
10G SFP+ to SFP+ AOC

PN: V10-S1SyyyC-AA

Product Overview

The V10-S1SyyyC-AA is a high-performance 10G SFP+ to SFP+ Active Optical Cable (AOC) designed for data transmission rates up to 10.3125 Gb/s, available in lengths ranging from 1 to 100 meters. This AOC adheres to the SFP+ MSA standard, operates on a single 3.3V power supply, and features low power dissipation of less than 0.6W per end. It supports case operating temperatures from 0°C to 70°C and is RoHS compliant, ensuring environmentally responsible manufacturing.

Features

- Up to 10.3125 Gb/s data rate
- Available in lengths of 1 to 100m
- Compliant to SFP+ MSA
- SFF-8472 compliant I2C management
- Single 3.3V power supply
- Power dissipation < 0.6W per end
- Case operating temperature 0°C to 70°C
- RoHS compliant
- Class 1 laser

Ordering Information

Part Number	Description
V10-S1SyyyC-AA	10G SFP+ to SFP+ AOC, yyy in meters C-temp

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit	Notes
Storage Temperature	T_s	-40	85	°C	
Power Supply Voltage	V_{CC}	-0.3	3.6	V	
Control Input Voltage	V_I	-0.3	3.465	V	
Relative Humidity (non-condensing)	RH	5	85	%	
Operating Case Temperature		0	70	°C	

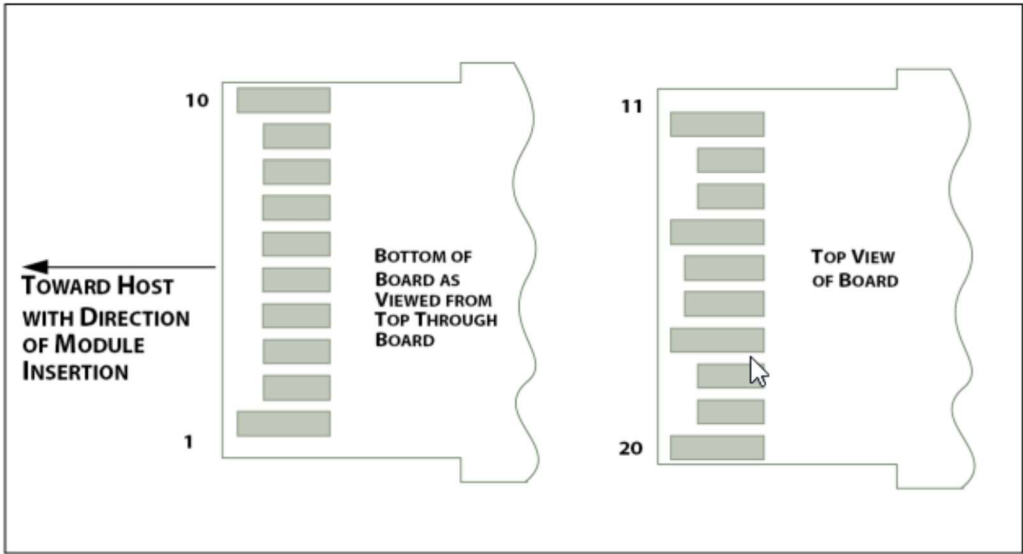
Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Power Supply Voltage	V_{CC}	3.135	3.3	3.465	V	
Signaling Rate per Lane	SRL		10.3125		Gb/s	
Maximum Power Consumption	P_{max}			0.6	W	
Differential input impedance	Z_{in}		100		ohm	
Differential Output impedance	Z_{out}		100		ohm	

Electrical Specifications

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Differential input impedance	Z_{in}		100		ohm	
Differential Output impedance	Z_{out}		100		ohm	
Differential input voltage amplitude	ΔV_{in}	100		1800	mVp-p	
Differential output voltage amplitude	ΔV_{out}	400		800	mVp-p	
Pre-FEC Bit Error Ratio	BER			1E-12		

Electrical Connector Layout

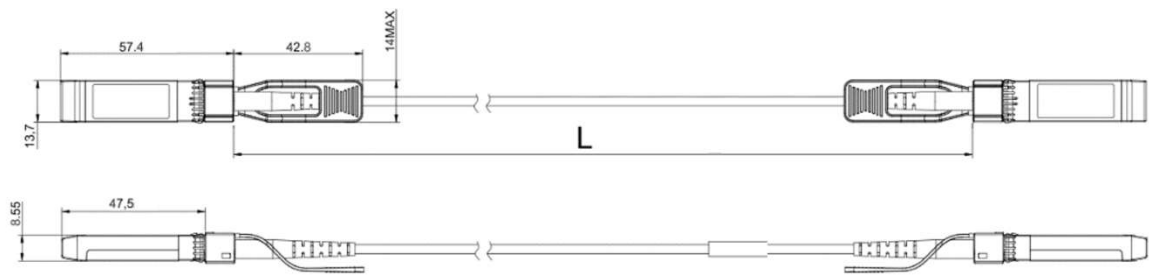


Electrical Pin Definition

Pin#	Logic	Symbol	Typical
1		VccT	Module Transmitter Ground
2	LVTTL-O	Tx_Fault	Module Transmitter Fault
3	LVTTL-I	Tx_Disable	Transmitter Disable, Turns off transmitter laser output
4	LVTTL-I/O	SDA	2-wire Serial Interface Data Line (Same as MOD.DEF2 in INF8074i)
5	LVTTL-I/O	SCL	2-wire Serial Interface Clock (Same as MOD-DEF1 in INF-8074i)
6		Mod_ABS	Module Absent, connected to VccT or VccR in the module
7	LVTTL-I	RS0	Rate Select 0
8	LVTTL-O	Rx_LOS	Receiver Loss of Signal Indication (In FC designated as Rx LOS and in Ethernet designated as Signal Detect)
9	LVTTL-I	RS1	Rate Select 1
10		VccR	Module Receiver Ground
11		VccR	Module Receiver Ground
12	CML-O	RD-	Receiver Inverted Data Output
13	CML-O	RD+	Receiver Non-Inverted Data Output
14		VccR	Module Receiver Ground
15		VccR	Module Receiver 3.3 V Supply
16		VccT	Module Transmitter 3.3 V Supply
17		VccT	Module Transmitter Ground
18	CML-I	TD+	Transmitter Non-inverted Data input
19	CML-I	TD-	Transmitter Inverted Data Input
20		VccT	Module Transmitter Ground



Mechanical Dimensions



Revision History

Date	Rev	Description
2/1/2023	1.0	Release Version
03/17/2025	1.1	New Template

For more information

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