

# DIGITAL VIDEO INTERFACE MEDIA CONVERTER PRODUCTS

PDS -294



## Amphenol introduces a proven line of Digital Video Interface media converters.

These converters can be used in harsh environment avionics, ground systems, or naval applications that need to transmit and receive such encoded interfaces over fiber optic cables.

### PRODUCTS INCLUDE:

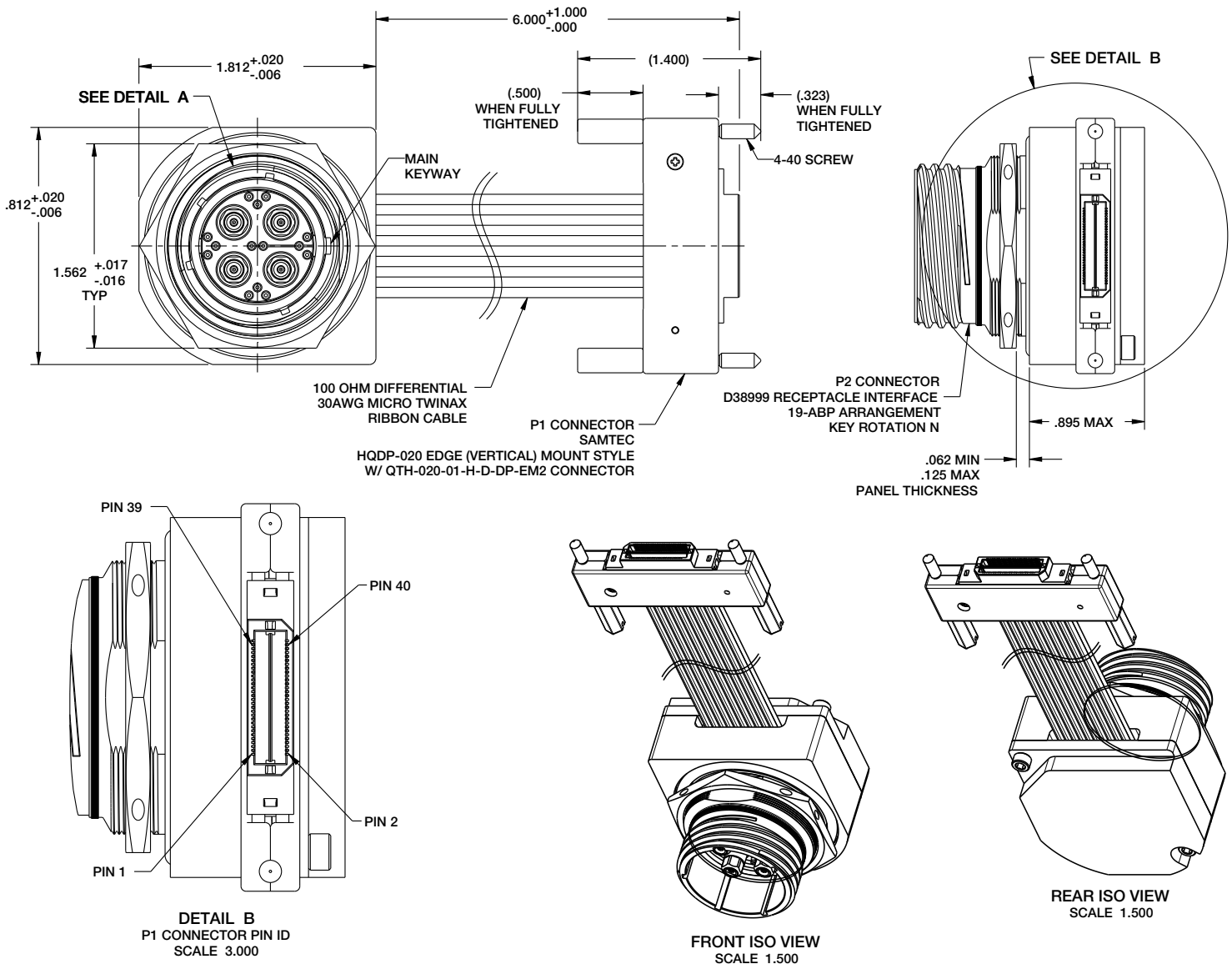
- Embedded Single Channel DVI Copper to Fiber Converter
- Standalone Single Channel DVI Copper to Fiber and Fiber to Copper Converter
- Standalone Copper DVI Splitter From One Unique Channel to Channels
- Standalone Copper DVI to HD-SDI Single Channel Converter

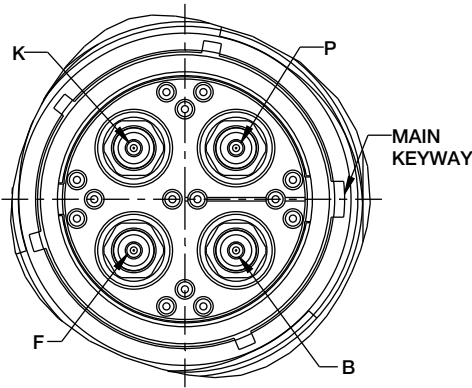


# CF-020010-900

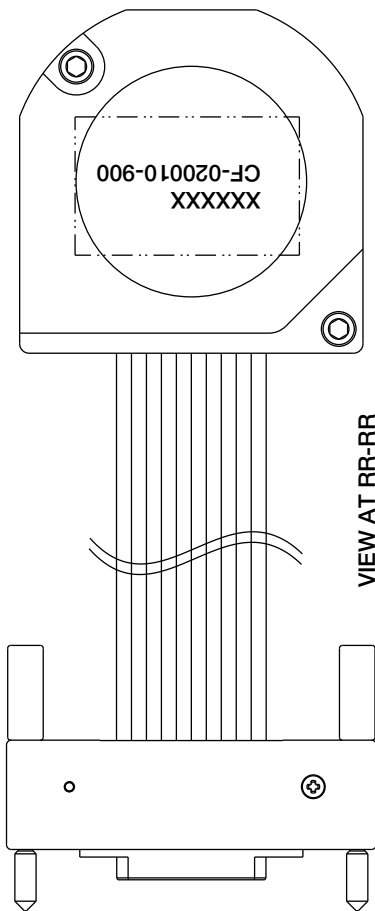
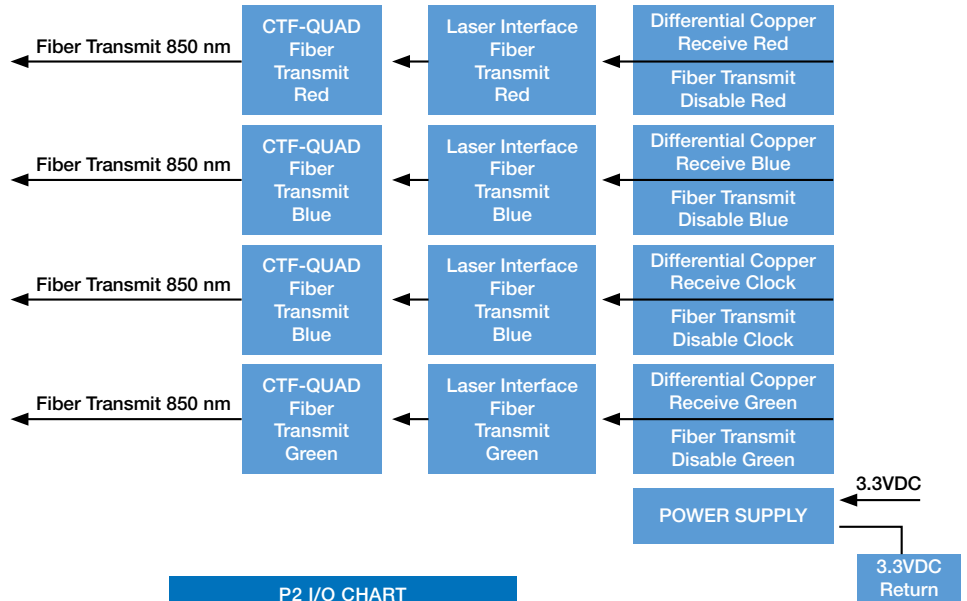
## Embedded Single-Channel DVI Copper-to-Fiber Converter

- Converts a single channel of DVI to 850nm multi-mode fiber optics
- The copper DVI is brought in through a Samtec HQDP ribbon.
- The fiber DVI link (multi-mode 850nm optics) is brought out on a shell size 19 MIL-DTL-38999 with embedded CTF-Quadrax contacts suitable for ruggedized environments.
- Input 3.3V power is brought into the unit over the Samtec HQDP ribbon along with high speed lanes.
- -40C - +85C operating temperature and meant for military/commercial aerospace environments.
- The parts can be configured with any plating, shell rotation, HQDP ribbon length, and HQDP connector type.
- Various test assemblies for the copper and fiber are available per request.





**DETAIL A**  
P2 CONNECTOR PIN ID  
SCALE 3.000



**VIEW AT RR-RR**

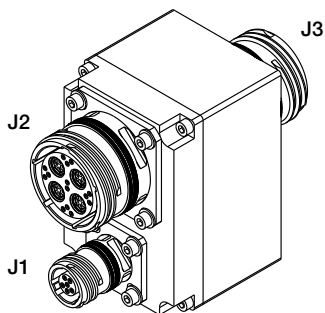
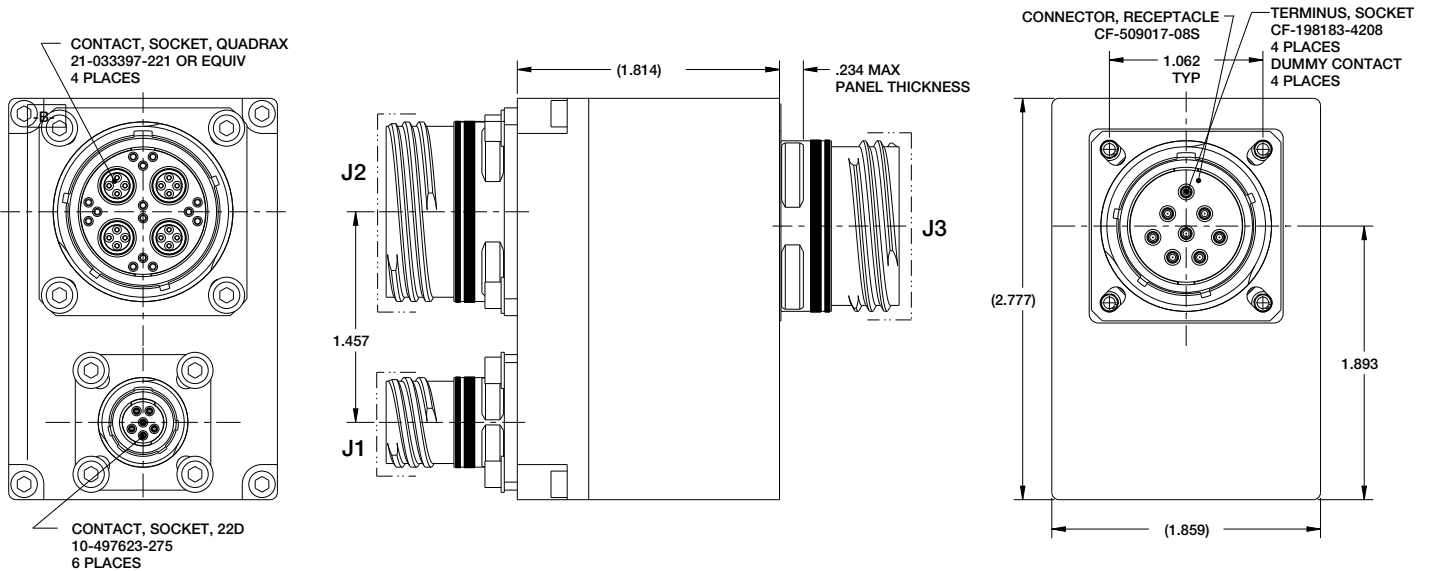
P2 I/O CHART		
ID	Signal	Description
P	TX1	Transmit, Red, Optical
B	TX2	Transmit, Blue, Optical
K	TX3	Transmit, Clock, Optical
F	TX4	Transmit, Green, Optical

J2 I/O CHART		
PIN ID	Signal	Description
1	Red Receive Positive	CML Input Positive Differential Signal for Red Fiber Transmit
2	Green Receive Positive	CML Input Positive Differential Signal for Green Fiber Transmit
3	Red Receive Negative	CML Input Negative Differential Signal for Red Fiber Transmit
4	Green Receive Negative	CML Input Negative Differential Signal for Green Fiber Transmit
5	Blue Receive Positive	CML Input Positive Differential Signal for Blue Fiber Transmit
6	Clock Receive Positive	CML Input Positive Differential Signal for Clock Fiber Transmit
7	Blue Receive Negative	CML Input Negative Differential Signal for Blue Fiber Transmit
8	Clock Receive Negative	CML Input Negative Differential Signal for Clock Fiber Transmit
9-12		No Connect
13	Red Transmit Disable	Set to open on board which disables the channel; drive to 0V (Logic 0) to enable
14	Clock Transmit Disable	
15	Blue Transmit Disable	
16	Green Transmit Disable	
17-32		No Connect
33	Input 3.3VDC Power	Power Supply
34	3.3VDC Return	
35	Input 3.3VDC Power	
36	3.3VDC Return	
37	Input 3.3VDC Power	
38	3.3VDC Return	
39	Input 3.3VDC Power	
40	3.3VDC Return	

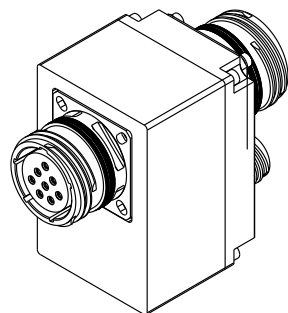
# CF-020010-000

## Standalone Single-Channel DVI Copper-to-Fiber and Fiber-to-Copper Converter

- Converts a single channel of DVI from copper to fiber and a single channel of DVI from fiber to copper.
- The copper DVI inputs and outputs are brought out on a shell size 19 MIL-DTL-38999 connector with high speed Quadrax contacts.
- The fiber DVI inputs and outputs are brought out on a shell size 17 MIL-DTL-38999 connector with M29504 fiber optic contacts.
- Input DC power is brought through a shell size 9 MIL-DTL-38999 connector with standard contacts.
- -40C - +85C operating temperature and meant for military/commercial aerospace environments.
- The parts can be configured with any plating and shell rotation.
- Various test assemblies for the copper and fiber are available per request.



FRONT ISOMETRIC VIEW



REAR ISOMETRIC VIEW

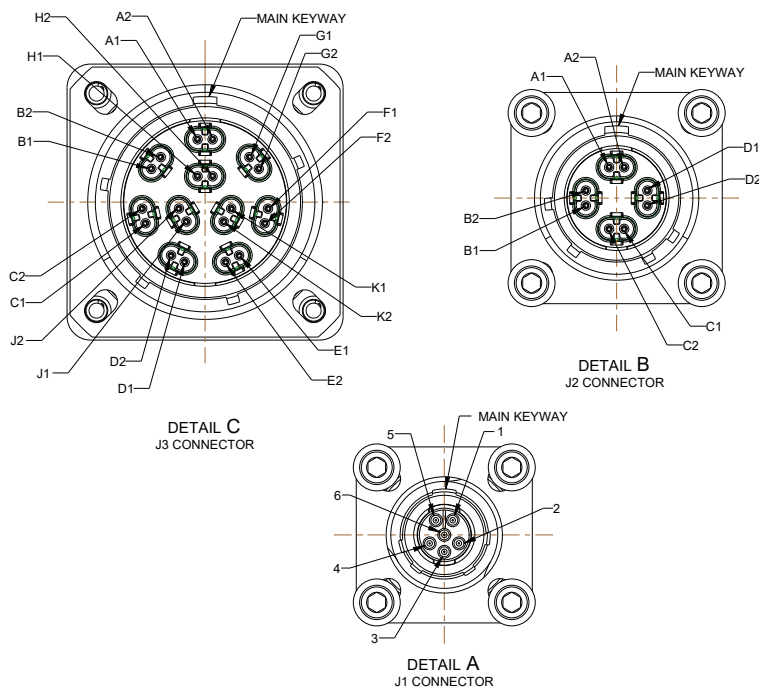
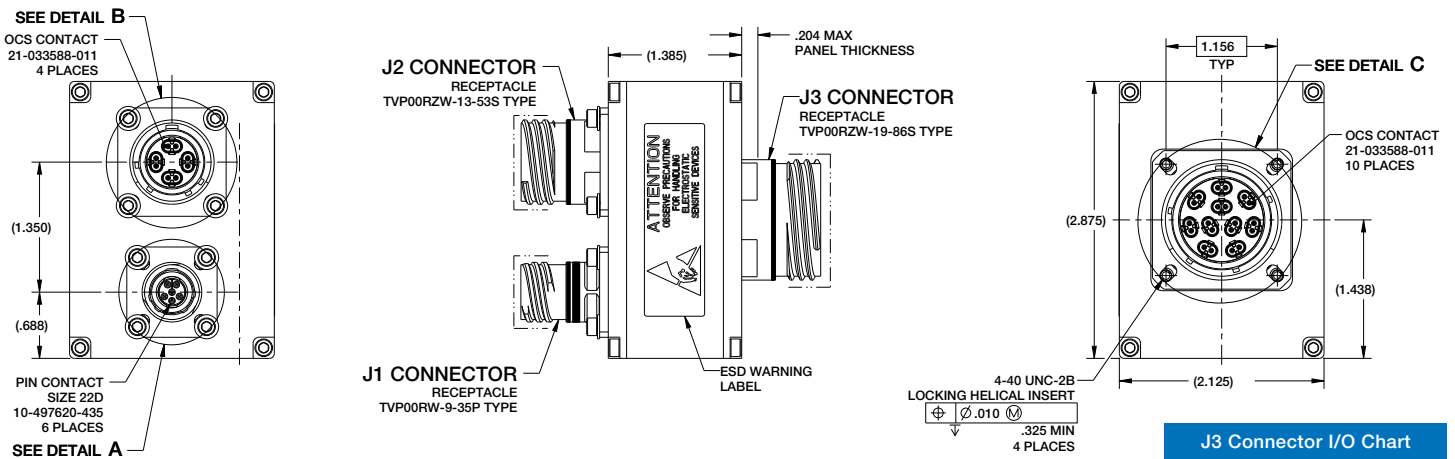
### Wiring Chart

J1 PIN-OUT	J2 PIN-OUT	J3 PIN-OUT
1 - Not Connected	B1 - TMDS Data 0+Digital Blue + Input	A - Data 0 Blue Optical Output
2 - Not Connected	B3 - TMDS Data 0-Digital Blue - Input	B - Data 0 Green Optical Output
3 - Not Connected	B2 - TMDS Data 0-Digital Green + Input	C - Data 0 Red Optical Output
4 - Not Connected	B4 - TMDS Data 0-Digital Green - Input	D - Data 0 Clock Optical Output
5 - DC Power	P1 - TMDS Data 0+Digital Red + Input	E - Data 0 Blue Optical Output
6 - Ground	P3 - TMDS Data 0-Digital Red - Input	F - Data 0 Green Optical Output
	P2 - TMDS Clock+Digital Clock + Input	G - Data 0 Red Optical Output
	P4 - TMDS Clock-Digital Clock - Input	H - Data 0 Clock Optical Output
	F1 - TMDS Data 0+Digital Blue + Output	
	F3 - TMDS Data 0-Digital Blue - Output	
	F2 - TMDS Data 0-Digital Green - Output	
	F4 - TMDS Data 0-Digital Green - Output	
	K1 - TMDS Data 0+Digital Red + Output	
	K3 - TMDS Data 0-Digital Red - Output	
	K2 - TMDS Clock+Digital Clock + Output	
	K4 - TMDS Clock-Digital Clock - Output	
	ALL OTHER J2 PINS NOT CONNECTED	

# CF-020010-97X

## Standalone Copper DVI Splitter From One Unique Channel to Channels

- Duplicates a single channel of copper DVI to two DVI copper channels
- The DVI input connector is a shell size 13 MIL-DTL-38999 with Oval Contact System high speed contacts.
- The DVI output connector is a shell size 19 MIL-DTL-38999 with Oval Contact System high speed contacts.
- Input DC power is brought through a shell size 9 MIL-DTL-38999 connector with standard contacts.
- -40C - +85C operating temperature and meant for military/commercial aerospace environments.
- The parts can be configured with any plating and shell rotation.
- Various test assemblies for the copper and fiber are available per request.



**J1 Connector I/O Chart**

PIN ID	Type	Description
1	IN	Chassis
2	IN	Chassis
3	IN	Chassis
4	IN	Chassis
5	IN	PWR 28 VDC
6	IN	GND

**J2 Connector I/O Chart**

PIN ID	Type	Description
A1	IN	Clock+
A2	IN	Clock-
A-Outer	IN	Clock GND
B1	IN	DATA0+
B2	IN	DATA0-
B-Outer	IN	DATA0 GND
C1	IN	DATA1+
C2	IN	DATA1-
C-Outer	IN	DATA1 GND
D1	IN	DATA2+
D2	IN	DATA2-
D-Outer	IN	DATA2 GND

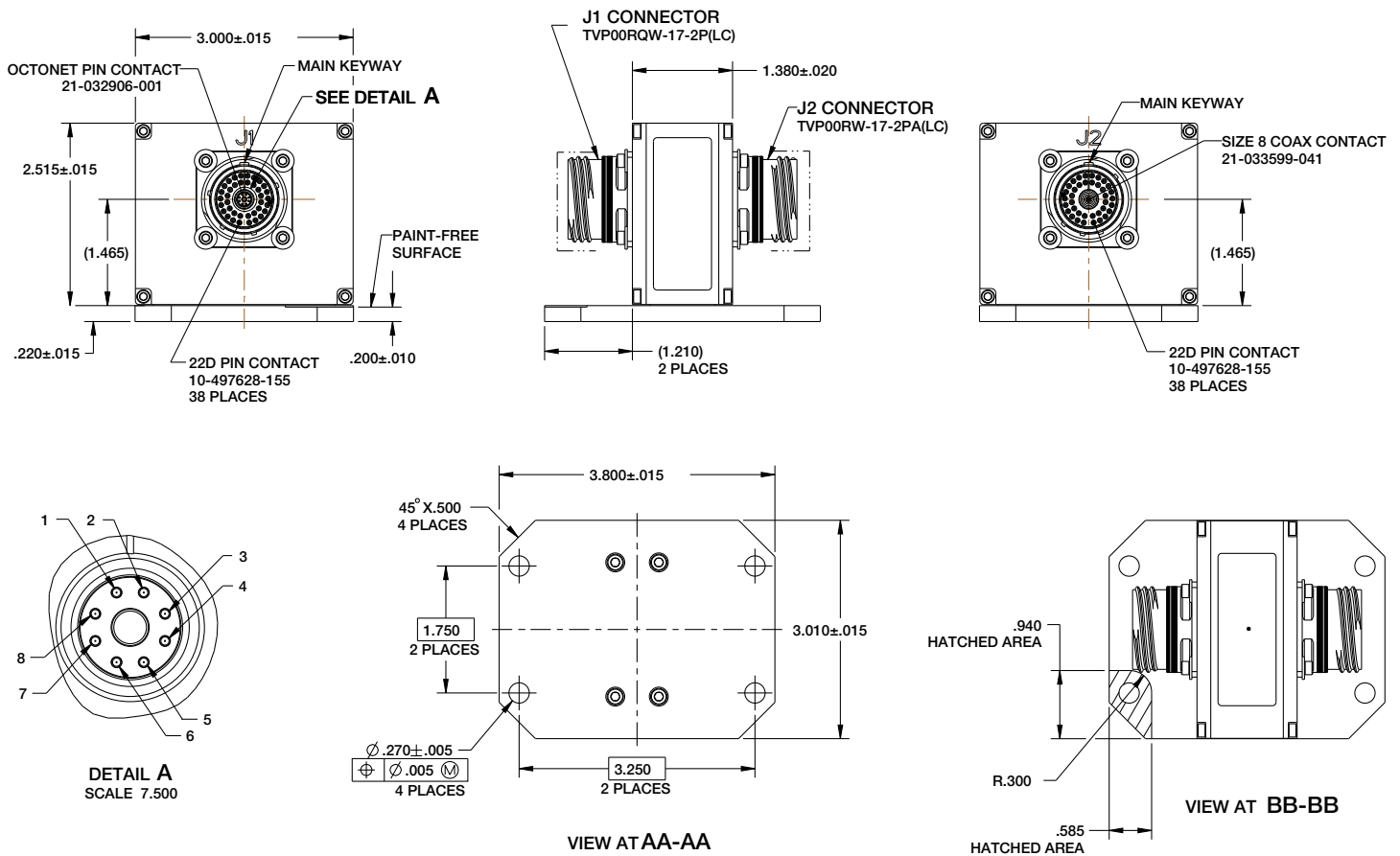
**J3 Connector I/O Chart**

PIN ID	Type	Description
A1	OUT	Clock+
A2	OUT	Clock-
A-Outer	OUT	Clock GND
B1	OUT	DATA0+
B2	OUT	DATA0-
B-Outer	OUT	DATA0 GND
C1	OUT	DATA1+
C2	OUT	DATA1-
C-Outer	OUT	DATA1 GND
D1	OUT	DATA2+
D2	OUT	DATA2-
D-Outer	OUT	DATA2 GND
E1	OUT	Clock+
E2	OUT	Clock-
E-Outer	OUT	Clock GND
F1	OUT	DATA0+
F2	OUT	DATA0-
F-Outer	OUT	DATA0 GND
G1	OUT	DATA1+
G2	OUT	DATA1-
G-Outer	OUT	DATA1 GND
H1	OUT	DATA2+
H2	OUT	DATA2-
H-Outer	OUT	DATA2 GND
J1	—	N/C
J2	—	N/C
J-Outer	—	N/C
K1	—	N/C
K2	—	N/C
K-Outer	—	N/C

# CF-020011-330

## Standalone Copper DVI to HD-SDI Single Channel Converter

- Converts a high resolution DVI input to an HD-SDI output all on copper.
- The DVI input connector utilizes a Octonet high speed contact as well as mixed signals for pass through from front to back (roughly 10 signals).
- The HD-SDI output connector utilizes a matched impedance 75ohm contact as well as mixed signals for pass through from the front.
- Input DC power comes in through the DVI input connector
- -40C - +85C operating temperature and meant for military/commercial aerospace environments.
- The parts can be configured with any plating and shell rotation.
- Various test assemblies for the copper and fiber are available per request.





# Amphenol Aerospace

40-60 Delaware Avenue

Sidney, NY 13838

[amphenol-aerospace.com](http://amphenol-aerospace.com) | [amphenolmao.com](http://amphenolmao.com)



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