

## SFP-25G-AOC10M-C

25GBase SFP28 Direct Attach Cable

### Features

- Hot-pluggable SFP28 form factor
- Supports 25Gbps data rate
- Maximum link length of 10m DAC
- 850nm VCSEL laser and PIN photo-detector
- Internal CDR on both Transmitter and receiver channel
- Single 3.3V power supply
- Power dissipation < 1W
- Digital diagnostics functions are available via the I2C interface
- RoHS-6 compliant
- Commercial case temperature range: 0°C to 70°C

### Application

- 25Gbase-SR Ethernet

### Product Description

This is a Cisco® compatible 25GBase-AOC SFP28 to SFP28 active optical cable that operates over multi-mode fiber with a maximum reach of 10.0m (32.8ft). At a wavelength of 850nm, it has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. This active optical cable is TAA (Trade Agreements Act) compliant, and is built to comply with MSA (Multi-Source Agreement) standards. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

ProLabs' SFP28 active optical cables 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."



### Recommended Operating Conditions

Parameter	Symbol	Min	Typ.	Max.	Unit
Storage Temperature		-40		85	°C
Operating Case Temperature	T <sub>c</sub>	0		70	°C
Power Supply Voltage	V <sub>CC3</sub>	3.13	3.3	3.47	V

### Absolute Maximum Ratings

Parameter	Symbol	Min	Typ.	Max.	Unit
Supply Voltage	V <sub>CC</sub>	0		3.6	V
Storage Temperature	T <sub>s</sub>	-40		85	°C
Operating Humidity		5		85	%

## Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
<b>Transmitter</b>						
Data Rate	BR		25.78		Gbps	
Centre Wavelength	$\lambda_c$	840	850	860	nm	
Spectral Width (-20dB)	$\sigma$			0.6	nm	
Average Output Power	$P_{avg}$	-8.4		2.4	dBm	
Optical Power OMA	$P_{OMA}$	-6.4		3	dBm	
Extinction Ratio	ER	2			dB	
Differential data input swing	$V_{IN,PP}$	40		1000	mV	
Input Differential Impedance	ZIN	90	100	110	$\Omega$	
TX Disable	Disable		2.0		Vcc	V
	Enable		0		0.8	V
TX Fault	Fault		2.0		Vcc	V
	Normal		0		0.8	V
<b>Receiver</b>						
Data Rate	BR		25.78		Gbps	
Centre Wavelength	$\lambda_c$	840	850	860	nm	
Receiver Sensitivity (OMA)	$P_{sens}$			-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	$V_{out,PP}$	500		1130	mV	
LOS	High		2.0		Vcc	V
	Low				0.8	V

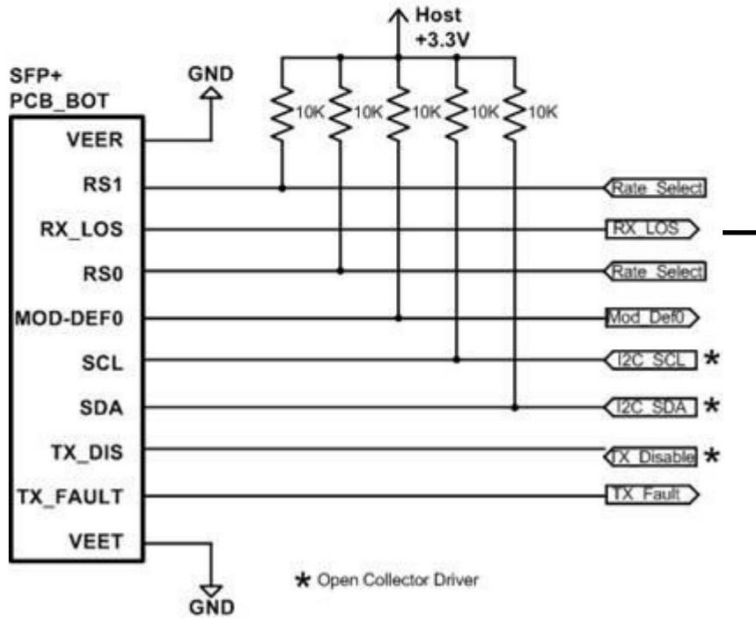
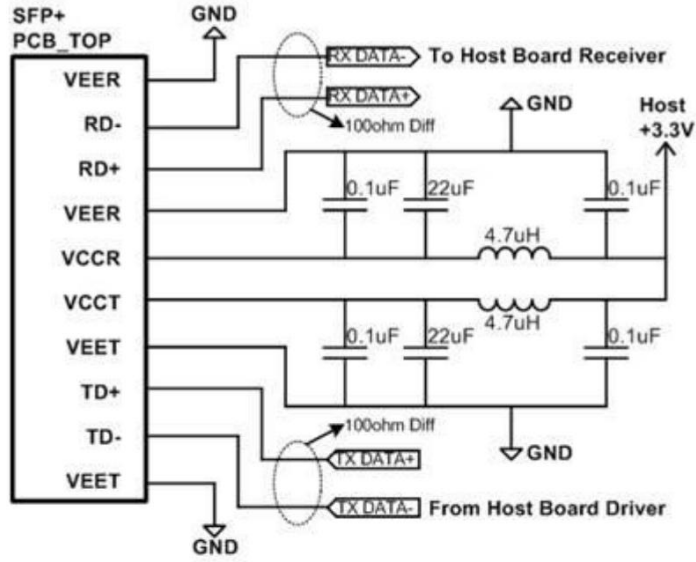
## Pin Descriptions

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	Two Wire Serial Data	
5	LV-TTL-I	SCL	Two Wire Serial Clock	
6		MOD_DEF0	Module present, connect to VeeT	
7	LV-TTL-I	RS0	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-O	RD-	Receiver Data Inverted	
13	CML-O	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 ohms resistor

# Mechanical Specification



**Mechanical Specification**

