# Pro**Labs**

# SFP-10GB-AOCXM-C

MSA and TAA Compliant 10GBase-AOC SFP+ Active Optical Cable (850nm, MMF, Up to 10m)

## Features

- Electrical interface compliant to SFF-8431
- Hot Pluggable
- Up to 10m Length
- 850nm VCSEL transmitter, PIN photo-detector receiver
- Operating case temperature: 0°C to 70°C
- All-metal housing for superior EMI performance
- RoHS compliant (lead free)



# **Product Description**

This is an MSA compliant 10GBase-AOC SFP+ to SFP+ 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' SFP+ 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.



# **Regulatory Compliance**

- ESD to the Electrical PINs: compatible with MIL-STD-883 Method 3015.
- ESD to the Duplex LC Receptacle: compatible with IEC 61000-4-2.
- Immunity compatible with IEC 61000-4-3.
- EMI compatible with FCC Part 15 Class B EN55022 Class B (CISPR 22B) VCCI Class B.
- Laser Eye Safety compatible with FDA 21CFR 1040.10 and 1040.11 EN60950, EN (IEC) 60825-1,2.
- RoHs compliant with 2002/95/EC 4.1&4.2 2005/747/EC.

#### **Order Information**

Part Number	Description
SFP-10GB-AOC1M-C	MSA and TAA Compliant 10GBase-AOC SFP+ Active Optical Cable (850nm, MMF, 1m)
SFP-10GB-AOC2M-C	MSA and TAA Compliant 10GBase-AOC SFP+ Active Optical Cable (850nm, MMF, 2m)
SFP-10GB-AOC3M-C	MSA and TAA Compliant 10GBase-AOC SFP+ Active Optical Cable (850nm, MMF, 3m)
SFP-10GB-AOC5M-C	MSA and TAA Compliant 10GBase-AOC SFP+ Active Optical Cable (850nm, MMF, 5m)
SFP-10GB-AOC7M-C	MSA and TAA Compliant 10GBase-AOC SFP+ Active Optical Cable (850nm, MMF, 7m)
SFP-10GB-AOC10M-C	MSA and TAA Compliant 10GBase-AOC SFP+ Active Optical Cable (850nm, MMF, 10m)

#### **SFP+AOC Specifications**

Parameter	Description		
Module Form Factor	SFP+ (Supports SFF8431/SFF8432/SFF8472)		
Protocols Supported	InfiniBand, Ethernet, Fiber Channel		
Channel Data Rate	Rate 1 to 10.3125Gbps		
BER	<10 <sup>-12</sup>		
Operating Case Temperature	0°C to 70°C		
Storage Temperature	-20 to + 85°C		
Supply Voltage	3.3V		
Supply Current (typical)	230mA per end		
Management Interface Serial	I <sup>2</sup> C (Supports SFF8472)		

# **Optical Characteristics**

Parameter	Symbol	Min.	Тур.	Max.	Unit	Notes		
Transmitter								
Centre Wavelength	λC	840	850	860	nm			
RMS spectral width	Δλ				nm	1		
Average launch power, each lane	Pout	-6.5		-1	dBm	2		
Extinction Ratio	ER	3.5			dB	3		
Transmitter Dispersion Penalty	TDP			3.9	dB			
Relative Intensity Noise	Rin			-128	dB/Hz	4		
Optical Return Loss Tolerance				12	dB			
Receiver								
Center Wavelength	λC	840	850	860	nm			
Receiver Sensitivity	Psens			-11.1	dBm	5		
Stress Sensitivity in OMA				-7.5	dBm	5		
Los function	Los	-30		-12	dBm			
Overload	Pin			-1.0	dBm	5		
Receiver Reflectance				-12	dB			

## Note:

- 1. Tradeoffs are available between spectral width, center wavelength and minimum OMA.
- 2. The optical power is launched into MMF
- 3. Measured with PRBS 2<sup>31</sup>-1 test pattern @10.3125Gbps
- 4. 12dB reflection
- 5. Measured with PRBS  $2^{31}$ -1 test pattern @10.3125Gbps, BER $\leq 10^{-12}$

# **Mechanical Specification**



