

## Product Specification

DAC  
 QSFP28 ACTIVE OPTICAL CABLE  
 100 Gbps



## Overview

Atrian QSFP28 Optical Cable is a Four-Channel, Pluggable, Parallel, Fiber-Optic QSFP+ AOC for 100 Gigabit Ethernet and InfiniBand EDR Applications. This AOC is a high performance module for short-range multi-lane data communication and interconnect applications. It integrates four data lanes in each direction with 100 Gbps bandwidth. Each lane can operate at 25.78125 Gbps up to 70 mts using OM3 fiber or 100 mts using OM4 fiber. These modules are designed to operate over multimode fiber systems using a nominal wavelength of 850nm. The electrical interface uses a 38 contact edge type connector. The optical interface uses a 12 fiber MTP (MPO) connector.

## Key Features

- **Speed:** 100 Gbps (4 x 25 Gbps)
- **Distance:** 70 mts with OM3, 100 mts with OM4
- **Laser Type:** 4 channels @ 850 nm VCSEL
- **Temperature:** 0~70°C (Commercial)

## Technical Specifications

General Parameters	Symbol	Min.	Typical	Max.	Unit
Storage Temperature	T <sub>s</sub>	-40		+85	°C
Operating Temperature	T <sub>c</sub>		See Ordering Information		
Power Voltage	V <sub>cc</sub>	3.1	3.3	3.5	V
Absolute Max Voltage	V <sub>cc</sub>	-0.3		3.6	V
Power Dissipation	P <sub>c</sub>			1.5	W
Data Rate per lane	DR			25.78125	Gbps
Fiber Bend Radius	R <sub>B</sub>	5			mm

## Optical Characteristics

Transmitter	Symbol	Min.	Typical	Max.	Unit
Lane center wavelengths (range)	$\lambda_c$	840	850	860	nm
RMS spectral width	$\Delta\lambda$			0.6	nm
Average Launch Power per Lane <sup>2</sup>	TXP <sub>x</sub>	-8.4		2.4	dBm
Transmitter OMA per Lane	TxOMA	-6.4		3	dBm
Transmitter TDEC per Lane	TxDEC			4.3	dB
Difference in launch power between any two lanes (OMA)				4.7	dB
Optical Extinction Ratio	ER	3			dB
Optical Return Loss Tolerance				20	dB
Average Launch Power Off	P <sub>OFF</sub>			-30	dB
Transmitter eye mask definition	X1, X2, X3, Y1, Y2, Y3		0.3, 0.38, 0.45 0.35, 0.41, 0.5		

Receiver	Symbol	Min.	Typical	Max.	Unit
Lane center wavelengths (range)	$\lambda_c$	840	850	860	nm
Receive Power (OMA) per Lane	RxOMA			2.4	dBm
Damage Threshold per Lane	P <sub>MAX</sub>			2.4	dBm
Minimum Threshold per Lane	P <sub>MIN</sub>			-10.3	dBm
LOS De-Assert	LOSD			-7.5	dBm
LOS Assert	LOSA	-30			dBm
LOS Hysteresis			0.5		dB

## Ordering Information

Part Number	Distance	AWG	Compatibiliy	Temperature
AADAC100G-xx0	xx mts	30	Cisco / MSA	0~70°C Commercial

## Warranty

ONE year of limited warranty for products sold directly by Atrian Technologies, unless special agreements have been set. Warranty period start from the ship date and will be only valid for the original customer who bought the product. If you have purchased the product from a reseller you must contact him directly. RMA Form and full warranty details are available on our website.