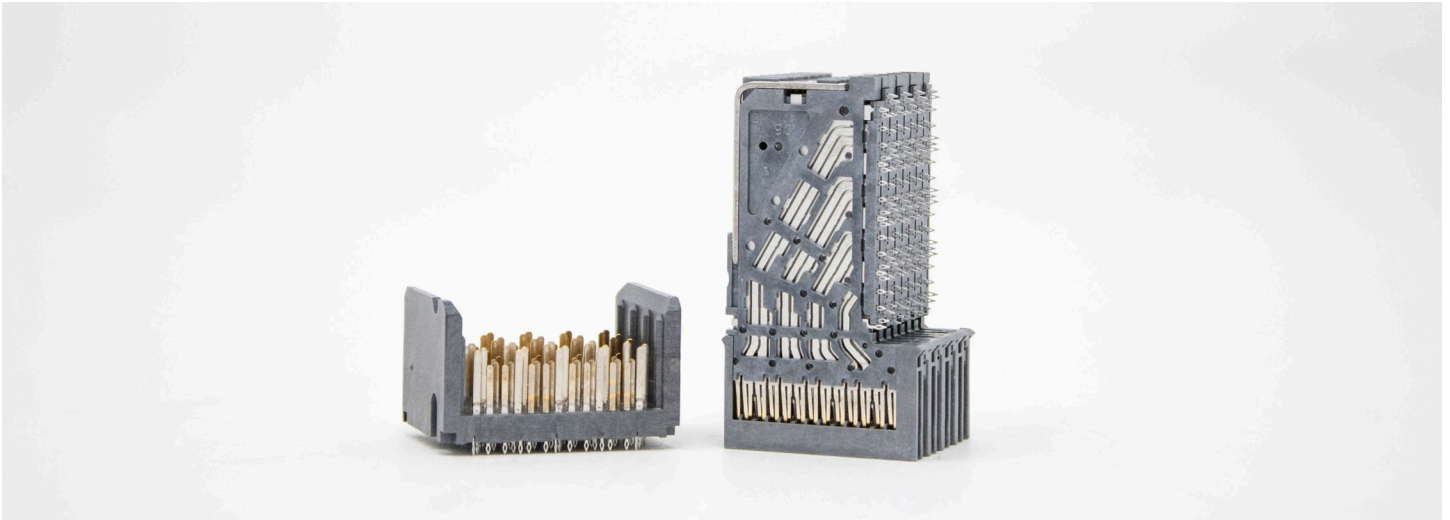


# MIL-HD2

## 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

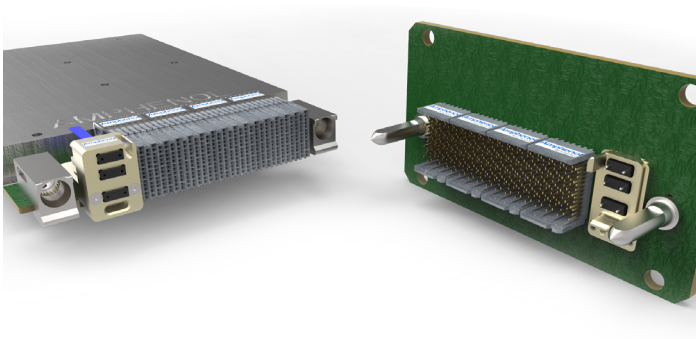
- HD2 General Product Specification
- HD Family Routing Guidelines
- HD2 Connector Design Guidelines
- Vita 91

### PACKAGING

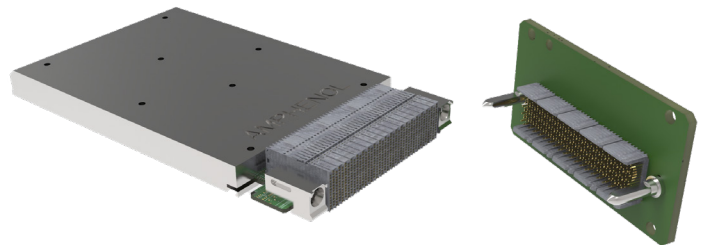
- PVC trays (ESD)

### TARGET MARKETS/APPLICATIONS

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



Shown: 128 high speed diff pair in copper (56 Gbps PAM4)  
PLUS 72 channels of Fiber

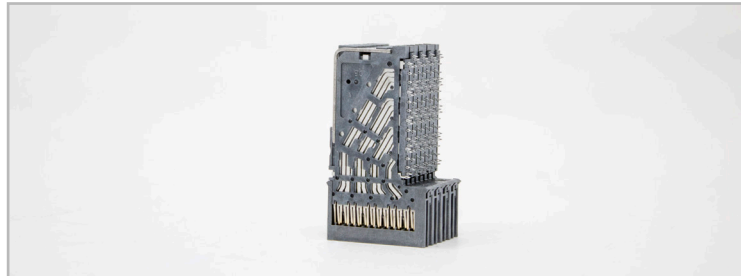


Shown: 3U 1" VPX Slot offering 160 differential pairs  
with MHD2

**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	Contact Plating	Contact Termination Finish
MHD2	4	J	8	00	M	1

1. Connector Type	
<b>MHD2</b>	MIL-HD2 - (56 Gbps PAM4) Extra Ground Version *

3. Gender	
<b>J</b>	Backplane (without endwalls)
<b>P</b>	Daughtercard

6. Contact Plating	
<b>M</b>	50 μ-inch Gold

2. Differential Pairs	
<b>3</b>	Number of differential pairs per column
<b>4</b>	
<b>6</b>	

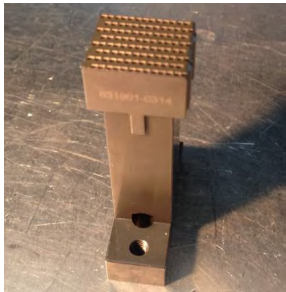
4. Columns	
<b>4</b>	Number of columns
<b>6</b>	
<b>8</b>	

7. Contact Termination Finish	
<b>1</b>	Gold (Tin & Lead Free)

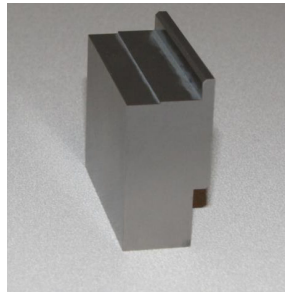
5. Special Options	
<b>00</b>	Optional 2 digit indicator for specials (partial loads, etc.). Shall always be "00" when not used.

## Required Installation Tools

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



Backplane Installation Tool



Daughtercard Installation Tool

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