

# SFP-10G-AOC-xxM

10Gb/s SFP+ Active Optical Cable – Active



## FEATURES

- Hot pluggable
- Bit rate support from 1G to 11.3Gbps
- 850nm VCSEL transmitter, PIN photo-detector receiver, up to 300m on OM3 MMF
- Operating environment temperature 0 ~ 70°C
- Low power consumption: less than 1.0 W per end
- Single 3.3V power supply
- All-metal housing for superior EMI performance
- SFP+ housing with enhanced EMI shielding
- Single 3.3V power supply
- Programmable EEPROM for serial identification

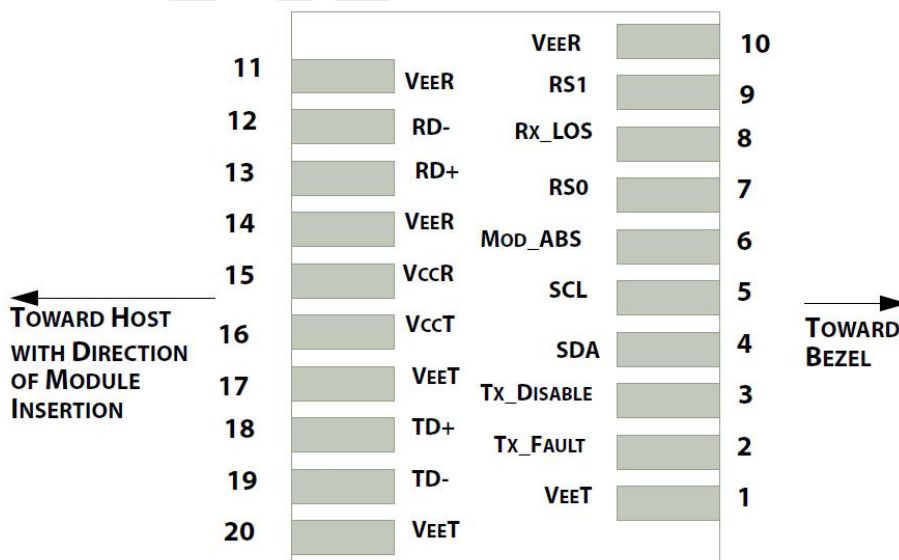
## APPLICATIONS

- 1 / 2 / 4 / 8G Fibre Channel (1 / 2 / 4 / 8GFC), Fibre Channel
- 10G Fiber Channel over Ethernet
- 1X QDR Infiniband
- Applicable to 1X DDR / 1x SDR Infiniband
- High capacity IO with SFP+ interface
- Data center and in-rack connection
- Compliance
- SFF-8431 SFP+ Electrical MSA
- SFF-8432 SFP+ Mechanical MSA
- RoHS complaint

## DESCRIPTION

Fibersum's 10G SFP AOC cable assemblies with SFP+ connectors are high-performance, cost effective I/O solutions for 10Gb Ethernet and 10G Fiber Channel applications. SFP+ modules allow hardware manufacturers to achieve high port density, configurability and utilization at a very low cost and to reduce power budget. The high-speed cable assemblies meet and exceed the performance and reliability requirements stipulated by Gigabit Ethernet and Fiber Channel industry standard.

Host Board Connector Pin (Top View)



### Note:

For detail information, please refer to SFF-8083 0.8mm Card Edge Connector for 8/10

Gbps Applications

SFP+ Connector Pin



Pin	Symbol	Logic	Description	Note
1	VeeT		Module Transmitter Ground	1
2	Tx_Fault	LVTTL-0	Not supported.	3
3	Tx_Disable	LVTTL-I	Not supported.	3
4	SDA	LVTTL-I/O	2-wire Serial Interface Data Line	2
5	SCL	LVTTL-I/O	2-wire Serial Interface Clock	2
6	Mod_ABS		Module Absent	2
7	RS0	LVTTL-I	Not supported.	3
8	Rx_LOS	LVTTL-0	Not supported.	3
9	RS1	LVTTL-I	Not supported.	3
10	VeeR		Module Receiver Ground	1
11	VeeR		Module Receiver Ground	1
12	RD-	CML-0	Receiver Inverted Data Output	
13	RD+	CML-0	Receiver Non-Inverted Data Output	
14	VeeR		Module Receiver Ground	1
15	VccR		Module Receiver 3.3 V Supply	4
16	VccT		Module Transmitter 3.3 V Supply	4
17	VeeT		Module Transmitter Ground	1
18	TD+	CML-I	Transmitter Non-Inverted Data Input	
19	TD-	CML-I	Transmitter Inverted Data Input	
20	VeeT		Module Transmitter Ground	1

### Notes:

1. Module circuit ground pins are isolated from the module chassis ground.
2. Pull up to VccHost with 4.7k - 10k $\Omega$
3. No connection required.
4. Power supply filtering circuit required.

### Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	Ts	-40	+85	° C
Operating Case Temperature	Tc	-40	+85	° C
Operating Humidity	RH		85	%
Supply Voltage	Vcc	-0.5	3.6	V

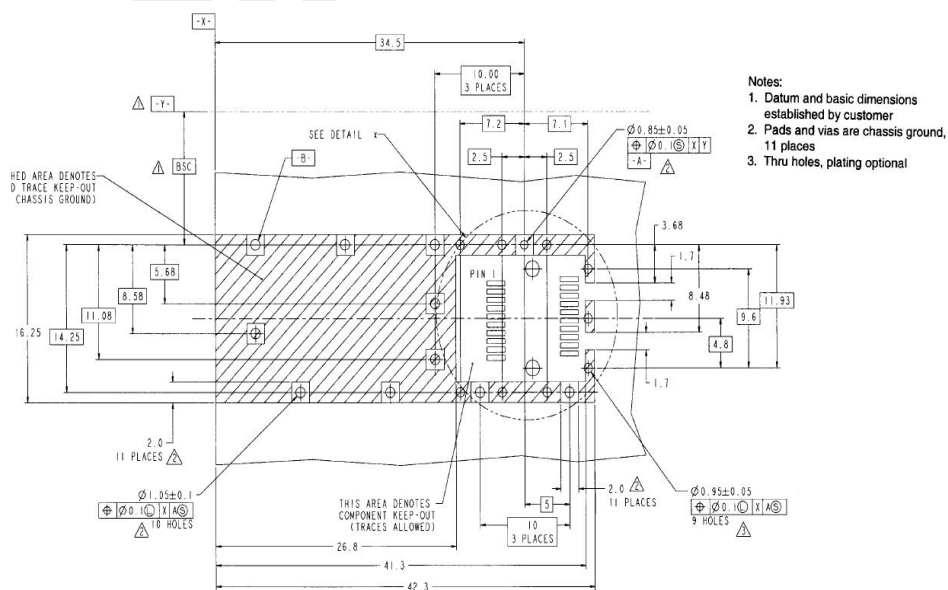
### Note:

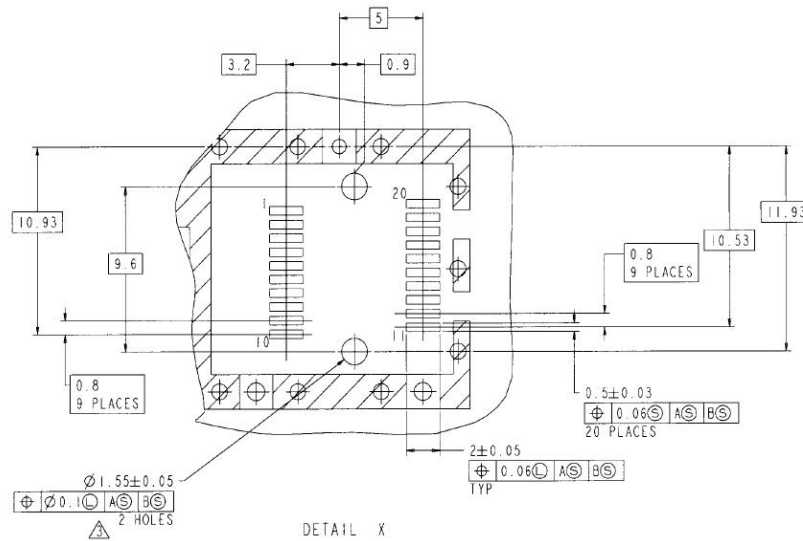
Damage may occur if the transceiver is subjected to conditions beyond the limits.

### Recommended Operating Conditions

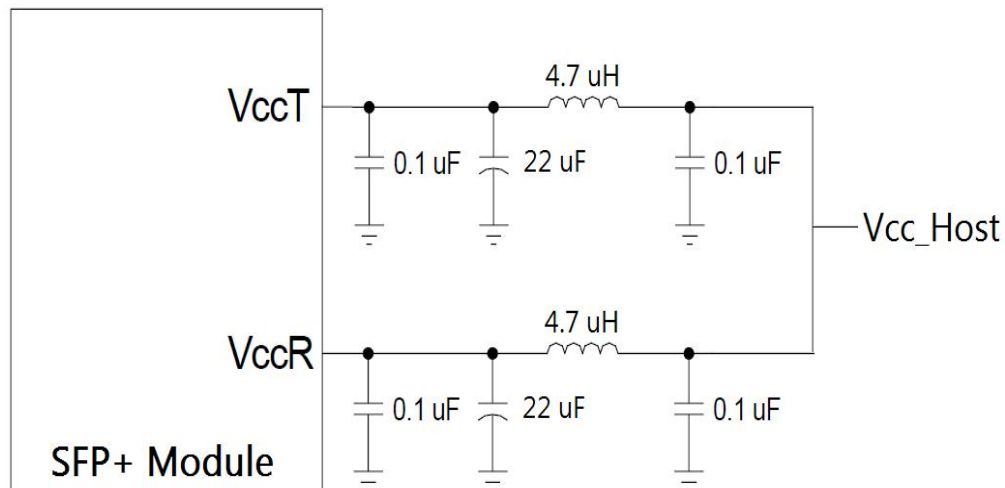
Parameter	Symbol	Min	Max	Unit
Operating Case Temperature	Tc	0	+70	° C
Supply Voltage	Vcc	3.1	3.5	V
Bit Rate	BR	1	11.3	GBd

### Host PCB Layout





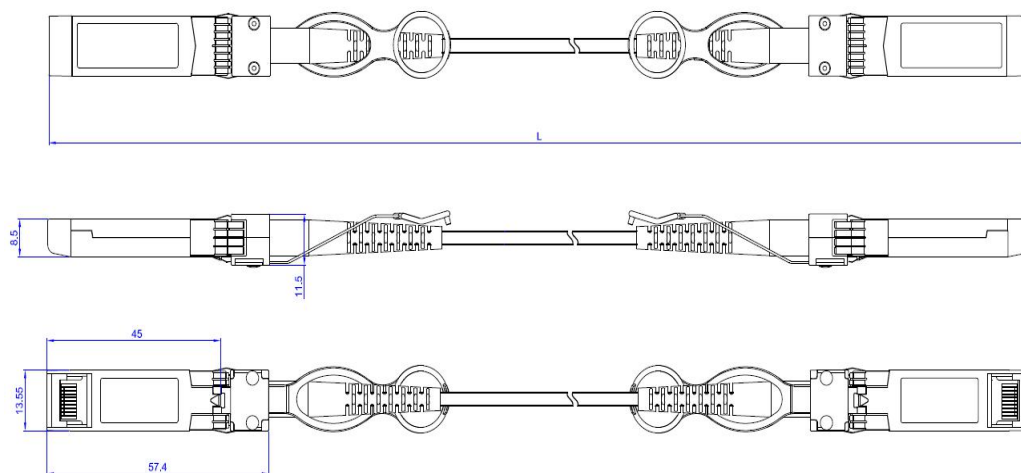
#### Recommended Power Supply Filter



#### References:

1. SFF-8431 "Specifications for Enhanced Small Form Factor Pluggable Module SFP+"
2. SFF-8432 "Specification for Improved Pluggable Form factor"
3. SFF-8472 "Specification for Diagnostic Monitoring Interface for Optical Transceivers"

## Mechanical Drawing



## Order information

Part Number	Product Description	Fiber Spec.
SFP-10G-AOC-Active-01M	10G SFP+ Active Optical Cable 1Meter	OM2or OM3
SFP-10G-AOC-Active-03M	10G SFP+ Active Optical Cable 3Meters	OM2or OM3
SFP-10G-AOC-Active-05M	10G SFP+ Active Optical Cable 5Meters	OM2or OM3
SFP-10G-AOC-Active-07M	10G SFP+ Active Optical Cable 7Meters	OM2or OM3
SFP-10G-AOC-Active-10M	10G SFP+ Active Optical Cable 10Meters	OM2or OM3
SFP-10G-AOC-Active-15M	10G SFP+ Active Optical Cable 15Meters	OM2or OM3
SFP-10G-AOC-Active-20M	10G SFP+ Active Optical Cable 20Meters	OM2or OM3
SFP-10G-AOC-Active-50M	10G SFP+ Active Optical Cable 50Meters	OM3
SFP-10G-AOC-Active--xxM	10G SFP+ Active Optical Cable xxMeters	OM3

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