

FG-TRAN-QSFP-4SFP-5-PRO

Fortinet® FG-TRAN-QSFP-4SFP-5 Compatible TAA 40GBase-AOC QSFP+ to 4xSFP+ Active Optical Cable (850nm, MMF, 5m)

Features

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



Applications:

- 40GBase Ethernet
- Fiber Channel Application
- InfiniBand QDR, SDR, DDR
- Servers, switches, storage, and host card adapters

Product Description

This is a Fortinet® FG-TRAN-QSFP-4SFP-5 Compatible 40GBase-AOC QSFP+ to 4xSFP+ active optical cable that operates over active fiber with a maximum reach of 5m. 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.

Proline's 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 ⁻¹²
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 ² 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 ⁻⁵		
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⁻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 70ºC
Storage Temperature	-20 to 85°C
Supply Voltage	3.3V
Supply Current	455mA Maximum
Management Interface Serial	I ² C (Supports SFF-8472)

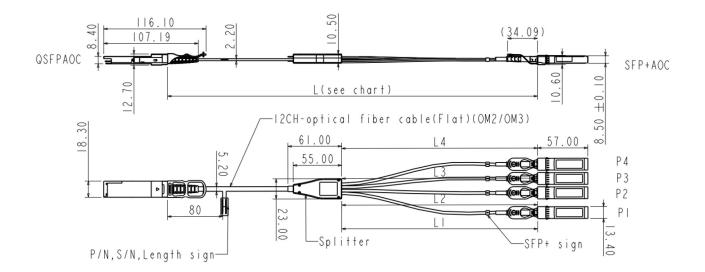
Optical Characteristics

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 2³¹-1 test pattern @10.3125Gbps.
- 4. Measured with a PRBS 2^{31} -1 test pattern @10.3125Gbps and BER \leq 10⁻¹².

Mechanical Specifications



About Us:

Proline Options is one of North America's leading providers of transceivers and high speed cabling. With a reputation for quality, tested products that cover the connectivity spectrum, Proline Options has a solution for you regardless of the specification.

At Proline Options, every product is tested in its intended application - never batch or spec tested only. We run bandwidth, distance and IOS network tests. We have documented an impressive 0.03% failure rate over the last 10 years. To continue this rate of success we invest millions annually in our own on-site testing lab.



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