# Pro**Labs**

## XXVAOCBL1M-C

Intel® XXVAOCBL1M Compatible TAA Compliant 25GBase-AOC SFP28 to SFP28 Active Optical Cable (850nm, MMF, 1m)

## Features:

- Hot-pluggable SFP28 form factor
- Supports 25Gbps data rate
- 850nm VCSEL laser and PIN photo-detector
- Internal CDR on both Transmitter and receiver channel
- Single 3.3V power supply
- Power dissipation < 1W</li>
- Digital diagnostics functions are available via the I2C interface
- Operating Case temperature: 0 to 70 Celsius
- RoHS Compliant and Lead-Free



**Applications:** 

• 25Gbase-SR Ethernet

### **Product Description**

This is a Intel<sup>®</sup> XXVAOCBL1M Compatible 25GBase-AOC SFP28 to SFP28 active optical cable that operates over active fiber with a maximum reach of 1m. It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. We stand behind the quality of our products and proudly offer a limited lifetime warranty. This cable is TAA (Trade Agreements Act) compliant and is built to comply with MSA (Multi-Source Agreement) standards.

ProLabs' 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."



Rev. 032924

# **General Specifications**

Parameter	Symbol	Min	Тур.	Max.	Unit
Storage Temperature		-40		85	°C
Operating Case Temperature	Тс	0		70	°C
Power Supply Voltage	Vcc	3.13	3.3	3.47	V
Supply Voltage	Vcc	0		3.6	V
Storage Temperature	Tstg	-40		85	°C
Operating Humidity		5		85	%

# **Optical Characteristics**

Parameter		Symbol	Min.	Тур.	Max.	Unit	Notes	
Transmitter								
Data Rate		BR		25.78		Gbps		
Centre Wavelength		λς	840	850	860	nm		
Spectral Width (-20dB)		σ			0.6	nm		
Average Output Power		Pavg	-8.4		2.4	dBm		
Optical Power OMA		P <sub>OMA</sub>	-6.4		3	dBm		
Extinction Ratio		ER	2			dB		
Differential data input swing		V <sub>IN,PP</sub>	40		1000	mV		
Input Differential Impedance		ZIN	90	100	110	Ω		
TX Disable	Disable		2.0		Vcc	V		
TA Disable	Enable		0		0.8	V		
TV Foult	Fault		2.0		Vcc	V		
TX Fault	Normal		0		0.8	V		
Receiver								
Data Rate		BR		25.78		Gbps		
Centre Wavelength		λς	840	850	860	nm		
Receiver Sensitivity (OMA)		Psens			-10	dBm		
Stressed Sensitivity (OMA)					-5.2	dBm		
Receiver Power (OMA)					3	dBm		
LOS De-Assert		LOS <sub>D</sub>			-13	dBm		
LOS Assert		LOS <sub>A</sub>	-30			dBm		
LOS Hysteresis			0.5			dB		
Differential data output swing		Vout,PP	500		1130	mV		
LOS	High		2.0		Vcc	V		
	Low				0.8	V		

# **Pin Descriptions**

Pin	Logic	Symbol	Name/Description	Notes
1		VeeT	Transmitter Ground.	
2	LV-TTL-O	TX_Fault	N/A	1
3	LV-TTL-I	TX_DIS	Transmitter Disable.	
4	LV-TTL-I/O	SDA	2-Wire Serial Data.	
5	LV-TTL-I	SCL	2-Wire Serial Clock.	
6		MOD_DEF0	Module present, connect to VeeT.	
7	LV-TTL-I	RSO	N/A	1
8	LV-TTL-O	LOS	LOS of Signal.	
9	LV-TTL-I	RS1	N/A	1
10		VeeR	Receiver Ground.	
11		VeeR	Receiver Ground.	
12	CML-0	RD-	Receiver Data Inverted.	
13	CML-0	RD+	Receiver Data Non-inverted.	
14		VeeR	Receiver Ground.	
15		VccR	Receiver Supply +3.3V.	
16		VccT	Transmitter Supply +3.3V.	
17		VeeT	Transmitter Ground.	
18	CML-I	TD+	Transmitter Data Non-Inverted.	
19	CML_I	TD-	Transmitter Data Inverted.	
20		VeeT	Transmitter Ground.	

### Note:

1. Signals not supported in SFP28 Copper pulled-down to VeeT with  $30k\Omega$  resistor.

**Host Board** 





# **Mechanical Specification**





#### **About ProLabs**

Our experience comes as standard; for over 15 years ProLabs has delivered optical connectivity solutions that give our customers freedom and choice through our ability to provide seamless interoperability. At the heart of our company is the ability to provide state-of-the-art optical transport and connectivity solutions that are compatible with over 90 optical switching and transport platforms.

#### **Complete Portfolio of Network Solutions**

ProLabs is focused on innovations in optical transport and connectivity. The combination of our knowledge of optics and networking equipment enables ProLabs to be your single source for optical transport and connectivity solutions from 100Mb to 400G while providing innovative solutions that increase network efficiency. We provide the optical connectivity expertise that is compatible with and enhances your switching and transport equipment.

### **Trusted Partner**

Customer service is our number one value. ProLabs has invested in people, labs and manufacturing capacity to ensure that you get immediate answers to your questions and compatible product when needed. With Engineering and Manufacturing offices in the U.K. and U.S. augmented by field offices throughout the U.S., U.K. and Asia, ProLabs is able to be our customers best advocate 24 hours a day.



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