

APTICOM | ASX-756[73-85]

## SFP+ to SFP+ 10G 850nm 0-70°C Cables - AOC and DAC

### Features

- Management Interface Specifications per SFF-8431 and SFF-8472
- Supports 10.3125Gbps Data Rate
- 10GBASE-SR Compliant
- VCSEL Transmitter
- PIN Receiver
- Lengths up to 100m
- Operating Temperature 0 to 70°C
- Power Dissipation  $\leq 1W$
- Single 3.3V Power Supply

### Applications

- 10 Gigabit Ethernet

### Description

The ASX-756[73-85] series are high-performance Active Optical Cables (AOC) for 10 Gigabit Ethernet connections. It is compliant with the QSFP+ Multisource Agreement (MSA) and hot pluggable.

The AOC is RoHS-6 compliant per Directive 2011/65/EU.

**CAUTION!** The AOC is a static-sensitive device. Always use an ESD wrist strap or similar individual grounding device when handling transceiver modules or coming into contact with modules.

### Order Information

Part Number	Wavelength	Protocol	Tx Output Power	Rx Sensitivity	Reach	Temp.
ASX-756[73-85]	850nm	10GBASE	N/A	N/A	$\leq 100m$	0-70°C

## Ordering Guide

Part Number	Cable Length [m]	Part Number	Cable Length [m]
ASX-75673	1	ASX-75680	20
ASX-75674	2	ASX-75681	25
ASX-75675	3	ASX-75682	30
ASX-75676	5	ASX-75683	40
ASX-75677	7	ASX-75684	50
ASX-75678	10	ASX-75685	100
ASX-75679	15		

## Absolute Maximum Ratings

Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. Exposure to absolute maximum ratings for extended periods can adversely affect device reliability.

Parameter	Min	Typ	Max	Unit
Storage Temperature	-40		85	°C
Relative Humidity	5		95	%
Supply Voltage	0		3.6	V

## Recommended Operating Conditions

Parameter	Min	Typ	Max	Unit
Operating Case Temperature	0		70	°C
Supply Voltage	3.135	3.3	3.465	V
Data Rate		10.3125		Gbps

## Transceiver Electrical Parameters

EOL, over the full temperature range, Vcc = 3.135 to 3.465V.

Parameter	Min	Typ	Max	Unit
Supply Current			300	mA
Power Dissipation			1	W
<b>Transmitter</b>				
Input Differential Impedance		100		$\Omega$
Differential Data Input Swing			800	mVpp
<b>Receiver</b>				
Output Differential Impedance		100		$\Omega$
Differential Output Data Swing [2]	150		850	mVpp
Data Output Rise/Fall Time (20/80%)	24			ps
<b>General</b>				
Bit Error Ratio (BER)			$10^{-12}$	

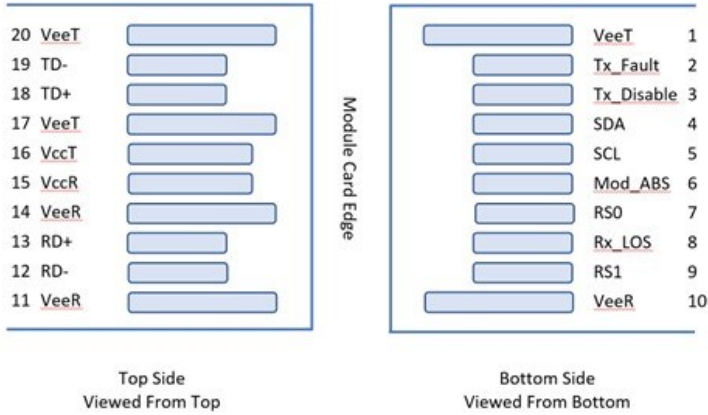
## Transceiver Pins

Pin #	Name	Description	Pin #	Name	Description
1	VeeT	Module Transmitter Ground	11	VeeR	Module Receiver Ground
2	Tx_Fault	Module Transmitter Fault	12	RD-	Receiver Inverted Data Output
3	Tx_Disable	Transmitter Disable	13	RD+	Receiver Non-Inverted Data Output
4	SDA	2-wire Serial Interface Data Line	14	VeeR	Module Receiver Ground
5	SCL	2-wire Serial Interface Clock	15	VccR	Module Receiver 3.3 V Supply
6	Mod_ABS	Module Absent	16	VccT	Module Transmitter 3.3 V Supply
7	RS0	Not Used	17	VeeT	Module Transmitter Ground
8	Rx_LOS	Receiver Loss of Signal Indication	18	TD+	Transmitter Non-Inverted Data Input
9	RS1	Not Used	19	TD-	Transmitter Inverted Data Input
10	VeeR	Module Receiver Ground	20	VeeT	Module Transmitter Ground

1. Open collector, to be pulled up with 4.7kohm

## Transceiver Pad Layout

SFP+-compliant 20-pin connector as per SFF-8431.



## Regulatory Compliance

The ASX-756[73-85] series of AOC:s are Class 1 Laser Products and certified per the following standards:

Item	Agency	Standard
Laser Eye Safety	TÜV	EN 60825-1:2014 EN 60825-2:2004+A1+A2
Electrical Safety	TÜV	EN 60950-1:2006+A11+A1+A12+A2

## Revision Information

Revision	Date	Description
A	2024-02-02	Initial release

## For more information

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