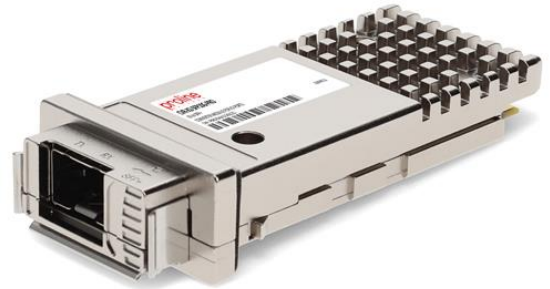


### **CVR-X2-SFP10G-PRO**

Cisco® CVR-X2-SFP10G Compatible TAA Compliant 10GBase-Converter X2 Transceiver (, DOM, 0 to 70C, X2 to SFP+)

#### **Features**

- X2 to SFP+ Converter Module
- For 10 Gigabit Ethernet SFP+ port



#### **Applications:**

- X2 to SFP+ Converter
- Access and Enterprise

#### **Product Description**

This Cisco® CVR-X2-SFP10G compatible X2 to SFP+ converter provides conversion from X2 to SFP+ form factors. It is guaranteed to be 100% compatible with the equivalent Cisco® converter. This easy to install, hot swappable converter has been programmed, uniquely serialized and data-traffic and application tested to ensure that it will initialize and perform identically. Digital optical monitoring (DOM) support is also present to allow access to real-time operating parameters. This converter is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

Proline's transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S. – made or designated country end products.



## Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Storage Temperature	Tstg	-40		85	°C	
Operating Case Temperature	Tc	0		70	°C	
Maximum Supply Voltage	Vcc	-0.5		4.0	V	
Data Rate			10.3125		Gbps	
Relative Humidity	RH			95	%	

## SFP+ transceiver Modules that can be plugged into the converter module

Product Description
850nm MM 10G SFP+
1310nm SM 10G SFP+ 10km
1550nm SM 10G SFP+ 40km
1310nm SM 10G SFP+ 70km
CWDM SFP+ 10G
DWDM SFP+ 10G

## Pin Descriptions

Pin	Symbol	Name/Descriptions	Logic	Notes
1	GND	Electrical Ground.	1	1
2	GND	Electrical Ground.	3	1
3	GND	Electrical Ground.	3	1
4	5.0V	Power.	3	2
5	3.3V	Power.	3	2
6	3.3V	Power.	3	2
7	APS	Adaptive Power Supply.	3	2
8	APS	Adaptive Power Supply.	3	2
9	LASI	Link Alarm Status Interrupt, low active, Open Drain Output A pull-up resistor with 10-22KΩ to 1,2V is expected. Logic High: Normal Operation.	1.2V CMOS Open Drain	
10	Reset	Low active Reset Input 10KΩ pull-up on Transceiver Logic high = Normal Operation.	1.2V CMOS Open Drain	
11	VENDSPECIFIC	Vendor Specific Pin, Leave unconnected.		5
12	Tx ON/OFF	High active Transmitter Enable Input 10KΩ pull-up on Transceiver Logic high = Transmitter active (normal Operation)	1.2V CMOS Open Drain	
13	RESERVED	RESERVED		
14	MOD DETECT	1kΩ to Ground On Transceiver		
15	VENDSPECIFIC	Vendor Specific Pin, Leave unconnected when not in use		5
16	VENDSPECIFIC	Vendor Specific Pin, Leave unconnected when not in use		5
17	MDIO	Management Data I/O.	1.2V CMOS Open Drain	3
18	MDC	Management Clock Input	1.2V CMOS Open Drain	3
19	PRTAD4	Port Address Bit 4(LOW=0)		
20	PRTAD3	Port Address Bit 3(LOW=0)		
21	PRTAD2	Port Address Bit 2(LOW=0)		
22	PRTAD1	Port Address Bit 1(LOW=0)		
23	PRTAD0	Port Address Bit 0(LOW=0)		
24	VENDSPECIFIC	Vendor Specific Pin,. Leave unconnected when not in use		5
25	APS SET	Feedback Input for APS, Input of APS Setting Resistor		
26	RESERVED	Reserved. Avalanche Photodiode Use.		5
27	APS SENSE	APS Sense Output for APS Control Circuit.		
28	APS	Adaptive Power Supply.		2
29	APS	Adaptive Power Supply.		2
30	3.3V	Power.		2
31	3.3V	Power.		2

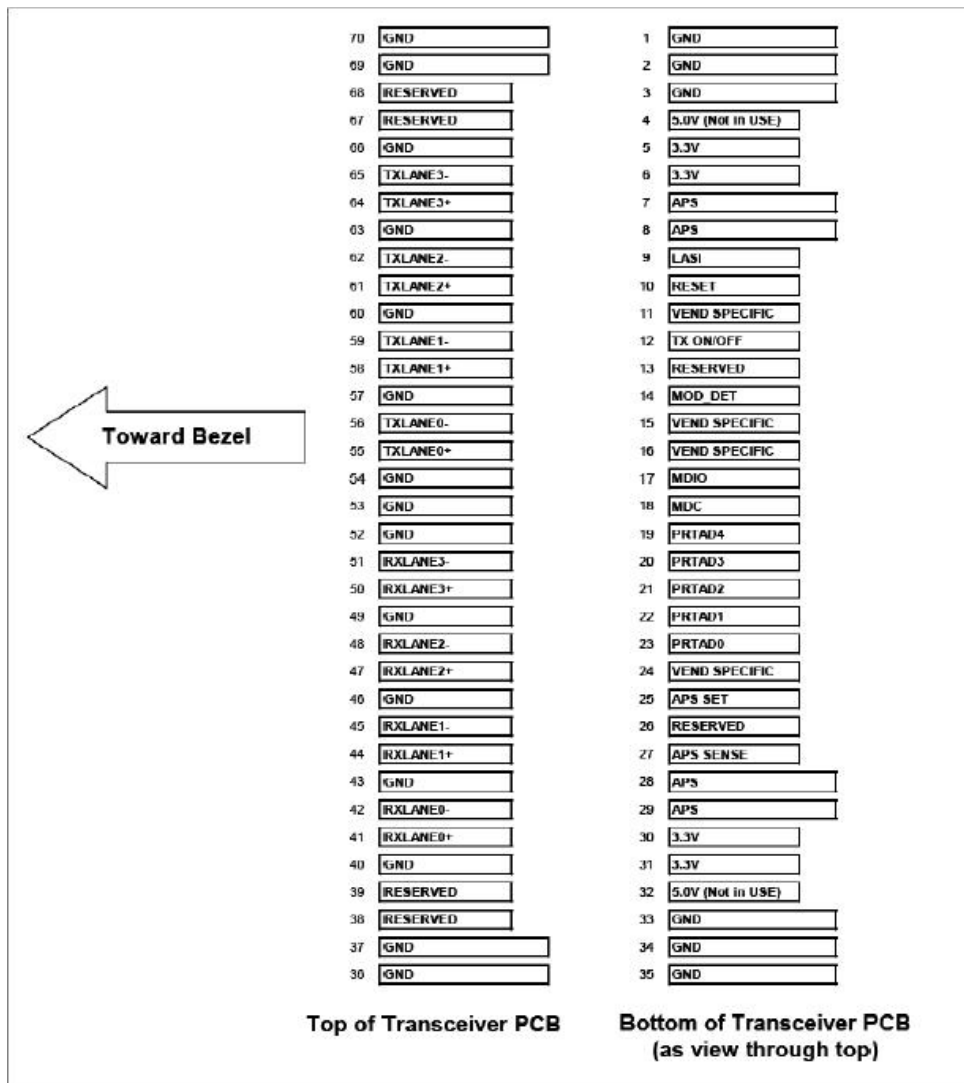
32	5.0V	Power.		2
33	GND	Electrical Ground.		1
34	GND	Electrical Ground.		1
35	GND	Electrical Ground.		1
36	GND	Electrical Ground.		1
37	GND	Electrical Ground.		1
38	RESERVED	Reserved.		
39	RESERVED	Reserved.		
40	GND	Electrical Ground.		1
41	RX LANE 0+	Module XAUI Output Lane 0+.		4
42	RX LANE 0-	Module XAUI Output Lane 0-.		4
43	GND	Electrical Ground.		1
44	RX LANE 1+	Module XAUI Output Lane 1+.		4
45	RX LANE 1-	Module XAUI Output Lane 1-.		4
46	GND	Electrical Ground.		1
47	RX LANE 2+	Module XAUI Output Lane 2+.		4
48	RX LANE 2-	Module XAUI Output Lane 2-.		4
49	GND	Electrical Ground.		1
50	RX LANE 3+	Module XAUI Output Lane 2+.		4
51	RX LANE 3-	Module XAUI Output Lane 2-.		4
52	GND	Electrical Ground.		1
53	GND	Electrical Ground.		1
54	GND	Electrical Ground.		1
55	RX LANE 0+	Module XAUI Output Lane 0+.		4
56	RX LANE 0-	Module XAUI Output Lane 0-.		4
57	GND	Electrical Ground.		1
58	TX LANE 1+	Module XAUI Output Lane 1+.		4
59	TX LANE 1-	Module XAUI Output Lane 1-.		4
60	GND	Electrical Ground.		1
61	TX LANE 2+	Module XAUI Output Lane 2+.		4
62	TX LANE 2-	Module XAUI Output Lane 2-.		4
63	GND	Electrical Ground.		1
64	TX LANE 3+	Module XAUI Output Lane 2+.		4
65	TX LANE 3-	Module XAUI Output Lane 2-.		4
66	GND	Electrical Ground		1
67	RESERVED	Reserved.		
68	RESERVED	Reserved.		

69	GND	Electrical Ground.		1
70	GND	Electrical Ground.		1

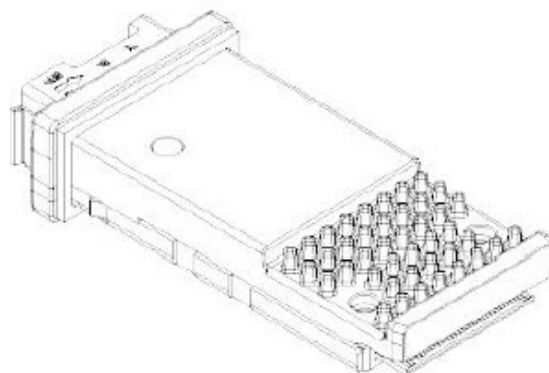
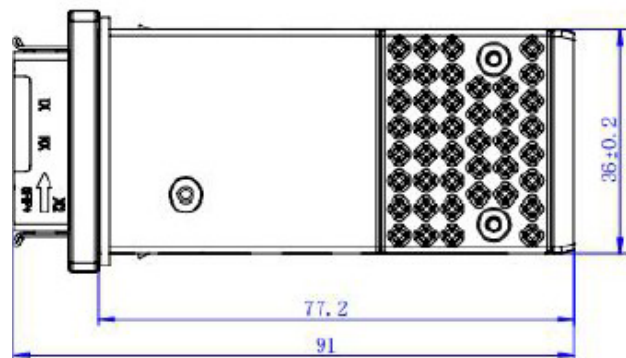
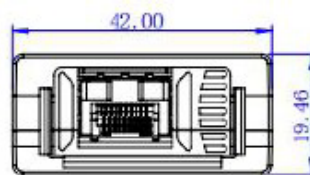
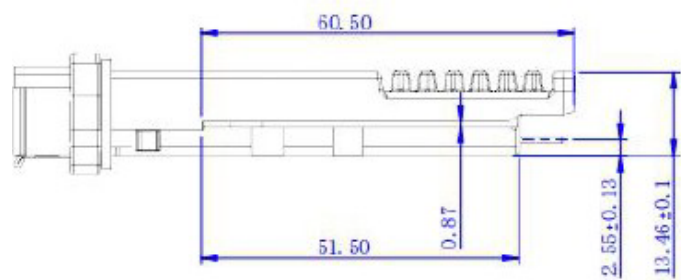
**Notes:**

1. Ground connections are common for Tx and Rx.
2. Each connector contact is rated at 0.5A.
3. MDIO and MDC timing must comply with IEEE 802.3ae clause 45.3.
4. XAUI output characteristics comply with IEEE 802.3ae clause 47.
5. Transceivers will be MSA compliant when no signals are present on the vendor specific pins.

**Electrical Pin-Out Details**



# Mechanical Specifications



**About Us:**

Proline Options is one of North America's leading providers of transceivers and high speed cabling. With a reputation for quality, tested products that cover the connectivity spectrum, Proline Options has a solution for you regardless of the specification.

At Proline Options, every product is tested in its intended application - never batch or spec tested only. We run bandwidth, distance and IOS network tests. We have documented an impressive 0.03% failure rate over the last 10 years. To continue this rate of success we invest millions annually in our own on-site testing lab.



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