Amphenol
MILITARY & AEROSPACE

7/2021

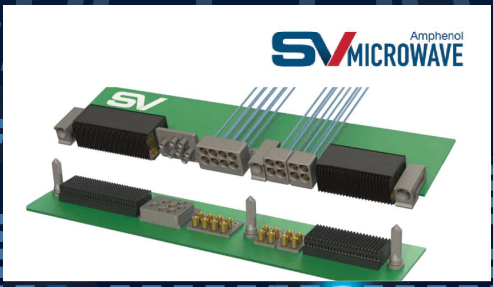
Amphenol VITA Compliant Connectors

MILITARY AND AEROSPACE APPLICATIONS

Open**VPX CONNECTORS**

VITA 46 • VITA 66.1 • VITA 66.4
VITA 66.5 • VITA 67









R-VPX UP TO 32 GBPS

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R-VPX

OVERVIEW:

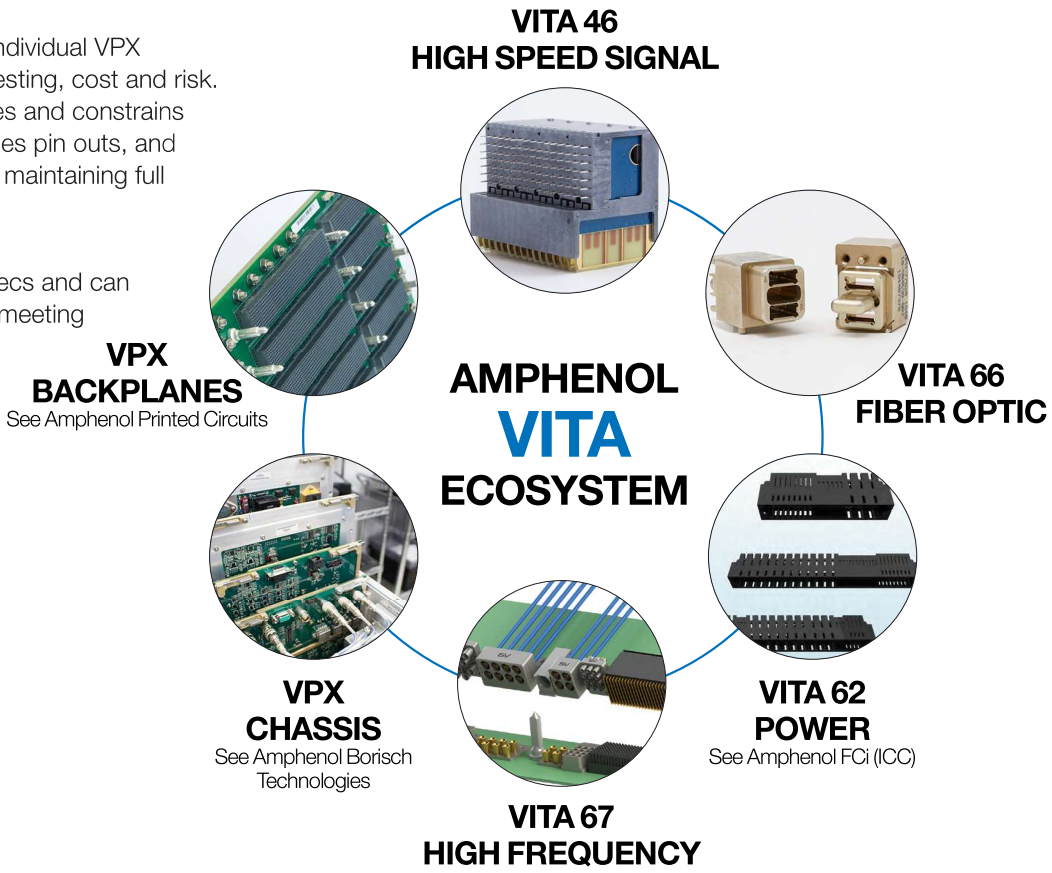
Amphenol offers a wide range of products designed for OpenVPX™, open architecture system needs.



OpenVPX is the next-generation interoperability standard for system-level defense and aerospace applications. It is ideal for rugged applications that require smaller packages, as well as high I/O densities and higher speed.

OpenVPX leverages the work of the individual VPX standards to reduce customization, testing, cost and risk. It defines an architecture that manages and constrains module and backplane designs, defines pin outs, and sets interoperability compliance while maintaining full compliance with VPX.

All products are compliant to VITA specs and can be designed for interoperability while meeting performance requirements.



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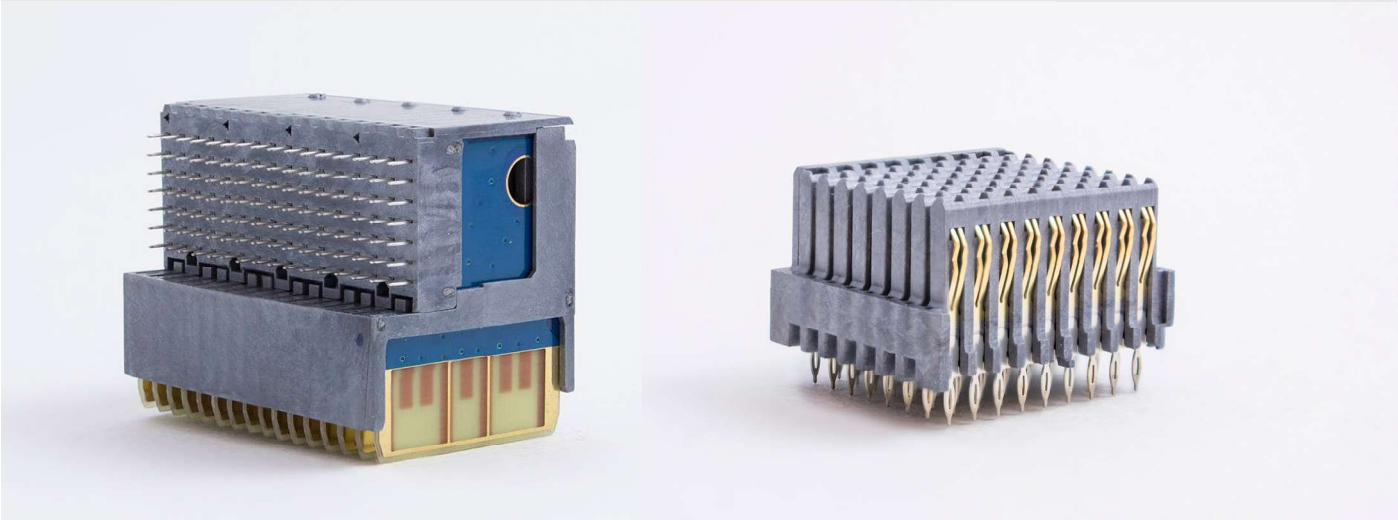
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R-VPX Ruggedized VITA 46



Amphenol's R-VPX is a ruggedized, high-speed, board-to-board interconnect system capable of data rates in excess of 10 Gbps, meeting and exceeding VITA 46 standards. This connector system gives users modularity and flexibility by utilizing PCB wafer construction with customized wafer-loading patterns.

R-VPX Ruggedized VITA 46 Connectors are designed for embedded computing applications in:



Commercial and Military Aerospace



Electronic Systems - C4ISR



Missile Defense



Ground Systems



Space Systems



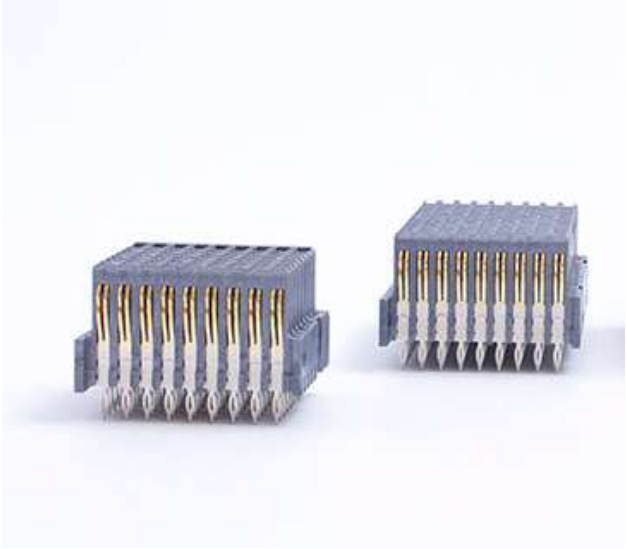
Other Ruggedized Environments

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R-VPX Overview:

FEATURES & BENEFITS:

- Qualified to VITA 46 for OpenVPX applications
- Fully intermountable & intermateable to existing VITA 46 connectors
- Meets and exceeds VITA 47
- Ruggedized 4 point contact system
- Modular COTS lightweight connector system
- Low mating force connector system
- Pin-Less backplane connector family
- Supports .8 inch card slot pitches
- Up to 140 signals per inch
- Contact current rating 1.5 Amps
- Can be combined with high power modules, RF
- Modules (VITA 67) and Optical modules (VITA 66)
- -55° to 105°C



SUPPORTED HIGH-SPEED PROTOCOLS:

- 1000BASE-KX
- 10GBASE-KX4
- 10GBASE-KR10
- 40GBASE-KR4
- InfiniBand SDR, DDR, and QDR
- PCIe Gen 1, 2, 3, 4 and 5
- Serial RapidIO 2.5, 3.125, 5, 6.25, 12.5 and 25 Gbaud

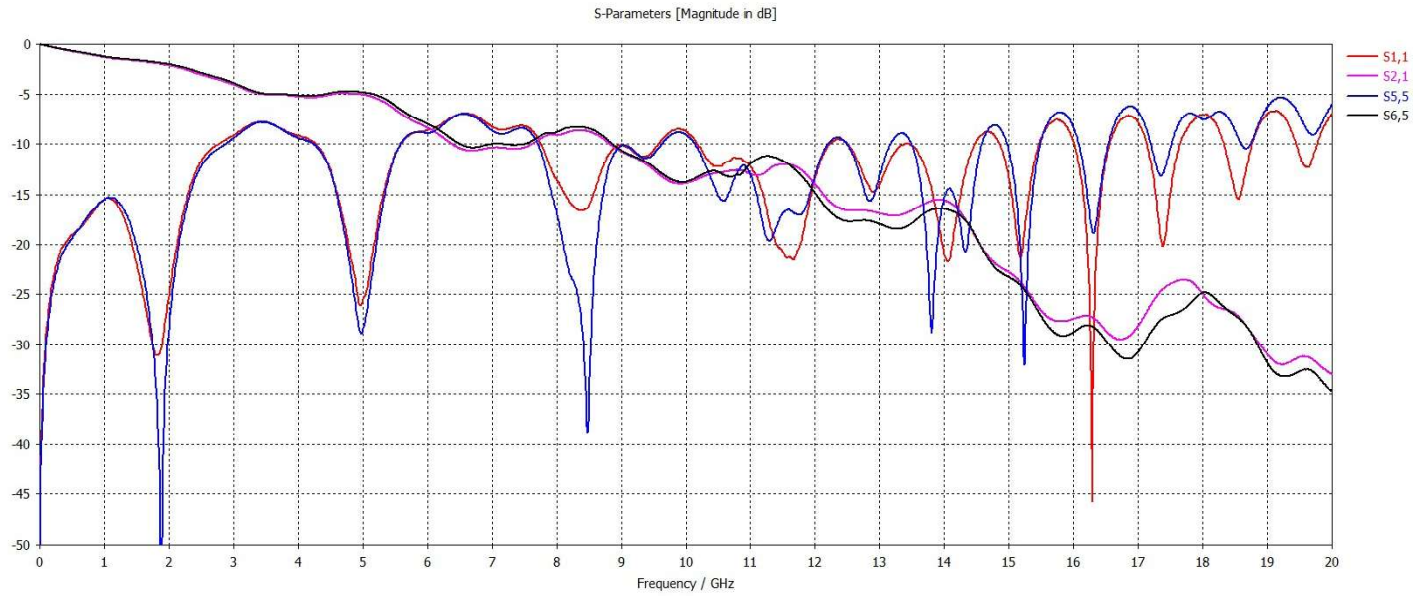


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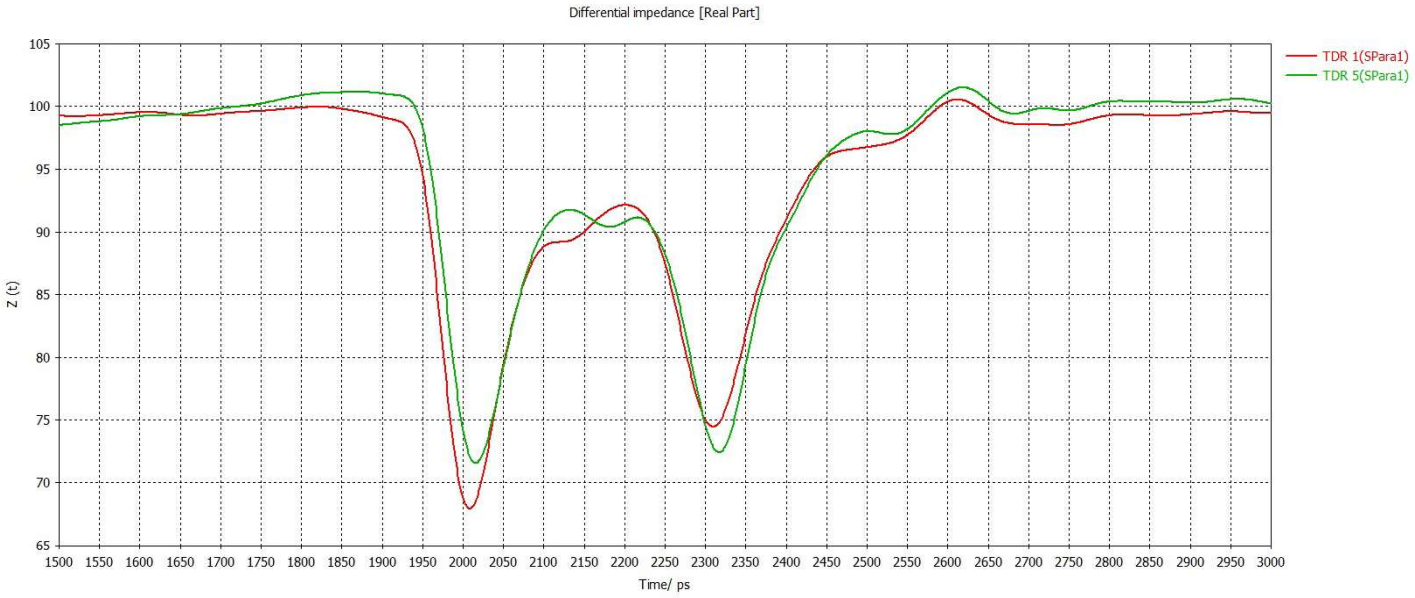
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R-VPX Overview:

Signal Integrity Comparison: Insert and Return Loss



Signal Integrity Comparison: Impedance



Note ≈ 44 ps 10-90% TDR Rise time

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R-VPX Part Number List:

Part Number	Gender	Size	Insert Type	Plating	Contact Finish
RVPX-PE16DM1	Evolution Module 1	16	P1-P6 Differential 25Gb/s	50 Micro-Inches	Tin
RVPX-PE216DM1	Evolution 2 Module	16	P1-P6 Differential 32Gb/s	50 Micro-Inches	Tin
RVPX-JE216MM1	Evolution 2 Backplane	16	J1, J3-J5 Middle	50 Micro-Inches	Tin
RVPX-PE16DM2	Evolution Module 1	16	P1-P6 Differential 25Gb/s	50 Micro-Inches	Tin-Lead
RVPX-PE216DM2	Evolution 2 Module	16	P1-P6 Differential 32Gb/s	50 Micro-Inches	Tin-Lead
RVPX-JE216MM2	Evolution 2 Backplane	16	J1, J3-J5 Middle	50 Micro-Inches	Tin-Lead
RVPX-PE16DC1	Evolution Module 1	16	P1-P6 Differential 25Gb/s	30 Micro-Inches	Tin
RVPX-PE216DC1	Evolution 2 Module	16	P1-P6 Differential 32Gb/s	30 Micro-Inches	Tin
RVPX-JE216MC1	Evolution 2 Backplane	16	J1, J3-J5 Middle	30 Micro-Inches	Tin
RVPX-PE16DC2	Evolution Module 1	16	P1-P6 Differential 25Gb/s	30 Micro-Inches	Tin-Lead
RVPX-PE216DC2	Evolution 2 Module	16	P1-P6 Differential 32Gb/s	30 Micro-Inches	Tin-Lead
RVPX-JE216MC2	Evolution 2 Backplane	16	J1, J3-J5 Middle	30 Micro-Inches	Tin-Lead

Part Number	Gender	Size	Insert Type	Plating	Contact Finish
RVPX-P08VM1	Std Module	8	P0 V- VITA 46	50 Micro-Inches	Tin
RVPX-P08DM1	Std Module	8	P0 Differential 10Gb/s	50 Micro-Inches	Tin
RVPX-P08SM1	Std Module	8	P0 Single-Ended	50 Micro-Inches	Tin
RVPX-P08PM1	Std Module	8	P0 Power	50 Micro-Inches	Tin
RVPX-P16DM1	Std Module	16	P1-P6 Differential 10Gb/s	50 Micro-Inches	Tin
RVPX-P16SM1	Std Module	16	P1-P6 Single-Ended	50 Micro-Inches	Tin
RVPX-P16PM1	Std Module	16	P1-P6 Power	50 Micro-Inches	Tin
RVPX-P08VM2	Std Module	8	P0 V- VITA 46	50 Micro-Inches	Tin-Lead
RVPX-P08DM2	Std Module	8	P0 Differential 10Gb/s	50 Micro-Inches	Tin-Lead
RVPX-P08SM2	Std Module	8	P0 Single-Ended	50 Micro-Inches	Tin-Lead
RVPX-P08PM2	Std Module	8	P0 Power	50 Micro-Inches	Tin-Lead
RVPX-P16DM2	Std Module	16	P1-P6 Differential 10Gb/s	50 Micro-Inches	Tin-Lead
RVPX-P16SM2	Std Module	16	P1-P6 Single-Ended	50 Micro-Inches	Tin-Lead
RVPX-P16PM2	Std Module	16	P1-P6 Power	50 Micro-Inches	Tin-Lead
RVPX-P08VC1	Std Module	8	P0 V- VITA 46	30 Micro-Inches	Tin
RVPX-P08DC1	Std Module	8	P0 Differential 10Gb/s	30 Micro-Inches	Tin
RVPX-P08SC1	Std Module	8	P0 Single-Ended	30 Micro-Inches	Tin
RVPX-P08PC1	Std Module	8	P0 Power	30 Micro-Inches	Tin

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R-VPX Part Number List:

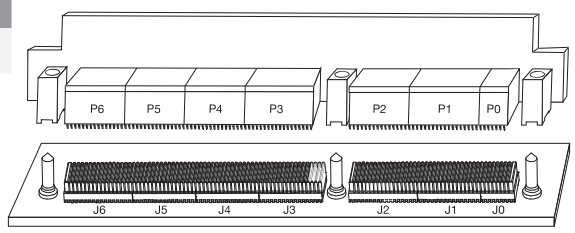
Part Number	Gender	Size	Insert Type	Plating	Contact Finish
RVPX-P16DC1	Std Module	16	P1-P6 Differential 10Gb/s	30 Micro-Inches	Tin
RVPX-P16SC1	Std Module	16	P1-P6 Single-Ended	30 Micro-Inches	Tin
RVPX-P16PC1	Std Module	16	P1-P6 Power	30 Micro-Inches	Tin
RVPX-P08VC2	Std Module	8	P0 V- VITA 46	30 Micro-Inches	Tin-Lead
RVPX-P08DC2	Std Module	8	P0 Differential 10Gb/s	30 Micro-Inches	Tin-Lead
RVPX-P08SC2	Std Module	8	P0 Single-Ended	30 Micro-Inches	Tin-Lead
RVPX-P08PC2	Std Module	8	P0 Power	30 Micro-Inches	Tin-Lead
RVPX-P16DC2	Std Module	16	P1-P6 Differential 10Gb/s	30 Micro-Inches	Tin-Lead
RVPX-P16SC2	Std Module	16	P1-P6 Single-Ended	30 Micro-Inches	Tin-Lead
RVPX-P16PC2	Std Module	16	P1-P6 Power	30 Micro-Inches	Tin-Lead
RVPX-J08EM1	Backplane	8	J0 End	50 Micro-Inches	Tin
RVPX-J08EC1	Backplane	8	J0 End	30 Micro-Inches	Tin
RVPX-J08EM2	Backplane	8	J0 End	50 Micro-Inches	Tin-Lead
RVPX-J08EC2	Backplane	8	J0 End	30 Micro-Inches	Tin-Lead
RVPX-J16MM1	Backplane	16	J1, J3-J5 Middle	50 Micro-Inches	Tin
RVPX-J16MC1	Backplane	16	J1, J3-J5 Middle	30 Micro-Inches	Tin
RVPX-J16EM1	Backplane	16	J2, J6 End	50 Micro-Inches	Tin
RVPX-J16EC1	Backplane	16	J2, J6 End	30 Micro-Inches	Tin
RVPX-J16MM2	Backplane	16	J1, J3-J5 Middle	50 Micro-Inches	Tin-Lead
RVPX-J16MC2	Backplane	16	J1, J3-J5 Middle	30 Micro-Inches	Tin-Lead
RVPX-J16EM2	Backplane	16	J2, J6 End	50 Micro-Inches	Tin-Lead
RVPX-J16EC2	Backplane	16	J2, J6 End	30 Micro-Inches	Tin-Lead

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DAUGHTER CARD: How to Order R-VPX and EVO-1

Complete steps 1-6 to create your part number

1. Connector Type	2. Gender	3. Size	4. Insert Type	5. Contact Plating	6. Contact Termination Finish
RVPX-	P	16	D	M	1



STEP 1 :

Connector Type	
RVPX-	Rugged High Speed Board

STEP 2 :

Gender	
P	Module 10 Gb/s
PE	Evolution Module 16 Gb/s
PE2	Evolution Module 2 32 Gb/s

STEP 3 :

Size	
08	8 Position Insert
16	16 Position Insert

STEP 4 :

Insert Type	
D	Differential
S	Single-Ended
P	Power
V	Standard VITA 46 P0 Load

STEP 5 :

Contact Plating	
M	50 Micro-Inches Gold
C	30 Micro-Inches Gold

STEP 6 :

Contact Termination Finish		
1	Tin	
2	Tin-Lead	

Daughter Card			
Module Position		Part No. Amphenol R-VPX Connectors	
PO		RVPX-P08VCX	RVPX-P08VMX*
P1, P2, P3, P4, P5, P6	Differential	RVPX-P16DCX	RVPX-P16DMX*
	Single-Ended	RVPX-P16SCX	RVPX-P16SMX*
Keying Guide Modules		RVPX-HMD-X	RVPX-HMM-X

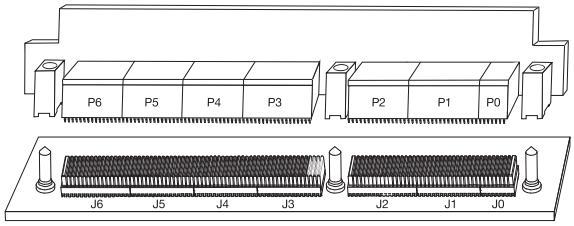
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BACKPLANE: How to Order

Complete steps 1-6 to create your part number

1. Connector Type	2. Gender	3. Size	4. Insert Type	5. Contact Plating	6. Contact Termination Finish
RVPX-	J	16	E	M	1



STEP 1 :

Connector Type	
RVPX-	Rugged High Speed Board

STEP 2 :

Gender	
J	Backplane
JE2	Backplane 32 Gbps

STEP 3 :

Size	
08	8 Position Insert
16	16 Position Insert

STEP 4 :

Insert Type	
M	Middle
E	End

STEP 5 :

Contact Plating	
M	50 Micro-Inches Gold
C	30 Micro-Inches Gold

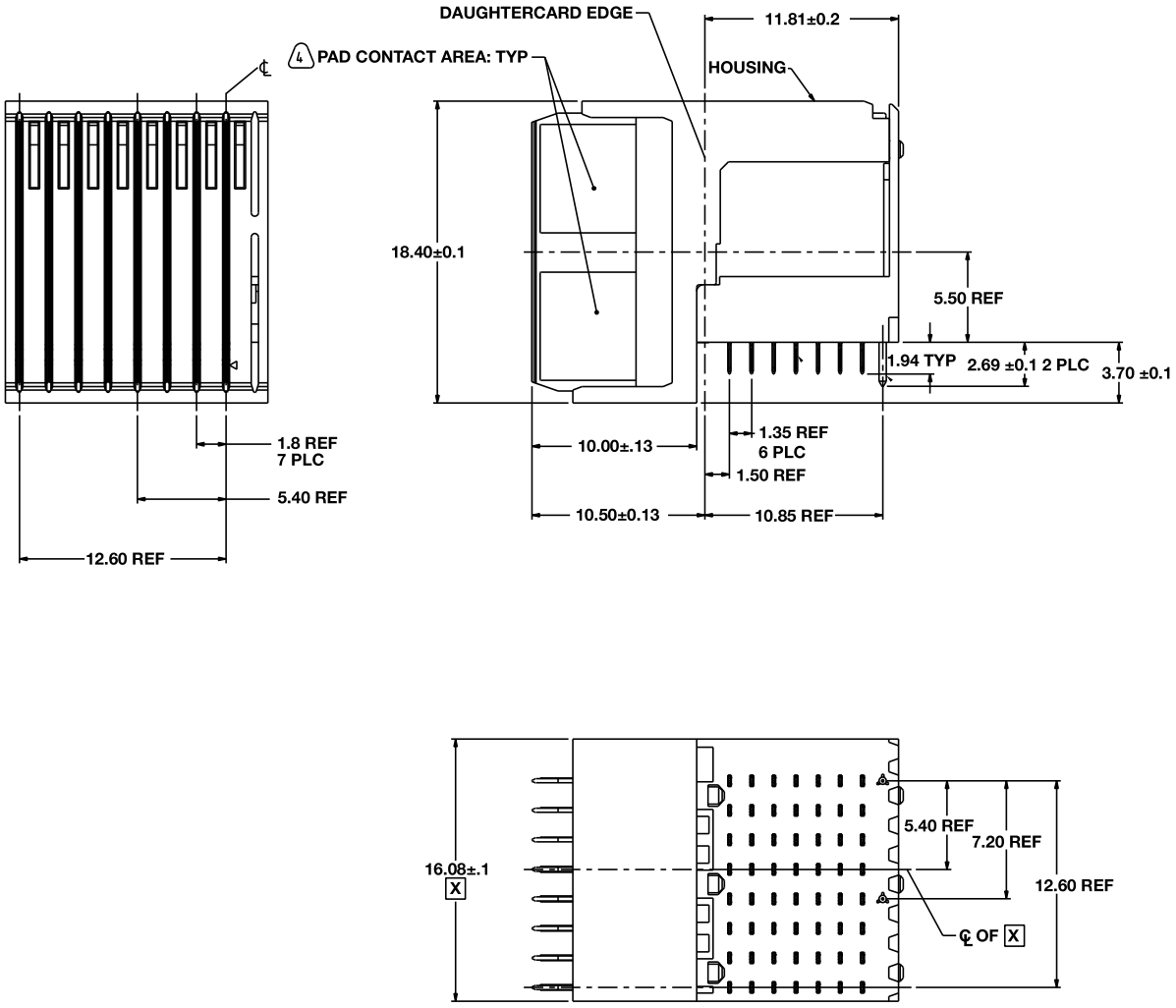
STEP 6 :

Contact Termination Finish		
1	Tin	
2	Tin-Lead	

Backplane		
Module Position	Part No. Amphenol R-VPX Connectors	
J0	RVPX-J08ECX	RVPX-J08EMX*
J1, J3, J4, J5	RVPX-J16MCX	RVPX-J16MMX*
J2, J6	RVPX-J16ECX	RVPX-J16EMX*
Keying Guide Modules	RVPX-HPD-X	RVPX-HPM-X

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DAUGHTER CARD: 8 Position Half Left End Module

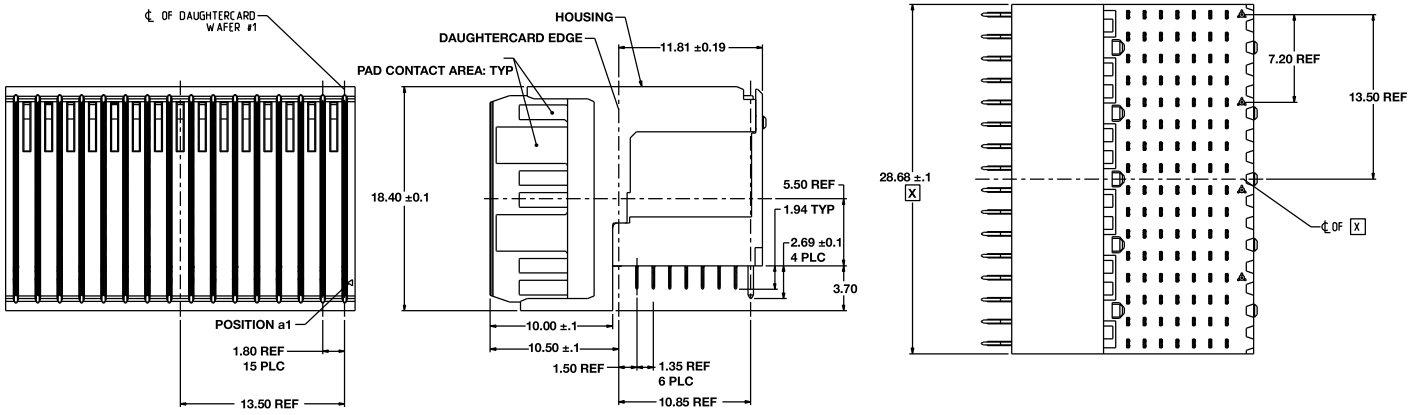


PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-P08VM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-P08VM2		Tin-lead	
RVPX-P08VC1	30 µ-Inch min.	Tin	
RVPX-P08VC2		Tin-lead	

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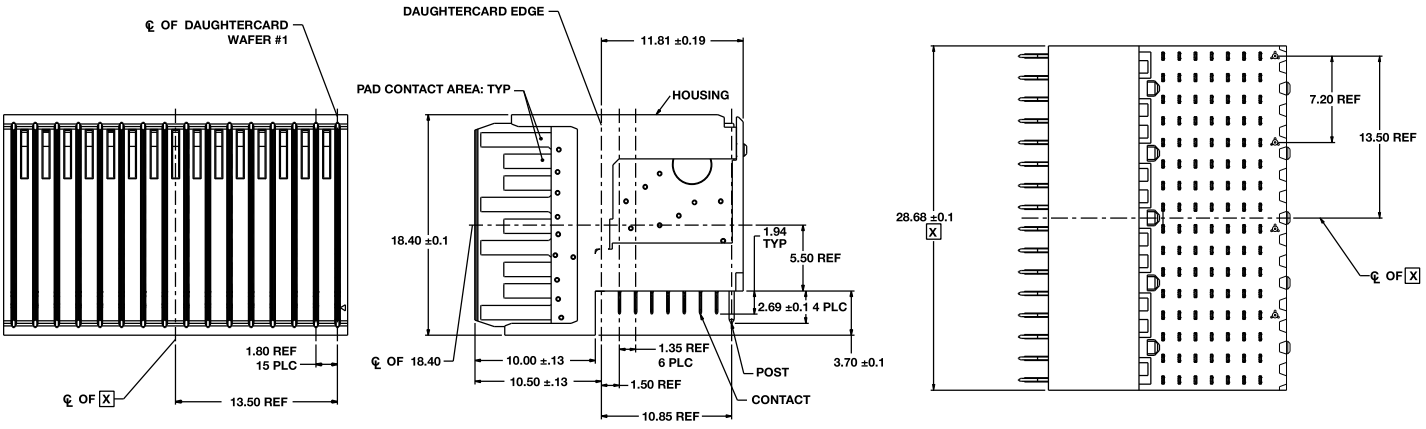
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DAUGHTER CARD: 16 Position Center Differential Module



PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-P16DM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-P16DM2		Tin-lead	
RVPX-P16DC1	30 µ-Inch min.	Tin	
RVPX-P16DC2		Tin-lead	

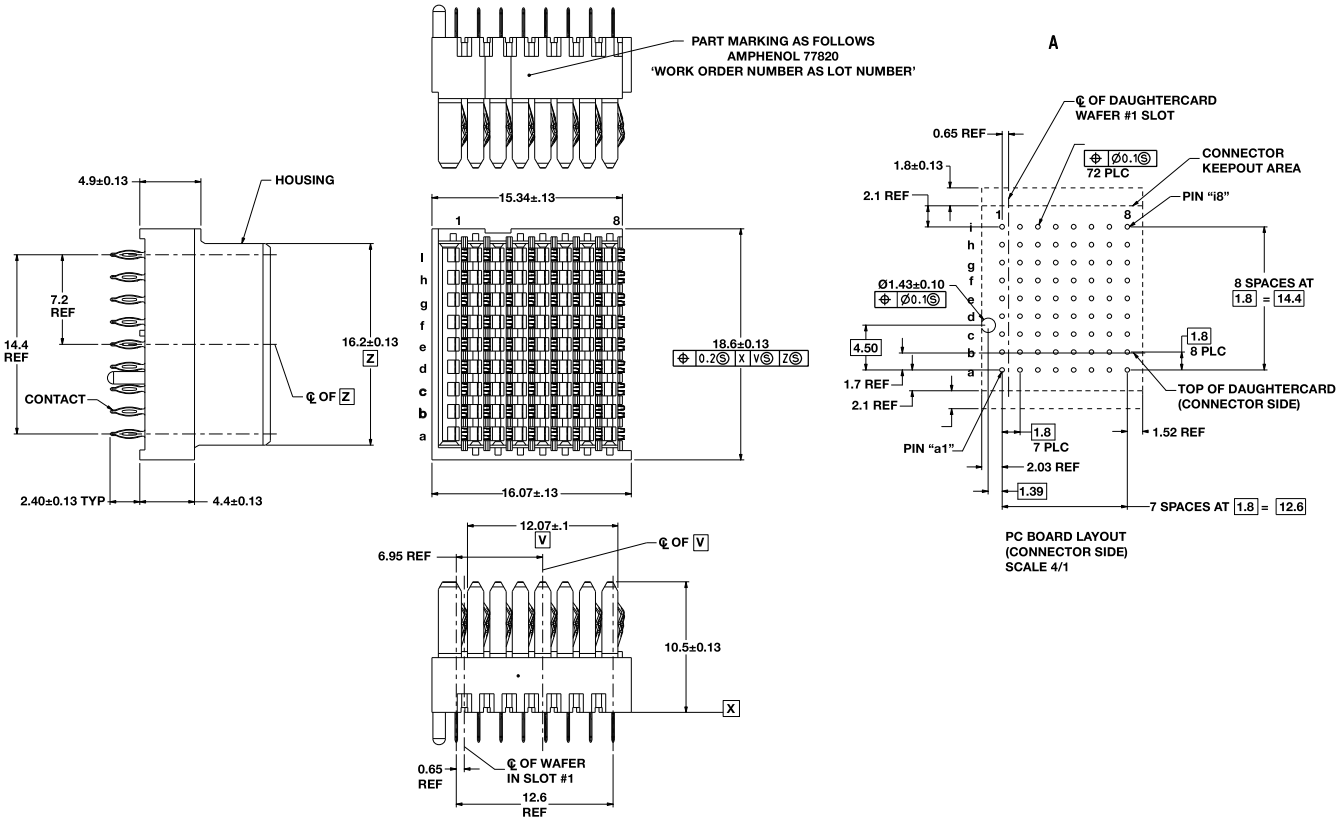
DAUGHTER CARD: 16 Position Center Single End



PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-P16SM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-P16SM2		Tin-lead	
RVPX-P16SC1	30 µ-Inch min.	Tin	
RVPX-P16SC2		Tin-lead	

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BACKPLANE: 8 Position Left End Backplane

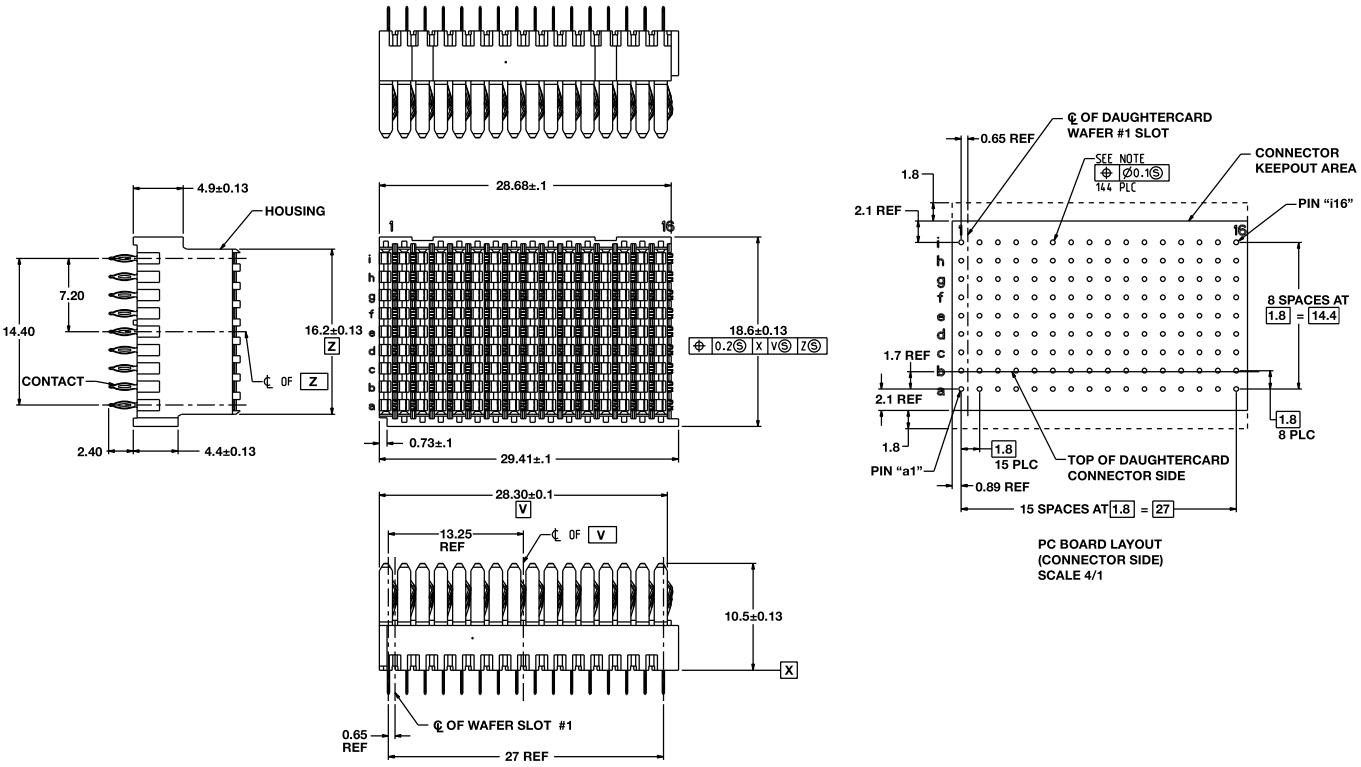


PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-J08EM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-J08EM2		Tin-lead	
RVPX-J08EC1	30 µ-Inch min.	Tin	
RVPX-J08EC2		Tin-lead	

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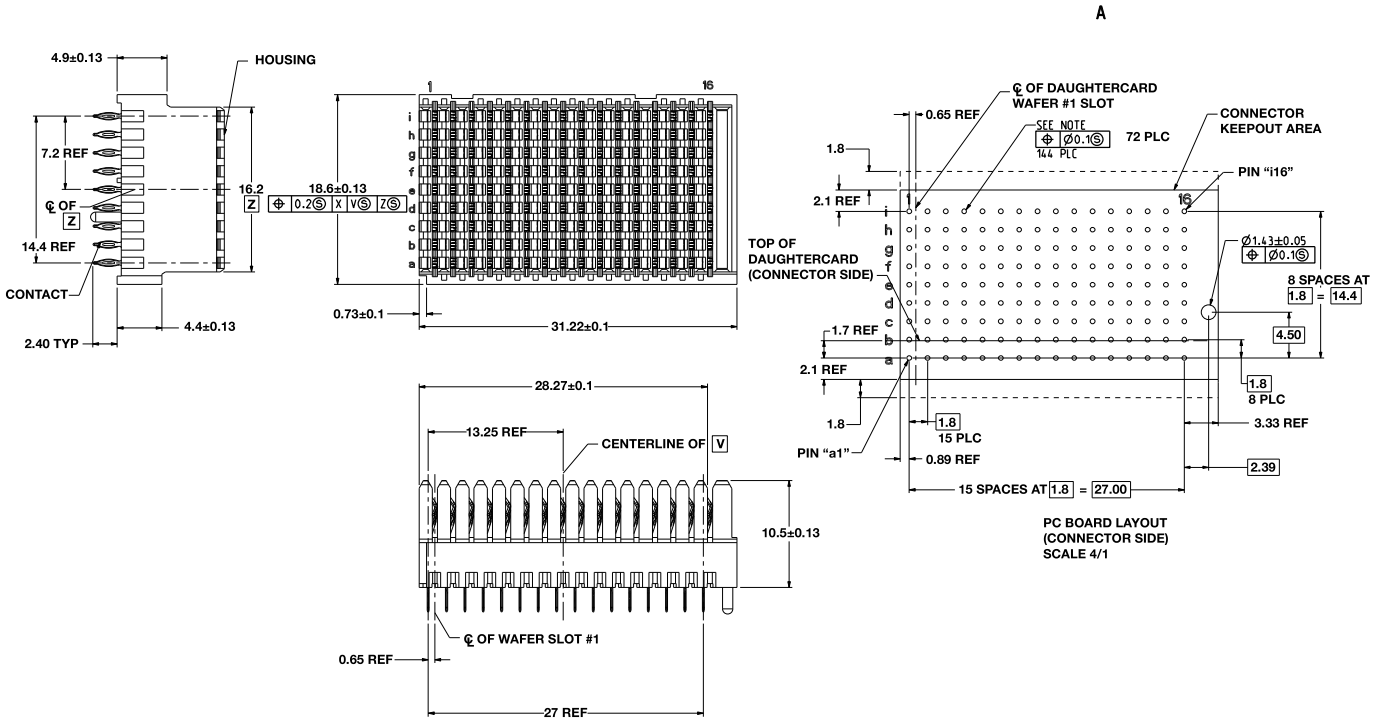
BACKPLANE: 16 Position Middle Backplane



PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-J16MM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-J16MM2		Tin-lead	
RVPX-J16MC1	30 µ-Inch min.	Tin	
RVPX-J16MC2		Tin-lead	

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BACKPLANE: 16 Position Right End Backplane



PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-J16EM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-J16EM2		Tin-lead	
RVPX-J16EC1	30 µ-Inch min.	Tin	
RVPX-J16EC2		Tin-lead	

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R-VPX EVOLUTION SERIES HIGH SPEED EVOLUTION



R-VPX EVO

Amphenol introduces R-VPX Evolution Module up to 32 Gbps data rate transfer performance.

R-VPX EVOLUTION 1.0:

- 16 Gb/s+ Performance
- 4 Point Contact System
- Module connector has modified footprint- utilizes smaller compliant contacts for increased Si performance.
- Backplane connector is the legacy connector- no changes necessary on the backplane.
- Intermateable with existing/legacy VITA 46 connectors
- Footprint compliant with 46.30 (VITA Draft Spec)

R-VPX EVOLUTION 2.0:

- 32Gb/s Performance
- 4 Point Contact System
- Module AND Backplane connectors utilize smaller compliant contacts for increase Si performance
- Intermateable with existing/legacy VITA 46 connectors.
- 46.30 Spec compliant

FEATURES AND BENEFITS

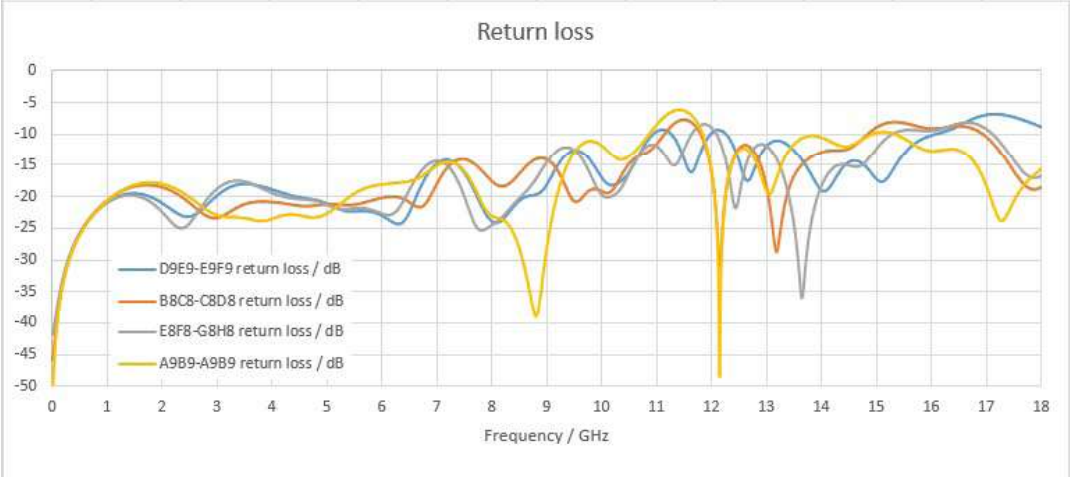
Supports High Speed Protocols

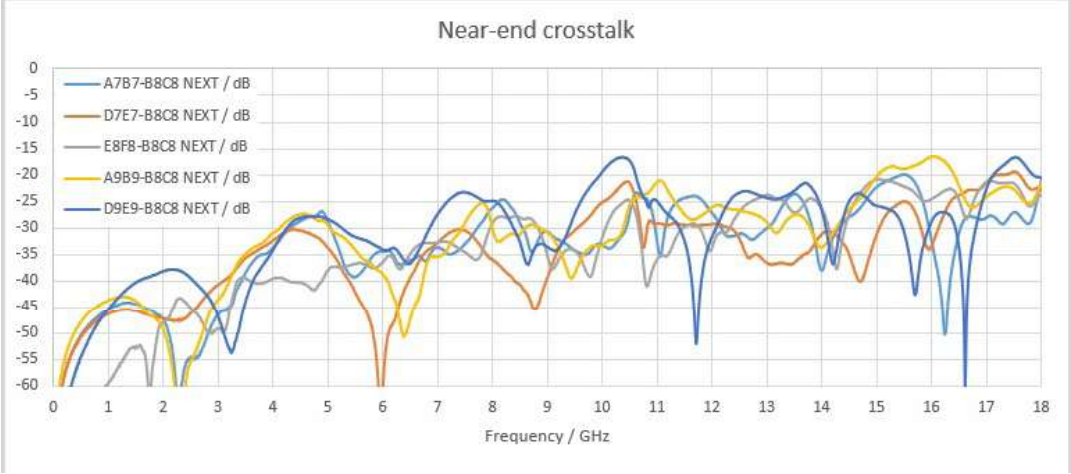
- PCIe Gen 4 and Gen 5
- 1000BASE-KX
- 10GBASE-KX4
- 100GBASE-KR4
- Infiniband SDR, DDR, and QDR
- Serial RapidIO 12.5 Gbaud and 25 Gbaud

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EVO 2 SI ELECTRICAL PERFORMANCE
Mated Configuration



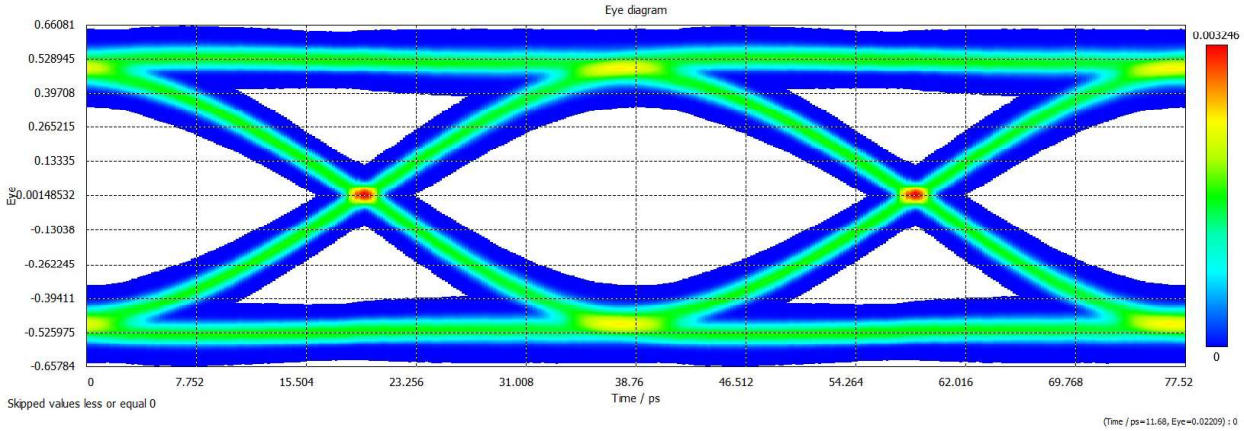




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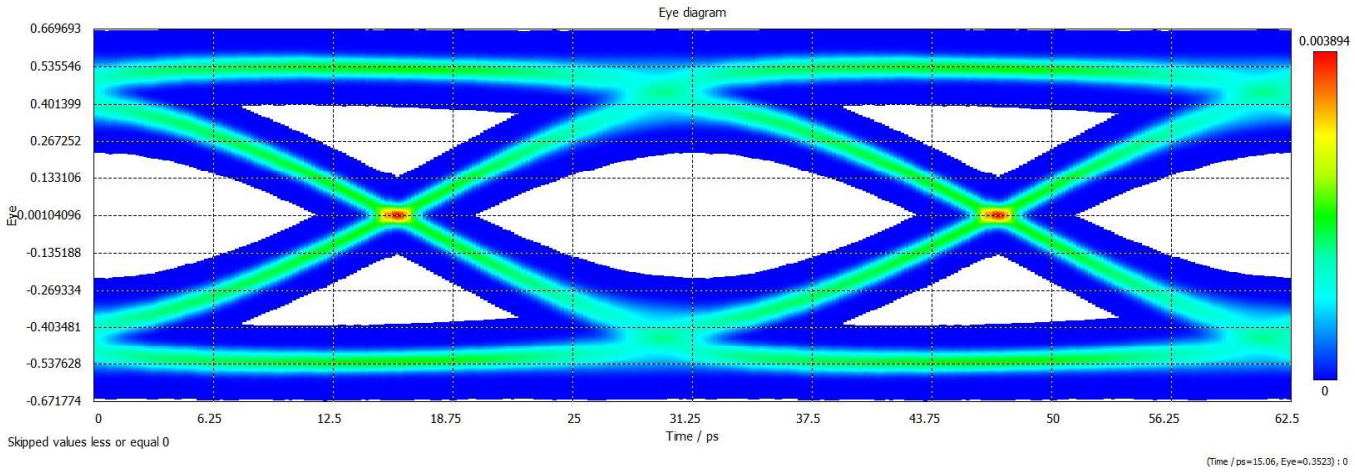
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Eye pattern @ 25.8 Gbps



Note: PRBS-23 signal through D7E7-E7F7 pair with all surrounding pairs as active aggressors

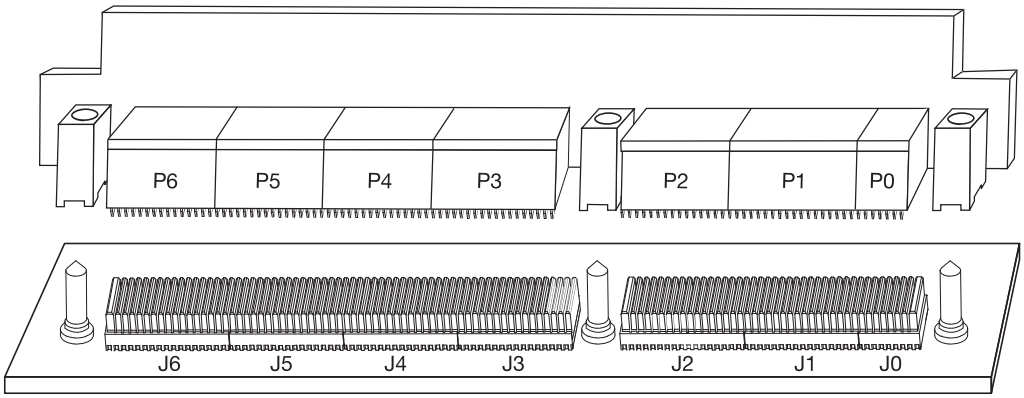
Eye pattern @ 32 Gbps



Note: PRBS-23 signal through D7E7-E7F7 pair with all surrounding pairs as active aggressors

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R-VPX EVOLUTION SERIES - EVO 1 AND 2 PART NUMBERS



	Part Number	Location	Gold in Contact Area	Compliant Contact Termination Finish	Nickel Overall
EVO 2 8 Pos Module	RVPX-PE208VM1	P0	50 u-inch min.	Tin	50 u-Inch min.
	RVPX-PE208VM2	P0		Tin-Lead	
	RVPX-PE208VC1	P0	30 u-inch min.	Tin	50 u-Inch min.
	RVPX-PE208VC2	P0		Tin-Lead	
EVO 1 16 Pos Module	RVPX-PE16DM1	P1-P6	50 u-inch min.	Tin	50 u-Inch min.
	RVPX-PE16DM2	P1-P6		Tin-Lead	
	RVPX-PE16DC1	P1-P6	30 u-inch min.	Tin	50 u-Inch min.
	RVPX-PE16DC2	P1-P6		Tin-Lead	
EVO 2 16 Pos Module	RVPX-PE216DM1	P1-P6	50 u-inch min.	Tin	50 u-Inch min.
	RVPX-PE216DM2	P1-P6		Tin-Lead	
	RVPX-PE216DC1	P1-P6	30 u-inch min.	Tin	50 u-Inch min.
	RVPX-PE216DC2	P1-P6		Tin-Lead	
EVO 2 8 Pos Backplane	RVPX-JE208EM1	J0	50 u-inch min.	Tin	50 u-Inch min.
	RVPX-JE208EM2	J0		Tin-Lead	
	RVPX-JE208EC1	J0	30 u-inch min.	Tin	50 u-Inch min.
	RVPX-JE208EC2	J0		Tin-Lead	
EVO 2 16 Pos Backplane	RVPX-JE216MM1	J1, J3-J5	50 u-inch min.	Tin	50 u-Inch min.
	RVPX-JE216MM2	J1, J3-J5		Tin-Lead	
	RVPX-JE216MC1	J1, J3-J5	30 u-inch min.	Tin	50 u-Inch min.
	RVPX-JE216MC2	J1, J3-J5		Tin-Lead	
	RVPX-JE216EM1	J2, J6	50 u-inch min.	Tin	50 u-Inch min.
	RVPX-JE216EM2	J2, J6		Tin-Lead	
	RVPX-JE216EC1	J2, J6	30 u-inch min.	Tin	50 u-Inch min.
	RVPX-JE216EC2	J2, J6		Tin-Lead	

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R-VPX EVOLUTION SERIES - EVO 2 PART NUMBERS
Hybrid Configurations

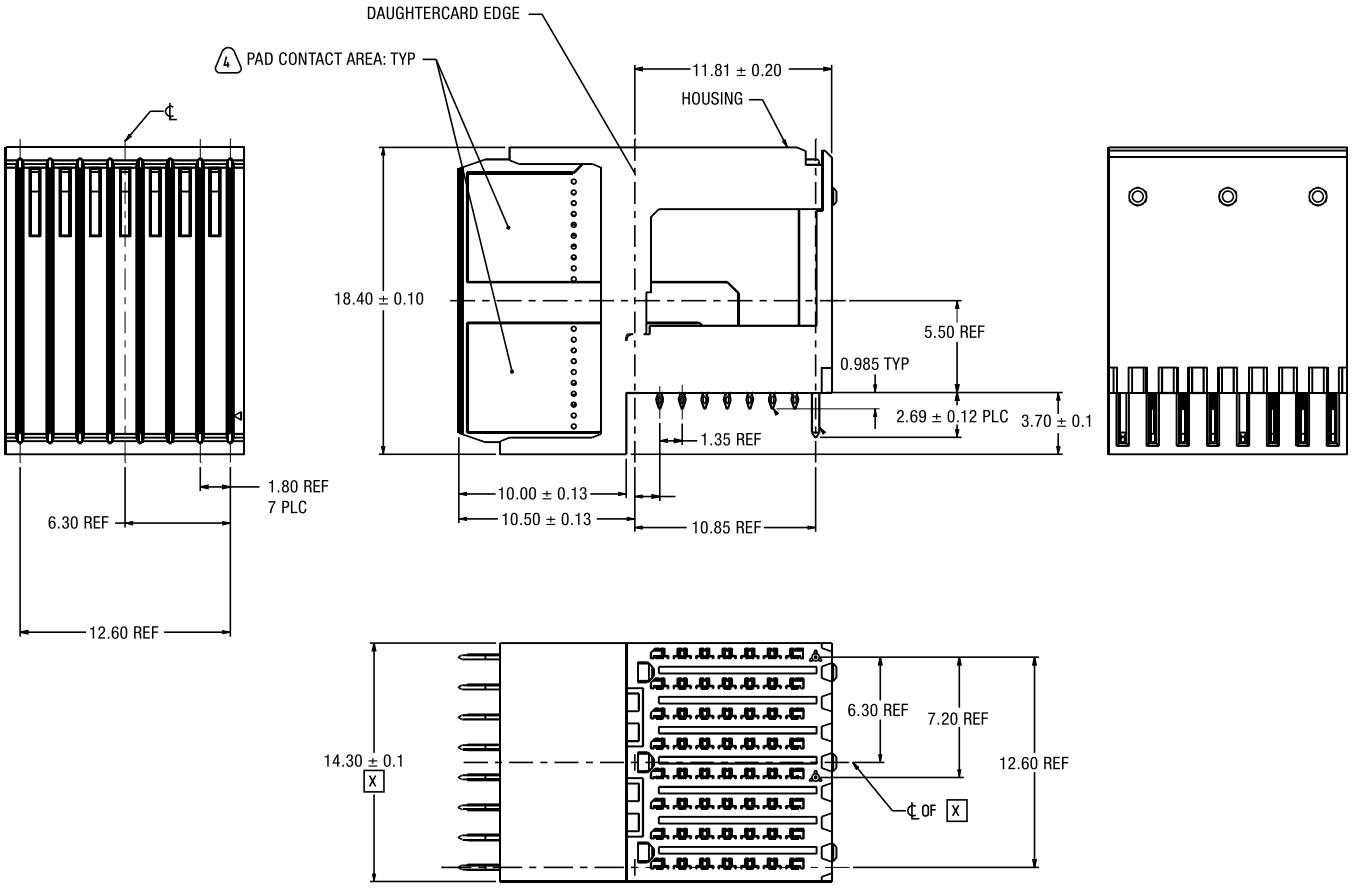
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R-VPX EVO

Evo 2 Hybrid Confgiurations					
Part Number	Gender	Rows of Contacts	Insert Type	Plating	Contact Finish
RVPX-PE20817M2	EVO 2 Module	8	P0 V - VITA 46 Hybrid	50 Micro-Inches	Tin-Lead
RVPX-PE21609M2	EVO 2 Module	16	Hybrid PO+P1A	50 Micro-Inches	Tin-Lead
RVPX-PE20817M1	EVO 2 Module	8	P0 V - VITA 46 Hybrid	50 Micro-Inches	Tin
RVPX-PE21609M1	EVO 2 Module	16	Hybrid PO+P1A	50 Micro-Inches	Tin
RVPX-PE20817C2	EVO 2 Module	8	P0 V - VITA 46 Hybrid	30 Micro-Inches	Tin-Lead
RVPX-PE21609C2	EVO 2 Module	16	Hybrid PO+P1A	30 Micro-Inches	Tin-Lead
RVPX-PE20817C1	EVO 2 Module	8	P0 V - VITA 46 Hybrid	30 Micro-Inches	Tin
RVPX-PE21609C1	EVO 2 Module	16	Hybrid PO+P1A	30 Micro-Inches	Tin
RVPX-JE20818M2	EVO 2 Backplane	8	J0 End Hybrid	50 Micro-Inches	Tin-Lead
RVPX-JE21616M2	EVO 2 Backplane	16	Hybrid J0+J1A	50 Micro-Inches	Tin-Lead
RVPX-JE20818M1	EVO 2 Backplane	8	J0 End Hybrid	50 Micro-Inches	Tin
RVPX-JE21616M1	EVO 2 Backplane	16	Hybrid J0+J1A	50 Micro-Inches	Tin
RVPX-JE20818C2	EVO 2 Backplane	8	J0 End Hybrid	30 Micro-Inches	Tin-Lead
RVPX-JE21616C2	EVO 2 Backplane	16	Hybrid J0+J1A	30 Micro-Inches	Tin-Lead
RVPX-JE20818C1	EVO 2 Backplane	8	J0 End Hybrid	30 Micro-Inches	Tin
RVPX-JE21616C1	EVO 2 Backplane	16	Hybrid J0+J1A	30 Micro-Inches	Tin

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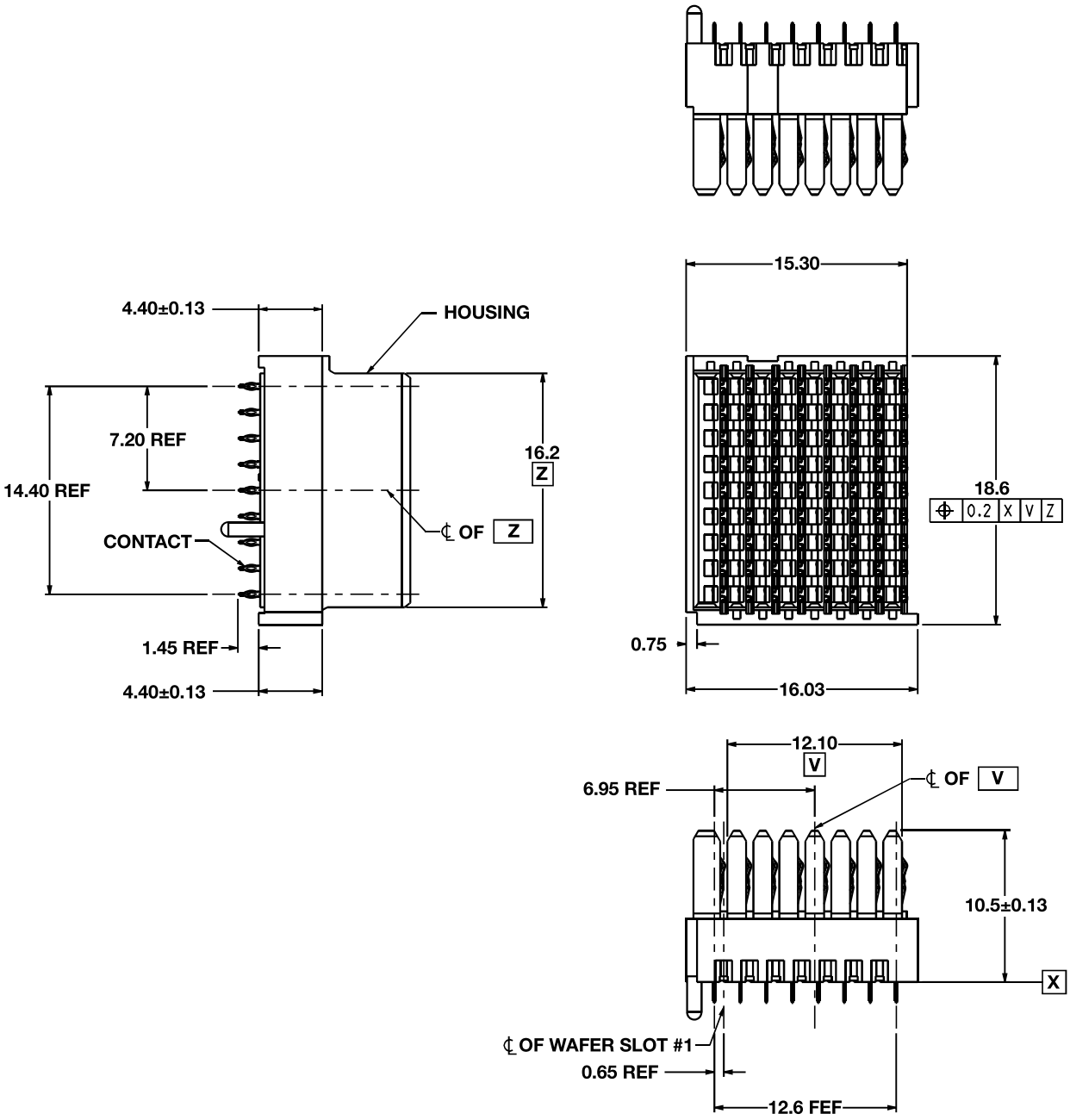
R-VPX EVOLUTION SERIES- EVO 2
DAUGHTER CARD: Right-Angle Plug Assembly, 8 Center



PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold in Contact Area	Compliant	Nickel Overview
RVPX-PE208VM1	1 50 µ-INCH MIN	50 µ-INCH MIN TIN	50 µ-INCH MIN
RVPX-PE208VM2	50 µ-INCH MIN	50 µ-INCH MIN TIN	50 µ-INCH MIN
RVPX-PE208VC1	30 µ-INCH MIN	50 µ-INCH MIN TIN	50 µ-INCH MIN
RVPX-PE208VC2	30 µ-INCH MIN	50 µ-INCH MIN TIN	50 µ-INCH MIN

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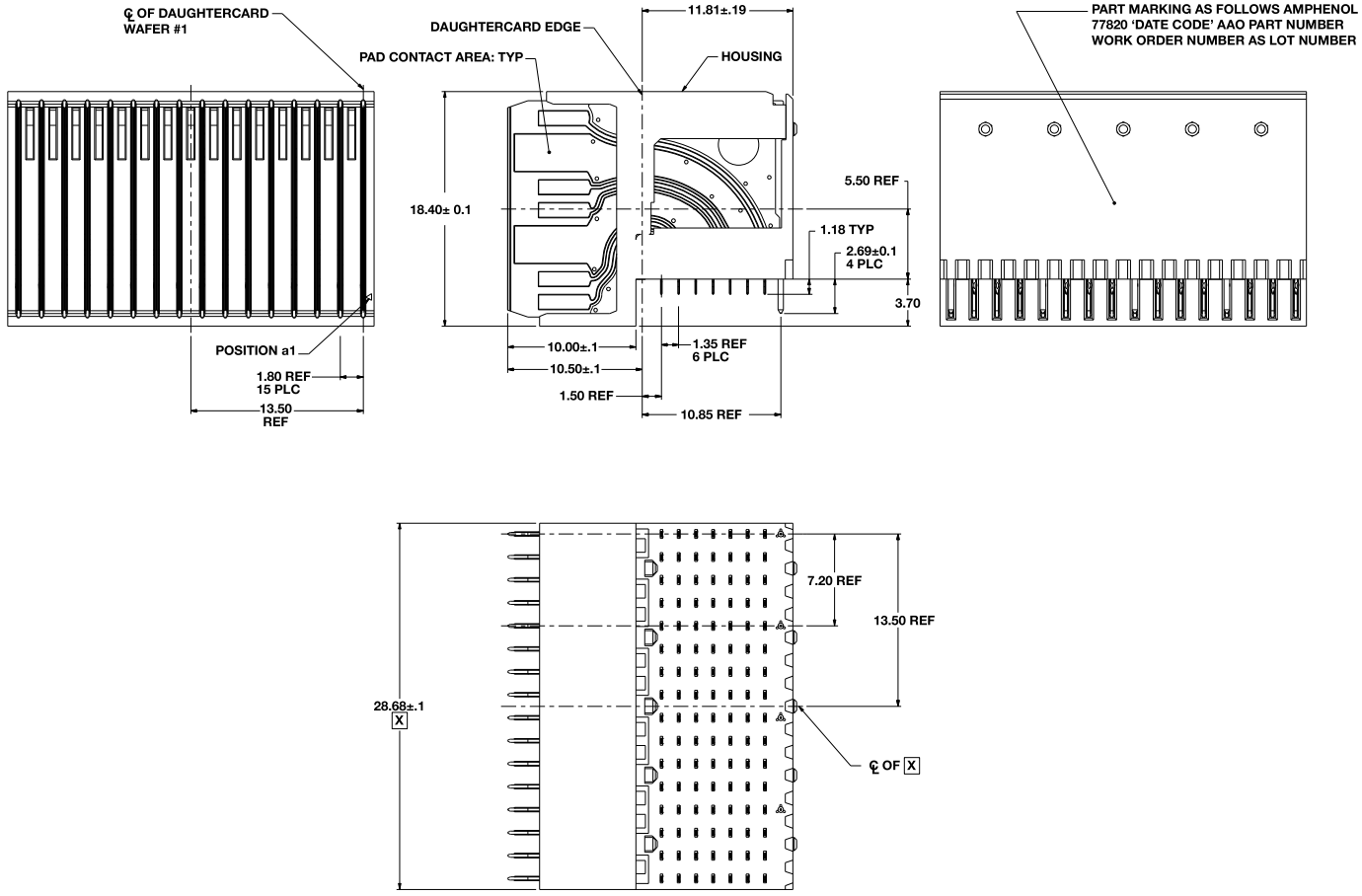
BACKPLANE EVOLUTION 2: 8 Position Backplane



PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold in Contact Area	Compliant	Nickel Overview
RVPX-JE208EM1	50 µ-INCH MIN	50 µ-INCH MIN TIN	50 µ-INCH MIN
RVPX-JE208EM2	50 µ-INCH MIN	50 µ-INCH MIN TIN-LEAD	50 µ-INCH MIN
RVPX-JE208EC1	30 µ-INCH MIN	50 µ-INCH MIN TIN	50 µ-INCH MIN
RVPX-JE208EC2	30 µ-INCH MIN	50 µ-INCH MIN TIN-LEAD	50 µ-INCH MIN

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R-VPX EVOLUTION SERIES- EVO 1 & EVO 2
DAUGHTER CARD: Right-Angle Plug Assembly, 16 Center

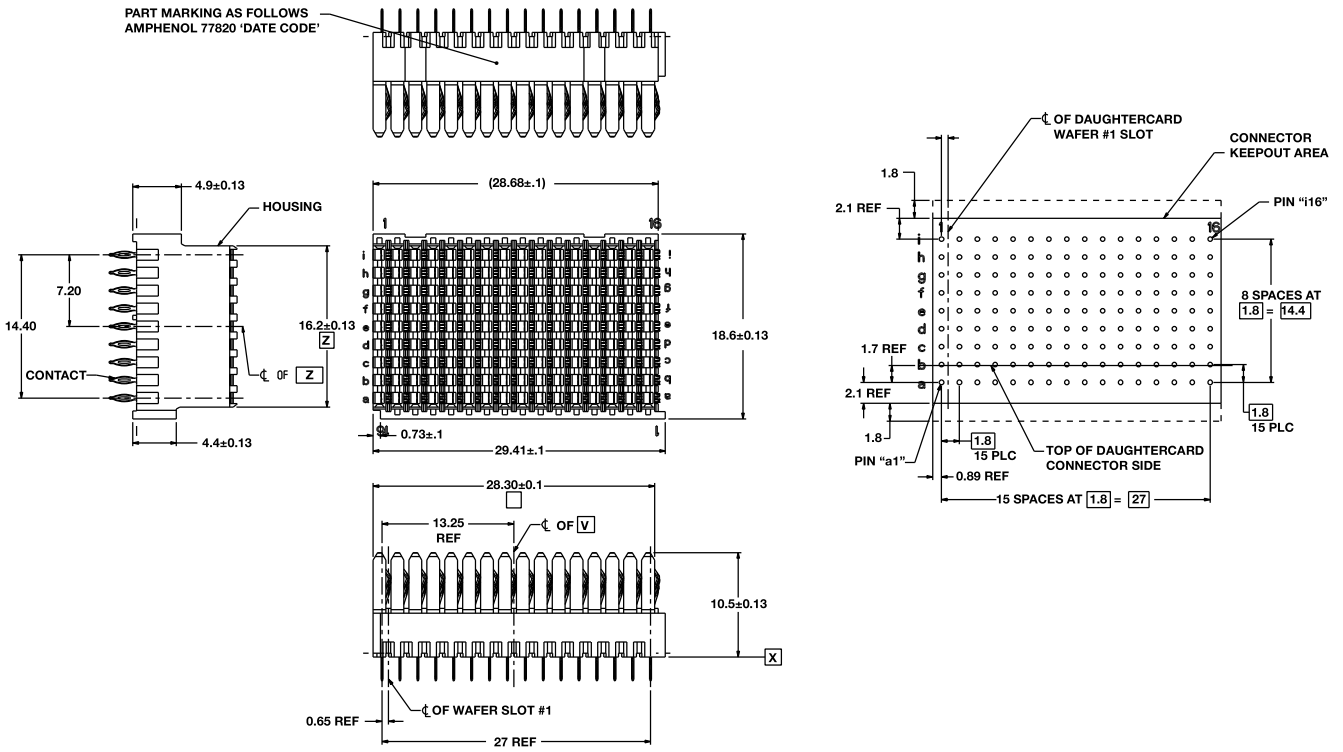


	PLATING THICKNESS AND MATERIAL BY PART NUMBER			
	Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
EVO 1 16 Gpbs	RVPX-PE16DM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
	RVPX-PE16DM2		Tin-lead	
	RVPX-PE16DC1	30 µ-Inch min.	Tin	
	RVPX-PE16DC2		Tin-lead	
EVO 2 32 Gpbs	RVPX-PE216DM1	50 µ-Inches min.	Tin	50 µ-Inches min.
	RVPX-PE216DM2		Tin-Lead	
	RVPX-PE216DC1	30 µ-Inches min	Tin	
	RVPX-PE216DC2		Tin-Lead	

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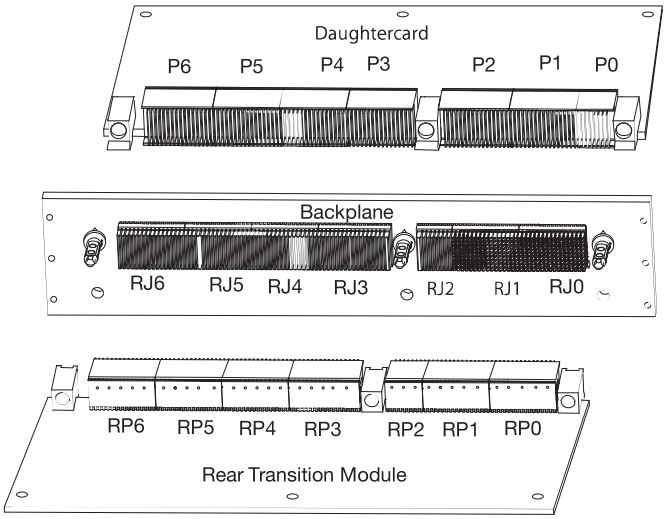
BACKPLANE EVOLUTION 2: 16 Position Middle Backplane



PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-JE216MM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-JE216MM2		Tin-lead	
RVPX-JE216MC1	30 µ-Inch min.	Tin	
RVPX-JE216MC2		Tin-lead	

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R-VPX REAR TRANSITION MODULE: Part Number List



Part Number	Gender	Size	Insert Type	Plating	Contact Finish
RVPX-RP208DC1	RTM Module	8	RP2 Single-Ended	30 Micro-Inches	Tin
RVPX-RP208DC2	RTM Module	8	RP2 Single-Ended	30 Micro-Inches	Tin-Lead
RVPX-RP208DM1	RTM Module	8	RP2 Differential	50 Micro-Inches	Tin
RVPX-RP208DM2	RTM Module	8	RP2 Differential	50 Micro-Inches	Tin-Lead
RVPX-RP208SM1	RTM Module	8	RP2 Differential	50 Micro-Inches	Tin
RVPX-RP208SM2	RTM Module	8	RP2 Differential	50 Micro-Inches	Tin-Lead
RVPX-PE20815M2	RTM Module Evolution 2	8	RP2 Differential	50 Micro-Inches	Tin-lead
RVPX-PE20817M2	RTM Module Evolution 2	8	P0	50 Micro-Inches	Tin-lead
RVPX-RP208SC1	RTM Module	8	RP2 Differential	30 Micro-Inches	Tin
RVPX-RP208SC2	RTM Module	8	RP2 Differential	30 Micro-Inches	Tin-Lead
RVPX-RP016VC1	RTM Module	16	End - RP0	30 Micro-Inches	Tin
RVPX-RP016VC2	RTM Module	16	End - RP0	30 Micro-Inches	Tin-Lead
RVPX-RP016VM1	RTM Module	16	End - RP0	50 Micro-Inches	Tin
RVPX-RP016VM2	RTM Module	16	End - RP0	50 Micro-Inches	Tin-Lead
RVPX-RP116DC1	RTM Module	16	RP1 Differential	30 Micro-Inches	Tin
RVPX-RP116DC2	RTM Module	16	RP1 Differential	30 Micro-Inches	Tin-Lead
RVPX-RP116DM1	RTM Module	16	RP1 Differential	50 Micro-Inches	Tin
RVPX-RP116DM2	RTM Module	16	RP1 Differential	50 Micro-Inches	Tin-Lead
RVPX-RP116DSC1	RTM Module	16	RP1 Differential & Single-Ended	30 Micro-Inches	Tin
RVPX-RP116DSC2	RTM Module	16	RP1 Differential & Single-Ended	30 Micro-Inches	Tin-Lead
RVPX-RP116DSM1	RTM Module	16	RP1 Differential & Single-Ended	50 Micro-Inches	Tin
RVPX-RP116DSM2	RTM Module	16	RP1 Differential & Single-Ended	50 Micro-Inches	Tin-Lead
RVPX-RP116DC1	RTM Module	16	RP3-RP6 Differential	30 Micro-Inches	Tin
RVPX-RP116DC2	RTM Module	16	RP3-RP6 Differential	30 Micro-Inches	Tin-Lead
RVPX-RP116DM1	RTM Module	16	RP3-RP6 Differential	50 Micro-Inches	Tin
RVPX-RP116DM2	RTM Module	16	RP3-RP6 Differential	50 Micro-Inches	Tin-Lead
RVPX-PE216DM2	RTM Module Evolution 2	16	P1 - P6 Differential	50 Micro-Inches	Tin-lead
RVPX-PE21609M2	RTM Module Evolution 2	16	P0 + P1A Hybrid Power & Signal	50 Micro-Inches	Tin-lead
RVPX-PE21613M2	RTM Module Evolution 2	16	RP0 Mixed Signal & Power	50 Micro-Inches	Tin-lead

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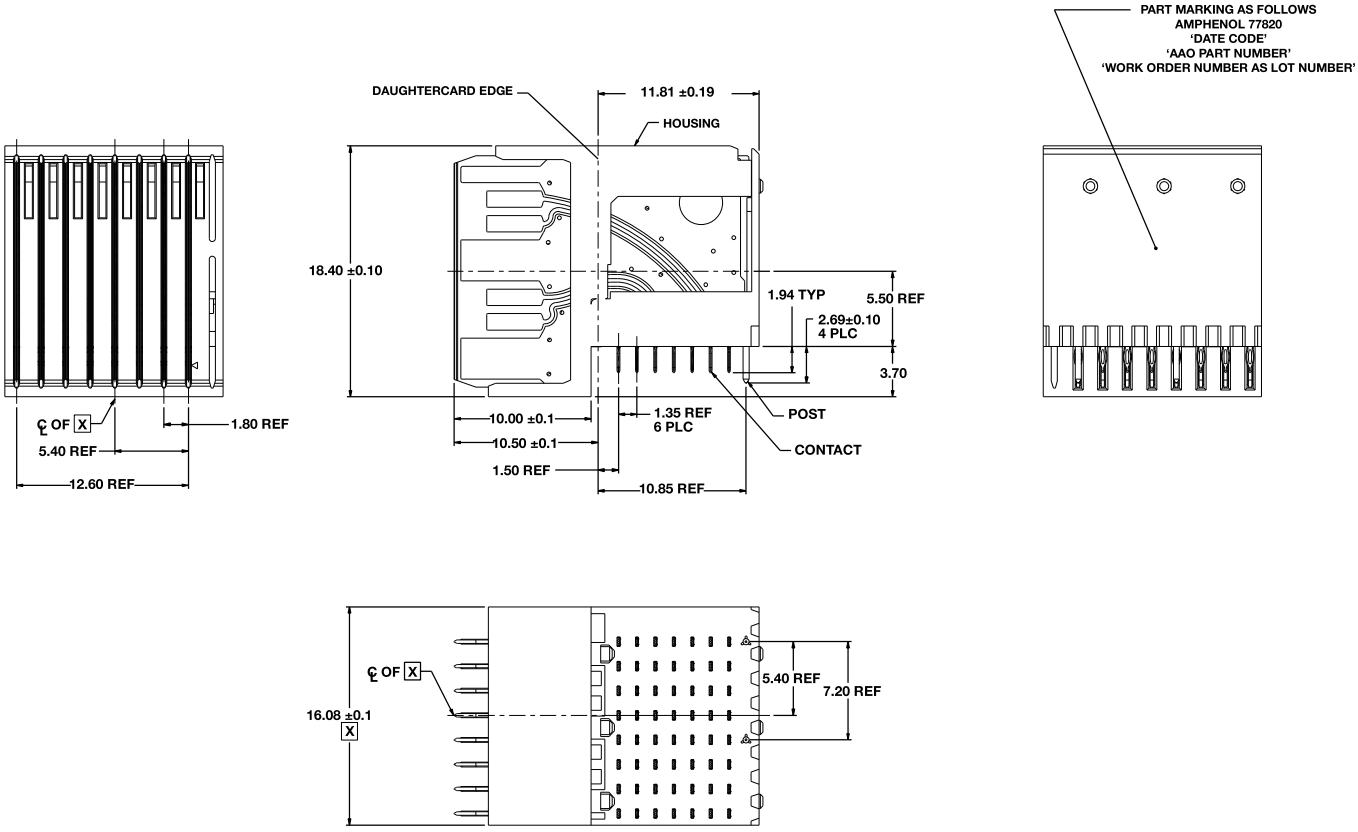
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R-VPX REAR TRANSITION MODULE: Part Number List

Part Number	Gender	Size	Insert Type	Plating	Contact Finish
RVPX-PE21614M2	RTM Module Evolution 2	16	RP1, RP3-RP6 Differential	50 Micro-Inches	Tin-lead
RVPX-P16SC1	RTM Module	16	RP3-RP6 Single Ended	30 Micro-Inches	Tin
RVPX-P16SC2	RTM Module	16	RP3-RP6 Single Ended	30 Micro-Inches	Tin-Lead
RVPX-P16SM1	RTM Module	16	RP3-RP6 Single Ended	50 Micro-Inches	Tin
RVPX-P16SM2	RTM Module	16	RP3-RP6 Single Ended	50 Micro-Inches	Tin-Lead
RVPX-J08EC1	RTM Backplane	8	RJ2 End	30 Micro-Inches	Tin
RVPX-J08EC2	RTM Backplane	8	RJ2 End	30 Micro-Inches	Tin-Lead
RVPX-J08EM1	RTM Backplane	8	RJ2 End	50 Micro-Inches	Tin
RVPX-J08EM2	RTM Backplane	8	RJ2 End	50 Micro-Inches	Tin-Lead
RVPX-JE20818M2	RTM Backplane Evolution 2	8	J0	50 Micro-Inches	Tin-lead
RVPX-JE208MM2	RTM Backplane Evolution 2	8	RJ2	50 Micro-Inches	Tin-lead
RVPX-RJ0116MC1	RTM Backplane	16	RJ0 15 Columns of contacts	30 Micro-Inches	Tin
RVPX-RJ0116MC2	RTM Backplane	16	RJ0 15 Columns of contacts	30 Micro-Inches	Tin-Lead
RVPX-RJ0116MM1	RTM Backplane	16	RJ0 15 Columns of contacts	50 Micro-Inches	Tin
RVPX-RJ0116MM2	RTM Backplane	16	RJ0 15 Columns of contacts	50 Micro-Inches	Tin-Lead
RVPX-RJ0216MC1	RTM Backplane	16	RJ0 7 Columns of contacts	30 Micro-Inches	Tin
RVPX-RJ0216MC2	RTM Backplane	16	RJ0 7 Columns of contacts	30 Micro-Inches	Tin-Lead
RVPX-RJ0216MM1	RTM Backplane	16	RJ0 7 Columns of contacts	50 Micro-Inches	Tin
RVPX-RJ0216MM2	RTM Backplane	16	RJ0 7 Columns of contacts	50 Micro-Inches	Tin-Lead
RVPX-J16MC1	RTM Backplane	16	RJ1 16 Columns of contacts	30 Micro-Inches	Tin
RVPX-J16MC2	RTM Backplane	16	RJ1 16 Columns of contacts	30 Micro-Inches	Tin-Lead
RVPX-J16MM1	RTM Backplane	16	RJ1 16 Columns of contacts	50 Micro-Inches	Tin
RVPX-J16MM2	RTM Backplane	16	RJ1 16 Columns of contacts	50 Micro-Inches	Tin-Lead
RVPX-RJ1216MC1	RTM Backplane	16	RJ1 8 Columns of contacts	30 Micro-Inches	Tin
RVPX-RJ1216MC2	RTM Backplane	16	RJ1 8 Columns of contacts	30 Micro-Inches	Tin-Lead
RVPX-RJ1216MM1	RTM Backplane	16	RJ1 8 Columns of contacts	50 Micro-Inches	Tin
RVPX-RJ1216MM2	RTM Backplane	16	RJ1 8 Columns of contacts	50 Micro-Inches	Tin-Lead
RVPX-JE216MM2	RTM Backplane Evolution 2	16	Full center J1,J3,J4,J5, RJ4, RJ5, RJ6	50 Micro-Inches	Tin-lead
RVPX-J16EC1	RTM Backplane	16	RJ3 End	30 Micro-Inches	Tin
RVPX-J16EC2	RTM Backplane	16	RJ3 End	30 Micro-Inches	Tin-Lead
RVPX-J16EM1	RTM Backplane	16	RJ3 End	50 Micro-Inches	Tin
RVPX-J16EM2	RTM Backplane	16	RJ3 End	50 Micro-Inches	Tin-Lead
RVPX-JE216EM2	RTM Backplane Evolution 2	16	Full right end J2, J6, RJ3	50 Micro-Inches	Tin-lead
RVPX-JE21610M2	RTM Backplane Evolution 2	16	RJ0	50 Micro-Inches	Tin-lead
RVPX-JE21611M2	RTM Backplane Evolution 2	16	RJ0	50 Micro-Inches	Tin-lead
RVPX-JE21612M2	RTM Backplane Evolution 2	16	RJ1	50 Micro-Inches	Tin-lead
RVPX-JE21616M2	RTM Backplane Evolution 2	16	J0 + J1A Hybrid Power & Signal	50 Micro-Inches	Tin-lead
RVPX-J16MC1	RTM Backplane	16	RJ4-RJ6	30 Micro-Inches	Tin
RVPX-J16MC2	RTM Backplane	16	RJ4-RJ6	30 Micro-Inches	Tin-Lead
RVPX-J16MM1	RTM Backplane	16	RJ4-RJ6	50 Micro-Inches	Tin
RVPX-J16MM2	RTM Backplane	16	RJ4-RJ6	50 Micro-Inches	Tin-Lead
RVPX-JE216MM2	RTM Backplane Evolution 2	16	RJ1	50 Micro-Inches	Tin-lead

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REAR TRANSITION MODULE: Right Angle Plug Assembly, Half Left End, Daughtercard Differential

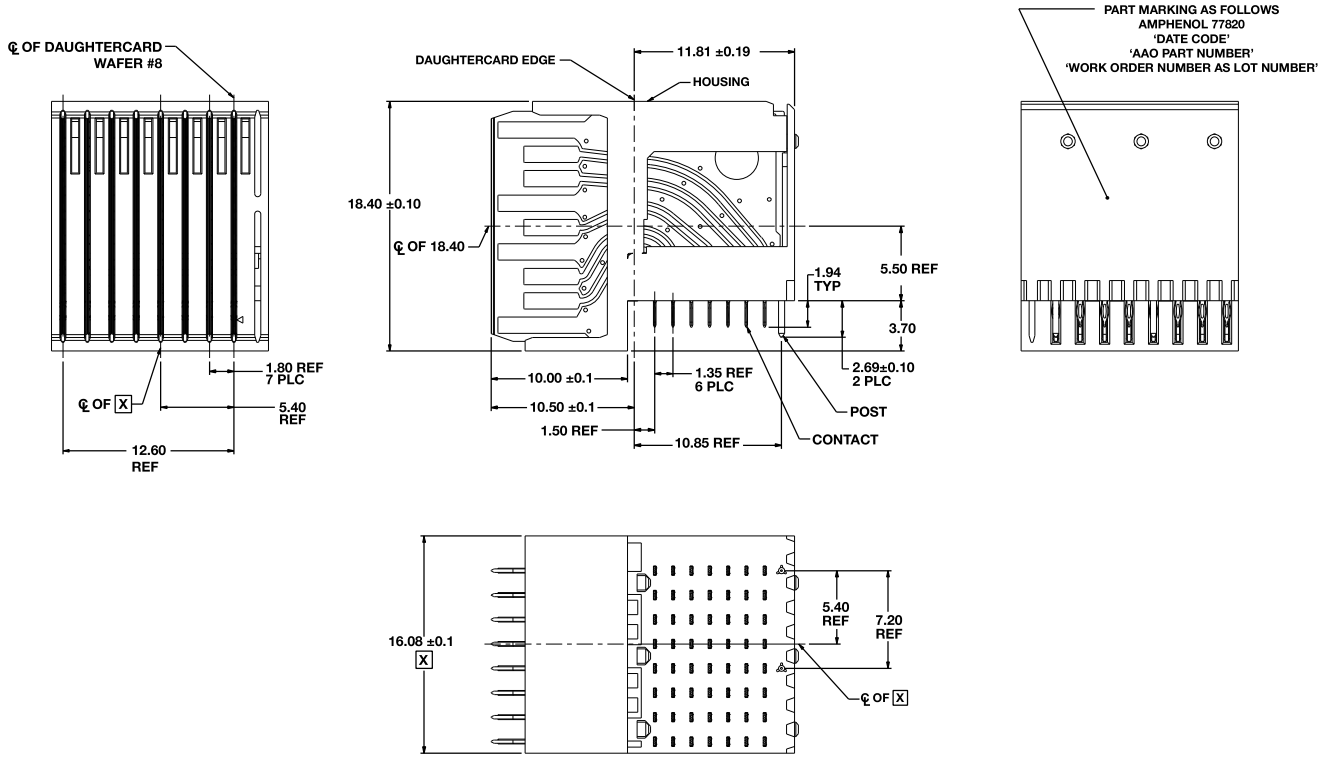


PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-RP208DM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-RP208DM2		Tin-lead	
RVPX-RP208DC2	30 µ-Inch min.	Tin	
RVPX-RP208DC2		Tin-lead	

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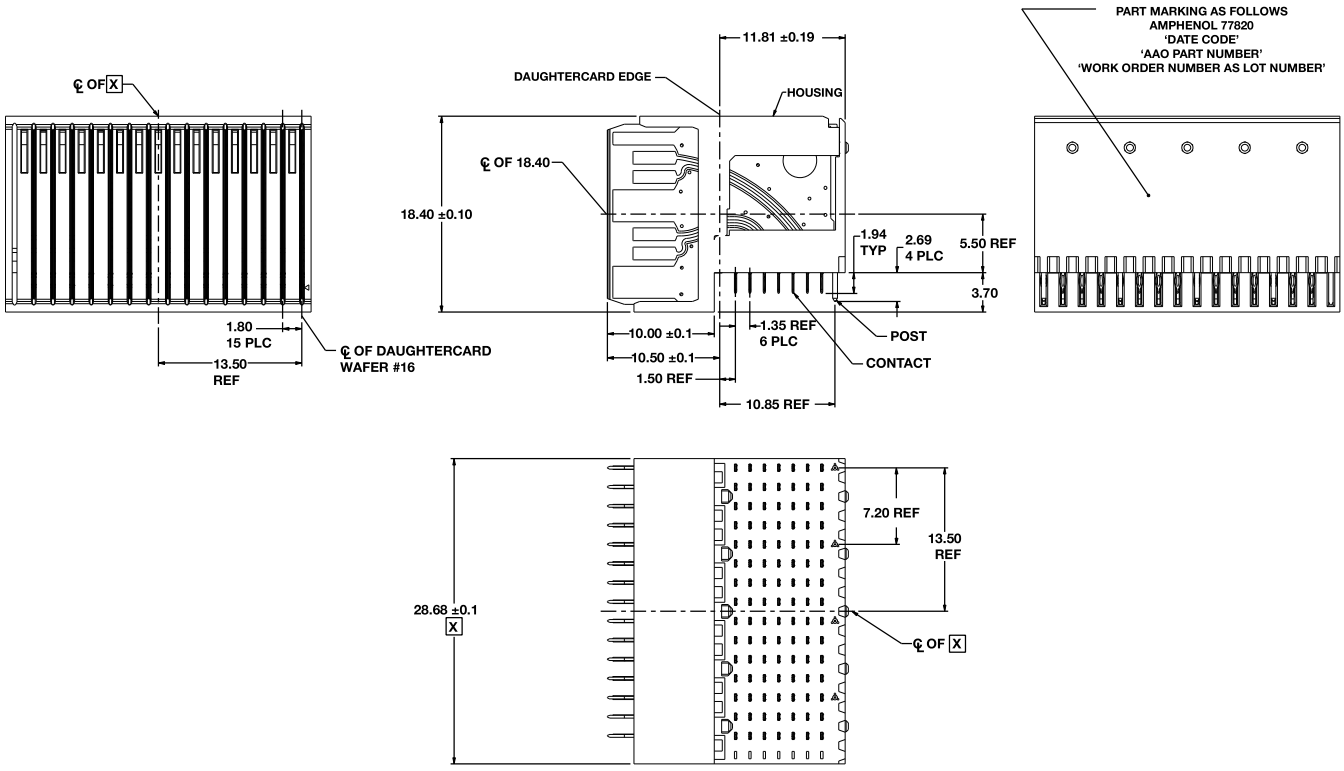
REAR TRANSITION MODULE: Right Angle Plug Assembly, Center RVPX Daughtercard Differential



PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-RP208SM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-RP208SM2		Tin-lead	
RVPX-RP208SC1	30 µ-Inch min.	Tin	
RVPX-RP208SC2		Tin-lead	

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REAR TRANSITION MODULE: Right Angle Plug Assembly, Center RVPX Daughtercard

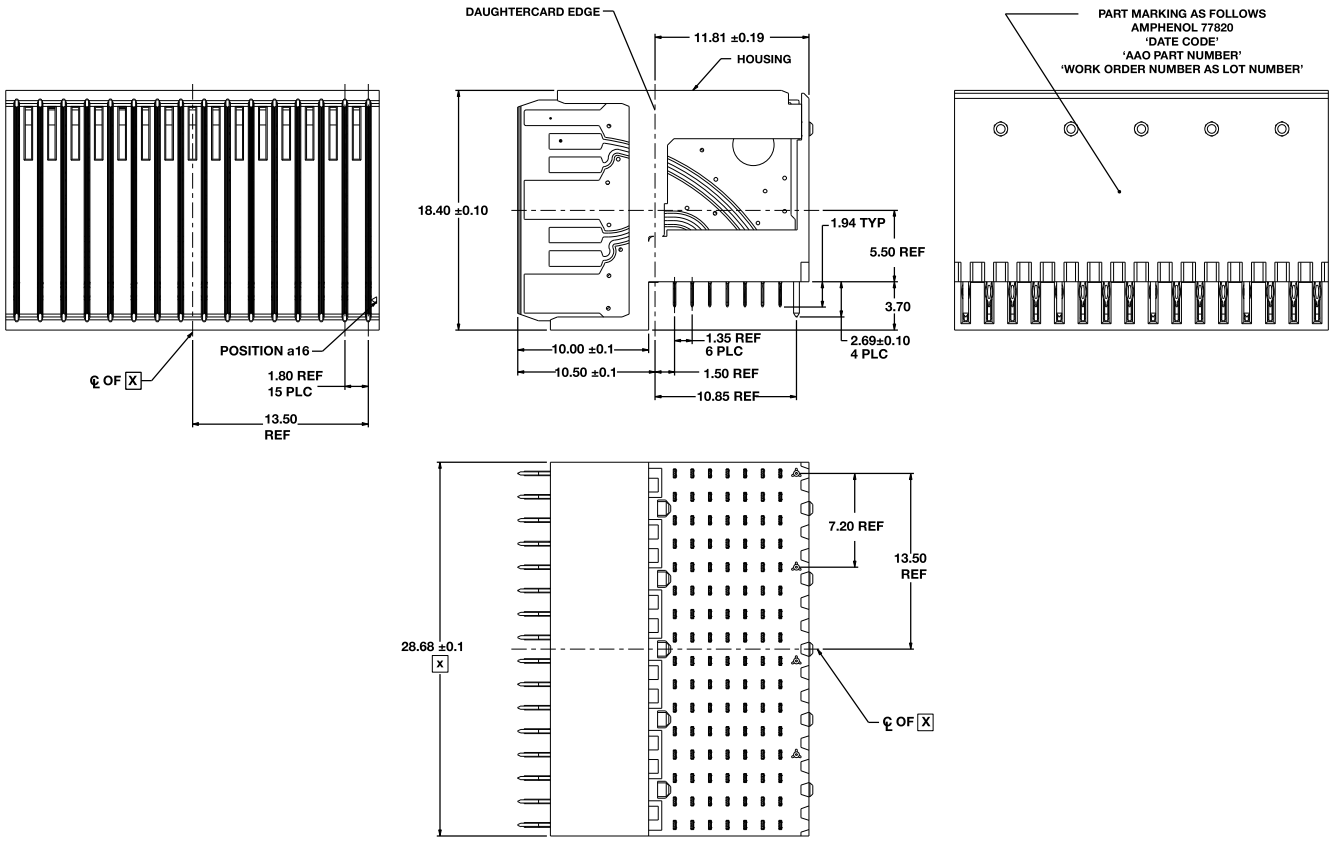


PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-RP016VM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-RP016VM2		Tin-lead	
RVPX-RP016VC1	30 µ-Inch min.	Tin	
RVPX-RP016VC2		Tin-lead	

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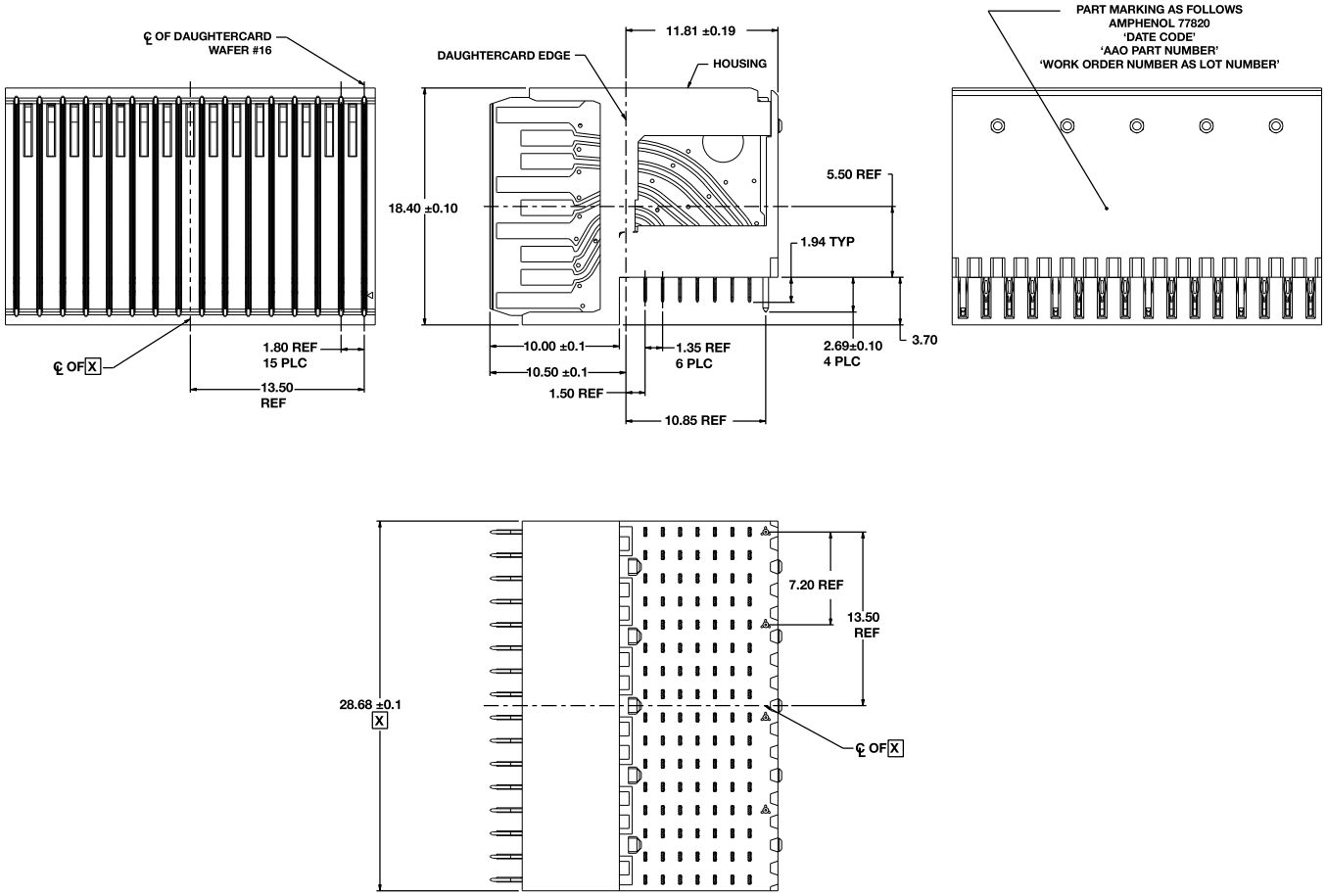
REAR TRANSITION MODULE: Right Angle Plug Assembly, Center RVPX Daughtercard Differential



PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-RP116DM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-RP116DM2		Tin-lead	
RVPX-RP116DC1	30 µ-Inch min.	Tin	
RVPX-RP116DC2		Tin-lead	

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REAR TRANSITION MODULE: Right Angle Plug Assembly, Center RVPX Daughtercard Differential-SE

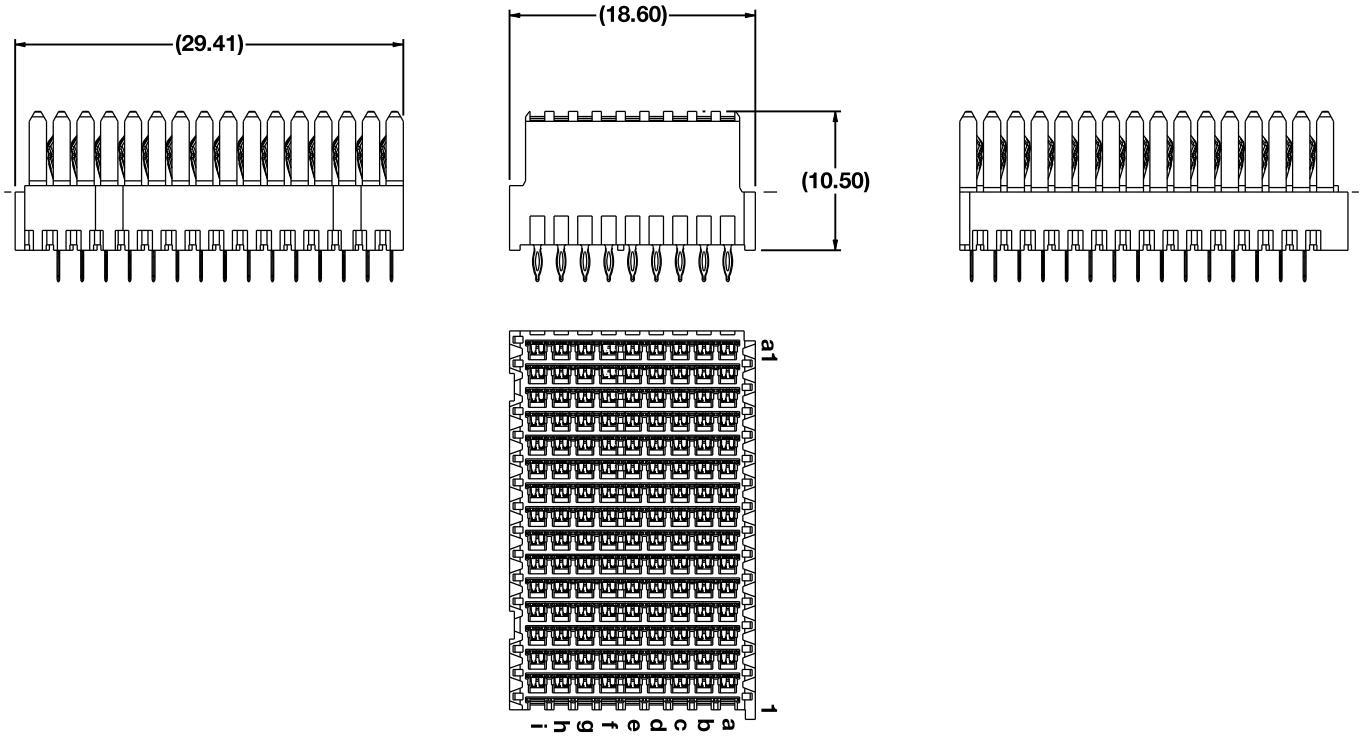


PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-RP116DSM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-RP116DSM2		Tin-lead	
RVPX-RP116DSC1	30 µ-Inch min.	Tin	
RVPX-RP116DSC2		Tin-lead	

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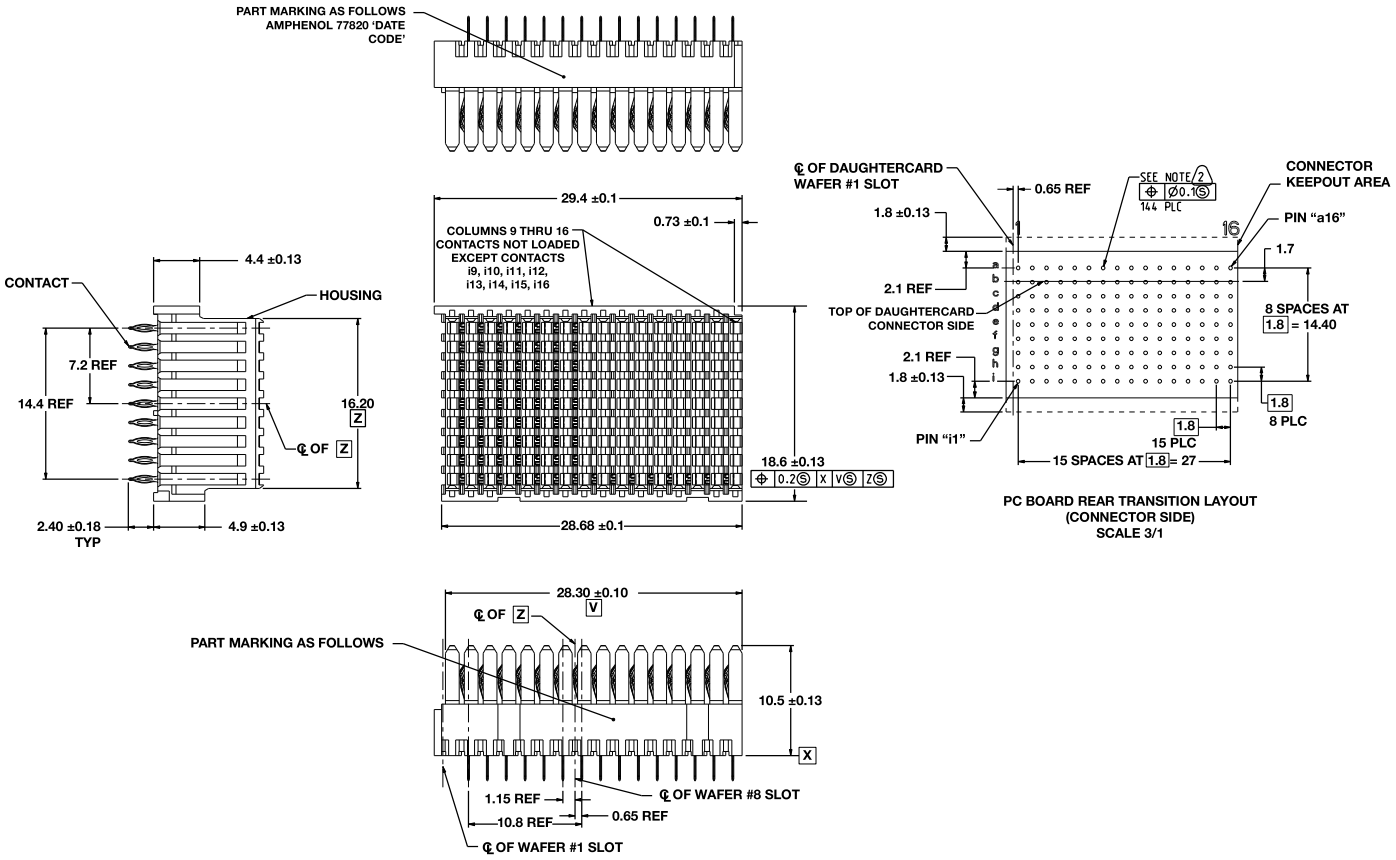
BACKPLANE: Rear Transition Module Center



PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-RJ0116MM1M	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-RJ0116MM2M		Tin-lead	
RVPX-RJ0116MC1M	30 µ-Inch min.	Tin	
RVPX-RJ0116MC2M		Tin-lead	

Downloaded from Arrow.com.

BACKPLANE: Rear Transition Module Vertical Receptacle Center, Partial Load

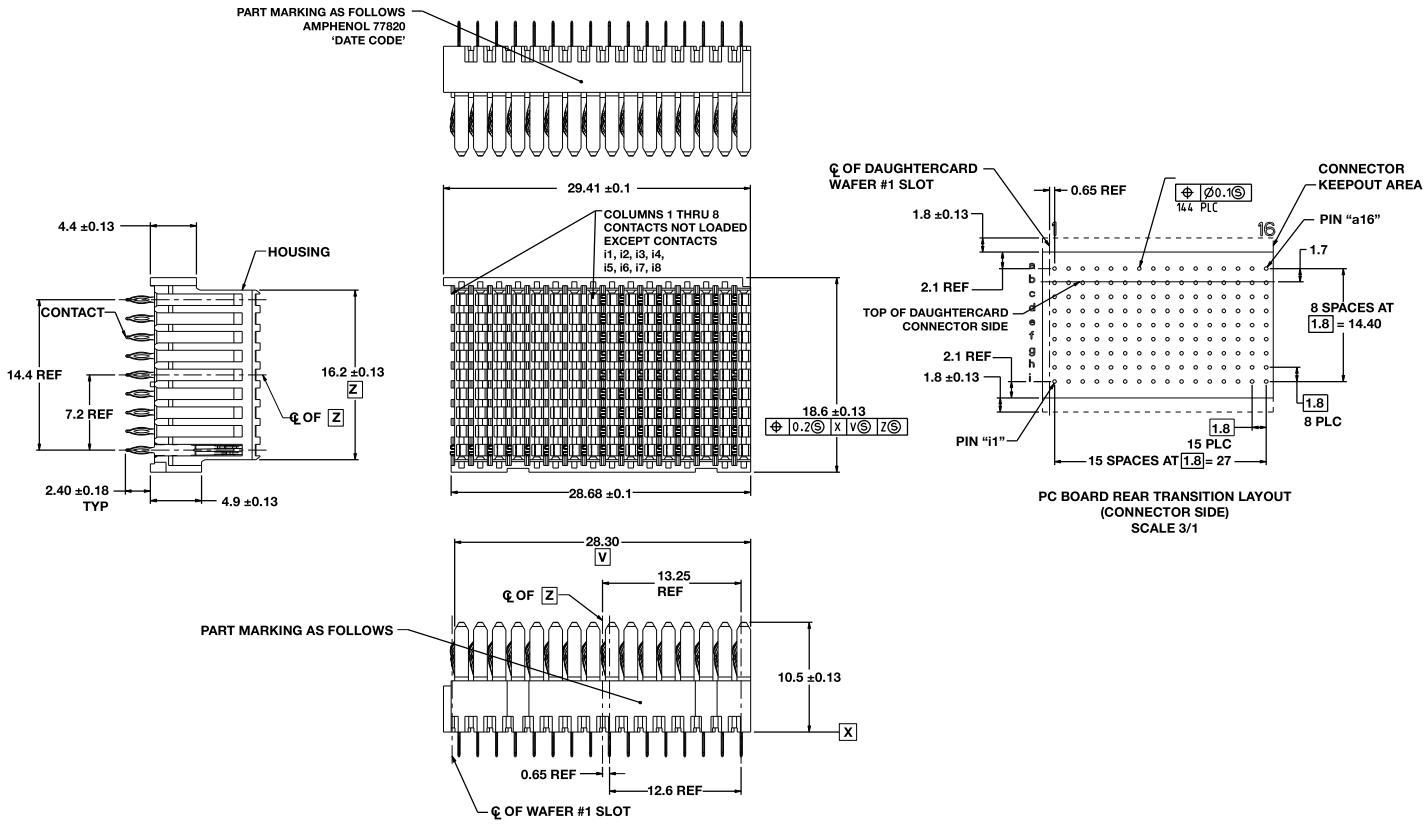


PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-RJ0216MM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-RJ0216MM2		Tin-lead	
RVPX-RJ0216MC1	30 µ-Inch min.	Tin	
RVPX-RJ0216MC2		Tin-lead	

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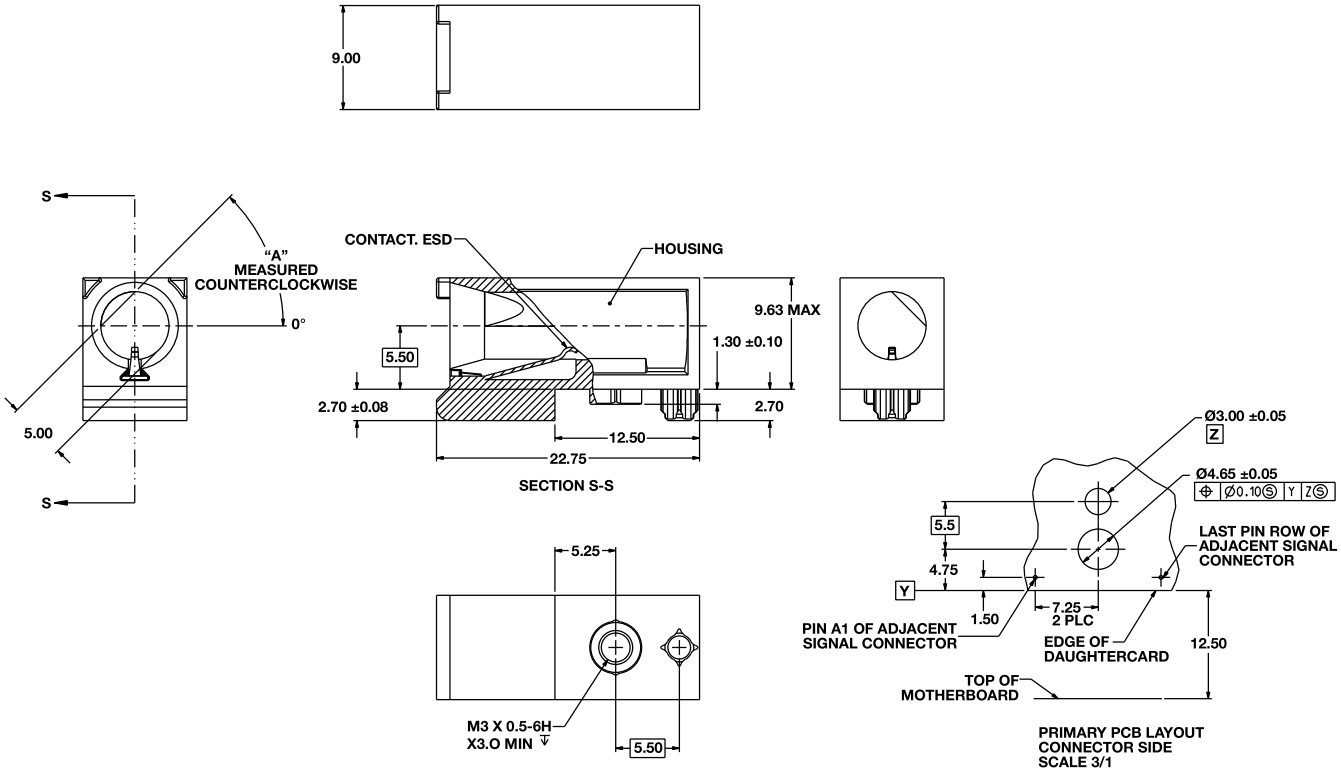
BACKPLANE: Rear Transition Module Vertical Receptacle Center, Partial Load



PLATING THICKNESS AND MATERIAL BY PART NUMBER			
Part Number	Gold In Contact Area	Compliant Contact Termination Finish	Nickel Overall
RVPX-RJ1216MM1	50 µ-Inch min.	Tin	50 µ-Inch Min.
RVPX-RJ1216MM2		Tin-lead	
RVPX-RJ1216MC1	30 µ-Inch min.	Tin	
RVPX-RJ1216MC2		Tin-lead	

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HARDWARE: Zinc Die Cast Guide Modules

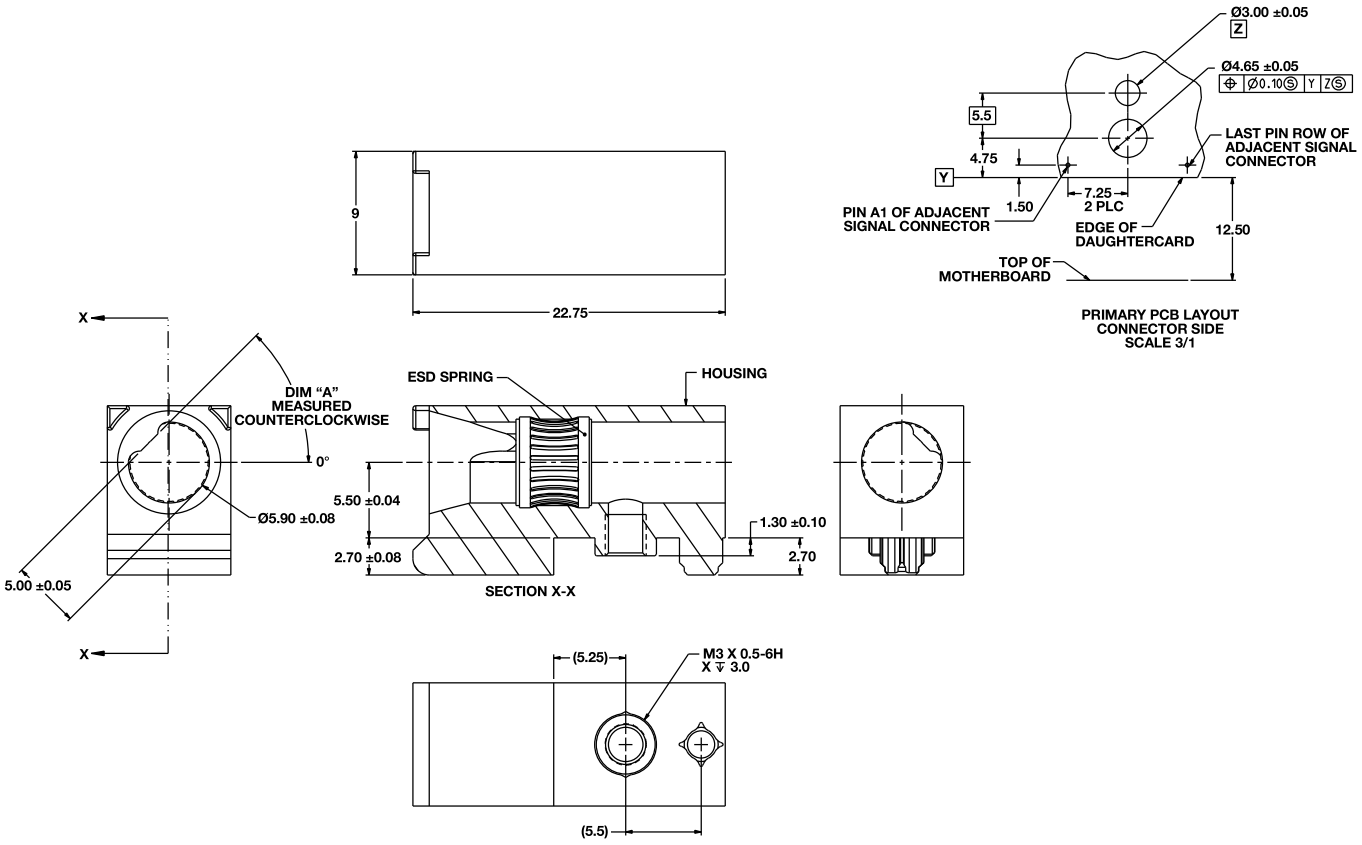


ZINC DIE CAST GUIDE MODULES	
Part Number	DIM. A
RVPX-HMD-1	0
RVPX-HMD-2	45
RVPX-HMD-3	90
RVPX-HMD-7	270
RVPX-HMD-8	315
RVPX-HMD-9	Without Key

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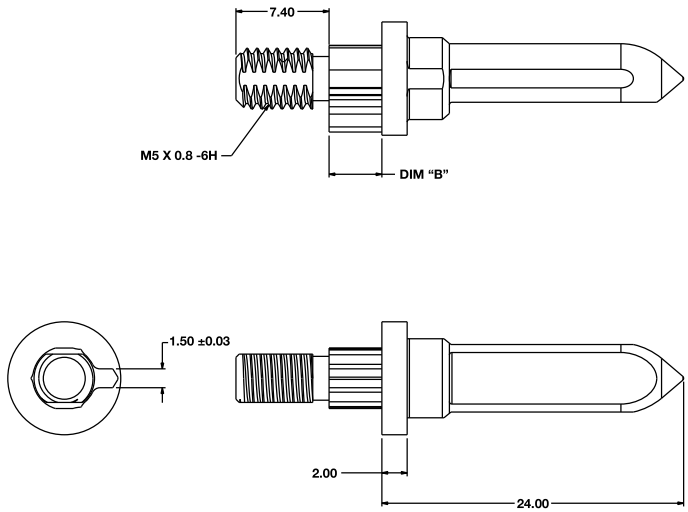
HARDWARE: Machined Aluminum Guide Modules

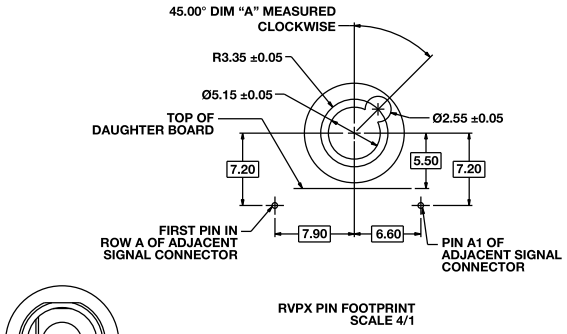


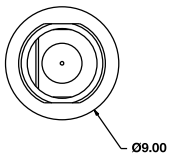
MACHINED ALUMINUM GUIDE MODULES			
Part Number	DIM. A	Material	Finish
RVPX-HMM-1	0	Aluminum	Electroless Nickel
RVPX-HMM-2	45		
RVPX-HMM-3	90		
RVPX-HMM-4	270		
RVPX-HMM-5	315		
RVPX-HMM-6	Without Key		
RVPX-HMM-7	0	Stainless Steel	Passivated Steel
RVPX-HMM-8	45		
RVPX-HMM-9	90		
RVPX-HMM-10	270		
RVPX-HMM-12	315		
RVPX-HMM-13	Without Key		

Downloaded from Arrow.com.

HARDWARE: Zinc Die Cast Guide Pins





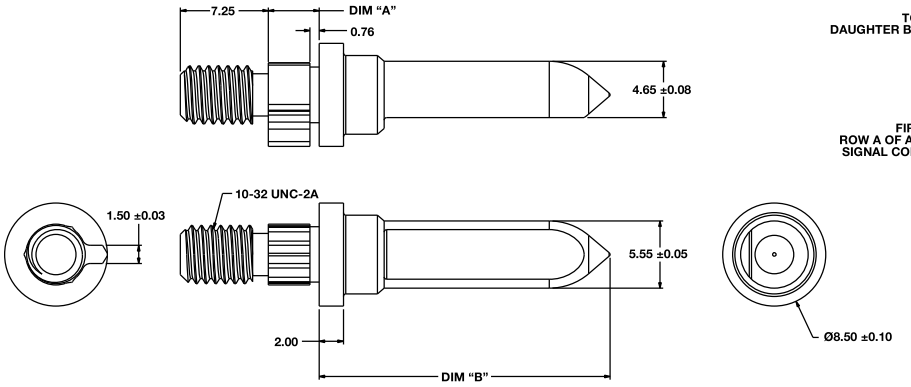


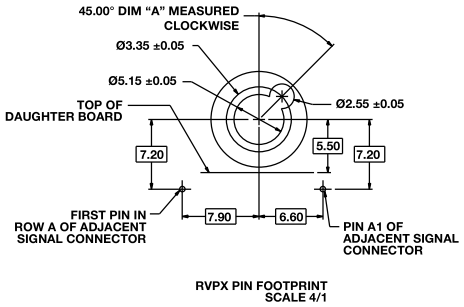
ZINC DIE CAST GUIDE PINS	
Part Number	DIM. B
RVPX-HPD-2	2.60
RVPX-HPD-3	4.20
RVPX-HPD-4	5.70

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HARDWARE: Machined Stainless Steel Guide Pins





MACHINED STAINLESS STEEL GUIDE PINS		
Part Number	DIM. A	DIM. B
RVPX-HPM-1	1.32	24.0
RVPX-HPM-2	2.60	24.0
RVPX-HPM-3	4.20	24.0
RVPX-HPM-4	5.70	24.0
RVPX-HPM-5	7.30	24.0
RVPX-HPM-10	1.32	19.0
RVPX-HPM-12	4.20	19.0
RVPX-HPM-13	5.70	19.0

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TOOLS: Backplane Connector Removal

BACKPLANE CONNECTOR REMOVAL

Amphenol has a two step process for backplane removal. First the backplane housing is removed using tool **640-0003-000** or **640-0001-000** for 8 and 16 position housings respectively.

The tool is placed around the housing with the fingers interlocking the base of the housing you would like to remove. Then the screw is turned until the housing comes off its contacts.

Second tool **640-0002-000** is used to remove the contacts. Gently place the comb under the last row of contacts and rock it back until the contacts come out of their holes. Repeat until all rows are removed.



ORDER GUIDE	
PART NUMBER	**DESCRIPTION**
640-0001-000	8 Position Connector Removal Tool
640-0003-000	16 Position Connector Removal Tool
640-0002-000	Contact Removal Comb Tool

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INSTALLATION

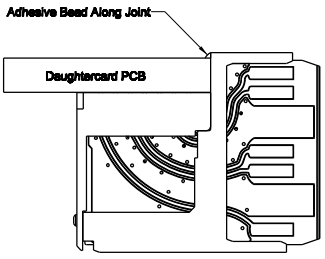
The RVPX connector is designed for simple installation. A mechanical electric press or Arbor Press is used to compress the compliant pins into the plated thru holes seating the connector. Care should be taken to ensure even distribution of force across the housings. This can easily be achieved with the use of flat rock tooling.

When pressing the module assemblies, the connector over hangs the module board slightly. Because of this overhang, a support plate is needed to ensure the connector gets fully seated without bowing of the PCB.

Extraction tools are available and suggested for backplane connector removal. See page 38.

SUPPLEMENTAL DAUGHTERCARD RETENTION: (EVO1 & EVO2)

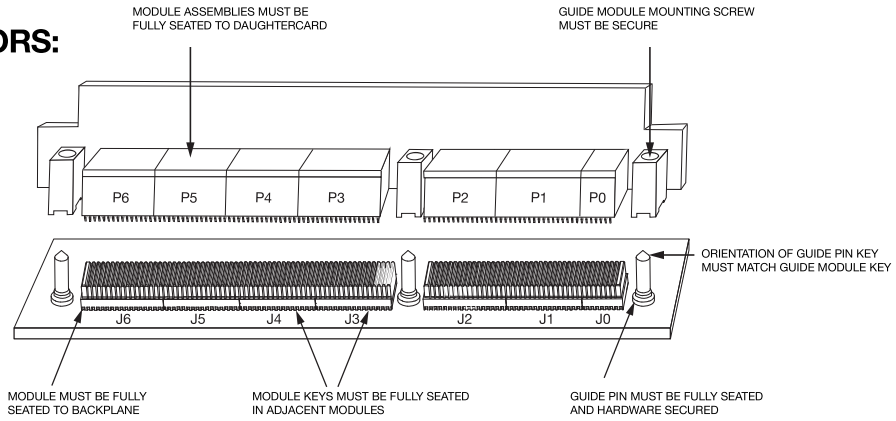
For systems which will encounter dynamic environments, use a bead of adhesive as illustrated. Amphenol has tested and qualified 3M Scotchweld 2216 with Amphenol daughtercards and FR4 PCBs. Alternate materials can also be used as approved by their materials engineers.



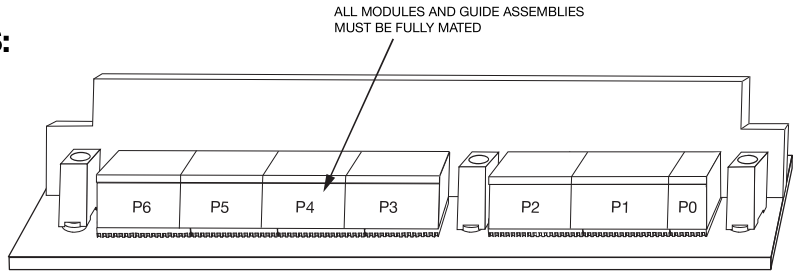
VISUAL AID

The illustration below shows a typical application of RVPX connectors.
This illustration should be used by production personnel to ensure a correctly applied product.

MOUNTED CONNECTORS:



MATED CONNECTORS:



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OPTICAL FIBER RUGGEDIZED VITA 66.1 AND 66.4



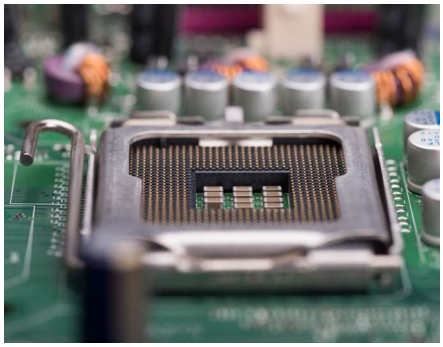
Amphenol's VITA 66 family of products are ruggedized blind mate optical MT Module/Backplane connector systems designed to meet the VITA 66.1 and 66.4 open architecture specifications. These connectors are designed to provide a high density blind-mate optical solution via standard multi-mode MT ferrules and robust aluminum shells meeting VITA footprint requirements.

VITA 66

Optical Fiber Ruggedized VITA 66.1 & 66.4 are designed for embedded computing applications in :



Electronic Systems - C4ISR



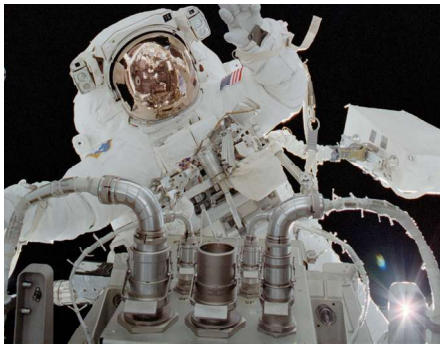
Embedded Computing



Missile Defense



Ground Systems



Space Systems



Other Ruggedized Environments

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OPTICAL FIBER VITA OVERVIEW

FEATURES AND BENEFITS:

- VITA 66.1, 66.4 spec compliant
- Supports up to two spring loaded floating MT ferrules
- Multiple alignment guide features
- No special tooling required for assembly
- Supports industry standard MT ferrules-up to 24 fiber optic channels per MT
- COTS
- Customs & derivatives : spring loaded, double density

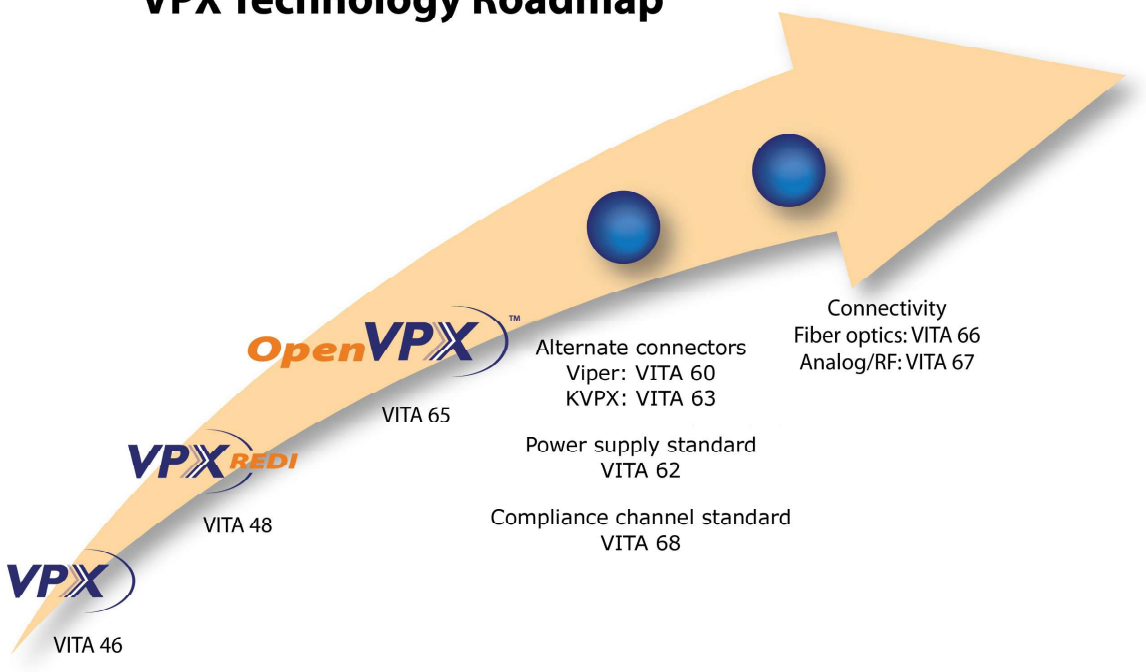


VITA 66 RANGE

- VITA 66.1 : 2MT or Double density 4MT Standard or Spring loaded contacts
- VITA 66.4 : 1MT or Double density 2MT Standard or Spring loaded contacts

VITA 66

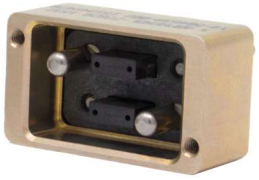
VPX Technology Roadmap



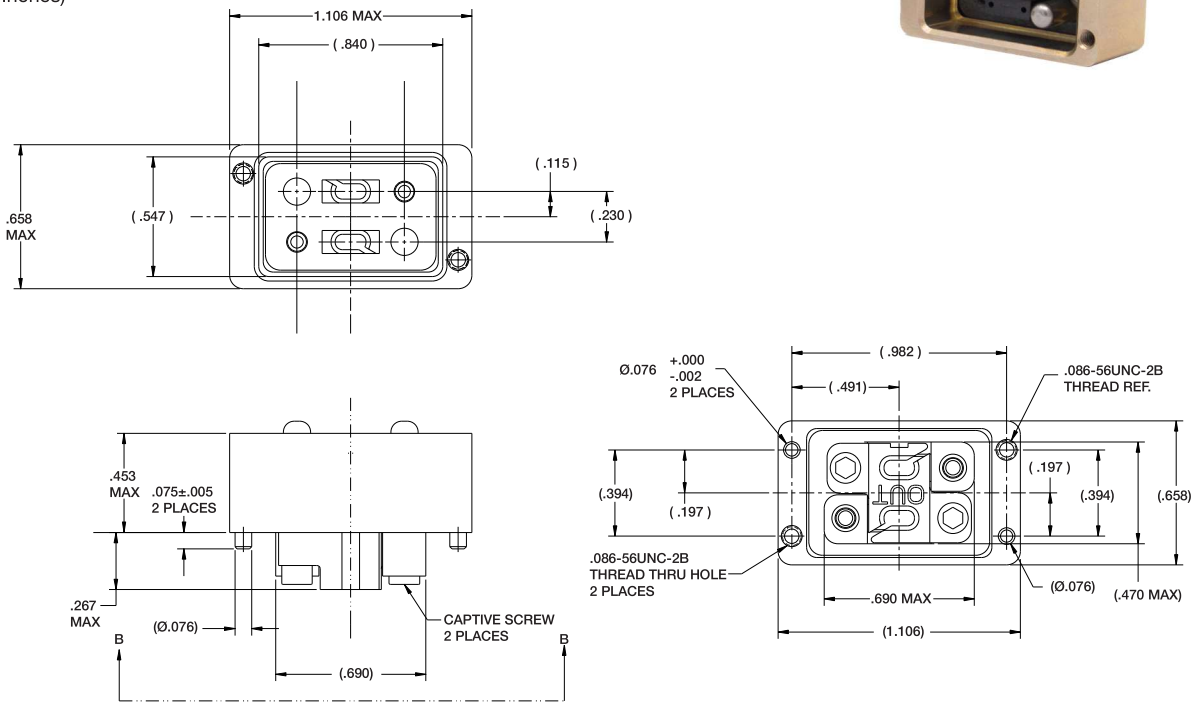
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FIBER OPTIC VITA 66.1: Standard 2MT Backplane

PART NUMBER: 10-504639-002



(Dimensions in Inches)

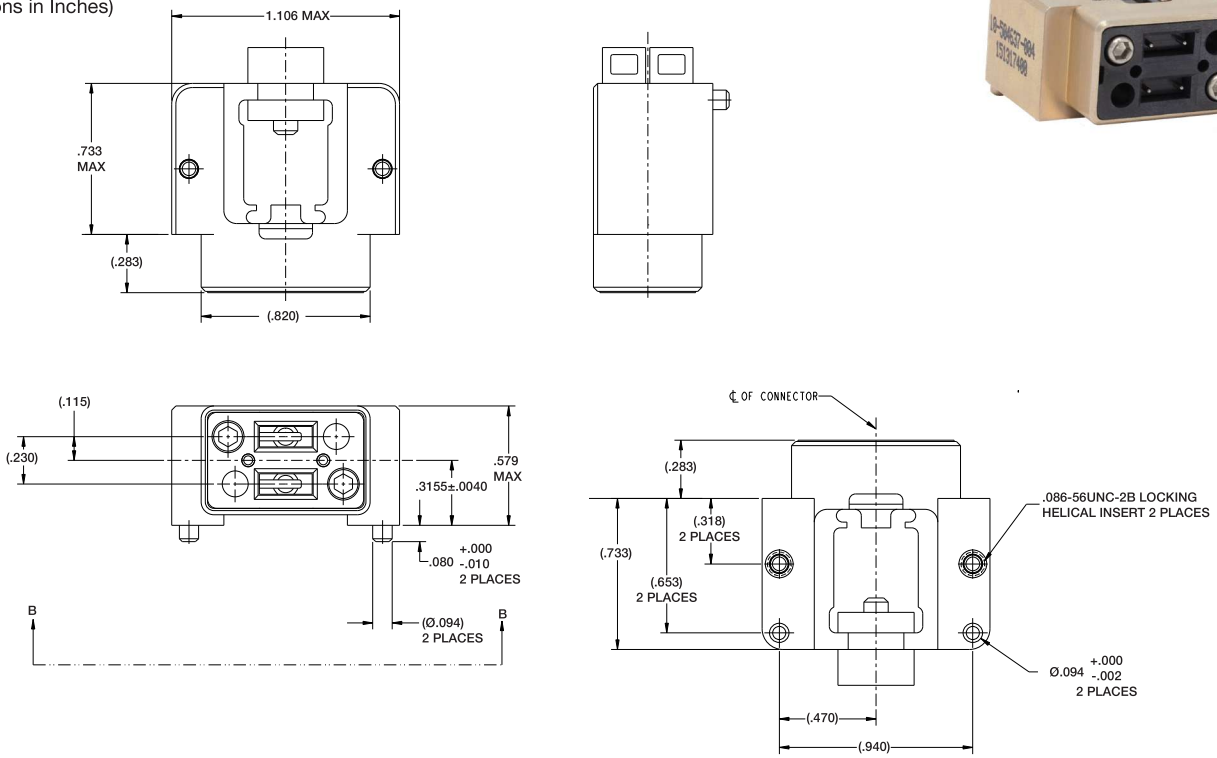


FIBER OPTIC VITA 66.1: Standard 2MT Module

PART NUMBER: 10-504637-004



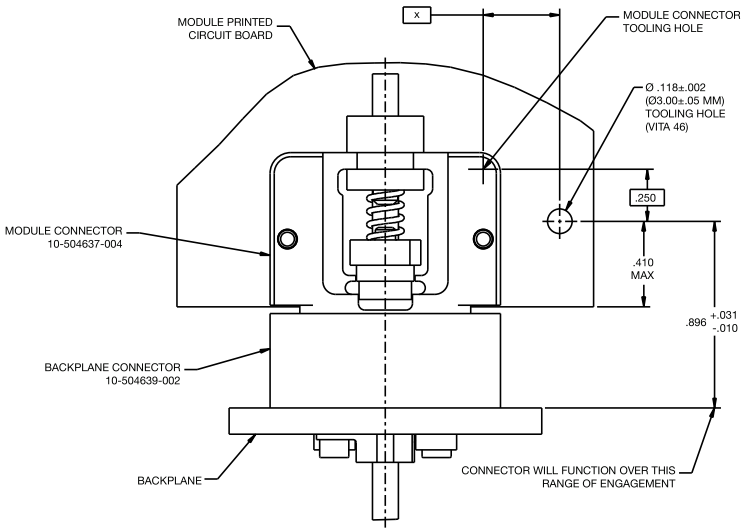
(Dimensions in Inches)

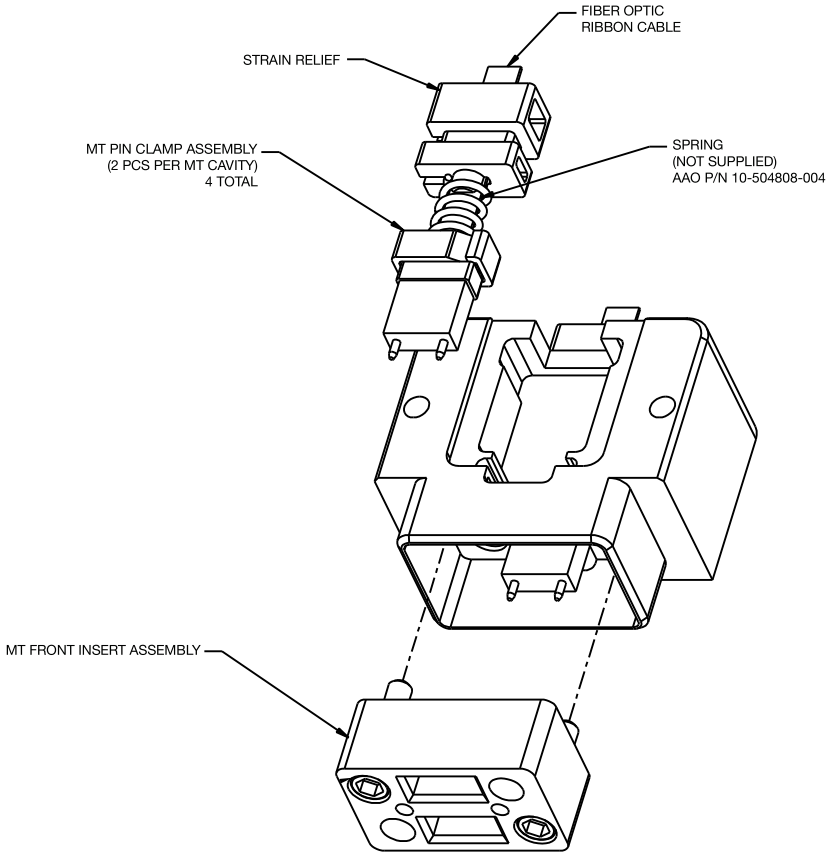


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FIBER OPTIC VITA 66.1: Standard 2MT
Installation & Assembly





VITA 66.1

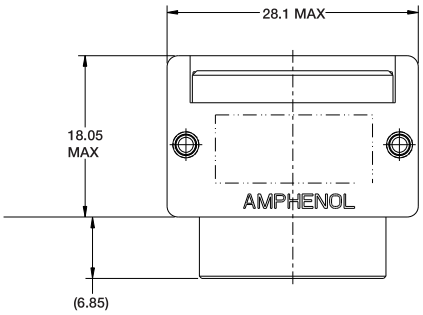
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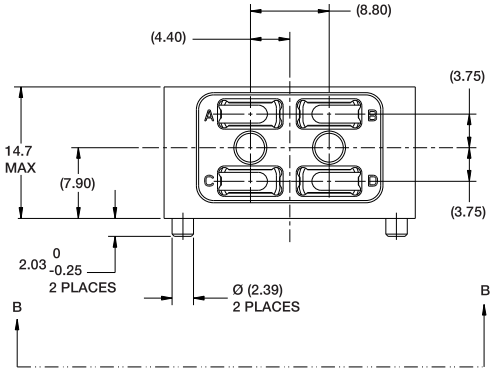
FIBER OPTIC VITA 66.1: Double Density 4MT Module

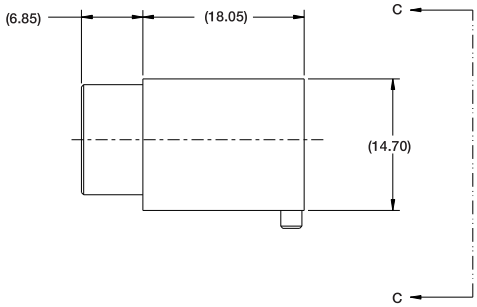
PART NUMBER: 10-504637-010

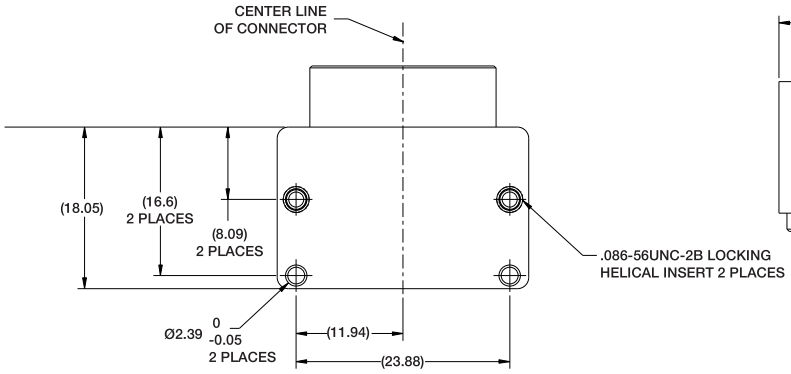
(Dimensions in MM)

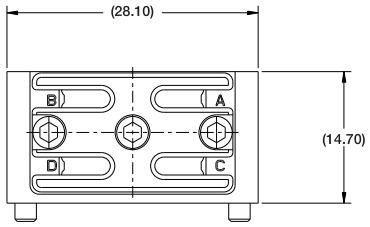


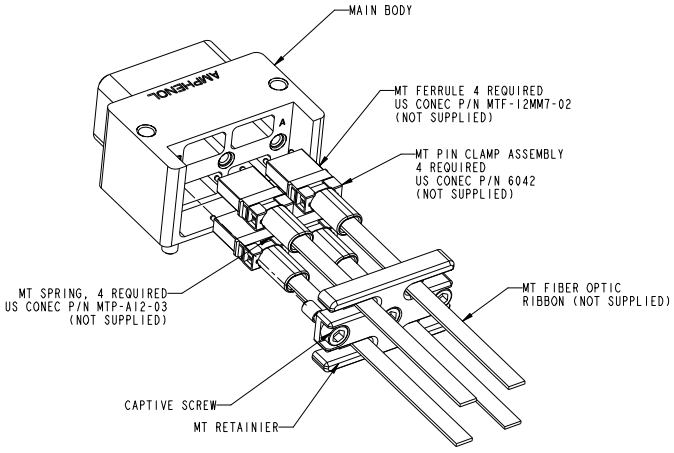












VITA 66.1

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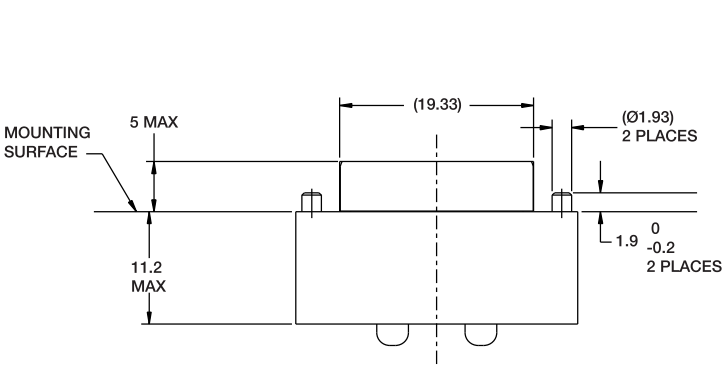
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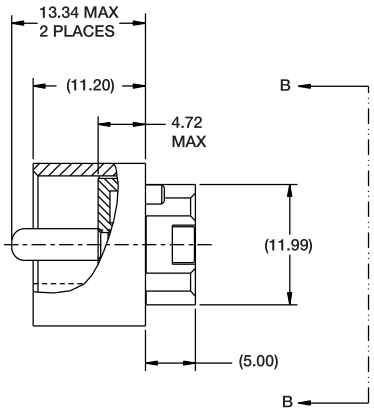
FIBER OPTIC VITA 66.1: Double Density 4MT Backplane

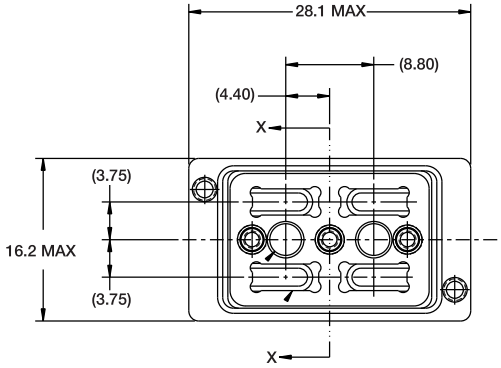
PART NUMBER: 10-504639-008

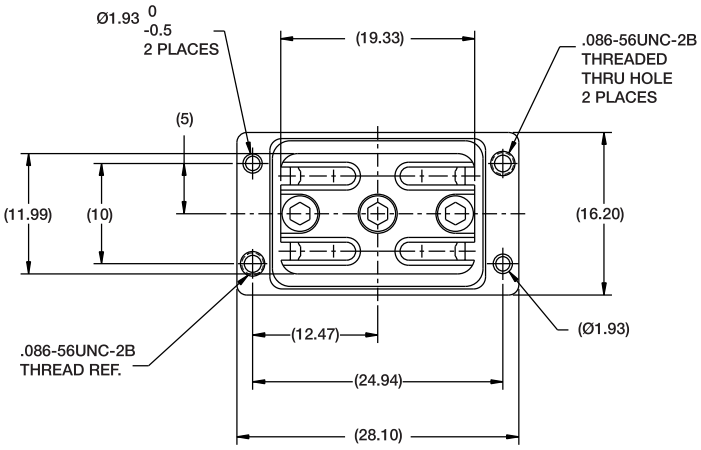
(Dimensions in MM)

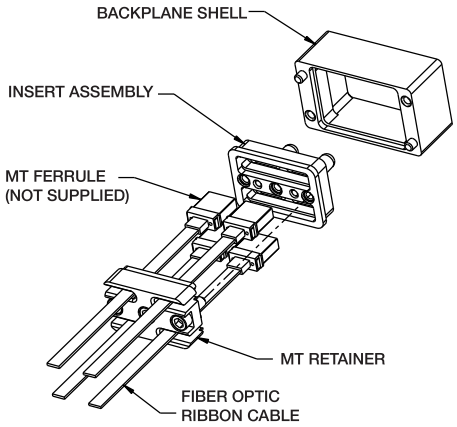












REAR EXPLODED ASSEMBLY VIEW SCALE 2.000

VITA 66.1

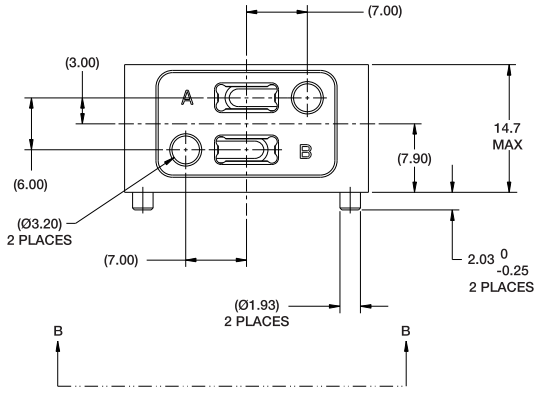
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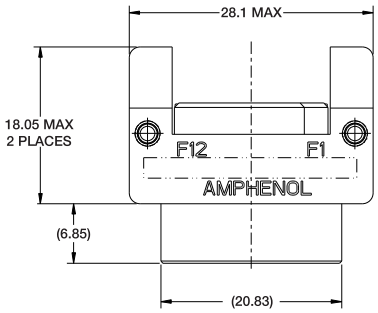
FIBER OPTIC VITA 66.1: 2MT Special Module

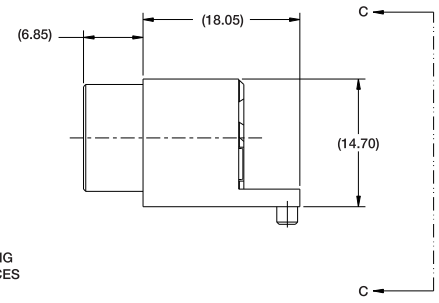
PART NUMBER: 10-504637-013

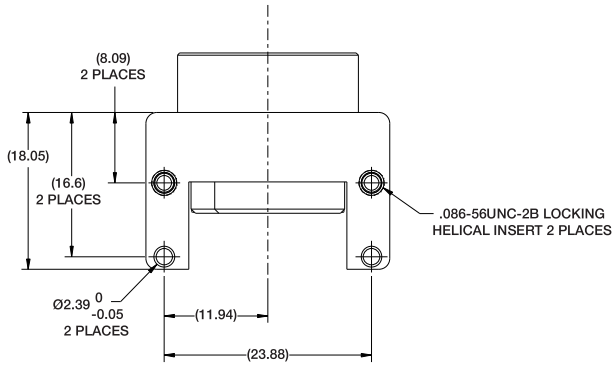
(Dimensions in MM)



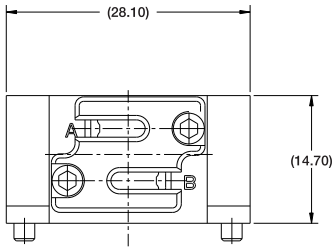




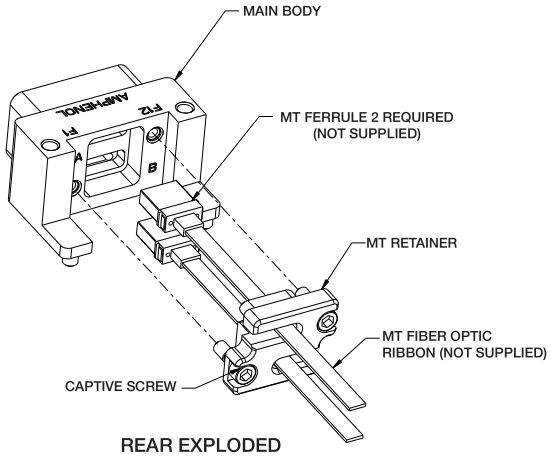




VIEW AT B



VIEW AT C



REAR EXPLODED
ASSEMBLY VIEW

VITA 66.1

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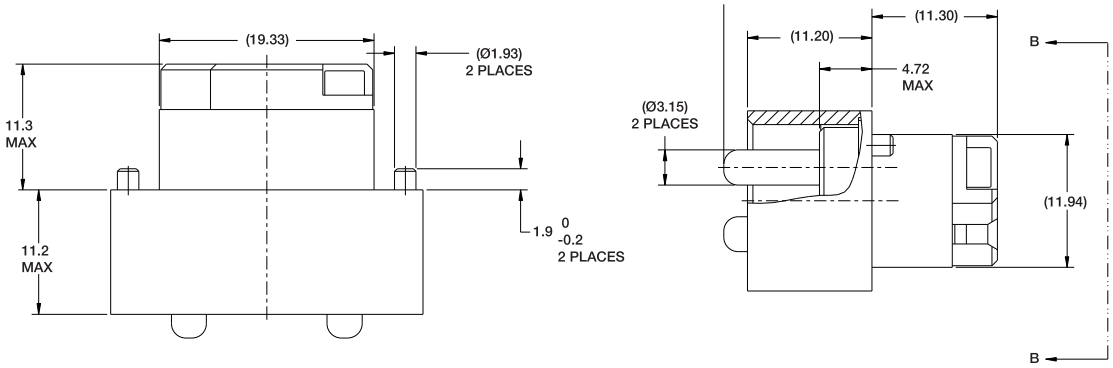
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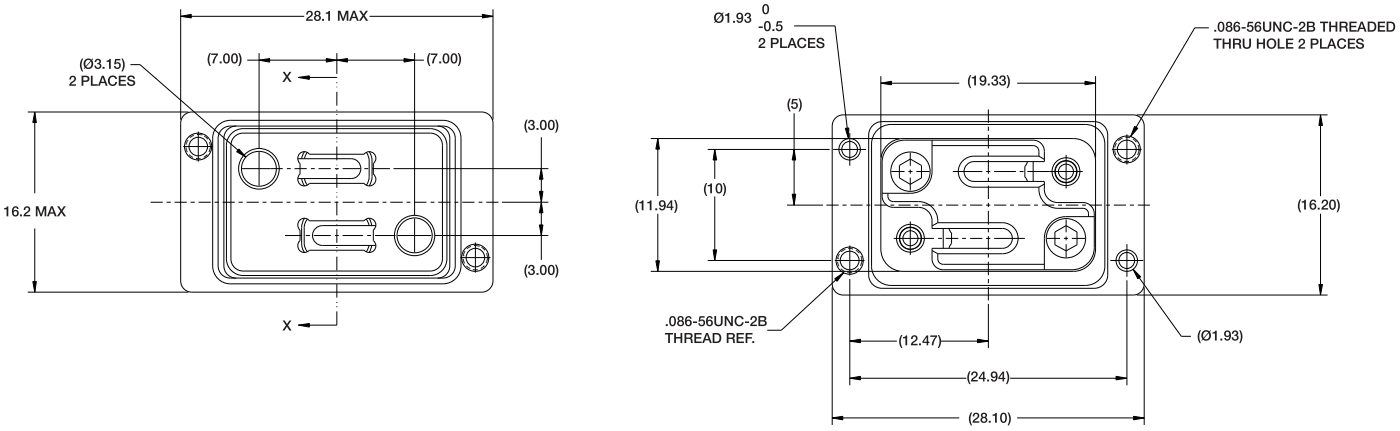
FIBER OPTIC VITA 66.1: 2MT Spring Loaded Backplane

PART NUMBER: 10-504639-011

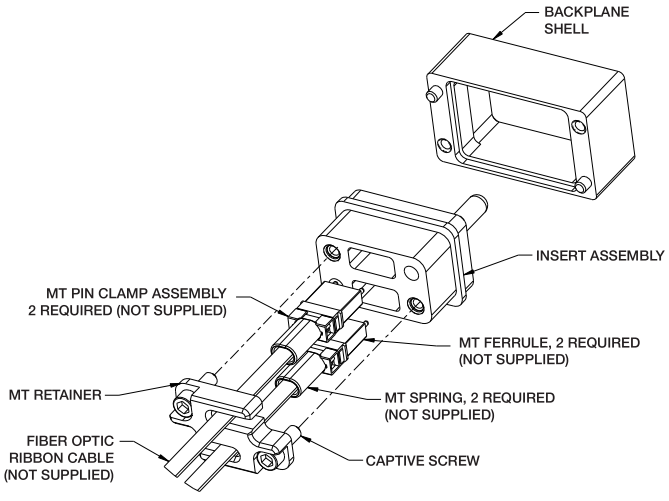
(Dimensions in MM)







VIEW AT B



REAR EXPLODED
ASSEMBLY VIEW
SCALE 3.000

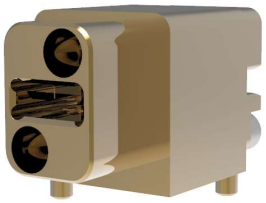
VITA 66.1

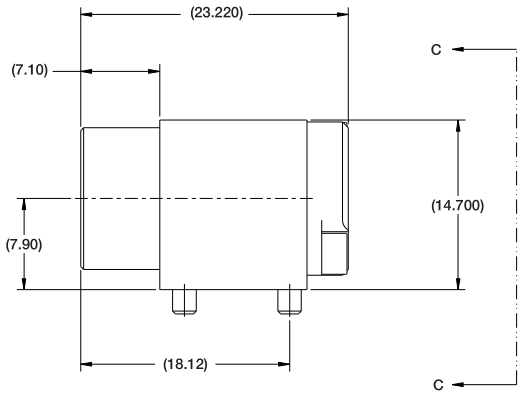
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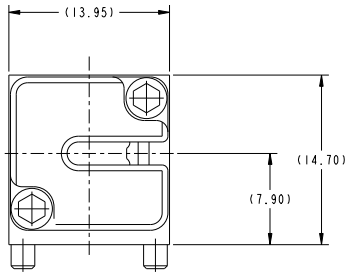
FIBER OPTIC VITA 66.4: Standard 1MT Module

PART NUMBER: 10-504637-008

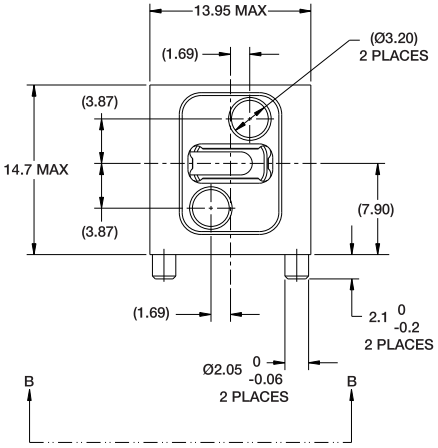
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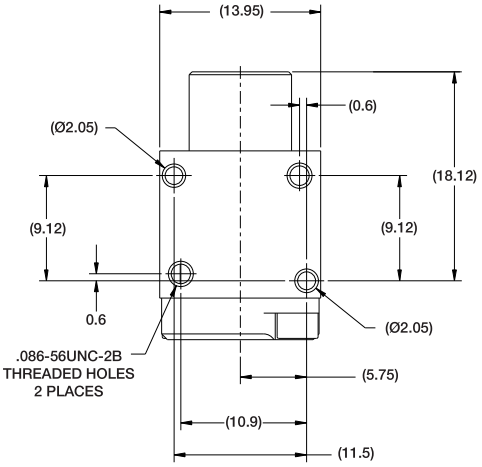




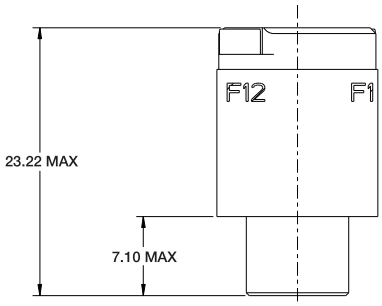


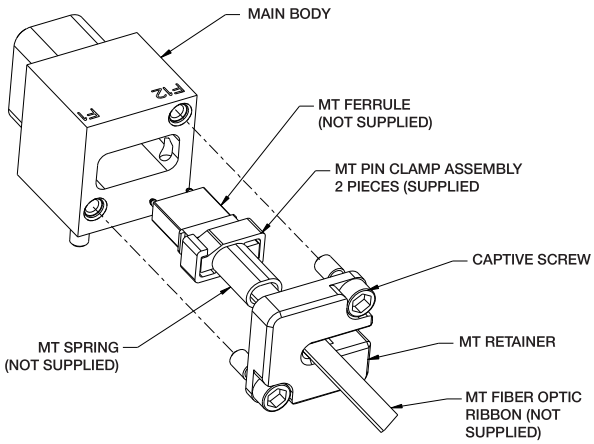
VIEW AT C





VIEW AT B





REAR EXPLODED
ASSEMBLY VIEW

VITA 66.4

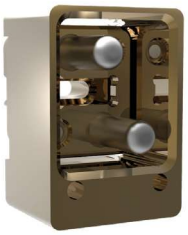
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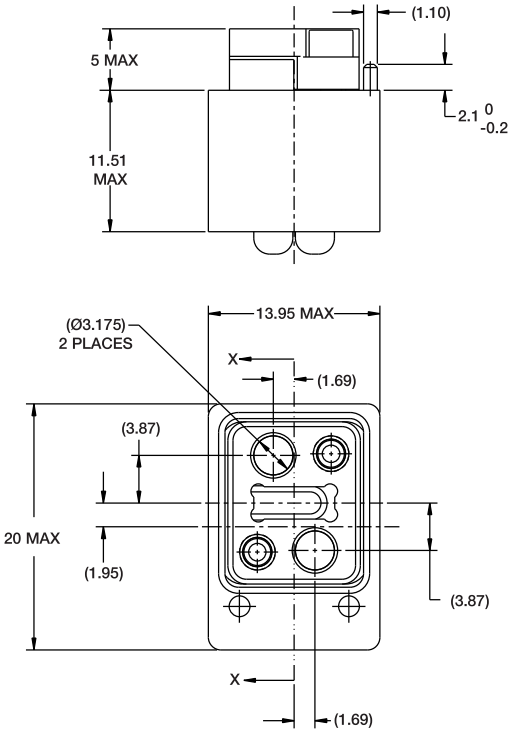
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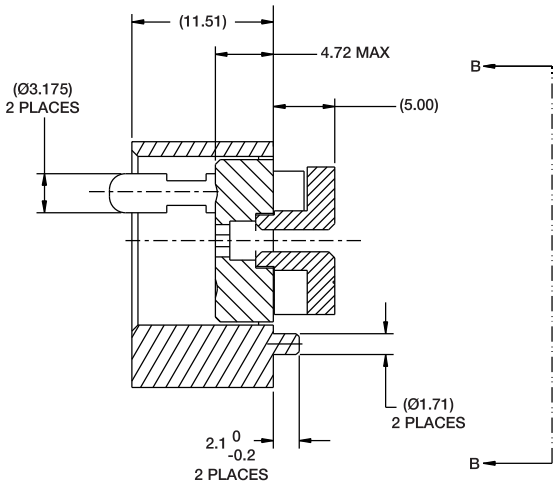
FIBER OPTIC VITA 66.4: Standard 1MT Backplane

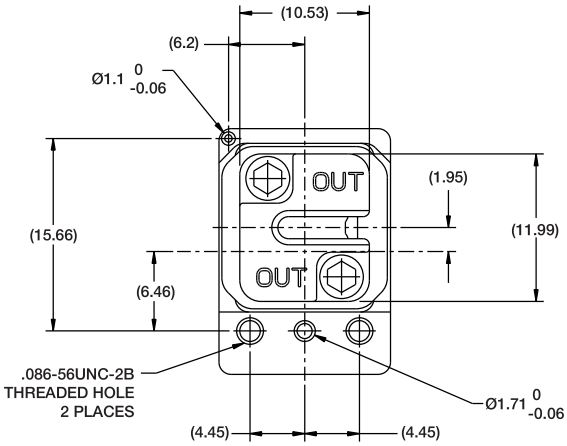
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(Dimensions in MM)

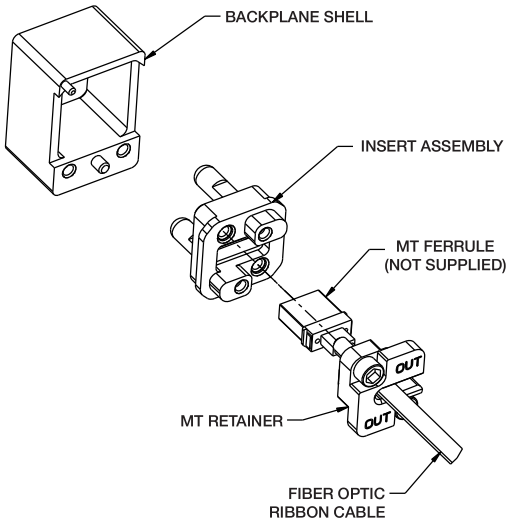








VIEW AT B



REAR EXPLODED ASSEMBLY VIEW

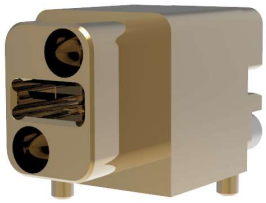
VITA 66.4

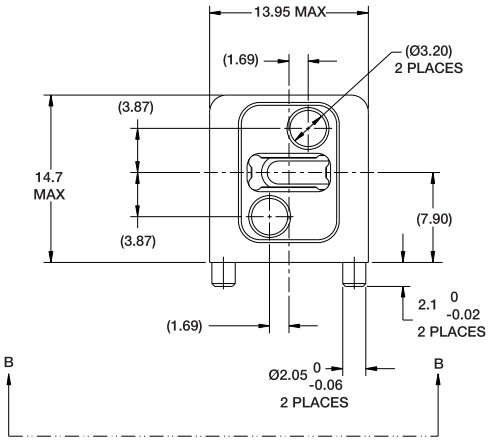
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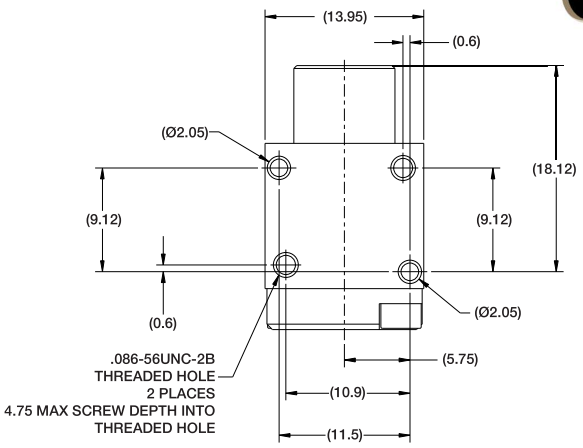
FIBER OPTIC VITA 66.4: 1MT Special Module

PART NUMBER: 10-504637-012

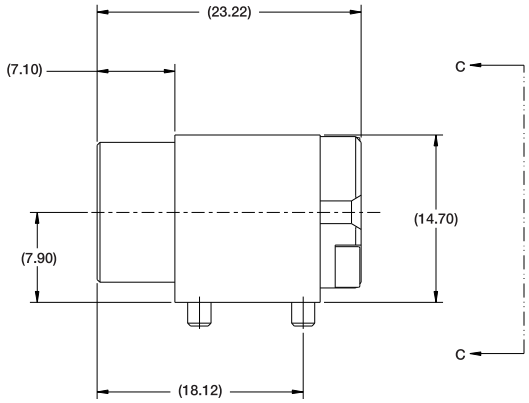
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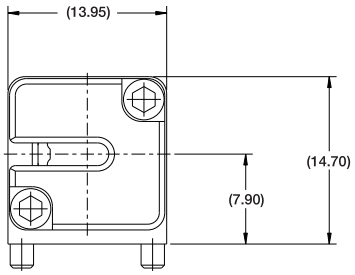




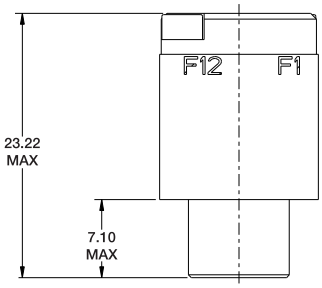


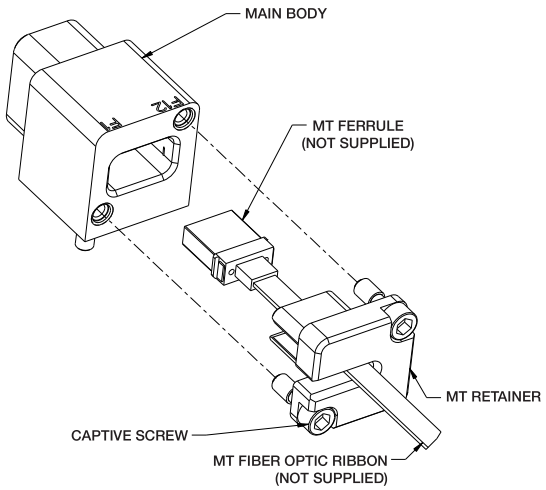
VIEW AT B





VIEW AT C





REAR EXPLODED
ASSEMBLY VIEW

VITA 66.4

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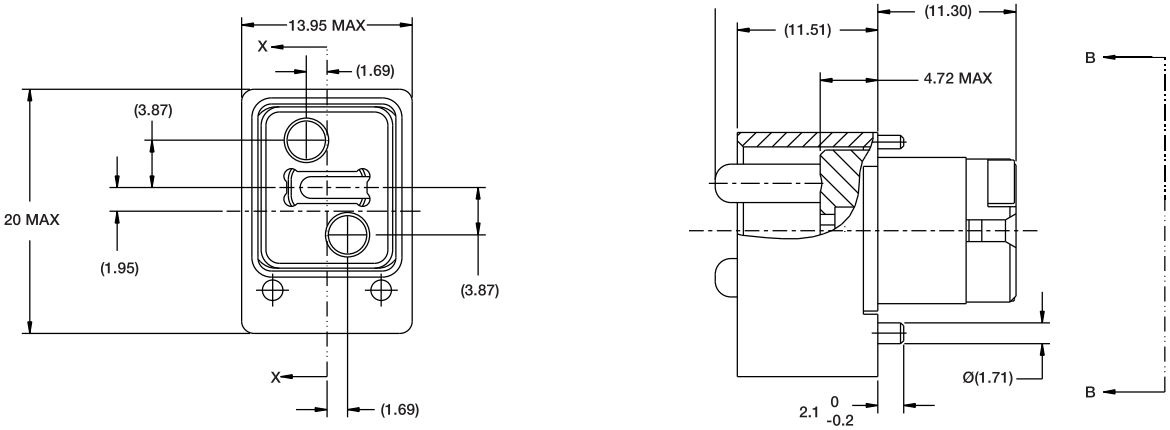
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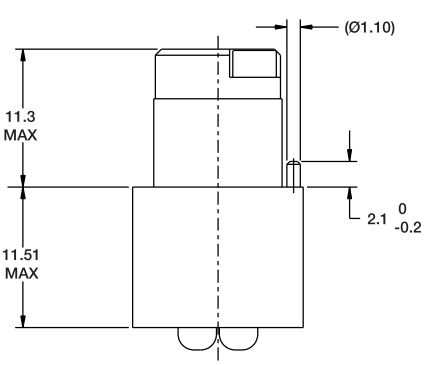
FIBER OPTIC VITA 66.4: Spring Loaded 1MT Backplane

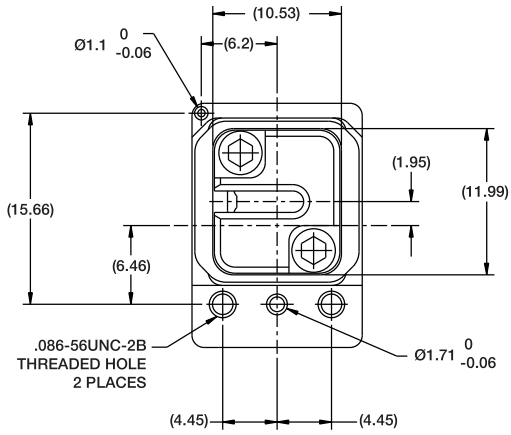
PART NUMBER: 10-504639-010

(Dimensions in MM)

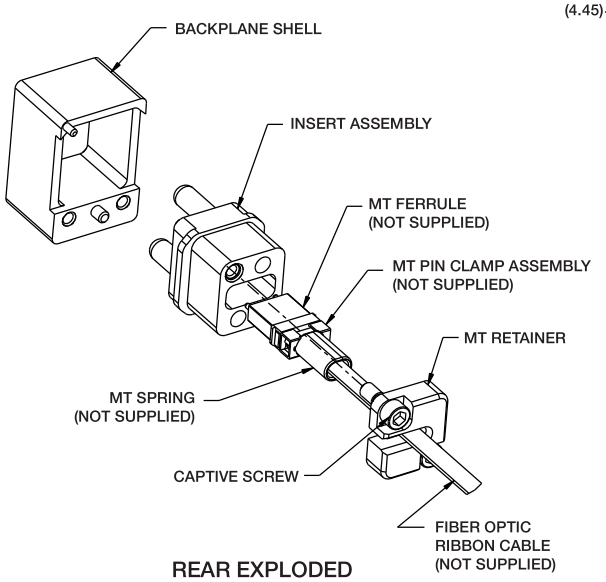








VIEW AT B



REAR EXPLODED ASSEMBLY VIEW

VITA 66.4

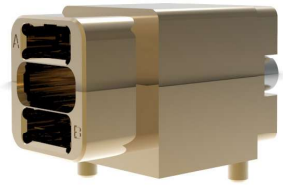
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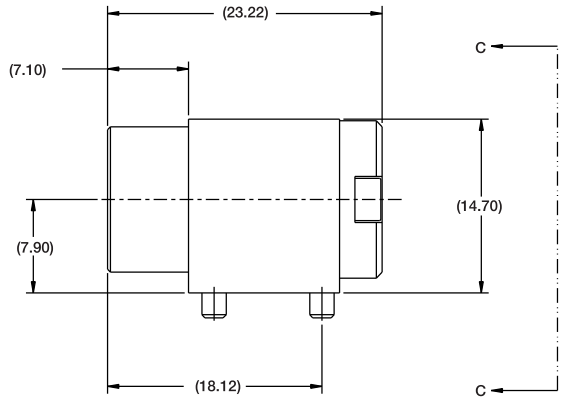
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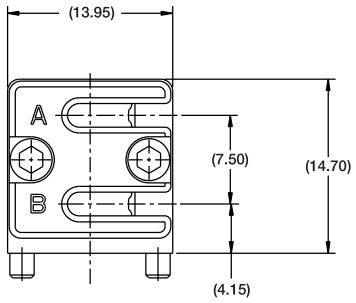
FIBER OPTIC VITA 66.4: Double Density 2MT Module

PART NUMBER: 10-504637-009

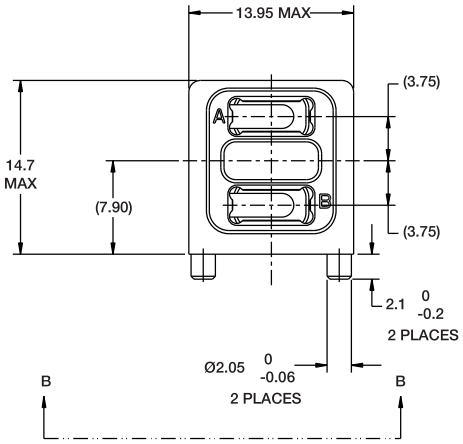
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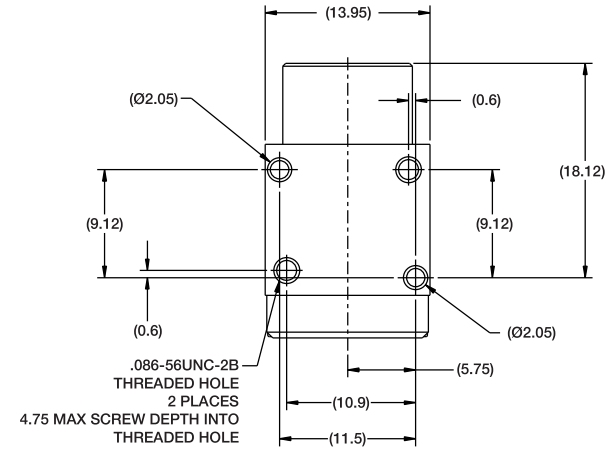




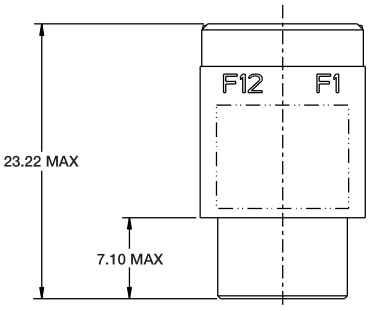


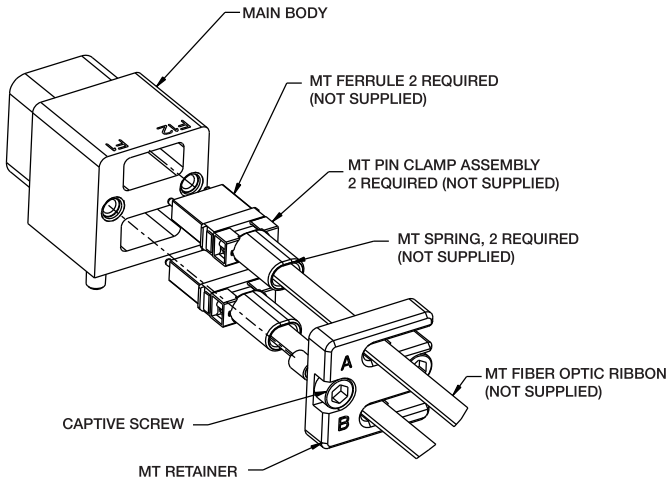
VIEW AT C





VIEW AT B





REAR EXPLODED
ASSEMBLY VIEW

VITA 66.4

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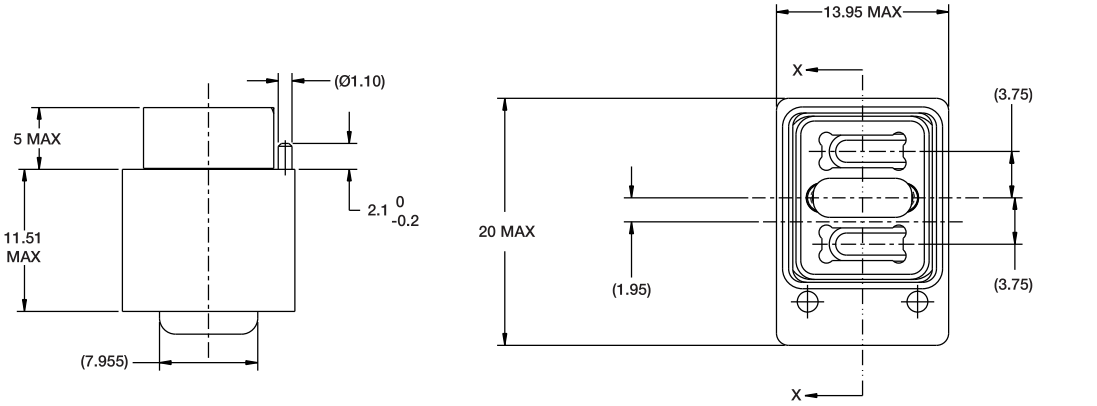
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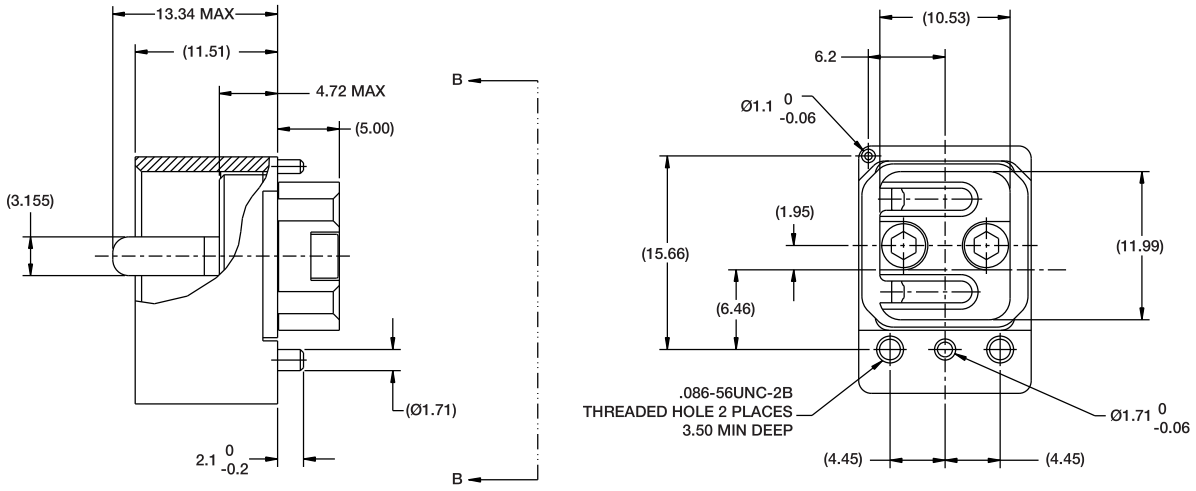
FIBER OPTIC VITA 66.4: Double Density 2MT Backplane

PART NUMBER: 10-504639-007

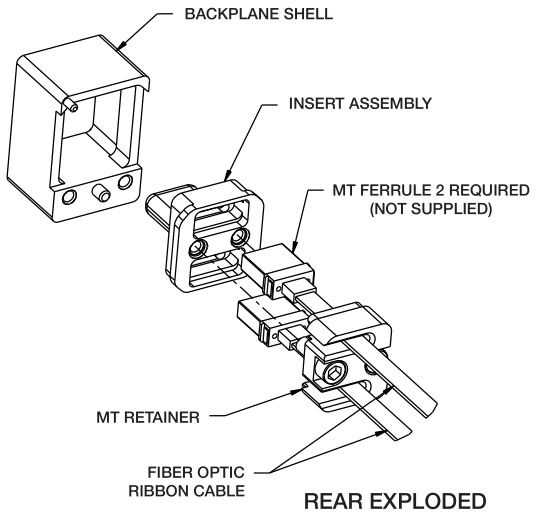
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VIEW AT B



REAR EXPLODED
ASSEMBLY VIEW

VITA 66.4

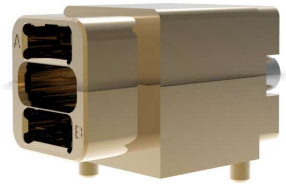
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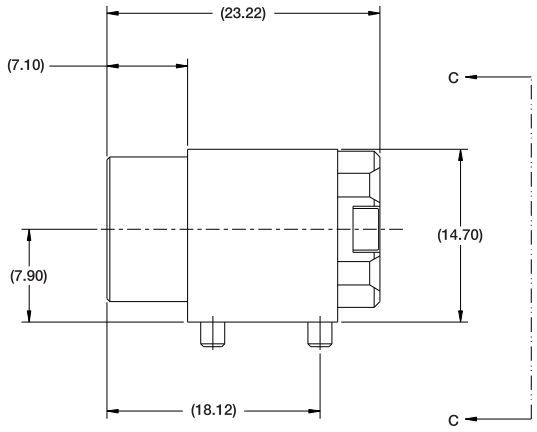
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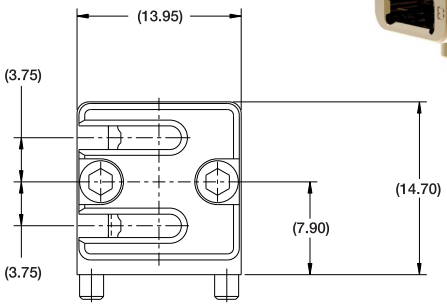
FIBER OPTIC VITA 66.4: Double Density 2MT Special Module

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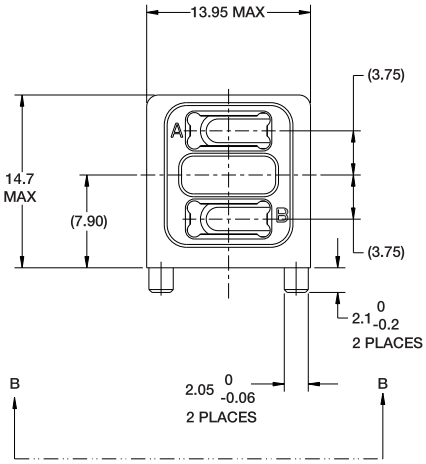
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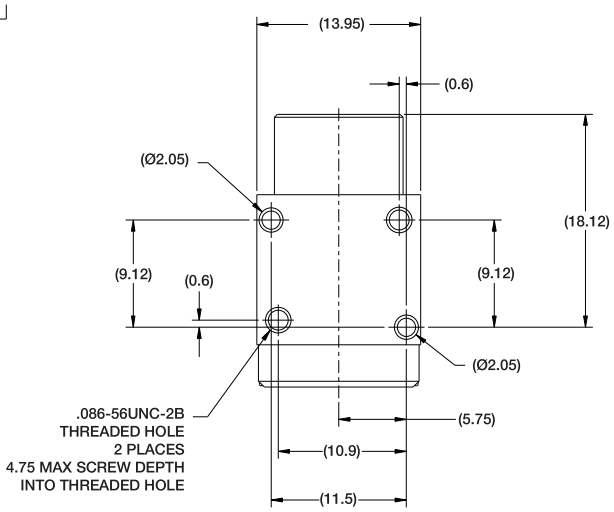




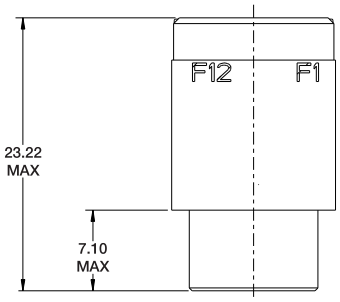


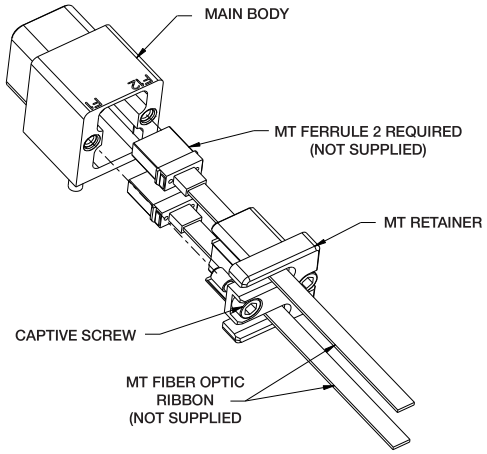
VIEW AT C





VIEW AT B





REAR EXPLODED
ASSEMBLY VIEW

VITA 66.4

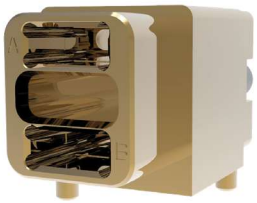
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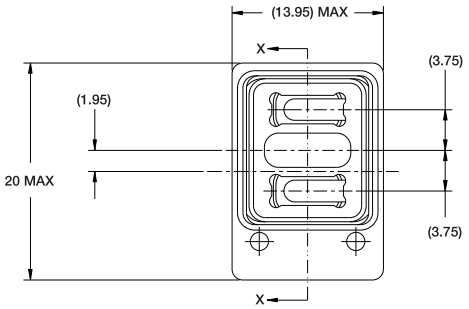
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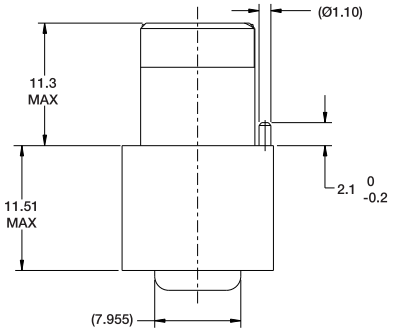
FIBER OPTIC VITA 66.4: Double Density Spring Loaded 2MT Backplane

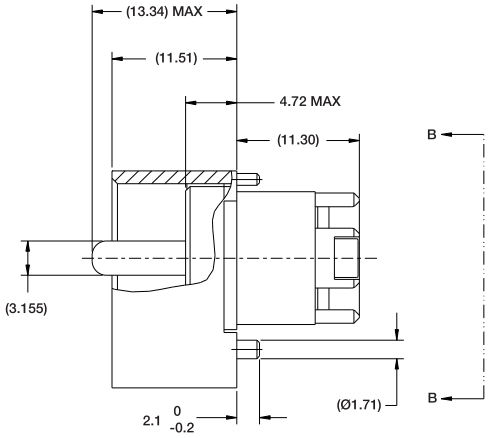
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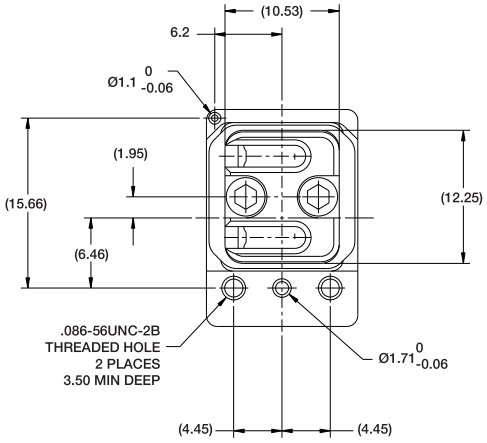
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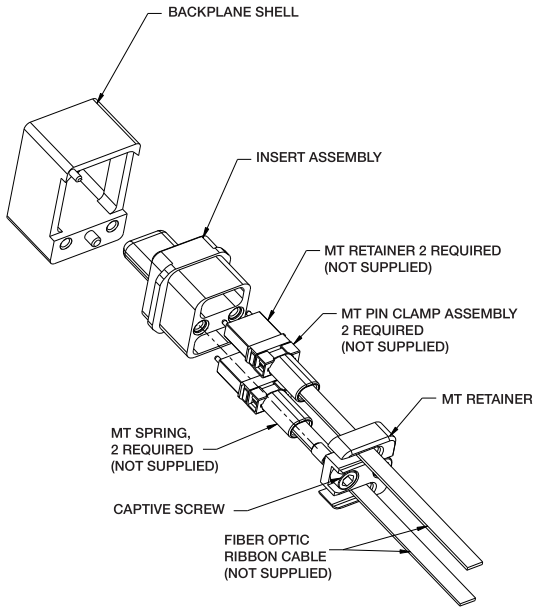








VIEW AT B



REAR EXPLODED
ASSEMBLY VIEW

VITA 66.4

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LIGHTCONEX VITA 66.5

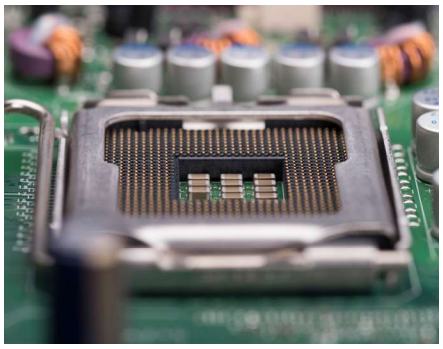


Amphenol Aerospace's LightConex blind mate optical interconnect for 6U and 3U embedded VPX boards.
LightConex integrates a 40Gbps optical transceiver, 120G optical transmitter, and 120G optical receiver into the module connector saving board space and eliminating cables.

The low profile backplane connector is a drop-in replacement for the standard VITA 66.4 connector. It includes springs to ensure a solid MT to MT connection under extreme shock and vibration.

The low profile module connector (6.5mm) mounts to the board via an LGA connector to facilitate optics as an option. It is offered as a 4-channel transceiver, a 12 channel transmitter or a 12-channel receiver. All module connectors operate at up to 10.3125 Gbps per lane from -40 to +85° C at ultra-low bit error rates of 10^{-15}. The module connector also includes equalizers and pre-emphasis to compensate trace impedance.

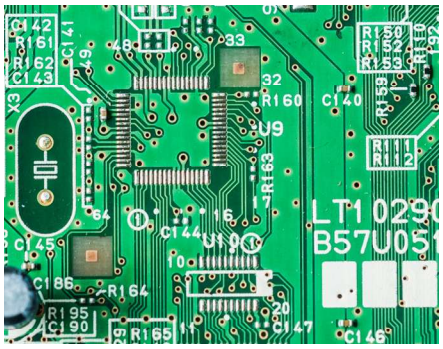
LightConex VITA 66.5 is designed for embedded computing applications in:



Single Processing Computer



Phase Array Radar



Single Board Computers

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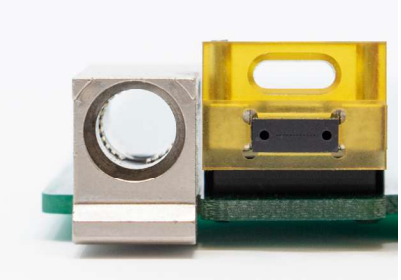
MODULE CONNECTOR FEATURES:

- Rugged: MIL STD 883
- Moisture resistant: Sealed
- Small (DxWxH): 14 x 23 x 6 mm
- Bandwidth: 10.3125 Gbps/ch
- Temperature: 40°C to +85°C
- Operating temperature range: -40°C to +85°C
- Reach: 300m, multi-mode
- BER: 10^{-15}
- Low power: 1.2W
- Data interface: CML
- Board Mount: LGA
- Configurations: 4TRx, 12Tx, 12Rx, 12TRx

BACKPLANE CONNECTOR FEATURES:

- VITA 66.4 drop in replacement
- Spring loaded MT
- Coarse and fine alignment
- Low Profile - 10mmF





QUALIFICATION TESTS

Vibration

- Sine Vibration Sweep - 10 minute sine vibration sweep of 5 g between 50 and 2000 Hz
- Shock - MIL-STD-1344A, Method 2004.1, Test Condition A (1/2 sine, 50 g in perpendicular axis, 80 g in other axes, 11 ms, 3 hits from both directions in each of 3 mutually perpendicular axes for a total of 18 hits)
- Random Vibration
  - Sample 1 - Test Condition V, letter D (0.1 G2/Hz max., 1.5 hours per axis)
  - Sample 2 - Step stress 0.125 G2/Hz for 15 minutes, 0.15 G2/Hz for 15 minutes, 0.175 G2/Hz for 15 minutes, and 0.2 G2/Hz for 45 minutes

Bench Handling

- The sample under test was raised on one edge using the opposite edge as a hinge 4 inches or 45 degrees (whichever is less). The other edges were tested the same.

Vibration over Temperature

- MIL-STD-1344A, Method 2005.1, Test Condition V, Letter D (0.1 G2/Hz max., 1.5 hours per axis, see Fig. 2 solid line), with simultaneous temperature exposure of –40 to 85°C.

Humidity

- Expose to humidity and temperature cycling per MIL-STD-1344A, Method 1002.2, Type III (240 hrs.). The sample shall be mated.

Salt Fog

- Salt Fog with SO2 per ASTM G85 (Annex A4, Cycle A4.4.4.1). The test sample shall be exposed in the mated condition in a sheet metal container.

Sand and Dust

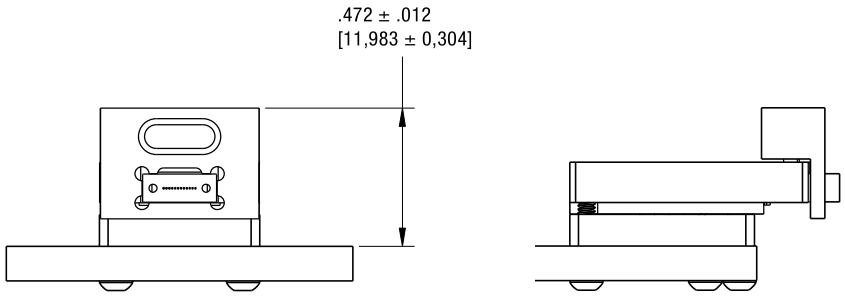
- MIL-STD-810F, Method 510.4, Procedure I (Blowing Dust, particle size < 150 µm, velocity 1750 ft/min). The sample will be mated. The dust test on these two samples will be followed by a Blowing Sand test, also per MIL-STD-810F, Method 510.4, Procedure II (Blowing Sand, particle size > 150 µm but < 850 µm, velocity 5700 ft/min).

Durability

- 500 mate/un-mate cycles. VI, RNT shall be performed after 500 mate/un-mate cycles.

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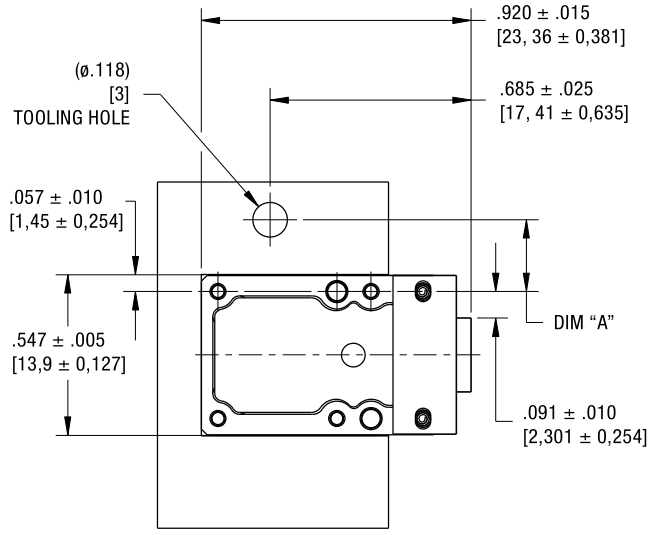
LIGHTCONEX 10-743008-00X

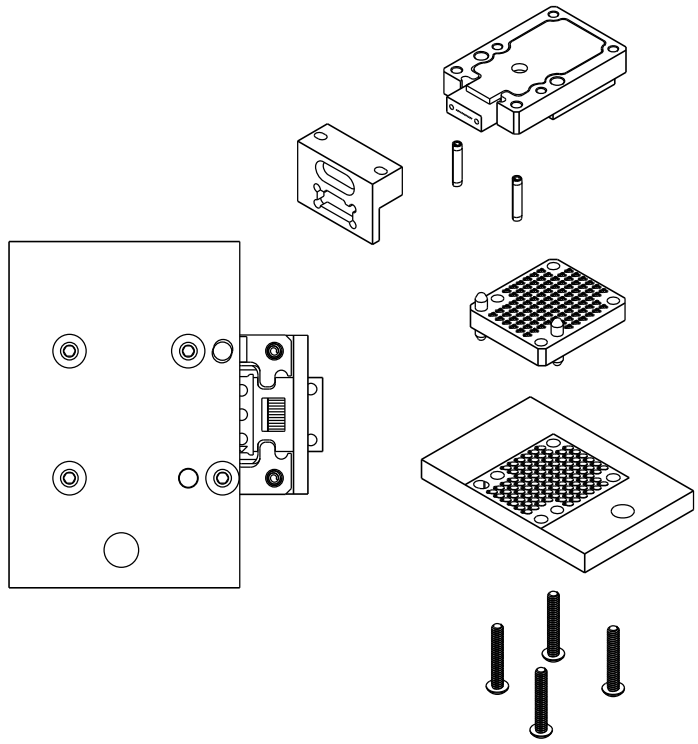


Part Number	Reflex Optical Active Device P/N (POS 5)	Reflex Optical Active Device Description
10-743008-003*	NONE	NONE
10-743008-004	10-743017-004	4TX/4RX, Transceiver, 10.3125-Gbps/CH, SENS: -12.0dBm**, -40°C to +85°C
10-743008-005	10-743017-005	12TX, Transmitter, 10.3125-Gbps/CH, -40°C to +85°C
10-743008-006	10-743017-006	12RX, Receiver, 10.3125-Gbps/CH, SENS: -12.0dBm**, -40°C to +85°C

* 10-743008-003 includes all the components to connect an optical device to a PCB without the optical device itself.

** If operating at 12.5 Gbps the receiver sensitivity will be -4dBm



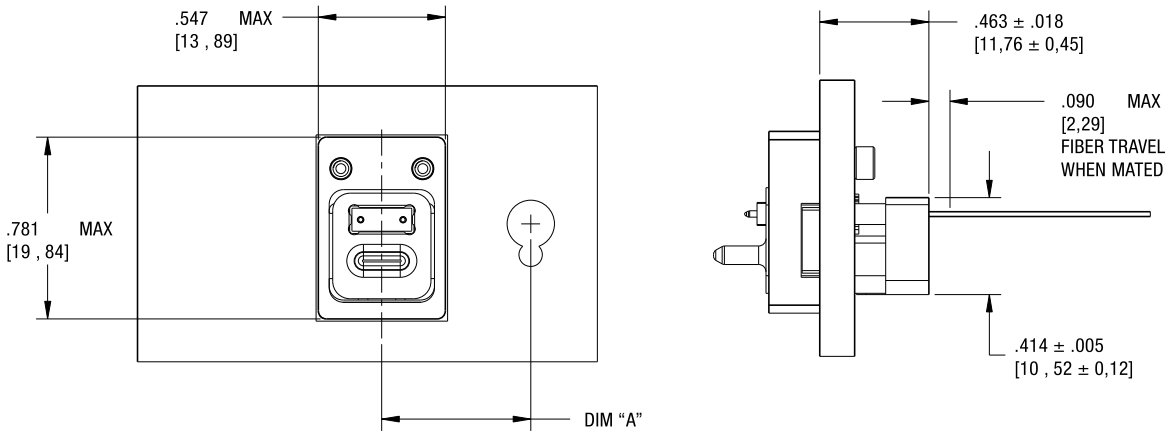


VITA 66.5

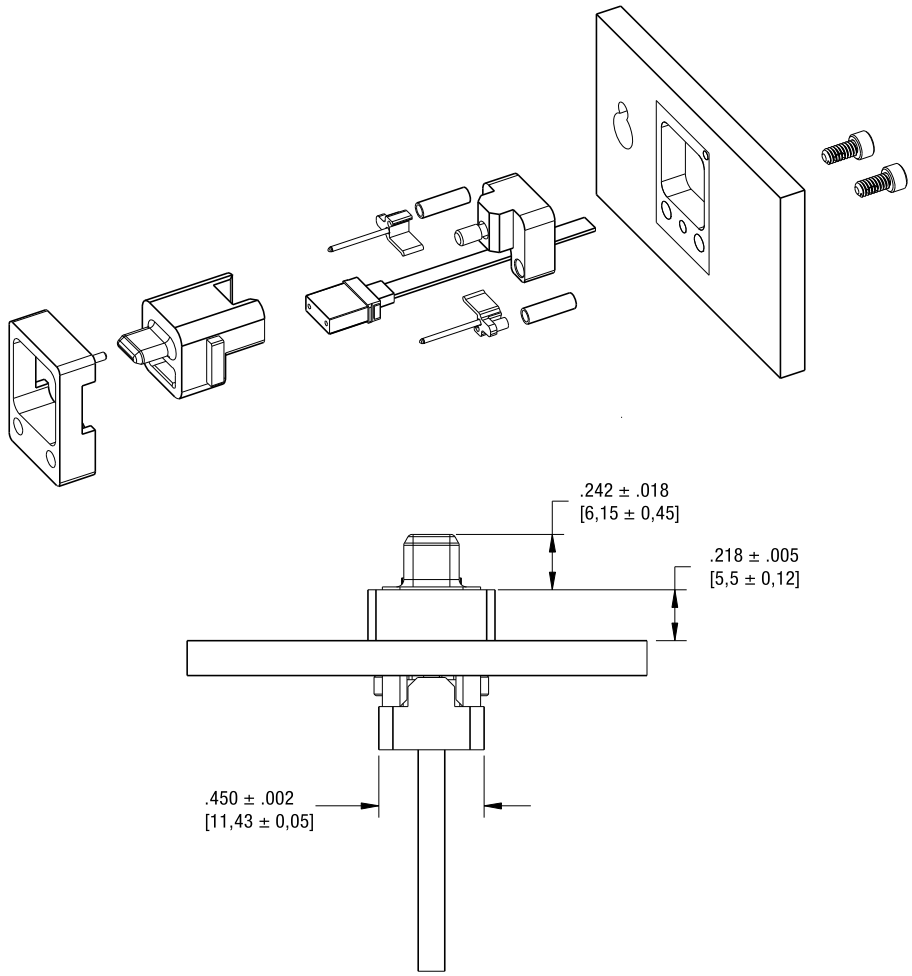
Joe Rothrock • Office: +1 (607) 563-5062 • Email: jrothrock@amphenol-aao.com
amphenol-aerospace.com • amphenolmao.com

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LIGHTCONEX 10-743007-002



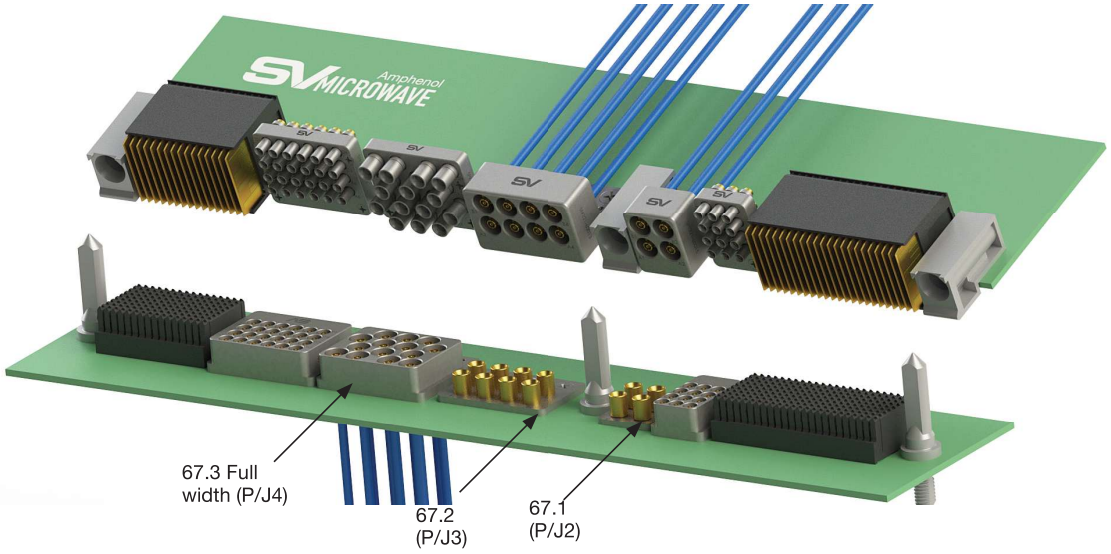
Part Number	Optical Active Device Description
10-743007-002	Passive Backplane Connector



VITA 66.5

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HIGH DENSITY VITA 67 FOR EMBEDDED COMPUTING



Amphenol's VITA 67 complete line of coaxial interconnects is a high density and high-performance RF addition to the VPX Platform. The floating SMPM and SMPS coaxial contacts ensure excellent RF performance in any mating condition. These parts are also designed for side-by-side implementation with VITA 46 hardware and can be cabled to .085" and smaller diameter coaxial cable types.

High Frequency VITA 67 RF products are primarily designed for embedding computing applications in the defense and commercial markets.











VITA 67

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HIGH DENSITY SMPS VITA 67 OVERVIEW

Amphenol Aerospace

FEATURES & BENEFITS:



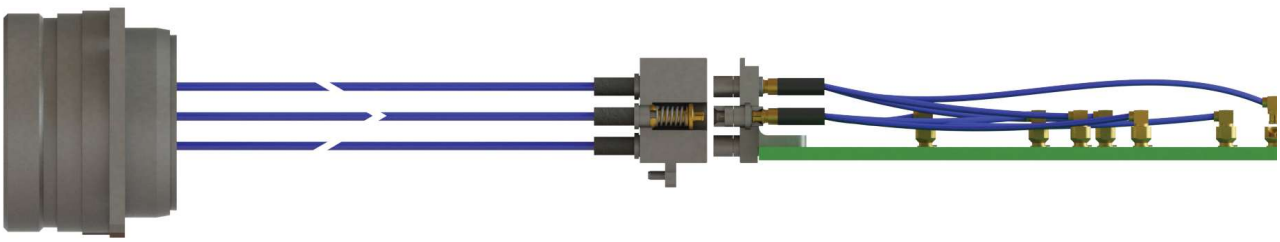
- Customizable RF contact locations within module
- Coaxial interface standard for daughtercard to backplane connectors
- Designed for side-by-side implementation with other VITA connector standards
- Floating SMPM & SMPS coaxial pins ensure excellent RF performance in any mating condition
- Unique SV connector retention mechanism offers significant ease of assembly/disassembly

APPLICATIONS:

- Robust and rugged high speed cabled solution
- High-reliability, high-density for aerospace & defense applications
- SIGINT, EWR, ground base station & communication systems, avionics, radar systems
- Air Transport Racks (ATRs) without Rear Transition Modules (RTMs) or limited speed through RTM

PRODUCT RANGE:

- VITA 67.1/2: SMPM contacts, cable assemblies, modules and tools
- VITA 67.3: SMPM & SMPS contacts, cable assemblies, adapters, modules and tools

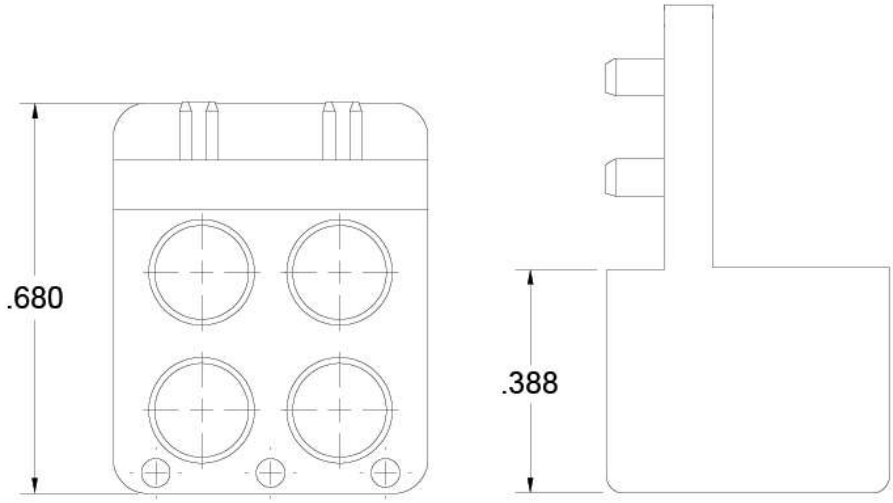


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SMPM VITA 67.1 PLUG-IN MODULE

PART NUMBER: SF9321-60015

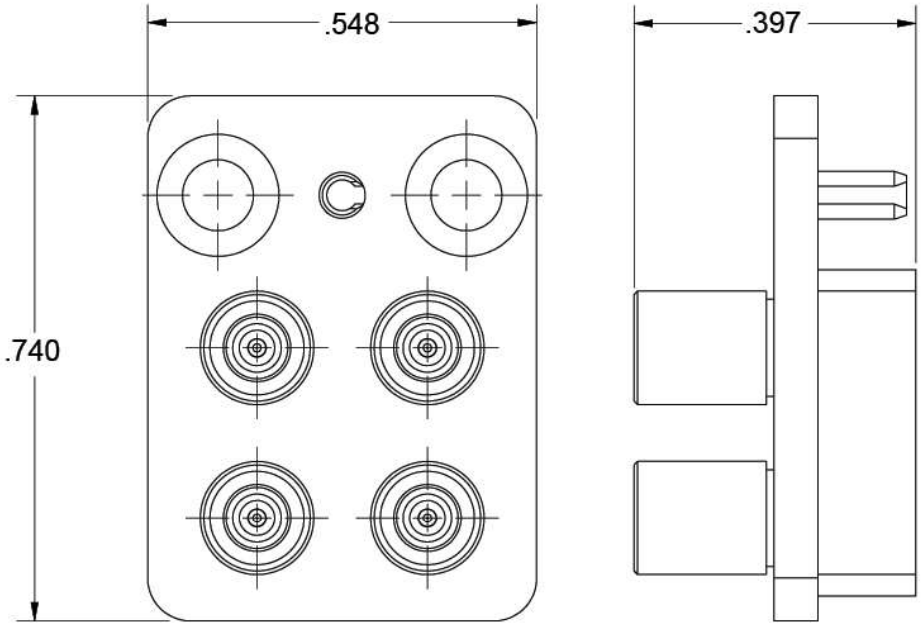




SMPM VITA 67.1 BACKPLANE MODULE

PART NUMBER: SF1132-6037





VITA 67

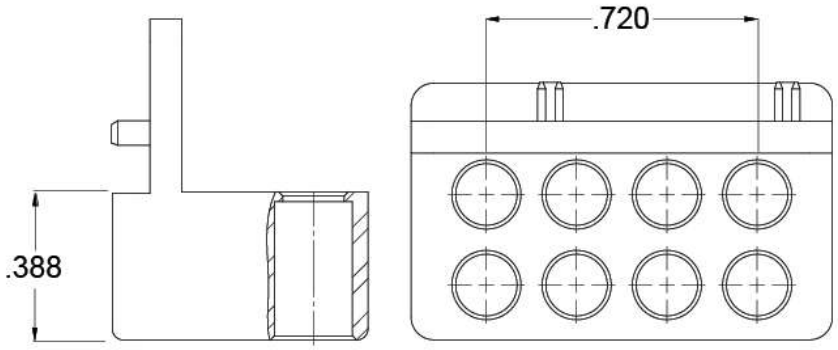
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SMPM VITA 67.2 PLUG-IN MODULE

PART NUMBER: SF9321-60013

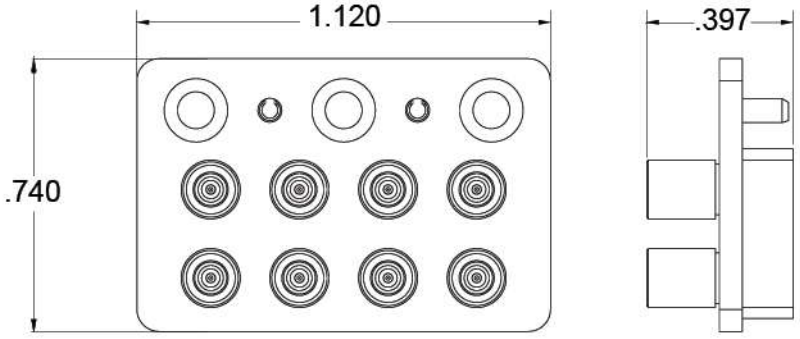




SMPM VITA 67.2 BACKPLANE MODULE

PART NUMBER: SF1132-6036





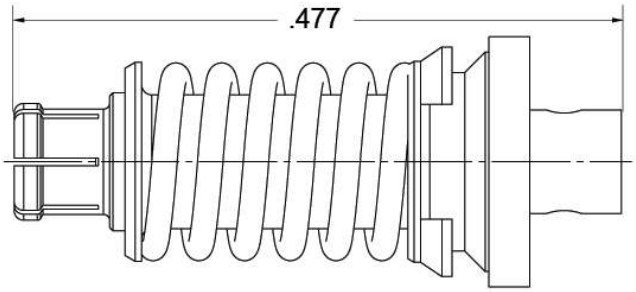
VITA 67

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SMPM FEMALE VITA 67.1/2 PLUG-IN CONTACT FOR .047 CABLE

PART NUMBER: 3221-40019

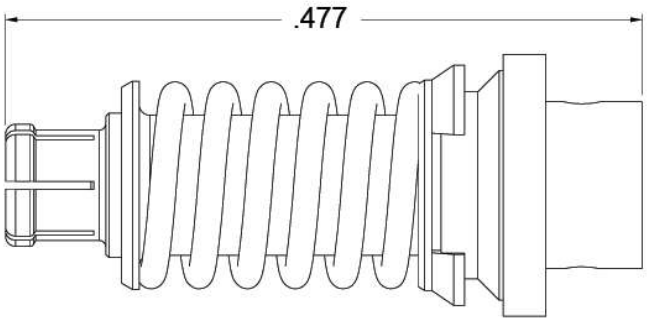




SMPM FEMALE VITA 67.1/2 PLUG-IN CONTACT FOR Ø.086 CABLE

PART NUMBER: 3221-40022





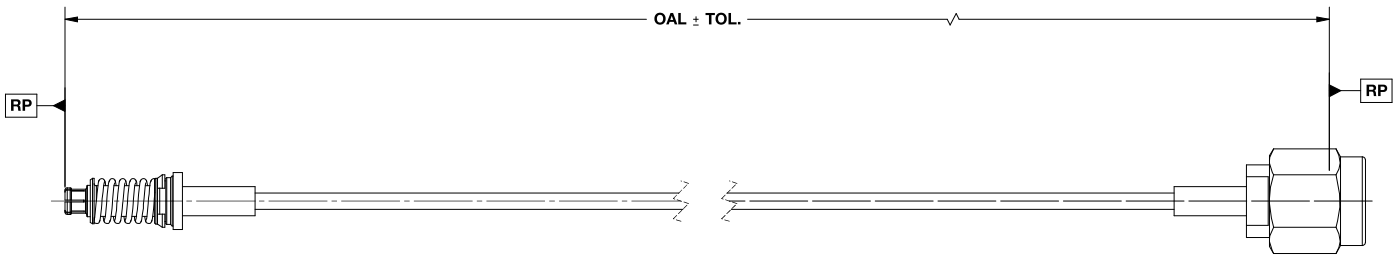
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SMPM FEMALE VITA 67.1/67.2 TO SMA MALE CABLE ASSEMBLY FOR .047 CABLE

OAL 6" 7032-6728-060, OAL 12" 7032-6728-120

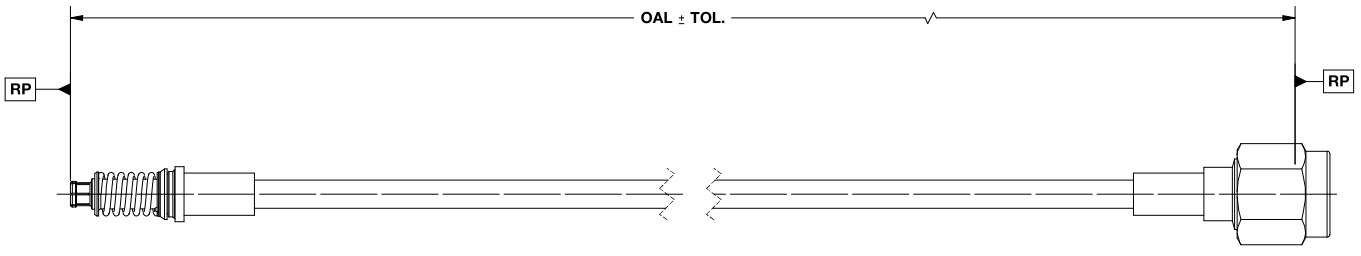




SMPM FEMALE VITA 67.1/67.2 TO SMA MALE CABLE ASSEMBLY FOR .085 CABLE

OAL 6" 7032-6729-060, OAL 12" 7032-6729-120



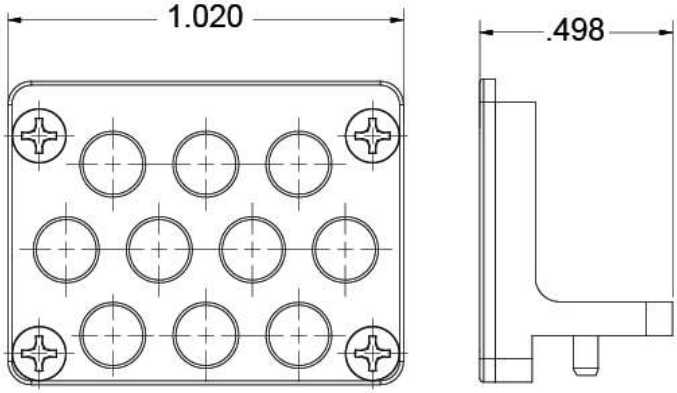


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SMPM VITA 67.3C 10-PORT PLUG-IN MODULE

PART NUMBER: SF9311-60097

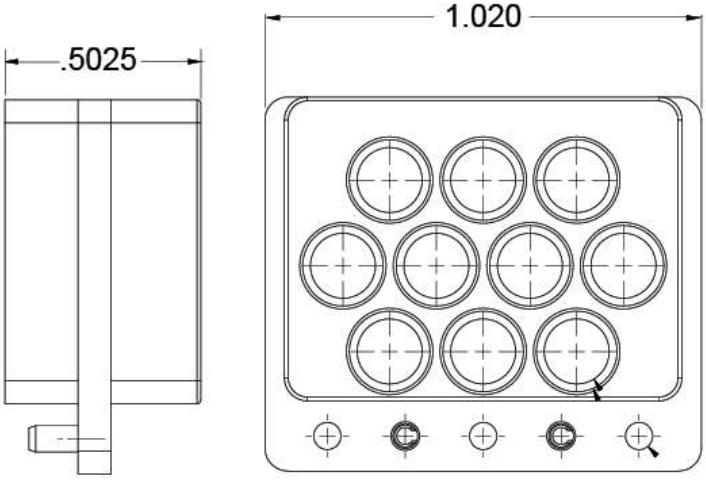




SMPM VITA 67.3C 10-PORT BACKPLANE MODULE

PART NUMBER: SF9321-60059





VITA 67

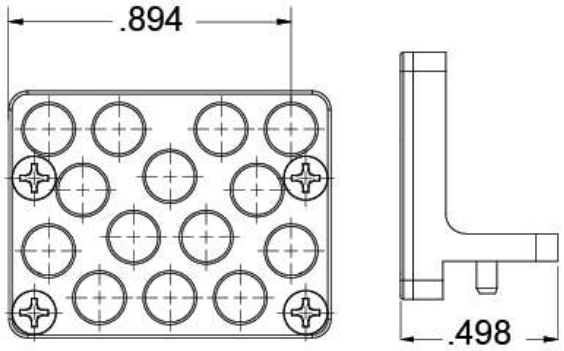
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SMPM VITA 67.3 SOSA 14 PORT PLUG-IN MODULE

PART NUMBER: SF9311-60147

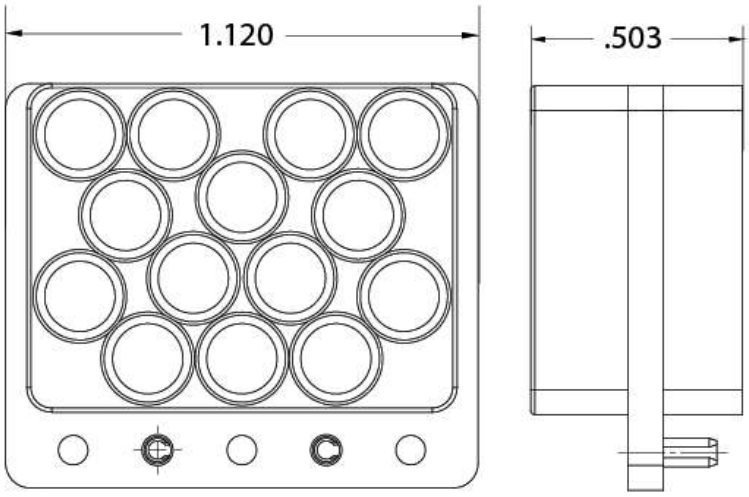




SMPM VITA 67.3 SOSA 14 PORT BACKPLANE MODULE

PART NUMBER: SF9321-60086



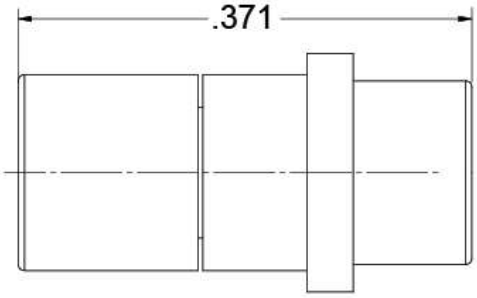


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SMPM MALE TO SMPM VITA 67.3 MALE PLUG-IN ADAPTER

PART NUMBER: SF1132-6067

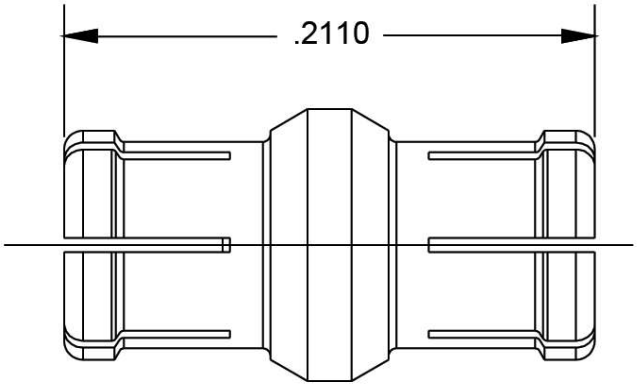




SMPM FEMALE TO FEMALE BULLET (OAL 0.211")

PART NUMBER: 3290-4002

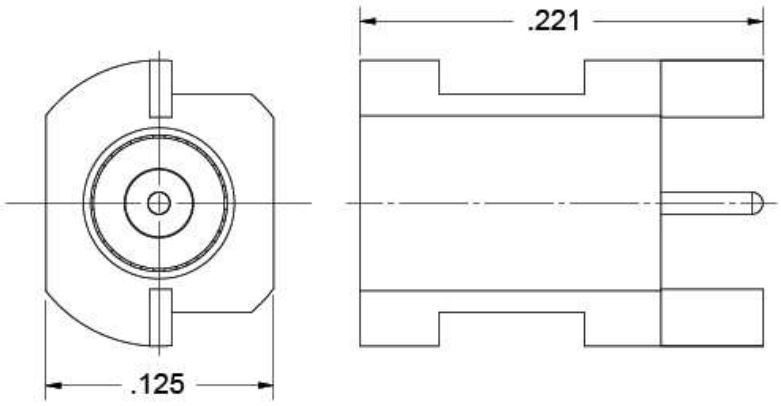




SMPM MALE EDGE LAUNCH CONNECTOR, SB

PART NUMBER: 3211-60035





VITA 67

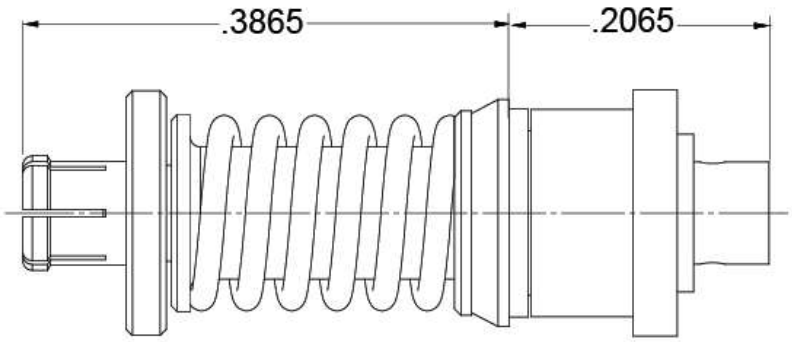
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SMPM FEMALE VITA 67.3 BACKPLANE CONTACT FOR .047 CABLE

PART NUMBER: 3221-40071

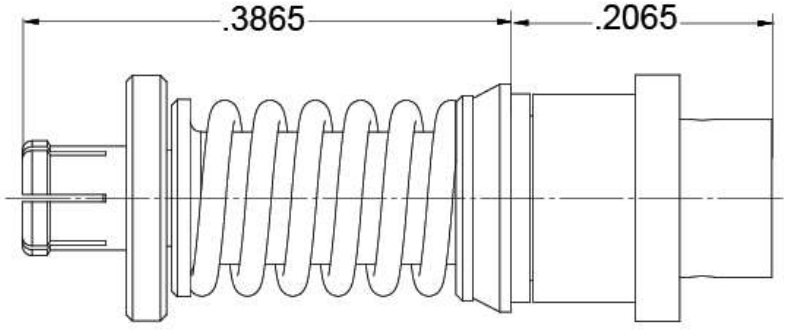




SMPM FEMALE VITA 67.3 BACKPLANE CONTACT FOR .086 CABLE

PART NUMBER: 3221-40066



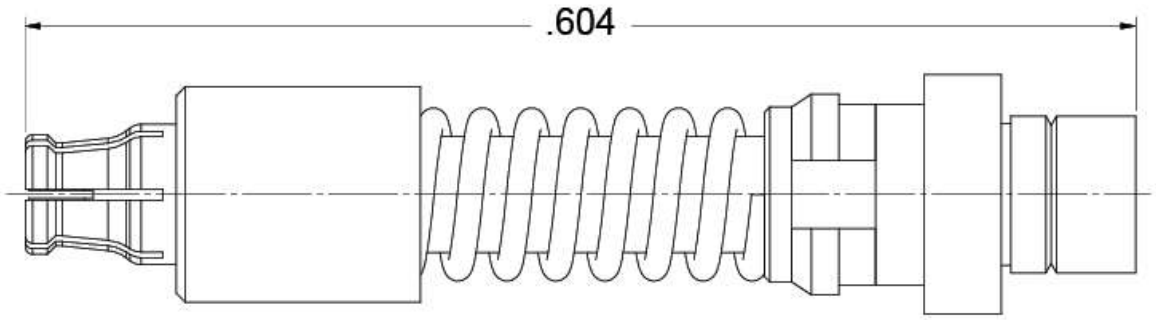


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SMPM VITA 67.3 BACKPLANE CONTACT FOR .047 CABLE

PART NUMBER: 3821-40023

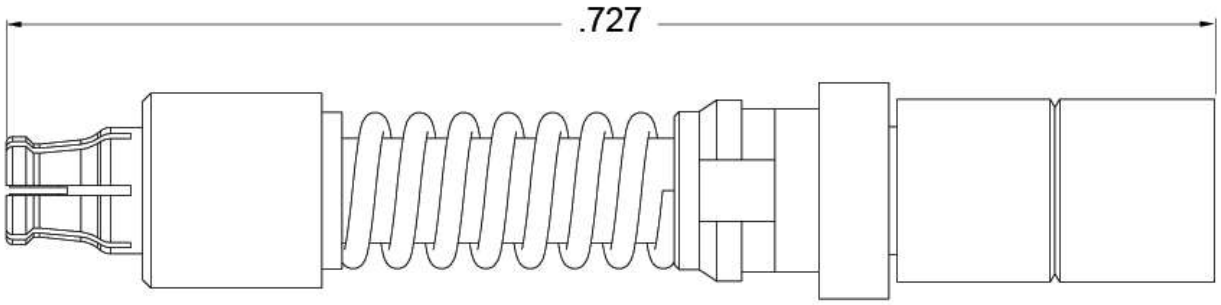




SMPM VITA 67.3 BACKPLANE CONTACT FOR .085 CABLE

PART NUMBER: 3821-40024





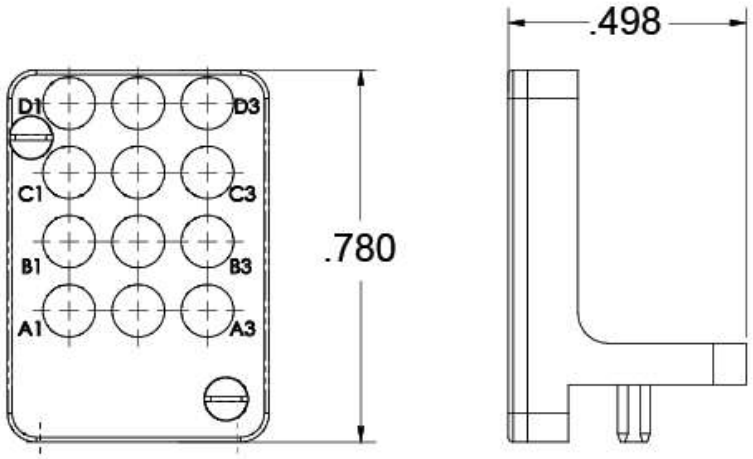
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SMPS VITA 67.3 12 PORT PLUG-IN MODULE D

PART NUMBER: SF9311-60166

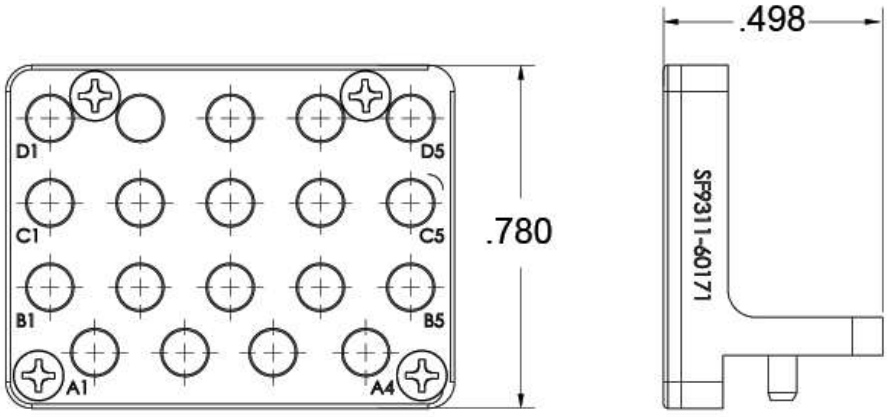




SMPS VITA 67.3 19 PORT PLUG-IN MODULE C

PART NUMBER: SF9311-60171





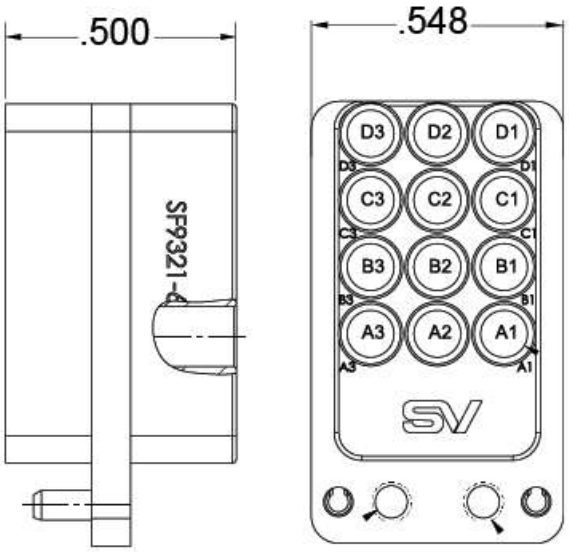
VITA 67

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SMPS VITA 67.3 12 PORT BACKPLANE MODULE D

PART NUMBER: SF9321-60084

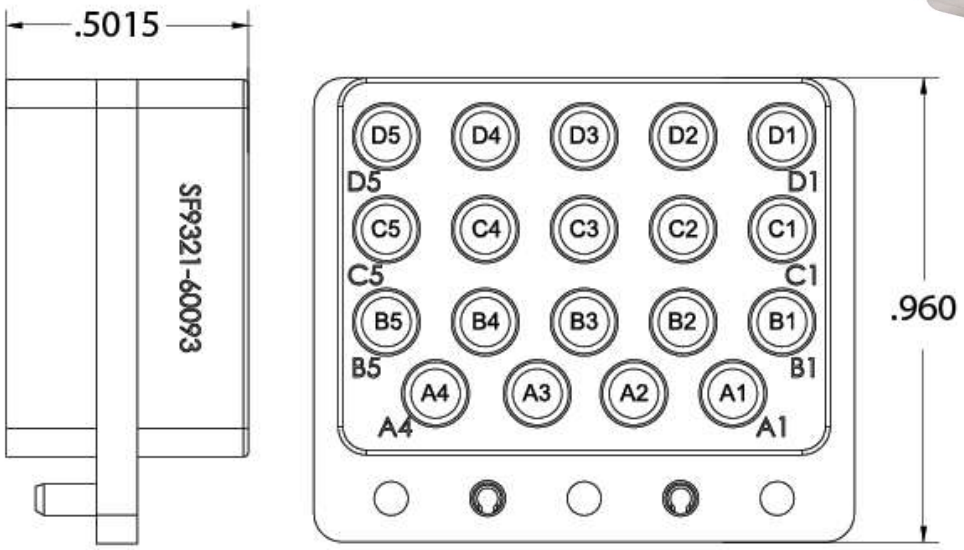




SMPS VITA 67.3 19 PORT BACKPLANE MODULE D

PART NUMBER: SF9321-60093





VITA 67

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VITA 67 CONTACT REMOVAL

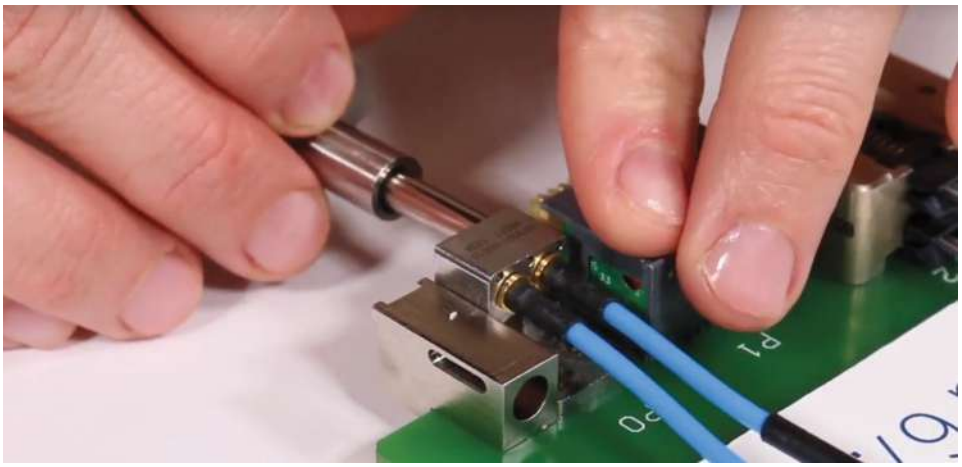
FEMALE CONTACT REMOVAL

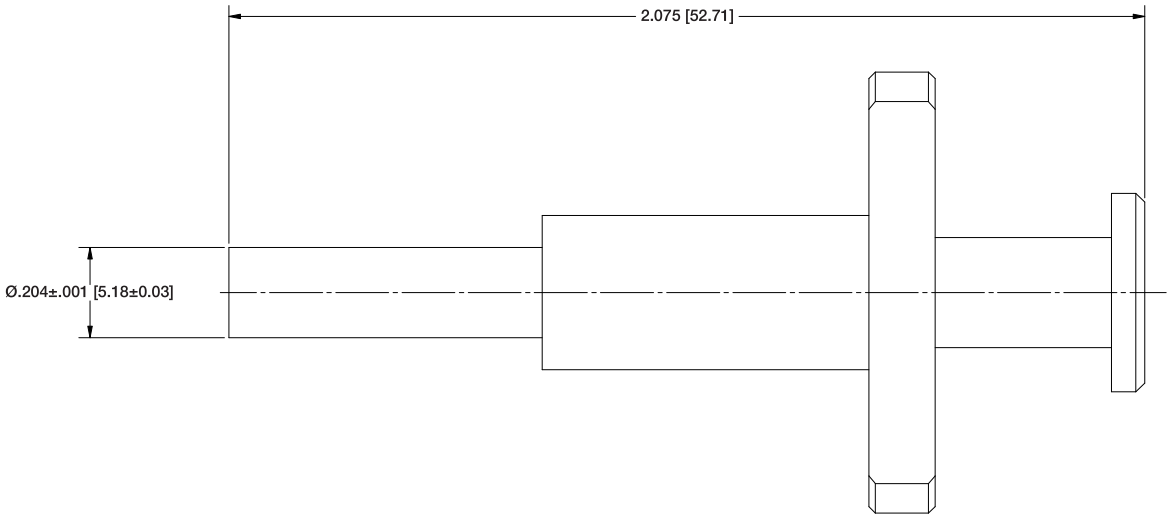
Amphenol SV Microwave has a one step process for female contact removal. This unique connector retention mechanism offers significant ease of assembly/disassembly, using the SMPM VITA 67.3 (500-32-015), SMPS VITA 67.3 (500-38-006), and SMPM VITA 67.1/2 (500-32-022) removal tools.

Gently insert the tool in the contact cavity and push on the plunger to take out the contact.



500-32-015





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VITA 67 CABLE INSTALLATION

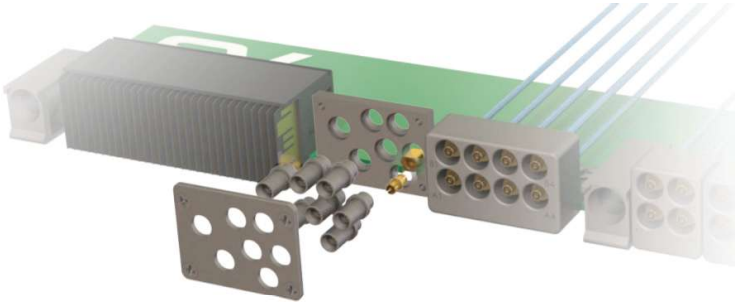
The Amphenol VITA 67 range is designed for simple end user assembly procedures.

SMPS VITA 67.3 cable installation tool (500-38-008)

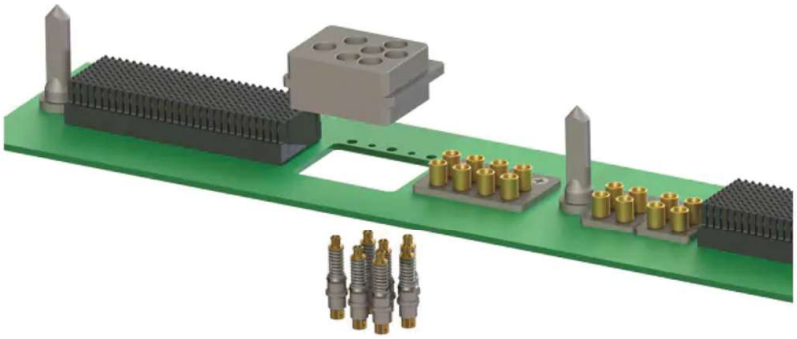


VISUAL AID
The illustrations below shows the typical assembly of a VITA 67 embedded system.

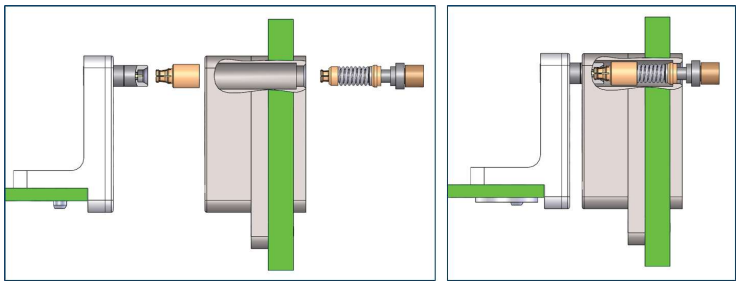
PLUG-IN CARD EXPLODED VIEW, CATALOG SMPM PCB LAUNCH AND BULLET SHOWN ON CARRIER CARD



BACKPLANE MODULE C EXPLODED VIEW WITH Ø .086 SMPM CONTACTS



SMPM CONTACTS ASSEMBLY PROCESS



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