

LXP-AOC-xxx

10G SFP+ Active Optical Cable

PRODUCT FEATURES

- Hot pluggable
- Bit rate support from 1G to 11.3Gbps
- Pre-terminated twin axial cable / fiber cable
- Operating environment temperature 0 ~ 70°C
- Low power consumption
- SFP+ housing with enhanced EMI shielding
- Single 3.3V power supply
- Programmable EEPROM for serial identification

APPLICATIONS

- 10G Ethernet
- Applicable to 1G Ethernet
- 8G Fiber Channel
- Applicable to 4G / 2G / 1G Fiber 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 compliant

Reach

- Up to 7m by twin axial copper cable
- Up to 15m by twin axial copper cable with signal conditioner
- Up to 100m by active optical cable with OM2 fiber

Ordering information

Part Number	Product Description	Fiber Spec.
LXP-AOC-001	10G SFP+ Active Optical Cable 1Meter	OM2 or OM3
LXP-AOC-003	10G SFP+ Active Optical Cable 3Meters	OM2 or OM3
LXP-AOC-005	10G SFP+ Active Optical Cable 5Meters	OM2 or OM3
LXP-AOC-007	10G SFP+ Active Optical Cable 7Meters	OM2 or OM3
LXP-AOC-010	10G SFP+ Active Optical Cable 10Meters	OM2 or OM3
LXP-AOC-015	10G SFP+ Active Optical Cable 15Meters	OM2 or OM3
LXP-AOC-020	10G SFP+ Active Optical Cable 20Meters	OM2 or OM3
LXP-AOC-025	10G SFP+ Active Optical Cable 25Meters	OM2 or OM3
LXP-AOC-030	10G SFP+ Active Optical Cable 30Meters	OM3
LXP-AOC-050	10G SFP+ Active Optical Cable 50Meters	OM3
LXP-AOC-100	10G SFP+ Active Optical Cable 100Meters	OM3

I. Absolute Maximum Ratings

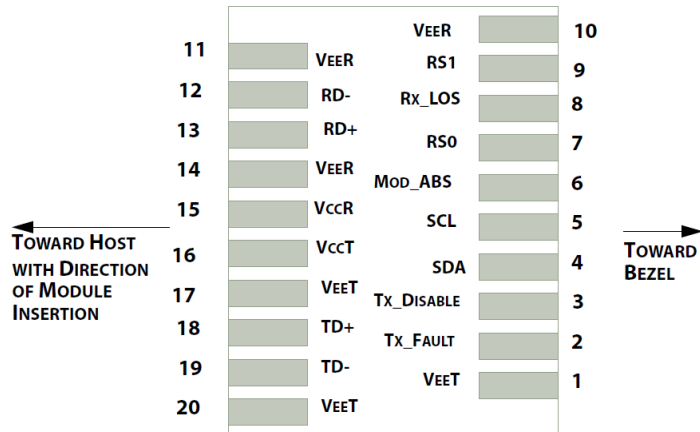
Parameter	Symbol	Min	Max	Unit
Storage Temperature	Ts	-40	+85	°C
Operating Case Temperature	Tc	-40	+85	°C
Operating Humidity	RH		85	%
Supply Voltage	Vcc	-0.5	3.6	V

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

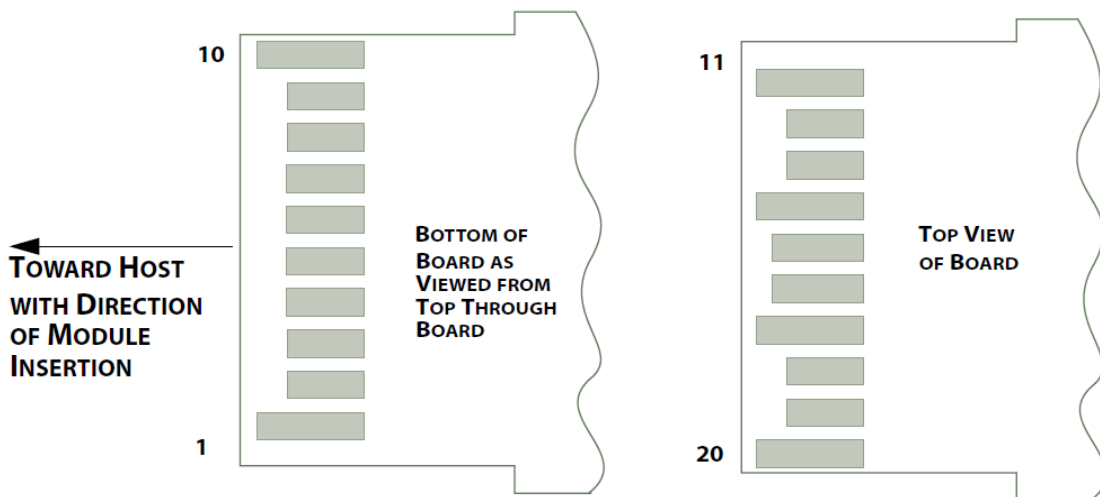
II. Recommended Operating Conditions

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

III. Host Board Connector Pin (Top View)



IV. SFP+ Connector Pin



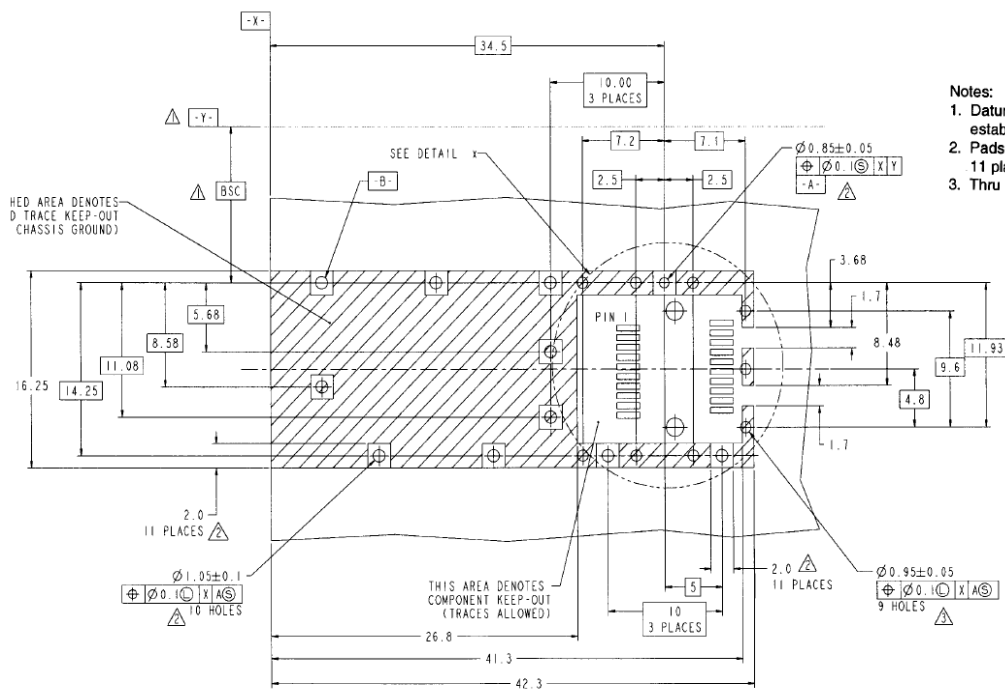
Pin	Symbol	Logic	Description	Note
1	VeeT		Module Transmitter Ground	1
2	Tx_Fault	LVTTL-O	Not supported.	3
3	Tx_Disable	LVTTL-I	Not supported.	3
4	SDA	LVTTL-I/O	2-wire Serial Interface Data Line	2
5	SCL	LVTTL-I/O	2-wire Serial Interface Clock	2
6	Mod_ABS		Module Absent	2
7	RS0	LVTTL-I	Not supported.	3
8	Rx_LOS	LVTTL-O	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-O	Receiver Inverted Data Output	
13	RD+	CML-O	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:

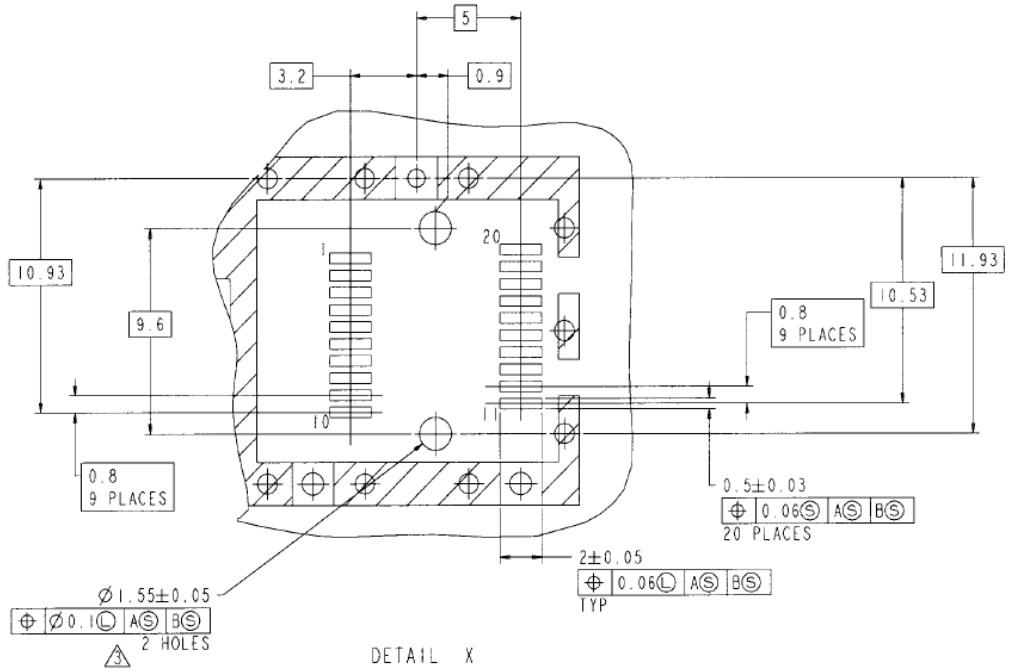
1. Module circuit ground pins are isolated from the module chassis ground.
2. Pull up to VccHost with 4.7k – 10k Ω .
3. No connection required.
4. Power supply filtering circuit required.

V. Host PCB Layout

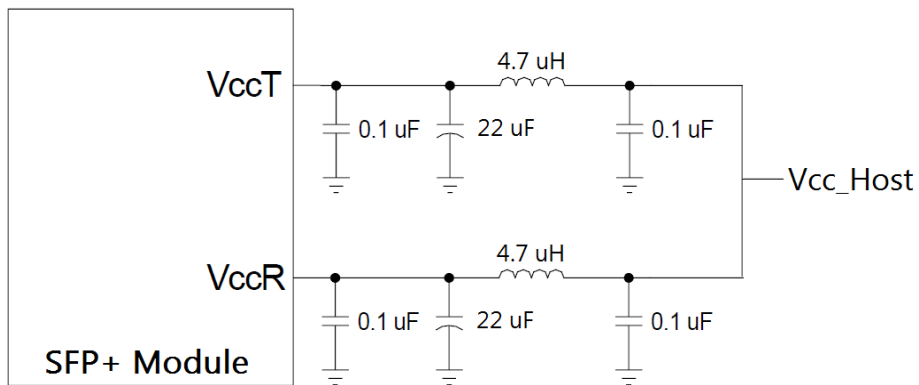


Notes:

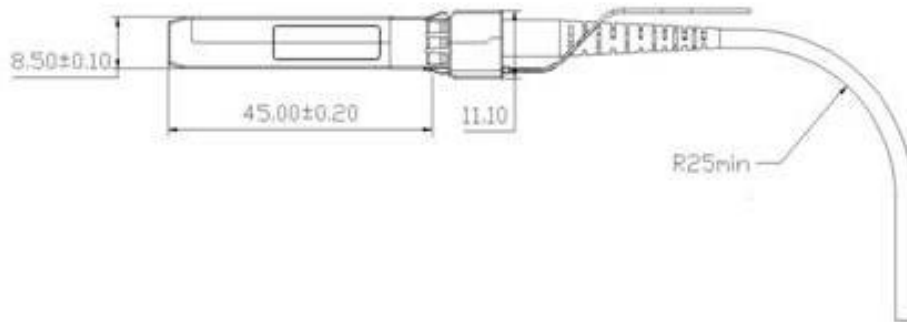
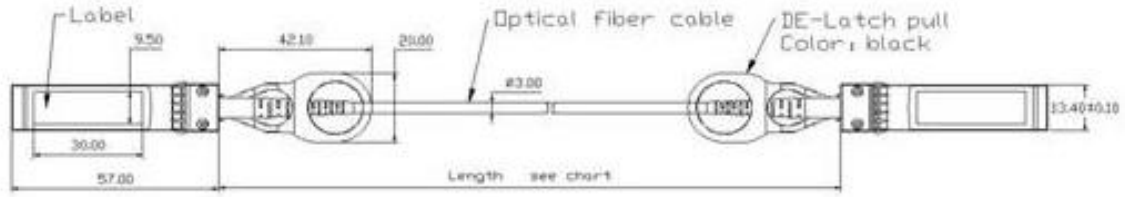
1. Datum and basic dimensions established by customer
2. Pads and vias are chassis ground, 11 places
3. Thru holes, plating optional



VI. Recommended Power Supply Filter



VII. Mechanical Drawing



Revision History

Version No.	Date	Description
1.0	June 24, 2020	Preliminary datasheet