

### C-QEXSFU-AOC10M

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#### **Features:**

- 850nm VCSEL transmitter, PIN photo-detector receiver
- All-metal housing for superior EMI performance
- Electrical interface compliant to QSFP+ connector (SFF-8436) and SFP+ connectors (SFF-8431)
- Hot Pluggable
- Operating temperature: 0 to 70 Celsius
- RoHS compliant and Lead free



## **Applications:**

- 40Gigabit Ethernet
- Fiber Channel
- InfiniBand QDR, SDR, DDR

### **Product Description**

This Extreme Networks® 10315 to Fujitsu® SFP-10GB-AOC10M-F dual oem compatible 40GBase-AOC QSFP+ to 4xSFP+ active optical cable has a maximum reach of 10.0m (32.8ft). It is 100% Extreme Networks® to Fujitsu® compatible and has been programmed, uniquely serialized, data-traffic and application tested to ensure that it is compliant and functional. This cable will initialize and perform identically to Extreme Networks® and Fujitsu®'s individual cables and is built to meet or exceed OEM specifications. This product complies with MSA (Multi-Source Agreement) standards and is TAA (Trade Acts Agreement) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

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."



# **QSFP Interface Specifications**

Parameter	Description
Module Form Factor	QSFP+ (Supports SFF-8436/SFF-8472)
Channel Data Rate	Rate 40Gbps
BER	<10 <sup>-12</sup>
Operating Case Temperature	0 °C to 70°C
Storage Temperature	-20 °C to 85°C
Supply Voltage	3.3V
Supply Current	180mA Per End Typical
Management Interface Serial	I <sup>2</sup> C (Supports SFF-8472)

# **Optical Characteristics**

Parameter	Symbol	Min.	Тур.	Max.	Unit	Notes	
Transmitter							
Center Wavelength	λC	840	850	860	nm		
RMS Spectral Width	Δλ			0.65	nm		
Average Launch Power Per Lane	POUT	-7.5		-2.5	dBm		
Difference in Launch Power Between Any Two Lanes (OMA)					dB		
Extinction Ratio	ER	3			dB		
Peak Power Per Lane				4	dBm		
Transmitter and Dispersion Penalty (TDP) Per Lane	TDP			3.5	dB		
Average Launch Power of Off Transmitter Per Lane				-30	dB		
Eye Mask Coordinates: (X1, X2, X3, Y1, Y2, Y3)	(0.23, 0.34, 0.43, 0.27, 0.33, 0.4)					Hit Ratio = 5x10 <sup>-5</sup>	
Receiver							
Center Wavelength	λC	840	850	860	nm		
Stressed Receiver Sensitivity in OMA Per Lane				-5.4		1	
Maximum Average Power at Receiver Input Per Lane				2.4			
Receiver Reflectance				-12			
Peak Power Per Lane				4			
LOS Assert		-30					
LOS De-Assert – OMA				7.5			
LOS Hysteresis		0.5					

# Notes:

1. Measured with conformance test signal at TP3 for BER=10E<sup>-12</sup>.

## **SFP+ Interface Specifications**

Parameter	Description
Module Form Factor	SFP+ (Supports SFF8431/SFF8432/SFF8472)
Channel Data Rate	Rate 1 to 10.3125Gbps
BER	<10 <sup>-12</sup>
Operating Case Temperature	0 to 70ºC
Storage Temperature	-20 to 85°C
Supply Voltage	3.3V
Supply Current	455mA Maximum
Management Interface Serial	I <sup>2</sup> C (Supports SFF-8472)

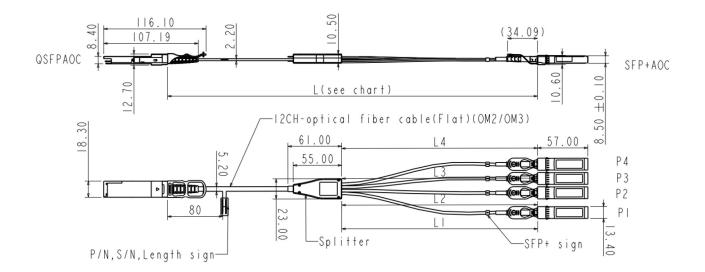
## **Optical Characteristics**

Parameter	Symbol	Min.	Тур.	Max.	Unit	Notes		
Transmitter								
Center Wavelength	λC	840	850	860	nm			
RMS Spectral Width	Δλ			Note 1	nm			
Average Optical Power	Pavg	-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	-12B Reflection		
Optical Return Loss Tolerance				12	dB			
Receiver								
Center Wavelength	λC	840	850	860	nm			
Receiver Sensitivity	Psens			-11.1	dBm	4		
Stressed Sensitivity in OMA				-7.5	dBm	4		
LOS Function	LOS	-30		-12	dBm			
Overload	Pin			-1.0	dBm	4		
Receiver Reflectance				-12	dB			

## Notes:

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

# **Mechanical Specifications**



#### **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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