

10G SFP+ AOC

Part Number: LBX-AS010Cyyy

LBX-AS010Cyyy is a high performance SFP+ AOC for 10 Gigabit Ethernet data links.

Features

- Up to 10.3125 Gbps bit rate
- Single 3.3 V power supply
- Low power consumption
- Up to 100 m
- Hot pluggable
- RoHS compliant
- Operating case temperature range - 0°C to 70°C

Applications

- 1/10G Ethernet
- Fiber Channel: 1/2/4/8/16GFC
- Proprietary high-speed interconnections

Ordering Information

Part Number	Link Length	Data Rate	Laser	Detector	Fiber Type	Temperature
LBX-AS010Cyyy	up to 100m	10G	850nm VCSEL	850nm PIN array	MMF	0 – 70°C
yyy=003	3m					
yyy=005	5m					
yyy=010	10m					
yyy=yyy*	yyym					

* Customized length is available upon request

Product Overview

Vitex **LBX-AS010Cyyy** is an 10G SFP+ AOC used for 10G Ethernet links for up to 100m. These AOCs take full advantage of the high transmission bandwidth, low power consumption and long reach.

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	T _{STG}	-20	70	°C
Maximum Voltage	V _{MAX}	0	4.0	V

Recommended Operating Conditions

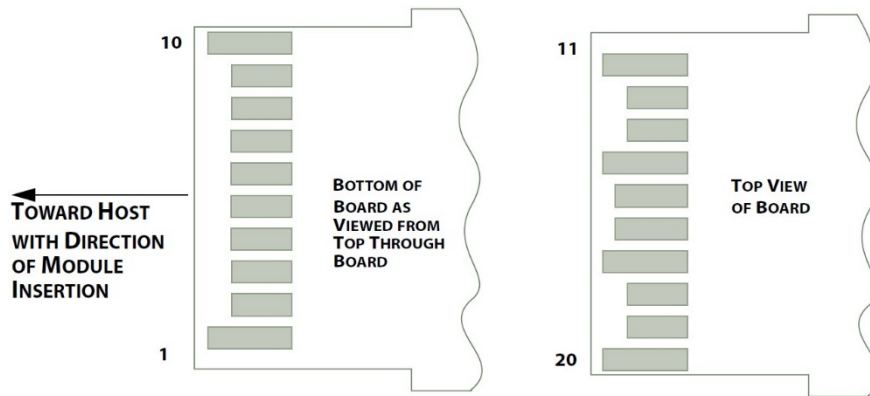
Parameter	Symbol	Min	Typical	Max	Unit
Operating Case Temperature	T _{OP}	0		70	°C
Power Supply Voltage	V _{CC}	3.13	3.3	3.47	V
Power Supply Current	I _{CC}		150		mA
Power Consumption				0.5	W

Electrical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Transmitter					
Data Rate per channel	DR		10.3125	10.3125	Gb/s
Input Differential Impedance	R _{IN}	-	100	-	Ω
Differential Data Input Swing	V _{INP-P}	-	-	900	mV
TX Fault Output High	-	2.6	-	V _{CC}	V
TX Fault Output Low	-	-	-	0.8	V
TX Disable Input High	-	2.3	-	V _{CC}	V
TX Disable Input Low	-	-	-	0.8	V
Receiver					
Data Rate per channel	DR		10.3125	10.3125	Gb/s
Output Differential Impedance	R _{OUT}	-	100	-	Ω
Differential Data Output Swing	V _{OUTP-P}	-	-	800	mV

RX LOS Output High	-	2.6	-	Vcc	V
RX LOS Output Low	-	0	-	0.8	V
Raw Bit Error Ratio	-	-	-	10 ⁻¹²	-

Electrical Connector Layout



Electrical Pin Definition

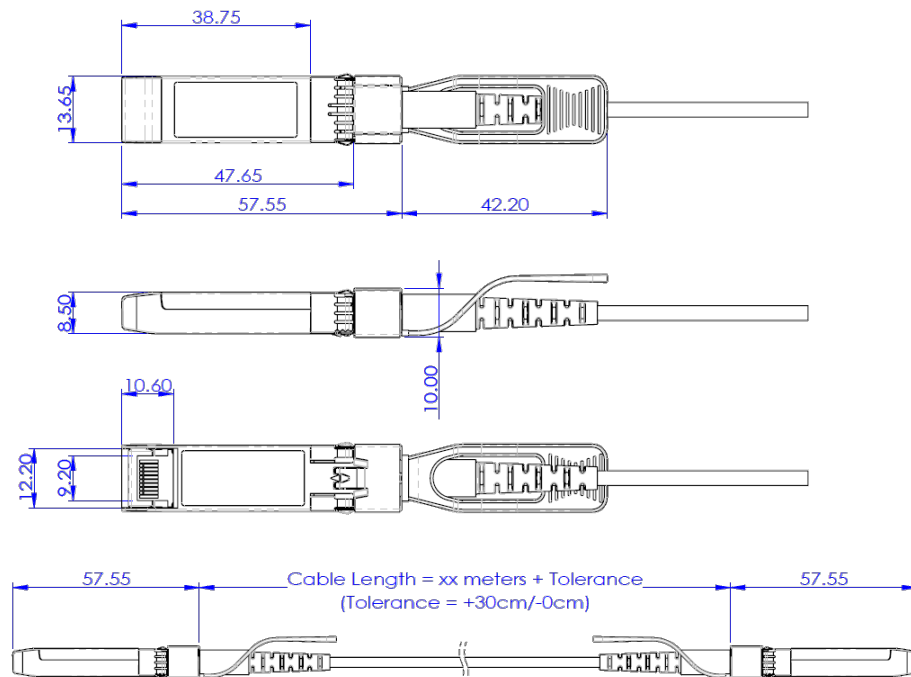
Pin	Name	Description	Note
1	VeeT	Module Transmitter Ground	1
2	Tx_Fault	Module Transmitter Fault	2
3	Tx_Disable	Transmitter Disable; Turns off transmitter laser output	3
4	SDA	2-wire Serial Interface Data Line	4
5	SCL	2-wire Serial Interface Clock	4
6	Mod_ABS	Module Absent, grounded within the module	
7	RS0	Rate Select 0, optionally controls SFP+ module receiver	5
8	Rx_LOS	Receiver Loss of Signal Indication	2
9	RS1	Rate Select 1, optionally controls SFP+ module transmitter	5
10	VeeR	Module Receiver Ground	1
11	VeeR	Module Receiver Ground	1
12	RD-	Receiver Inverted Data Output	
13	RD+	Receiver Non-Inverted Data Output	
14	VeeR	Module Receiver Ground	1
15	VccR	Module Receiver 3.3V Supply	
16	VccT	Module Transmitter 3.3V Supply	
17	VeeT	Module Transmitter Ground	1

18	TD+	Transmitter Non-Inverted Data Input	
19	TD-	Transmitter Inverted Data Input	
20	VeeT	Module Transmitter Ground	1

Note :

- 1.The module signal ground contacts, VeeR and VeeT, should be isolated from the module case.
- 2.The TTL level TX Fault is an open collector/drain output, which should be pulled up with a 4.7 – 10kΩ resistor on the host board to VccT. When high, output indicates a laser fault of some kind. Low indicates normal operation. In the low state, the output will be pulled to < 0.8V. When sensing an improper power level in the laser driver, the SFP sets this signal high and turns off the laser. TX-FAULT can be reset with the TX-DISABLE line.
- 3.TX disable is an input that is used to shut down the transmitter optical output. It is pulled up within the module with a 4.7 – 10kΩ resistor. The states are: Low (0 – 0.8V): Transmitter on / (>0.8, < 2.0V): Undefined / High (>2.0): Transmitter Disabled / Open: Transmitter Disabled. Make TX-DISABLE high (TTL logic “1”) to turn off the laser output. The laser will turn on when TX-DISABLE is low (TTL logic “0”).
- 4.These are the module definition pins. They should be pulled up with a 4.7 – 10kΩ resistor on the host board to supply less than VccT+0.3V or VccR+0.3V.
- 5.Not used.

Mechanical Dimensions



ALL DIMENSIONS ARE ±0.2mm UNLESS OTHERWISE SPECIFIED

UNIT: mm

Active Optical Cable

Parameter	Value	Unit	Note
Cable Diameter	$\varnothing 2.2 \pm 0.15$	mm	
Minimum Bend Radius	50	mm	
Length Tolerance	+300 / -0	mm	
Cable Jacket	PVC, Orange (Aqua color is available upon request)		

Contact Information

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