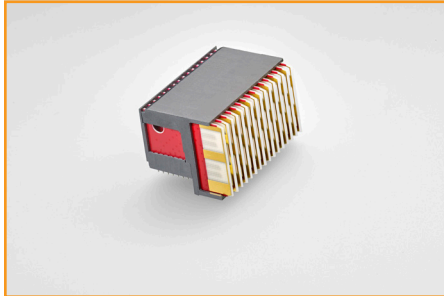
# MULTIGIG RT 3 and MULTIGIG RT 2-S Connectors

Board-to-board connectors engineered for the world's most demanding and rugged environments:

- Data transfer rates to 32+ Gb/s
- Modular design with backward interoperability
- Ruggedized multipoint contact system meets VITA vibration standards

# MULTIGIG RT 3 AND MULTIGIG RT 2-S CONNECTORS

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



### FAST

- Enhanced PCB wafer and contact design supports increased bandwidth up to **32+ 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 16-32+ GB/s.

### APPLICATIONS/MARKETS

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

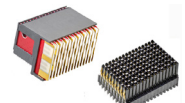
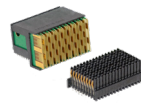
### STANDARDS AND SPECIFICATIONS

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- Application Specification: 114-163004 (MULTIGIG RT 2, RT 2-R and MULTIGIG RT 3 Signal Connectors)
- Product Specification: 108-2072 (MULTIGIG RT 3)
- Qualification Test Report: 501-544 (MULTIGIG RT 2R) 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)



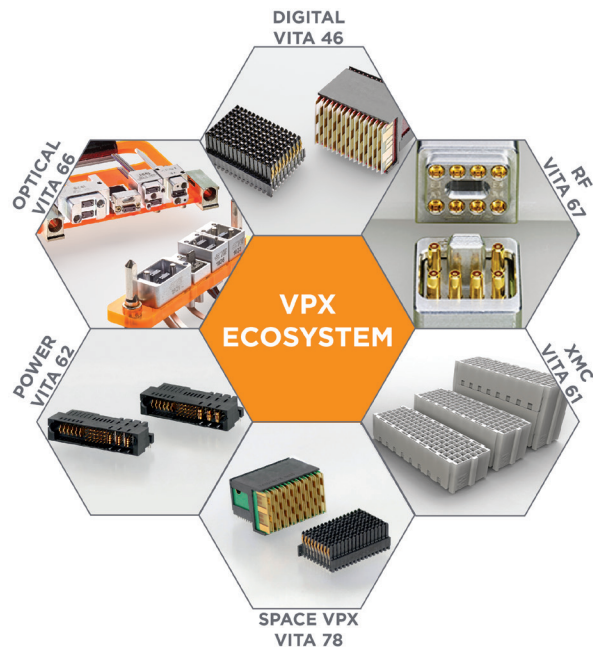
PRODUCT OFFERING



	MULTIGIG RT 2	MULTIGIG RT 2-R	MULTIGIG RT 2-S	MULTIGIG RT 3
Speeds	10+ Gb/s	10+ GB/S	16+ Gb/s	32+ Gb/s
Ruggedized	-	✓	✓	✓
Mating Cycles	200	500	500	500
Quad-redundant Contact System	-	✓	✓	✓
Flexibility with Wafer Configuration	✓	✓	✓	✓
VITA 46 Intermateable	✓	✓	✓	✓
PCB Hole Dimension (Backplane)	0.56 (Ref)	0.56 (Ref)	0.56 (Ref)	0.37 (Ref)
PCB Hole Dimension (Daughtercard)	0.46 (Ref)	0.46 (Ref)	0.46 (Ref)	0.32 (Ref)
Release Date	2003	2013	2019	2019
Open VPX Standard	VITA 46.0	VITA 46.0	VITA 46.0	VITA 46.30

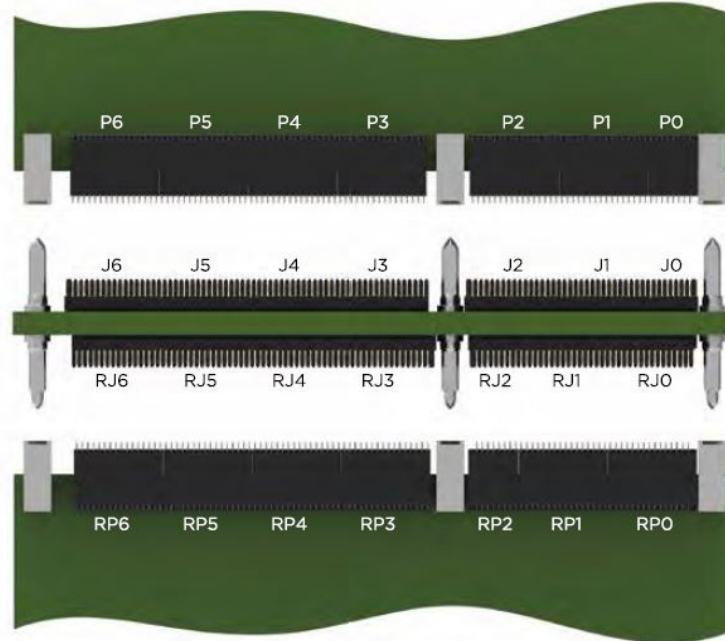
A VERSATILE PORTFOLIO THAT SUPPORTS FLEXIBILITY IN APPLICATIONS:

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





VITA 46 VPX PART NUMBERS



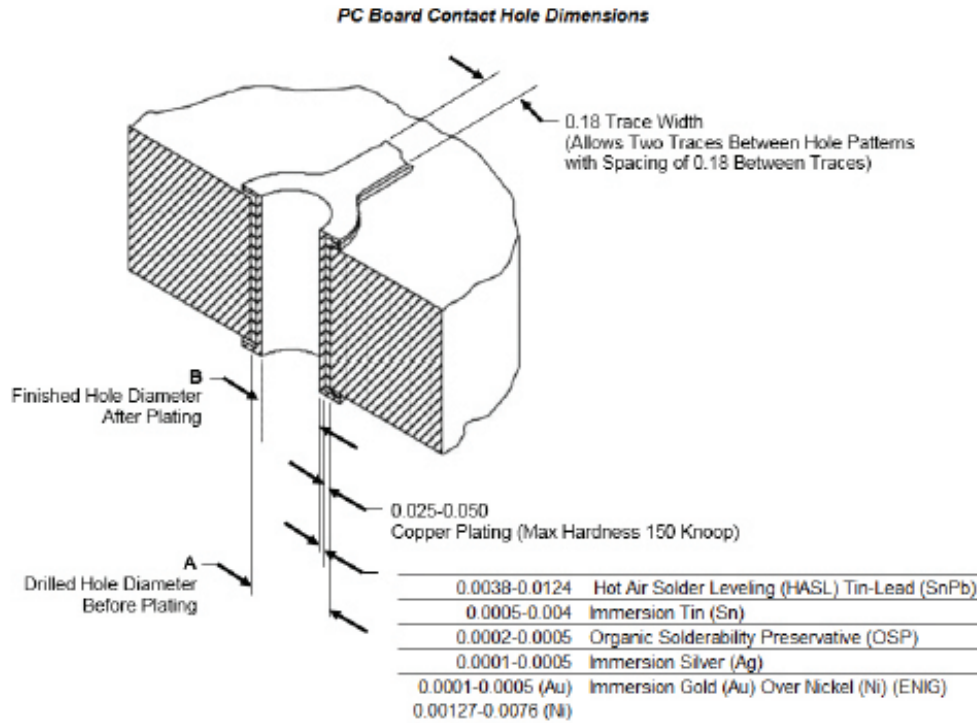
\*Reference only\*

refer to [IE Spec 114-163004](http://www.ti.com/lit/zip/ti-spec-114-163004) for most up to date information

VITA 46 VPX Part Numbers									
Position	RT 2 (10Gb/s)		RT 2-R (Rugged 10Gb/s)		RT 2-S (+16Gb/s)		RT 3 (32+Gb/s)		RT3 Highspeed with Power
	Differential	Single Ended	Differential	Single Ended	Differential	Differential	Differential	Differential	
P0		<a href="#">1410189-3</a>		<a href="#">2102772-1</a>		<a href="#">2302318-1</a>		<a href="#">2102772-1 (RT 2-R)</a>	<a href="#">2332816-1</a>
P1, 2, 3, 4, 5, 6	<a href="#">1410187-3</a>	<a href="#">1410190-3</a>	<a href="#">2102771-1</a>	<a href="#">2102847-1</a>	<a href="#">2302317-1</a>		<a href="#">2302785-1</a>		
DC Guide	1-1469492-X		2000713-X		2000713-X		2000713-X		
J0		<a href="#">1410186-1</a>		<a href="#">2102735-1</a>	<a href="#">2102735-1 (RT 2-R)</a>		<a href="#">2102735-1 (RT 2-R)</a>		<a href="#">2332817-1</a>
J1, 3, 4, 5		<a href="#">1410140-1</a>		<a href="#">2102736-1</a>	<a href="#">2102736-1 (RT 2-R)</a>		<a href="#">2302789-1</a>		
J2, 6		<a href="#">1410142-1</a>		<a href="#">2102737-1</a>	<a href="#">2102737-1 (RT 2-R)</a>		<a href="#">2302790-1</a>		
BP Pin	1-1469491-X		2000676-X		2000676-X		2000676-X		
VITA 46.10 RTM Part Numbers									
Position	RT 2 (10Gb/s)		RT 2-R (Rugged 10Gb/s)		RT 2-S (+16Gb/s)		RT 3 (32+Gb/s)		RT3 Highspeed with Power
	Differential	Single Ended	Differential	Single Ended	Differential	Single Ended	Differential	Single Ended	
RP0		<a href="#">1410968-3</a>		<a href="#">2102773-1</a>		<a href="#">2302319-1</a>		<a href="#">2302794-1</a>	
RP1, 3, 4, 5, 6	<a href="#">1410975-3</a>	<a href="#">1410970-3</a>	<a href="#">2102774-1</a>	<a href="#">2102849-1</a>	<a href="#">2302320-1</a>		<a href="#">2102849-1</a>	<a href="#">2302795-1</a>	<a href="#">2102849-1</a>
RP2	<a href="#">1410971-3</a>	<a href="#">1410972-3</a>	<a href="#">2102775-1</a>	<a href="#">2102848-1</a>	<a href="#">2302321-1</a>		<a href="#">2102848-1</a>	<a href="#">2302796-1</a>	<a href="#">2102848-1</a>
RTM DC Guide	1-1469492-X		2000713-X		2000713-X		2000713-X		
Position	RT2		RT2-R		RT 2-S		RT3		RT3 Highspeed with Power
	Full Load	Select Load	Full Load	Select Load	Full Load	Select Load	Full Load	Select Load	
RJ0	<a href="#">1410964-1</a>	<a href="#">1410965-1</a>	<a href="#">2102768-1</a>	<a href="#">2102850-1</a>	<a href="#">2102768-1 (RT 2-R)</a>	<a href="#">2102850-1 (RT 2-R)</a>	<a href="#">2302791-1</a>	<a href="#">2302792-1</a>	
RJ1	<a href="#">1410140-1</a>	<a href="#">1410966-1</a>	<a href="#">2102736-1</a>	<a href="#">2102851-1</a>	<a href="#">2102736-1 (RT 2-R)</a>	<a href="#">2102851-1 (RT 2-R)</a>	<a href="#">2302789-1</a>	<a href="#">2302793-1</a>	
RJ2	<a href="#">1410186-1</a>		<a href="#">2102735-1</a>		<a href="#">2102735-1 (RT 2-R)</a>		<a href="#">2302788-1</a>		
RJ3	<a href="#">1410142-1</a>		<a href="#">2102737-1</a>		<a href="#">2102737-1 (RT 2-R)</a>		<a href="#">2302790-1</a>		
RJ4, 5, 6	<a href="#">1410140-1</a>		<a href="#">2102736-1</a>		<a href="#">2102736-1 (RT 2-R)</a>		<a href="#">2302789-1</a>		
RTM BP Pin	<a href="#">1410956-1</a>		<a href="#">2226127-1</a>		<a href="#">2226127-1</a>		<a href="#">2226127-1</a>		
Modules for VITA 66.4 and 67.1 3U applications									
Position	RT 2 (10Gb/s)		RT 2-R (Rugged 10Gb/s)		RT 2-S (+16Gb/s)		RT 3 (32+Gb/s)		RT3 Highspeed with Power
	Differential	Single Ended	Differential	Single Ended	Differential	Single Ended	Differential	Single Ended	
PO + P1A		<a href="#">1410326-3</a>		<a href="#">2286250-1</a>		<a href="#">2345723-1</a>		<a href="#">2313237-1</a>	
J0 + J1A		<a href="#">1410140-1</a>		<a href="#">2102736-1</a>		<a href="#">2102736-1 (RT 2-R)</a>		<a href="#">2313238-1</a>	
J0 + J1A Right End		<a href="#">1410142-1</a>		<a href="#">2102737-1</a>		<a href="#">2102737-1</a>		<a href="#">2352032-1</a>	
P1B + P2A		<a href="#">1410187-3</a>		<a href="#">2102771-1</a>		<a href="#">2302317-1</a>		<a href="#">2302785-1</a>	
J1B + J2A		<a href="#">1410142-1</a>		<a href="#">2102737-1</a>		<a href="#">2102737-1</a>		<a href="#">2302790-1</a>	



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.

## LET'S CONNECT

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