

MIL-HD2

NEXT GEN SOSA/VITA 91 ALIGNED CONNECTOR SERIES

PDS - 352



Designed to achieve 56G PAM4 data rate requirements with higher density.

MIL-HD2 provides developers with a readily available robust solution for tighter card pitches and chassis designs where space requirements and density are critical. These connectors are available in 3-, 4-, and 6-pair configurations. Providing the MIL embedded market with the highest count of differential pairs available today in a 3U configuration at 56Gb/s PAM 4 speeds. This series was selected by the SOSA Consortium and provides a SOSA aligned solution for next gen switch and payload card requirements enabling the MIL-embedded market to meet next gen performance levels while still meeting COTS requirements.

FEATURES

- Configurations to meet SOSA/VITA 91 requirements for HD Switch
- 4 diff, 8 column SOSA aligned configuration
- Data rates scalable to 56Gb/s PAM4 to support system upgrades without costly redesigns
- Proprietary crosstalk reducing technologies
- 15.7mil drill compliant pin allows deeper backdrilling
- Optimized footprints
- Shielded contacts mate before signal contacts, providing up to a 4mm minimum wipe
- Embedded capacitor available
- Differential pairs 28-84 per inch (11-33 differential pairs per centimeter
- Passed VITA 72 vibration level testing with BER monitoring

BENEFITS

- Highest density with 1.80mm pitch
- Proven EMI and signal integrity advantages
- Improved impedance matching
- Complete solution for unique customer requirements
- Enables hot plugging
- Meets high density application requirements

TECHNICAL INFORMATION



MATERIAL

Contact Finish Area: Gold

Contact Base Metal: High performance copper alloy

Housings: LCP

• Stiffener: Stainless steel type 301

ELECTRICAL PERFORMANCE

Signal Contact Current Rating: 1A

Contact Resistance Change: 10mΩ max.

• Dielectric Withstanding Voltage: 750V RMS peak

MECHANICAL PERFORMANCE

2mm & 3mm signal wipes available

Housing Capture: 0.8mm X & 0.61mm Y

Guide Capture: 2mm X & Y

Durability: 250 mating cycles

ENVIRONMENTAL

Operating Temperature Range: -40°C to 105°C

APPROVALS AND CERTIFICATIONS

UL94 V-0

VITA 47 - Qualification testing in progress

VITA 72 - Passed Vita 72 vibe levels

SPECIFICATIONS

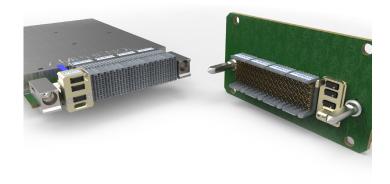
- HD2 General Product Specification
- HD Family Routing Guidelines
- HD2 Connector Design Guidelines
- Vita 91

PACKAGING

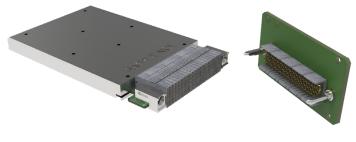
PVC trays (ESD)

TARGET MARKETS/APPLICATIONS

- Radar
- Sensors
- Switches
- Integrated Processors
- Surveillance
- Electronic Warfare







Shown: 3U 1" VPX Slot offering 160 differential pairs with MHD2



SOSA ALIGNED CONNECTOR CONFIGURATIONS



Module -4pr 8 Column, Extra Ground, 50u Gold, Tin & Lead Free

3U Configuration Qty: 5

AAO Part Number: MHD24P800M1



Backplane -4pr 8 Column, Extra Ground, 50u Gold, Tin & Lead Free

3U Configuration Qty: 5

AAO Part Number: MHD24J800M1



HOW TO ORDER



Complete steps 1-7 to create your part number (ex: MHD24J800M1)

	1.	2.	3.	4.	5.		6.	7.	
Connector Type		Differential Pairs	Gender	Columns	Special Options	Со	ntact Plating	Contact Termination Finish	
MHD2		4	J	8	8 00		М	1	
1. Connector Type			3. Gender		6. Contact Plating				
MHD2	MIL-HD2 - (56 Gbps PAM4)		J B	Backplane (without endwalls)			50 μ-inch Gold	t	
Extra Ground Version *		P D	P Daughtercard						
2. Differential Pairs			4. Columns			7. Contact Termination Finish			
3	Number of differential pairs per column		4			1	Gold (Tin & Le	ad Free)	
4			6 N	umber of columns					
6			8						
			5. Specia	5. Special Options					
				ptional 2 digit indicato pecials (partial loads, e					

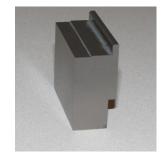
always be "00" when not used.

Required Installation Tools

10-743053-001	Backplane Installation Tool
10-743053-002	Daughter Card Installation Tool



Backplane Installation Tool



Daughtercard Installation Tool