

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:

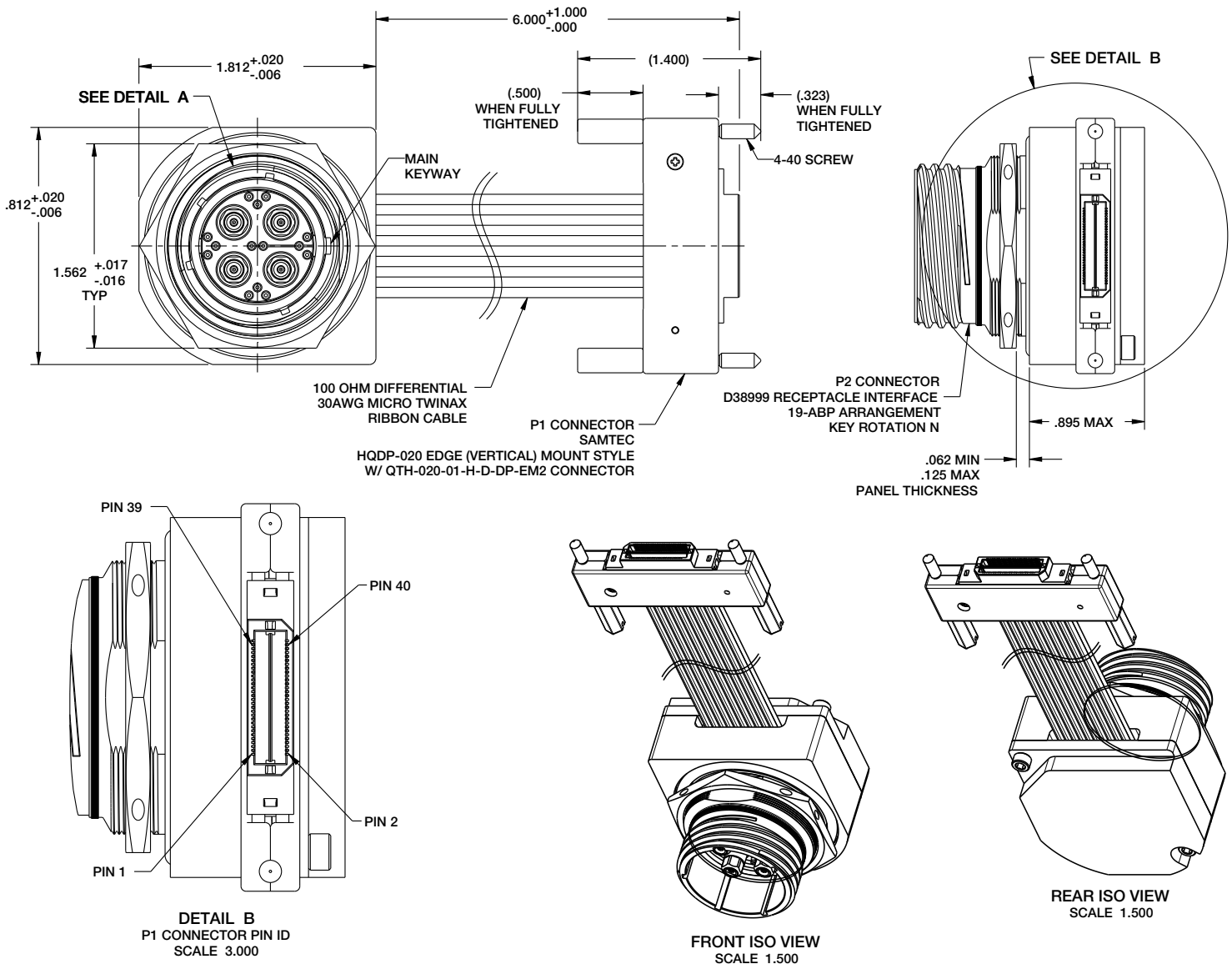
- Embedded Single Channel DVI Copper to Fiber Converter
- Standalone Single Channel DVI Copper to Fiber and Fiber to Copper Converter
- Standalone Copper DVI Splitter From One Unique Channel to Channels
- Standalone Copper DVI to HD-SDI Single Channel Converter

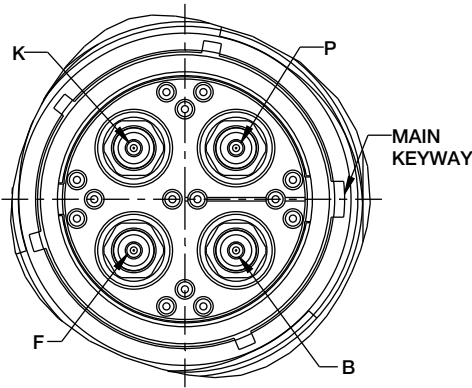


CF-020010-900

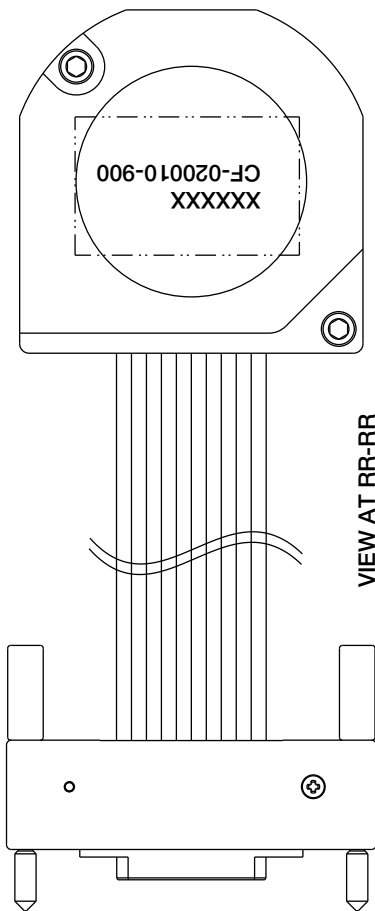
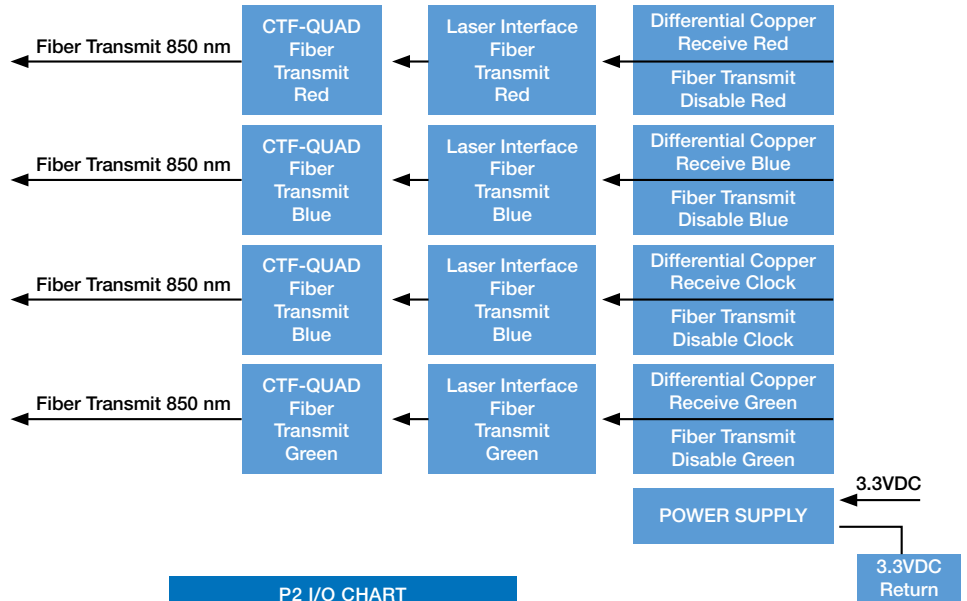
Embedded Single-Channel DVI Copper-to-Fiber Converter

- 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

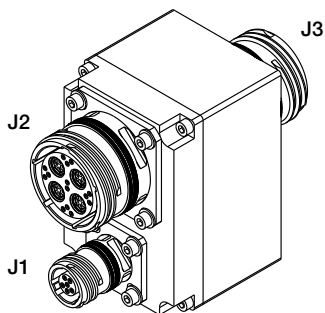
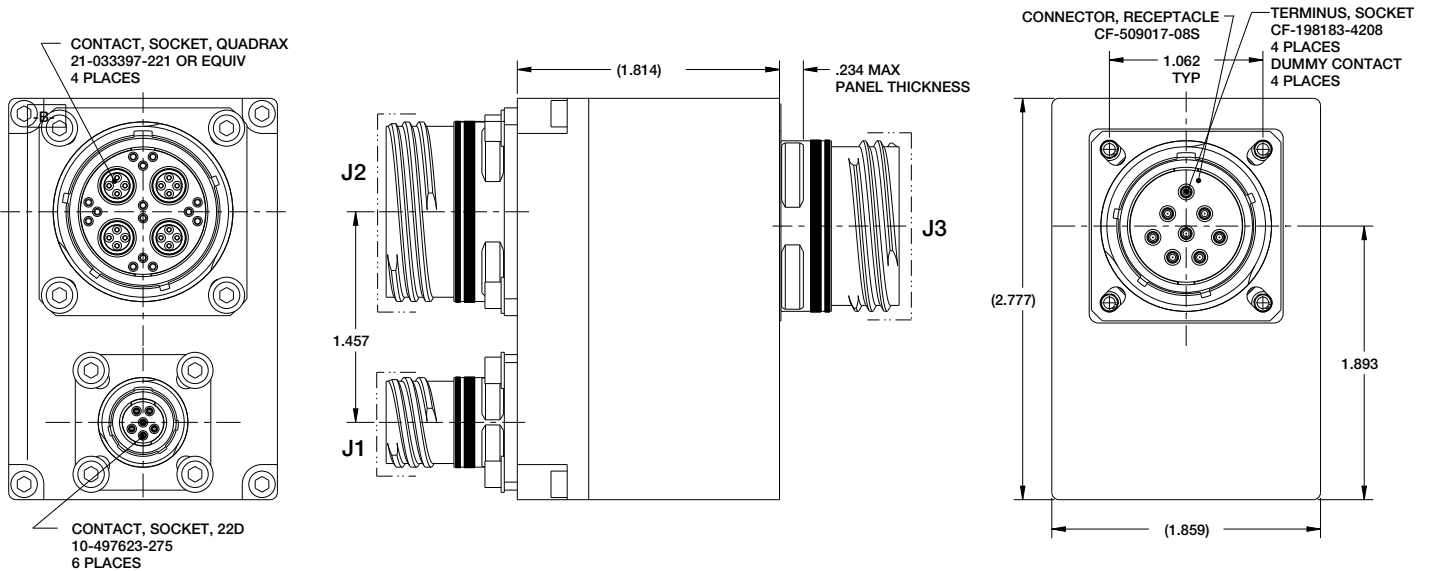
| P2 I/O CHART | | |
|--------------|--------|--------------------------|
| ID | Signal | Description |
| P | TX1 | Transmit, Red, Optical |
| B | TX2 | Transmit, Blue, Optical |
| K | TX3 | Transmit, Clock, Optical |
| F | TX4 | Transmit, Green, Optical |

| 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 | |

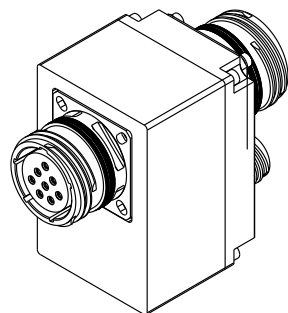
CF-020010-000

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

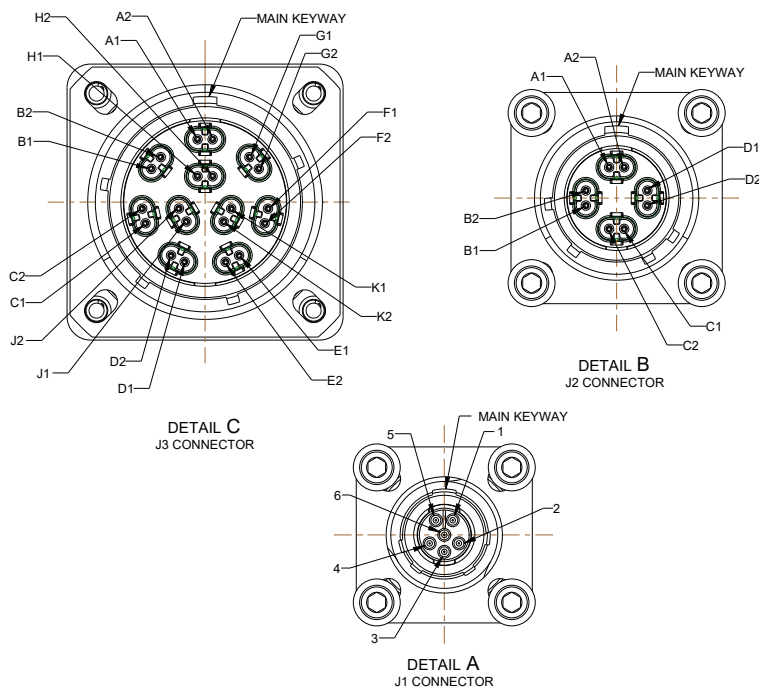
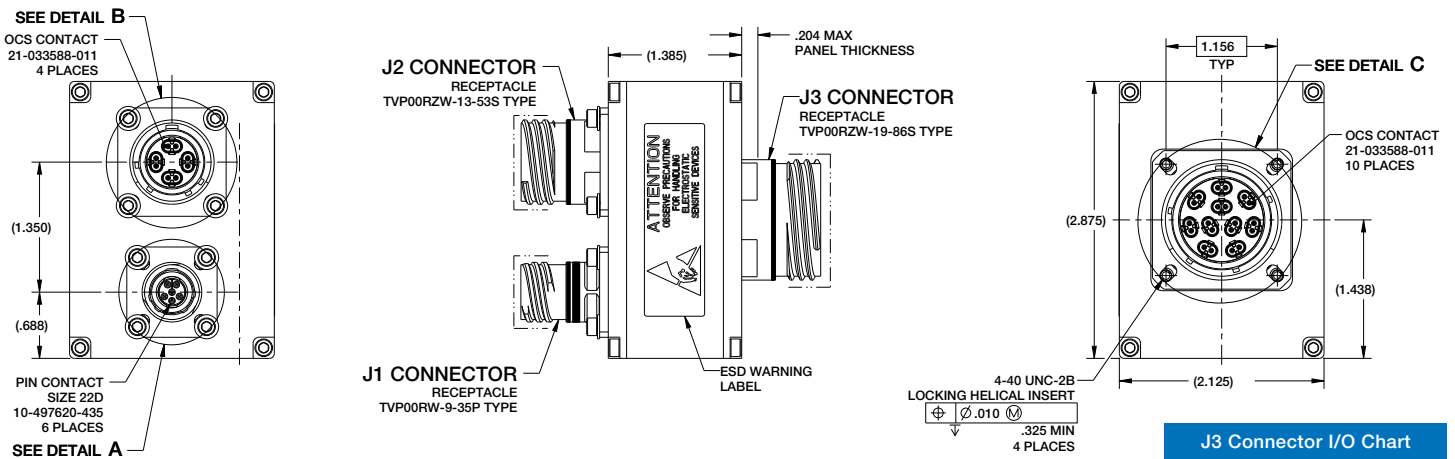
Wiring Chart

| 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 | |
| 3 - Not Connected | B2 - TMDS Data 0-Digital Green + Input | B - Data 0 Green Optical Output |
| 4 - Not Connected | B4 - TMDS Data 0-Digital Green - Input | |
| 5 - DC Power | P1 - TMDS Data 0+Digital Red + Input | C - Data 0 Red Optical Output |
| 6 - Ground | P3 - TMDS Data 0-Digital Red - Input | |
| | P2 - TMDS Clock+Digital Clock + Input | D - Data 0 Clock Optical Output |
| | P4 - TMDS Clock-Digital Clock - Input | |
| | F1 - TMDS Data 0+Digital Blue + Output | E - Data 0 Blue Optical Output |
| | F3 - TMDS Data 0-Digital Blue - Output | |
| | F2 - TMDS Data 0-Digital Green - Output | F - Data 0 Green Optical Output |
| | F4 - TMDS Data 0-Digital Green - Output | |
| | K1 - TMDS Data 0+Digital Red + Output | G - Data 0 Red Optical Output |
| | K3 - TMDS Data 0-Digital Red - Output | |
| | K2 - TMDS Clock+Digital Clock + Output | H - Data 0 Clock Optical 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.

