Embedded Computing

Board-Level Interconnects

Rugged High-Speed Solutions
That Save Weight and Space

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Embedded Computing
Rugged, Weight- and Space-Saving High-Speed Solutions

SWaP: Reduce Size and Weight
Increase Power, Data and Bandwidth
Speed Design with Open Architecture Solutions

Next-generation processors need next-generation connectivity to keep pace with the growing demand for bandwidth even as space, weight, and power savings become critical.

TE Connectivity (TE) has been pushing the bandwidth envelope by adapting high-speed commercial technology and combining it with our expertise in rugged packaging. The results are board-level interconnects that give you more performance in harsh military and aerospace applications.

Beyond Speed

We are also reducing size through higher contact densities and supporting RF and optical interconnects at the board level. And to allow compact, high-speed box-to-box connectivity, we have a full range of I/O connectors supporting rates to 10 Gb/s.

Meeting the Needs of Battlespaces

We are meeting the demanding needs of battlespaces with ruggedized copper and fiber interconnect and cable assemblies. And we are helping to protect systems with lightweight shielding and EMI-immune datapaths.

TE is focusing our technology to minimize size, weight and power consumption, to increase bandwidth, and to enable open architecture systems.

More Performance for Land, Sea, Air, and Space

- Avionics and Vetronics
- Communications Hubs and Processing
- Electronic Warfare and Countermeasure Management

- Two-Level Maintenance and ESD Sensitive Applications
- Mobile and Fixed Satellite Terminals and Ground Base Stations
- Power Supply and Distribution

- Radar Interface and Processing – RF and Digital
- Sensor Array Hubs and Data Processing
- Vehicle Mission Computers and Navigation

- Weapons Control and Targeting
- Space

TE Components . . . TE Technology . . . TE Know-how . . .
AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem | Rochester | DEUTSCH
SEACON Phoenix | LL ROWE | Phoenix Optix | AFP | SEACON

Empower Engineers to Solve Problems, Moving the World Forward.

VPX Compliant Solutions

As the latest standard architecture evolving from VMEbus, the VPX standard meets the needs for data-intensive processing in the aerospace and defense industries, where both ruggedness and high-speed performance are crucial. Supporting 6.25 Gb/s in a switched fabric architecture, VPX systems are designed for flexible application of demanding high-speed protocols, such as 10G Ethernet, RapidIO, InfiniBand, and HyperTransport, in ground, aerospace, and marine applications.

Scalable

VPX systems are highly scalable and flexible, supporting both 3U and 6U formats to meet the widest range of needs. The VPX backplane uses the TE 7-row MULTIGIG RT 2 connector system to support both single-ended and differential signals.
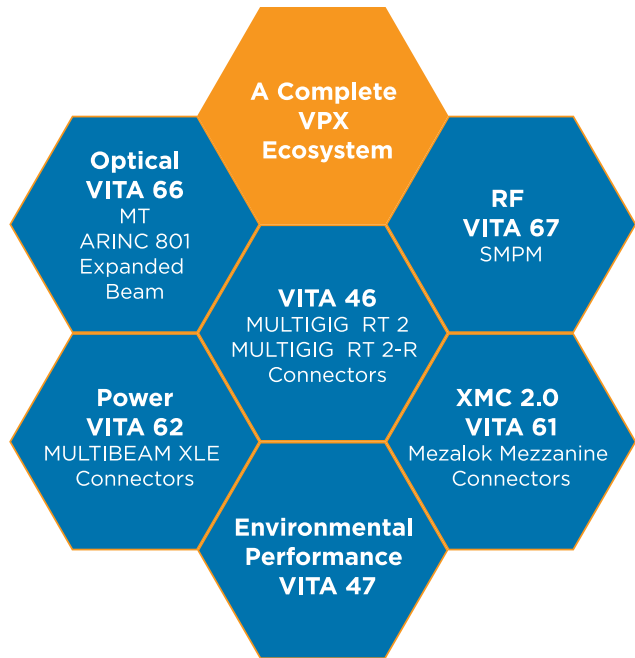
Open Architecture

As a widely used standard, VPX promotes interoperability, a healthy choice of suppliers, and economies of scale that result from higher board volumes.

Flexible

Not only does VPX accommodate new technologies, it has expanded beyond backplane/daughterboard signaling to embrace mezzanine application, power modules, and optical and RF connectivity—all with the goal of providing unmatched flexibility and capabilities for embedded computing.

High Speeds, Multimedia, Maximum Flexibility

TE's portfolio of VPX systems gives you a complete array for high-speed data, optical, RF, power, and mezzanine connectivity. More choice means more flexibility in achieving specific system architectures with standards-based solutions. Get the high-speed signal integrity advanced applications require in rugged, reliable connectors.

A Complete VPX Ecosystem

Optical VITA 66
MT
ARINC 801
Expanded Beam

RF VITA 67
SMPM

VITA 46
MULTIGIG RT 2
MULTIGIG RT 2-R
Connectors

Power VITA 62
MULTIBEAM XLE Connectors

XMC 2.0 VITA 61
Mezalok Mezzanine Connectors

Environmental Performance VITA 47

<div style="border:1px solid">

MULTIGIG RT 2
RUGGED

- The standard for VITA 46 applications
- Modular connector system features a protected backplane connector

FAST

- Supports speeds up to 10 Gb/s, providing a comfortable performance margin in VPX applications

FLEXIBLE

- Wafers are easily modified to support the need for propagation delay, characteristic impedance, and other electrical parameters
- Lightweight connector offers built-in ESD features enabling field serviceability

MULTIGIG RT 2-R
EXTREME RUGGEDNESS

- Passes extreme requirements of VITA 72 study group
- Features a quad-redundant contact system for greater reliability in a high vibration environment
- Specified for VITA 78 SpaceVPX applications

ULTRA FLEXIBLE

- Compatible with standard MULTIGIG RT-2 connectors for VITA 46
- Optimized footprints for signal integrity and ease of board design
- Low outgassing

</div>

VITA 46 MULTIGIG RT 2 and MULTIGIG RT 2-R Connectors

Modular MULTIGIG RT 2 Connector System with Data Rates up to 10 Gb/s

The MULTIGIG RT 2 connector, the standard for VITA 46, represents a huge step forward in the world of rugged computing and C4ISR enabling technology. The connectors support speeds up to 10 Gb/s, providing a comfortable performance margin in VPX applications.

This modular connector system features a protected pinless backplane connector and wafer-based design in place of pin contacts. Wafers, available for differential, single-ended, and power needs, can be easily modified to support specific customer needs for characteristic impedance, propagation delay, and other electrical parameters. This lightweight connector system also offers built in ESD features, enabling field serviceability, and is fully qualifies for VITA 47 environments.

Ultra-Rugged MULTIGIG RT 2-R Connectors

MULTIGIG RT 2-R connectors are an evolution of MULTIGIG RT 2 connectors, designed to offer even more ruggedness and reliability in demanding high-vibration environments. They go beyond VITA 47 environmental performance to meet the demanding requirements of VITA 72.

The connectors are specified for VITA 78 SpaceVPX fault-tolerant interoperable backplanes and modules. The lightweight connectors offer low outgassing and resist the growth of tin whiskers to high reliability in the challenging environment of space.
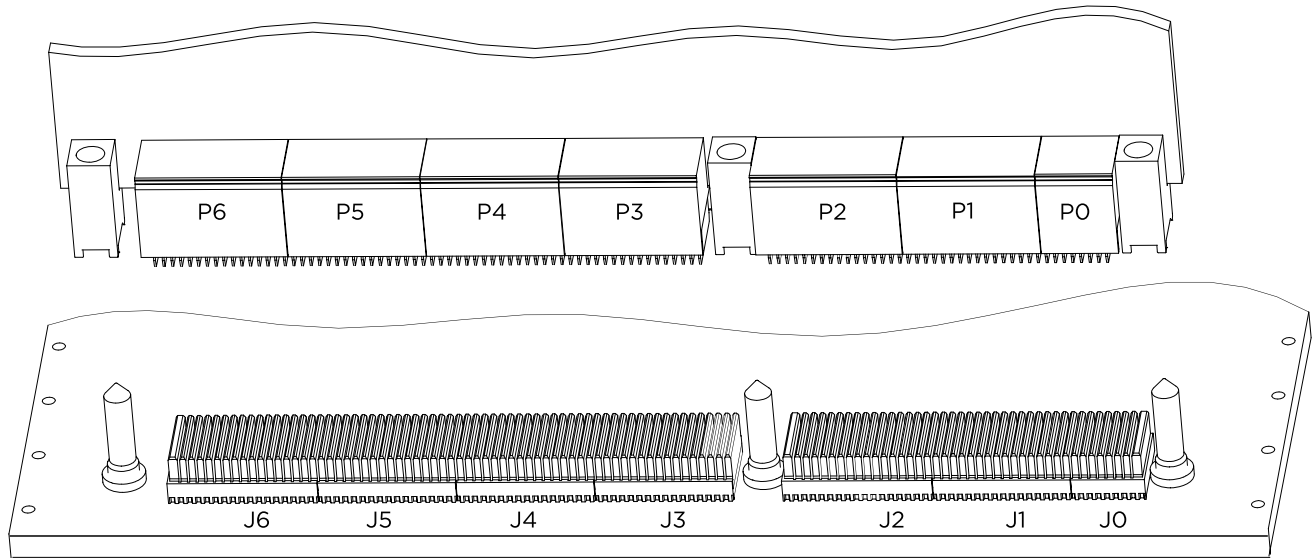
Backward compatible to all existing VITA 46 daughtercards, rugged MULTIGIG RT 2-R connectors have a pinless interface tested to 10,000 mating/unmating cycles. The connector has been torture tested by exposing a 6U VPX test unit to random vibration levels of 0.2 g^2/Hz for 12 hours.
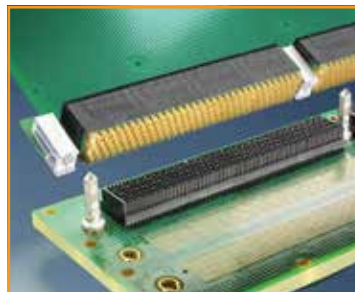
MULTIGIG RT 2
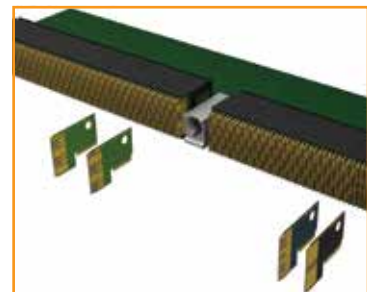
MULTIGIG RT 2-R

DAUGHTERCARD

Module Position		Part No.	
		MULTIGIG RT 2	**MULTIGIG RT 2-R**
P0		1410189-3	2102772-1
P1, P2, P3, P4, P5, P6	Differential	1410187-3	2102771-1
	Single-Ended	1410190-3	2102847-1
Keying Guide Socket Modules		1-1469492-X (Standard Zinc Die Cast)	2000713-X (Machined 6061 Aluminum with ESD Contact)

BACKPLANE

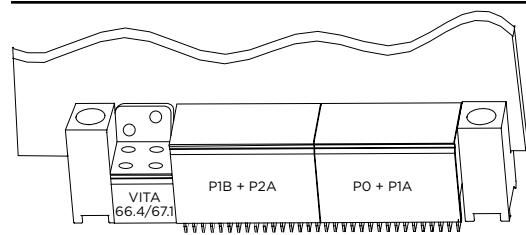| Module Position		Part No.	
		MULTIGIG RT 2	**MULTIGIG RT 2-R**
J0		1410186-1	2102735-1
J1, J3, J4, J5		1410140-1	2102736-1
J2, J6		1410142-1	2102737-1
Keying Guide Pin		1-1469491-X (Standard Zinc Die Cast)	2000676-X (Stainless Steel)

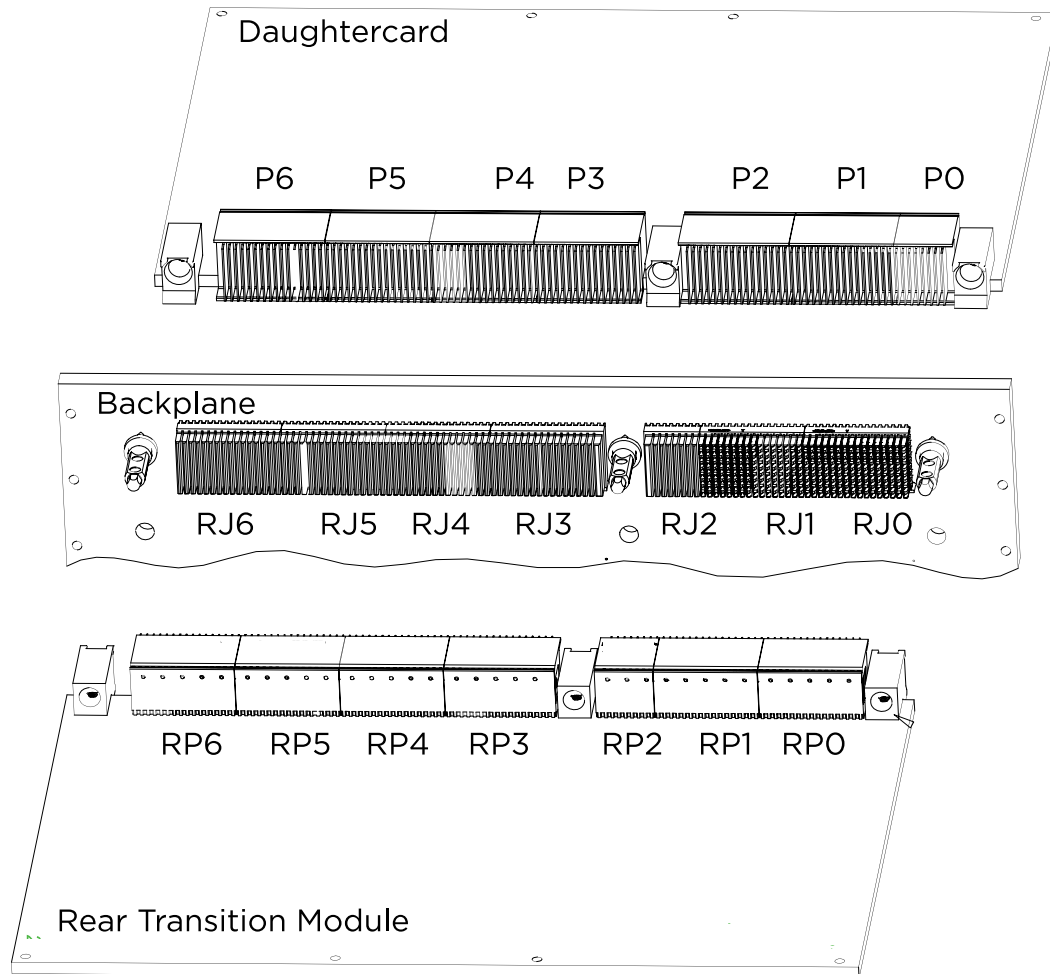See TE drawings for guide module and pin options.
RoHS equivalents available.

SpaceVPX CONNECTORS (PER VITA 78) FOR SpaceUM MODULES

VITA 78 Module Designation	3U position	6U position	Part No.
Module 8	P0	P0	2286123-1
Module 16A	—	P1, P5	2286117-1
Module 16B	P2	P2, P6	2286118-1
Module 16C	—	P3	2286119-1
Module 16D	—	P4	2286120-1
Module 16E	P1	—	2286121-1

DAUGHTERCARD MODULES FOR VITA 66.4 AND 67.1 3U APPLICATIONS

Module Position		Part No.	
		MULTIGIG RT 2	**MULTIGIG RT 2-R**
P0 + P1A		1410326-3	2286250-1
P1B + P2A	Differential	1410187-3	2102771-1
	Single-Ended	1410190-3	2102847-1

Daughtercard

P6   P5   P4 P3   P2   P1 P0

Backplane

RJ6   RJ5 RJ4   RJ3   RJ2   RJ1 RJ0

RP6   RP5   RP4   RP3   RP2   RP1   RP0

Rear Transition Module

REAR TRANSITION MODULE

Module Position		Part No.	
		MULTIGIG RT 2	**MULTIGIG RT 2-R**
RP0		1410968-3	2102773-1
RP1	Differential	1410975-3	2102774-1
	Single-Ended	1410970-3	2102849-1
RP2	Differential	1410971-3	2102775-1
	Single-Ended	1410972-3	2102848-1
RP3, RP4, RP5, RP6	Differential	1410975-3	2102774-1
	Single-Ended	1410190-3	2102847-1
Keying Guide Socket Modules		1-1469492-X (Standard Zinc Die Cast)	2000713-X (Machined 6061 Aluminum with ESD Contact)

REAR TRANSITION BACKPLANE

Module Position		Part No.	
		MULTIGIG RT 2	**MULTIGIG RT 2-R**
RJ0	See Note 1	1410964-1	2102768-1
	See Note 2	1410965-1	2102850-1
RJ1	See Note 3	1410140-1	2102736-1
	See Note 4	1410966-1	2102851-1
RJ2		1410186-1	2102735-1
RJ3		1410142-1	2102737-1
RJ4, RJ5, RJ6		1410140-1	2102736-1
Keying Guide Pin		1410956-1 (Standard Zinc Die Cast)	2226127-1 (Stainless Steel)

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 i1-8)

Additional VPX-Compatible Products
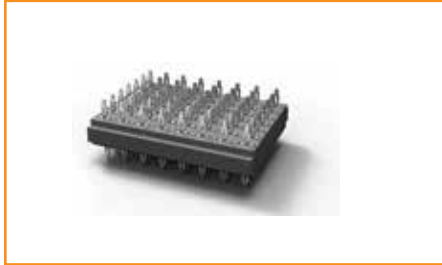
Stacking Compliant Pin Connector
Part No. 2102785-1

Permanent Stacking

- Compliant pin termination on both sides
- Well suited for rigid flex or board-to-board stacking where a separable interface is not required

Convenient

- Simple press-fit application
- Connector footprint matches the MULTIGIG RT 2 daughtercard connector pattern for low noise and low loss
- 56 position modules, end-to-end stackable to build the pin count required with standard components

Low Profile

- 4 mm stack height

VITA 46 Interposer
Part No. 2226027-1

Parallel Backplanes

- Stacking connector to enable parallel backplanes in a VPX chassis.
- Mates to backplane VITA 46 connectors, maintaining VITA 46 pinout
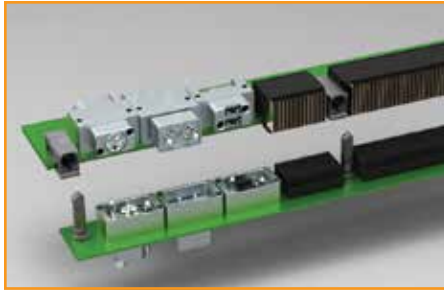- 25 mm stack height

VPX Daughtercard (Plug-In Module) Covers
Part No. 2226808-1   6U
Part No. 2226808-2   3U

Rugged Protection

- Durable polycarbonate protective cover applied to a plug-in card
- Prevents connector damage in handling

VITA 66 Optical Modules

The VITA 66 standard for optics gives you the choice of MT array connectors, ARINC 801 termini, or expanded beam (EB) contacts using a common module. With an aerospace pedigree, each style of termini offers different benefits in terms of density, ruggedness, repairability, and other characteristics.

MT Ferrules
- **Highest-density interconnection**
- **Up to 48 fibers in a 3U system**
- **Up to 248 fibers in a 6U system**

ARINC 801 Termini
- **Industry-standard 1.25 mm high-performance ceramic ferrules**
- **Physical contact technology for very low insertion loss, with angled polishes**
- **Keyed orientation for optimal single-mode performance**

Expanded Beam Termini
- **Up to four fibers per module**
- **Ball lens to tolerate less than pristine conditions**
- **Excellent for handling shock, vibration, or repeated mating/unmating**
- **Well suited to two-level maintenance or applications calling for frequent insertion/extraction**

MORE CHOICE

- Choose from MT array connectors, ARINC 801 termini, or expanded beam (EB) contacts using a common module
- Up to 248 fibers in a 6U system
- Each style of termini offers different benefits

EASY TO USE

- Common mounting interface requirements for the various fiber-optic interconnects within 3U and 6U VPX applications
- Quickly and confidently implement the best solution for specific applications

RUGGED

- Improved density, ruggedness, and repairability via three termini styles
- The three module varieties are based upon proven optical termini for military and aerospace applications

Interface	Part No.	
	Backplane	**Daughtercard**
VITA 66.1: MT	2000973-1	2000974-1
VITA 66.2: ARINC 801	—	—
VITA 66.3: Expanded Beam	2102282-1	2102283-1
VITA 66.4: MT	2226880-1	2226881-1
MT Ferrule Kit (12 Fiber, Multimode)	2102866-1	2102866-2

Contact TE about availability and additional fiber assemblies.

VITA 67 RF Modules

VITA 67 RF modules from TE are modular systems designed specifically to allow backplane/daughtercard multi-contact mating within a robust platform to withstand the mechanical rigors of military and aerospace applications. They are also fully compatible with VPX packaging to make it easy and convenient to achieve RF connectivity within a well-established architecture.

The contacts tolerate generous misalignment to allow blind mating and be configured to eliminate the possibility of stubbing. The contacts are housed in robust stainless steel or aluminum modules that hold four or eight contacts. The modules are configured to provide RFI/EMI shielding between the RF contacts and provide a high level of adjacent channel isolation of at least 100 dBc up through 40 GHz.

MORE CHOICE

- Modular design with 4- or 8-position modules for application-specific configuration
- Modules available in stainless steel and aluminum
- Float-mounted jack maintains positive RF connection

VERSATILE

- Will support 0.80" card pitch
- .240" center-to-center contact spacing
- RF contacts are available for a variety of cables

ROBUST

- SMPM-based contact performance to 40 GHz
- Excellent channel-to-channel isolation
- Higher packaging density saves space and weight

VITA 67 MODULES

Interface Side	Mounting Flange	Material	Part No.	
			4-Position	8-Position
Daughtercard (Plug-In Module)	Countersink Through Holes to Accept 2-56 UNC	Stainless Steel	1996883-4	1996705-4
		Aluminum	2157338-3	2157350-3
	2-56 UNC Mounting Holes	Stainless Steel	2101925-4	2101924-4
		Aluminum	2157339-4	2157340-4

Interface Side	Contact Interface to Rear of Backplane	Module Material	Part No.	
			4-Position	8-Position
Backplane	SMPM Plug (Snap On)	Stainless Steel	1996884-1	1996706-1
	OSMM Jack (Threaded)	Stainless Steel	2101510-2	1996777-2
	Direct Attach Cable	Aluminum	—	2157553-1

RF CONTACTS

Interface Side	Cable Type*	Part No.
Daughtercard	.047" Dia.	1996771-1
	.086" Dia.	1996390-1
	.086" Low-Loss Cable	2101814-1
Backplane	.047" Dia. (For Direct Attach Cable)	2157248-1
	.086" Dia. (For Direct Attach Cable)	2101012-1
	.086" Low-Loss Cable (For Direct Attach Cable)	2157022-1
	NA — Press Fit Directly Into Backplane	1996318-1

*Semirigid cable or flex equivalent.

TOOLING

Tool	Use	Part No.
OSMM Low-Profile Wrench	Use for OSMM Connectors Mating to Backplane Modules	2119704-1
SMPM Jack Insertion/Extraction Tool	Use On 1996390-1, 1996771-1	2101595-1
SMPM Plug Extraction Tool	Use On 2101012-1, 2157248-1	2161640-1

VITA 61 Mezalok Connectors

TE's Mezalok connectors are rugged surface mount connectors featuring a quad redundant mini-box contact system having 500-mating-cycle durability.

Engineered for high-speed reliability across the most adverse environments, the Mezalok connector enables 10+ Gb/s data rates coupled with a four-point redundant contact system based on the M55302 standard. The 114-position connectors are compliant with VITA 61 for XMC 2.0 applications.

		50 Microinch Gold Mating Face		30 Microinch Gold Mating Face	
		Tin-Lead BGA	Lead Free BGA	Tin-Lead BGA	Lead Free BGA
60 (6 x 10) Positions					
Pin Connector		2102079-1	2102079-2	2102079-3	2102079-4
Socket Connector	10 mm	2102080-1	2102080-2	2102080-5	2102080-6
	12 mm	2102080-3	2102080-4	2102080-7	2102080-8
	18 mm	2102080-9	1-2102080-0	1-2102080-1	1-2102080-2
114 (6 x 19) Positions					
Pin Connector		2102060-1	2102060-2	2102060-3	2102060-4
Socket Connector	10 mm	2102061-1	2102061-2	2102061-5	2102061-6
	12 mm	2102061-3	2102061-4	2102061-7	2102061-8
	15 mm	1-2102061-3	1-2102061-4	1-2102061-5	1-2102061-6
	18 mm	2102061-9	1-2102061-0	1-2102061-1	1-2102061-2
320 (8 x 40) Positions					
Pin Connector		2102429-1	2102429-2	2102429-3	2102429-4
Socket Connector	10 mm	2102430-1	2102430-2	2102430-5	2102430-6
	18 mm	2102430-9	1-2102430-0	1-2102430-1	1-2102430-2

VITA 62 MULTI-BEAM XLE Power Connectors

The MULTI-BEAM XLE power connector, specified for the VPX VITA 62 power supply standard, offers 50 A and 20 A contacts.

The design is hot pluggable, features a vented housing for heat dissipation, tolerates mating misalignment, and has lower mating forces.

HIGH PERFORMANCE

- 20 A and 50 A 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
- Hot-plug capable

CONVENIENT

- Slim guide sockets reduce the overall PCB footprint
- Vented housing allows for better heat dissipation
- Connector tolerates mating misalignment
- Lower mating force

Connector Configuration (No. of Contacts)				Part No.	
High Power (50 A)	Low Power (20 A)	Signal	Plug-In Module Size	Receptacle	Plug
2	6	32	3U	1-6450869-4	6450849-7
7	—	—	6U	6450863-5	6450843-6
10	—	36	6U	1-6450869-0	6450849-6

Next-Generation Connectivity Fortis Zd Connectors

Extreme Mechanical and Electrical Performance for the Most Demanding Bandwidth Applications

With high speeds and high reliability in demanding applications, the Fortis Zd connector family is designed to meet next-generation processing-intensive applications. The connectors support speeds of 12+ Gb/s in a design that saves weight and space.

The Mini-Box contact, with spring contact on all four of the mating posts, has years of proven reliability in rugged applications.

FAST

• Allows 12+ Gb/s data rates in a design that saves weight and space

RUGGED

• Extreme mechanical and electrical performance for the most demanding applications

• Space-compatible materials

• Proven compliant pin board attach facilitates manufacturing efficiency, repairability, and superior electrical performance

• Protected pin field on backplane for reliability and durability

FLEXIBLE

• Modular design allows for user configurability and modular evolution

• M55302-heritage Mini-Box separable interface provides four points of contact on all sides of the pin

• Staggered daughtercard pin field supports two-level maintenance

HIGH PERFORMANCE

• Three shell varieties for application versatility, including:
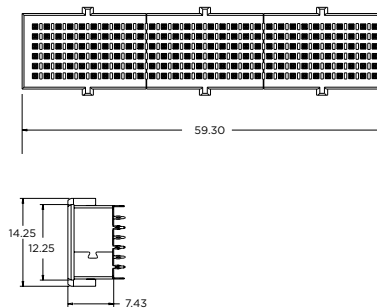
  Shielded for EMI protection
  Plastic for lowest weight
  Machined metal shell for ruggedized daughtercard

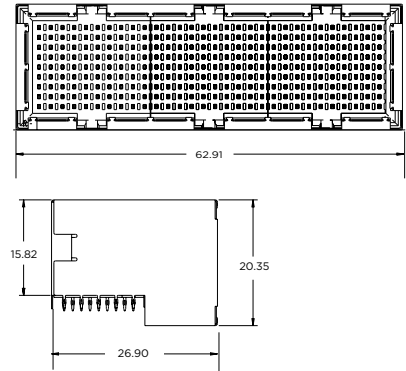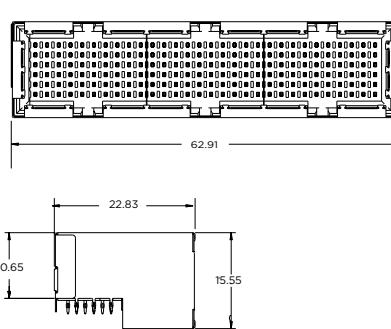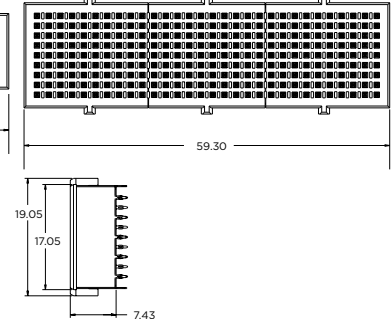• 3-pair (9-row) and 2-pair (6-row) versions available to accommodate multiple slot pitches

Six-Row Connectors

59.30

14.25
12.25

7.43

Nine-Row Connectors

59.30

19.05
17.05

7.43

62.91

22.83

10.65

15.55

62.91

15.82

20.35

26.90

STANDARD FORTIS Zd MODULES

		Part No.					
		Left	**Center**		**Right**	**Full Shroud**	
		10 Col.	**10 Col.**	**20 Col.**	**10 Col.**	**10 Col.**	**20 Col.**
6-Row (2-Pair) Connector Modules							
Right-Angle	Differential	2102086-1	2102087-1	2102096-1	2102088-1	2102081-1	2102232-1
Vertical	—	2102092-1	2102093-1	2102098-1	2102092-1	2102094-1	2102234-1
9-Row (3-Pair) Connector Modules							
Right-Angle	Differential	2000890-1	2000891-1	2000903-1	2000892-1	2102155-1	2102159-1
	Single Ended	2102314-1	2102315-1	2102316-1	2102317-1	2102318-1	2102319-1
Vertical	—	2000895-1	2000896-1	2000905-1	2000895-1	2102157-1	2102161-1

-1 parts have tin-lead plated contact tails; for lead-free tin order -2.

SHIELDED FORTIS Zd MODULES

|		Part No.					
		10 Col.	**20 Col.**	**30 Col.**	**40 Col.**	**50 Col.**	**60 Col.**
6-Row (2-Pair) Connector Modules							
Right-Angle	Differential	2102515-1	2102515-2	2102515-3	2102515-4	2102515-5	2102515-6
Vertical	—	2102516-1	2102516-2	2102516-3	2102516-4	2102516-5	2102516-6
9-Row (3-Pair) Connector Modules							
Right-Angle	Differential	2102247-1	2102247-2	2102247-3	2102247-4	2102247-5	2102247-6
	Single Ended	2102320-1	2102320-2	2102320-3	2102320-4	2102320-5	2102320-6
Vertical	—	2102248-1	2102248-2	2102248-3	2102248-4	2102248-5	2102248-6

MACHINED METAL SHELL FOR RIGHT-ANGLE FORTIS Zd MODULES

		Part No.					
		10 Col.	**20 Col.**	**30 Col.**	**40 Col.**	**50 Col.**	**60 Col.**
6-Row (2-Pair) Connector Modules							
Right-Angle	Differential	2102114-1	2102114-2	2102114-3	2102114-4	2102114-5	2102114-6
9-Row (3-Pair) Connector Modules							
Right-Angle	Differential	2102077-1	2102077-2	2102077-3	2102077-4	2102077-5	2102077-6

Shells are applied to right-angle modules, ordered separately. They mate with standard vertical modules.

GUIDE HARDWARE

	Part No.		
	Universal Guide Hardware	**VITA 46**	**Rugged VITA 46 Machined**
Guide Pin	223969-X	1-1469491-X	2000676-X
Guide Module	223979-X	1-1469492-X	2000713-X (with ESD contact)

See TE drawings for guide module and pin options.
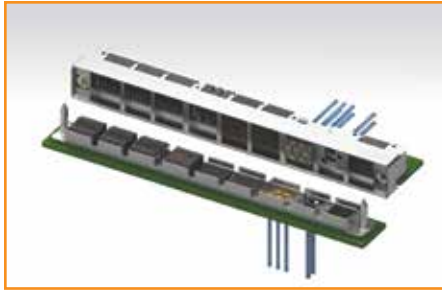
Fortis Zd LRM Connector System

Rugged Next-Generation Packaging Made Flexible with Lightweight, Modular System

The Fortis Zd LRM Connector System is an innovative modular connector system for rugged next-generation packaging, from avionics boxes to military ground vehicles. Optical and RF modules are based on VITA 66 and 67, featuring precision guide hardware and shell features that ensure reliable plug-in and excellent stability under extreme vibration.

It features a rugged, lightweight, multibay shell that accepts high-speed digital signal, power, RF and optical modules. Based on well-established technology, Fortis Zd LRM connector systems feature M55320 box contacts, with four points of contact, to provide electrical stability in high-vibration environments. Additionally, the compliant pin board attach results in manufacturing efficiency, reparability, and superior electrical performance.

HIGH PERFORMANCE

- Performance to 12+ Gb/s
- Controlled impedance design
- Low crosstalk and superior electrical characteristics
- Low noise board footprint

WEIGHT SAVING MODULAR DESIGN

- Lightweight aluminum shell with chromate finish
- 3, 4, 8 or 9 bays standard, with other sizes possible
- Easy mixing and matching of modules

RUGGED RELIABILITY

- High-temperature, space-compatible materials
- Shell's integral guide keys align and minimize micromotion between boards

FULL RANGE OF MODULES

- Single-ended signals
- Differential signals
- Power
- RF
- Fiber optics
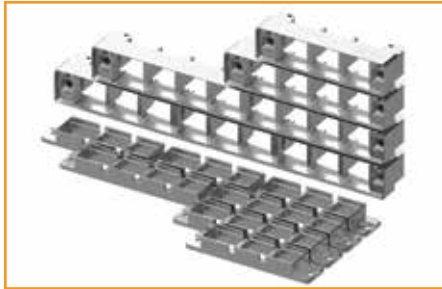
Shells

Rugged and Lightweight
- Precision machined from aluminum for light weight
- Chromate finished

Modular Flexibility
- Identical bays for flexibility in mixing and matching modules and positioning them optimally

3U and 6U Solutions
- 3 and 4-bay shells support 3U boards
- 8 and 9-bay shells support 6U boards
- Other sizes can be made available
- Custom shell features possible, including integrated covers

Signal Modules

Flexible
- Differential and single-ended signal daughtercard modules
- Universal backplane module for both differential and single-ended signals
- 90 contacts per module
- Differential module supports 30 pairs, with ground shields for isolation

Reliable
- Reliable box contacts with four points of contact
- RoHS compliant

High-Power Modules

High Current
- 55 A contacts
- Two contacts per module
- 3-beam high-conductivity contacts
- Vented housing for thermal dissipation

Tried and True Technology
- Based on MULTI-BEAM XLE connector design
- Same interface as used in VITA 62 power supply modules for VPX

Low-Power Modules

Flexible Current Handling
- 15 A contacts
- Five contacts per module

Tried and True Technology
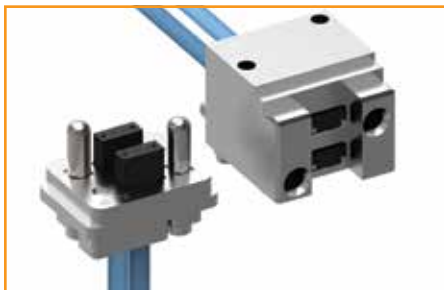- Based on TE Universal Power Module

RF Modules

Rugged Performance
- Superior RF performance to 40 GHz
- Float-mounted contacts ensure mated contacts bottom, for excellent isolation and low VSWR

Tried and True Technology
- Based on TE's VITA 67 modules for VPX
- SMPM contacts
- Five position modules

Optical Modules

Tried and True Technology
- MT ferrule inserts
- Up to 24 fibers (12 per ribbon)
- Based on VITA 66

Filler Modules

- Protects unused bays from dust or contamination
- Snaps into place on daughtercard shell

Guide Hardware

Precision Machined
- Tightly toleranced to minimize micromotion between boards
- Lightweight aluminum

Flexible Keying
- 8 key orientations per pin
- 64 key combinations per assembly
- ESD springs in daughtercard shell's guide sockets

Application

Daughtercard Assembly

Backplane Assembly
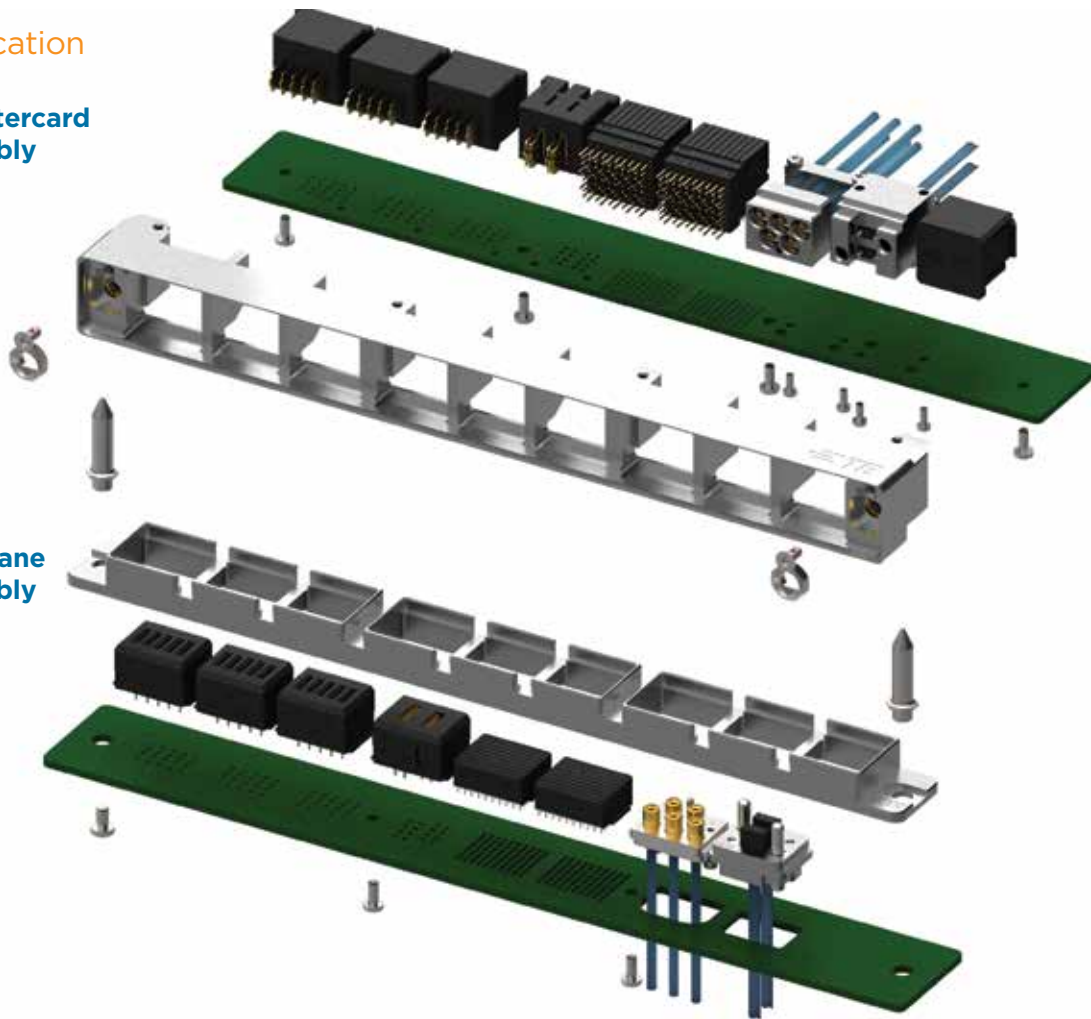
PART NUMBERS

Part	Type	Part No.	
		Daughtercard	**Backplane**
Connector Shells	3 bay	2226783-1	2226784-1
	4 bay	2226783-2	2226784-2
	9 bay	2226783-3	2226784-3
	8 bay	2226783-4	2226784-4
Modules	Differential Pair	2102436-1	2102438-1
	Single Ended	2102436-2	2102438-1
	Low-Power Module	2102444-1	2102446-1
	High-Power Module	2102440-1	2102442-1
	RF (SMPM) Module	2226511-1	2226512-1
	Optical (MT) Module	2226790-1	2226789-1
	Filler	2102449-1	—
Guide Hardware	Guide Socket, Keyed	2102503-2	—
	Guide Socket, Non-Keyed	2102503-4	—
	Screw, Guide Module, Phillips Head	208021-1	—
	Screw, Guide Module, Torx	2226170-1	—
	Guide Pin, Keyed	—	2102502-2
	Guide Pin, Non-Keyed	—	2102502-4

Complete Solutions for Embedded Computing

Count on TE for complete end-to-end solutions to enable high-performance computing. Our I/O solutions give you one of the widest ranges of choices for helping to increase speeds speeds, going longer distances, and eliminating bandwidth bottlenecks.

CeeLok FAS-T Connectors
- Small, field terminable, 10 Gigabit Ethernet, rugged I/O connector
- Compact size 8 shell saves weight and space
- Ruggedized for excellent shock, vibration, temperature, and sealing performance, with integral backshell that provides low cost, low-weight strain relief, and EMI protection

CeeLok FAS-X Connectors
- One of the highest speed I/O connectors available
- Single-channel size 11 or four-channel size 25 38999 shells or ARINC 809
- Fast, easy assembly
- Composite or metal shell
- Lanyard-release option

DEUTSCH Wildcat Connectors
- Full range of sizes and configurations, with wide choice of materials and finishes
- 38999 and micro sizes
- Close to double density compared to standard 38999

Rack and Panel Connectors
- I/O for LRUs and LRMs
- Blindmate, rugged, high pin count
- Signal, Quadrax, RF, power, and optical (ARINC 801 and mini expanded beam)

RF Connectors
- I/O for LRUs and LRMs
- Blindmate, rugged, high pin count
- Signal, Quadrax, RF, power, and optical (ARINC 801 and mini expanded beam)

High-Speed Cable
- Gigabit/10G Ethernet
- Fibre Channel
- DVI/HDMI
- IEEE 1394
- USB 3.0
- CANbus

Optical Connectors
- Expanded beam, ceramic ferrule, and MT termini
- Single mode and multimode for any reach
- Compatibility with an extensive line of standard and optics-only connectors

Harnessing Components
- Families matched to application extremes
- Heat-shrink tubing
- Molded parts
- Adhesives
- Backshells
- Identification
- Solder sleeves and termination devices

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Rugged High-Speed Solutions That Save Weight and Space

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