

QSFP-4X10G-AC10M-C  
Cisco 40GBase-AOC QSFP+ to 4X SFP+  
850nm, 10m Reach, MPO to LC



## **QSFP-4X10G-AC10M-C**

40GBase QSFP+ to 10G SFP+ Transceiver

### **Features**

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

### **Applications**

- 40 Gigabit Ethernet
- Fiber Channel Application
- InfiniBand QDR, SDR, DDR
- High-performance computing clusters
- Servers, switches, storage and host card adapters

### **Product Description**

This is a Cisco® QSFP-4X10G-AC10M-C compatible 40GBase-CU QSFP+ to 4xSFP+ direct attach cable that operates over active copper with a maximum reach of 10.0m (32.8ft). It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. This direct attach 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.

ProLab's QSFP+ transceivers are RoHS compliant and lead-free.

## QSFP Interface Specifications

Parameter	Description
Module Form Factor	QSFP+ (Supports SFF8436/SFF8472)
Channel Data Rate	Rate 40Gbps
BER	$<10^{-12}$
Operating Case Temperature	0 to + 70°C
Storage Temperature	-20 to + 85°C
Supply Voltage	3.3V
Supply current	180mA per end typical
Management Interface Serial	I <sup>2</sup> C (Supports SFF8472)

## Optical Characteristics

The following optical characteristics are defined over the Recommended Operating Environment unless otherwise specified.

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Centre Wavelength	$\lambda_C$	840	850	860	nm	
RMS spectral width	$\Delta\lambda$			0.65	nm	
Average launch power, each lane	P <sub>out</sub>	-7.5		-2.5	dBm	
Difference in launch power between any two lanes (OMA)					dB	
Extinction Ratio	ER	3			dB	
Peak power, each lane				4	dBm	
Transmitter and dispersion penalty (TDP), each lane	TDP			3.5	dB	
Average launch power of OFF transmitter, each 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 = 5x10-5
Receiver						
Center Wavelength	$\lambda_C$	840	850	860	nm	
Stressed receiver sensitivity in OMA, each lane				-5.4		1
Maximum Average power at receiver input, each lane				2.4		
Receiver Reflectance				-12		
Peak power, each 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-12.

**SFP+ Interface Specifications**

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

**Optical Characteristics**

The following optical characteristics are defined over the Recommended Operating Environment unless otherwise specified.

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
<b>Transmitter</b>						
Center Wavelength	$\lambda_t$	840	850	860	nm	
RMS Spectral Width	P <sub>m</sub>			Note 1	nm	
Average Optical Power	P <sub>avg</sub>	-6.5		-1	dBm	2
Extinction Ratio	ER	3.5			dB	3
Transmitter Dispersion Penalty	TDP			3.9	dB	
Relative Intensity Noise	R <sub>in</sub>			-128	dB/Hz	-12B reflection
Optical Return Loss Tolerance				12	dB	
<b>Receiver</b>						
Center Wavelength	$\lambda_r$	840	850	860	nm	
Receiver Sensitivity	P <sub>sens</sub>			-11.1	dBm	4

