

Specification
Small Form Factor Pluggable
COB Process – SFP28
AOC
25 Gigabit Ethernet



TAS-A1EH8-X31xx

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Distance

Model Name	Voltage	Device type	Interface	Temperature	Distance	Latch Color
TAS-A1EH8-X3101	3.3V	VCSEL/PIN	AC-AC / PECL	0°C ~+70°C	1M	Black
TAS-A1EH8-X3103					3M	
TAS-A1EH8-X3105					5M	
TAS-A1EH8-X3107					7M	
TAS-A1EH8-X3110					10M	
TAS-A1EH8-X3120					20M	
TAS-A1EH8-X3125					25M	
TAS-A1EH8-X3150					50M	
TAS-A1EH8-X31A0					100M	

Features

- 25G 850nm VCSEL transmitter.
- 25G PIN photo-detector.
- 2-wire interface for management specifications compliant with SFF 8472 standard.
- Pre-terminated fiber cable.
- Operating environment temperature: 0 ~ 70°C.
- Bit rate up to 25 Gbps.
- Single 3.3V power supply.
- Low Power Consumption (< 0.8W each end).
- SFP28 housing with enhanced EMI shielding.
- Hot pluggable

Applications

- 25Gbps data link.
- Applicable to 25G Ethernet.
- Data center and in-rack connection.
- High capacity IO with SFP28 interface.

Compliance

- SFF-8431 SFP28 Electrical MSA.
- SFF-8432 SFP28 Mechanical MSA.
- RoHS compliance

Absolute Maximum Rating

Parameter	Symbol	Min	Typ.	Max	Unit
Storage Temperature	Ts	-40		85	°C
Relative Humidity (Non - condensing)	RH	5		95	%
Power Supply Voltage	Vcc	0		3.6	V

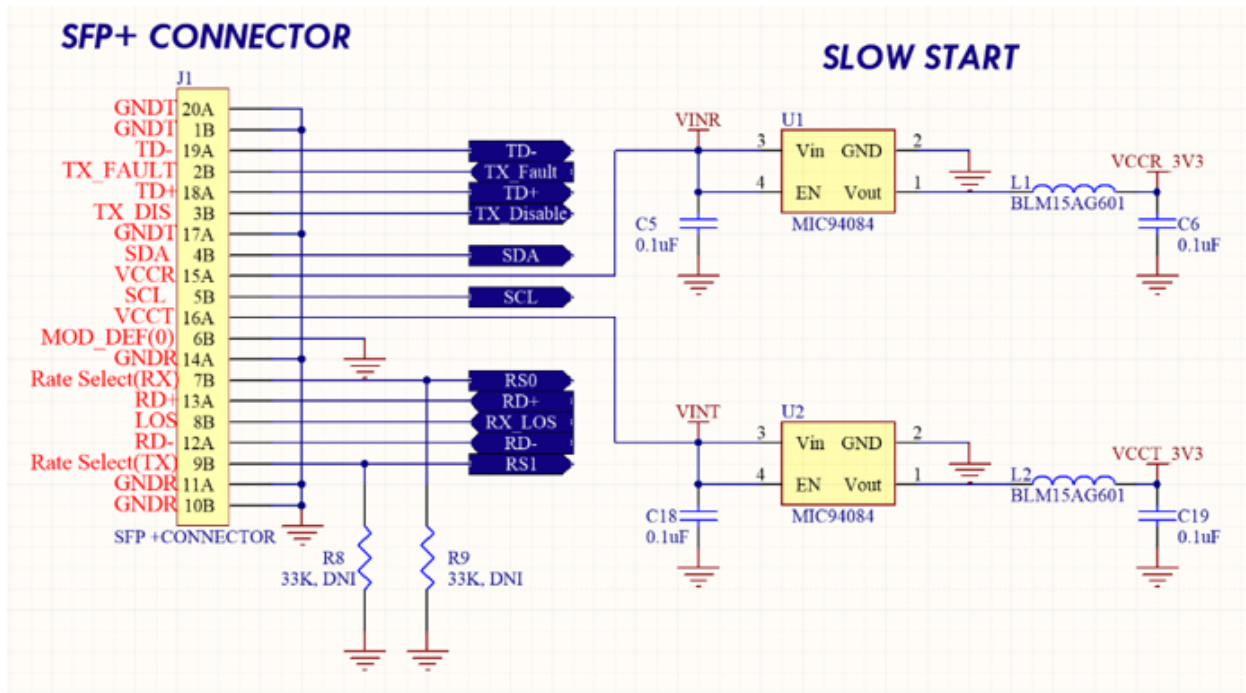
Recommended Operating Conditions

Parameter	Symbol	Min	Typ.	Max	Unit
Operating Case Temperature	Top	0	25	70	°C
Power Supply Voltage	Vcc	3.135	3.300	3.465	V
Data Rate			25.78125		Gb/s
Data Rate Accuracy		-100		100	ppm
Power Supply Current (TX + RX)	Icc	160		200	mA

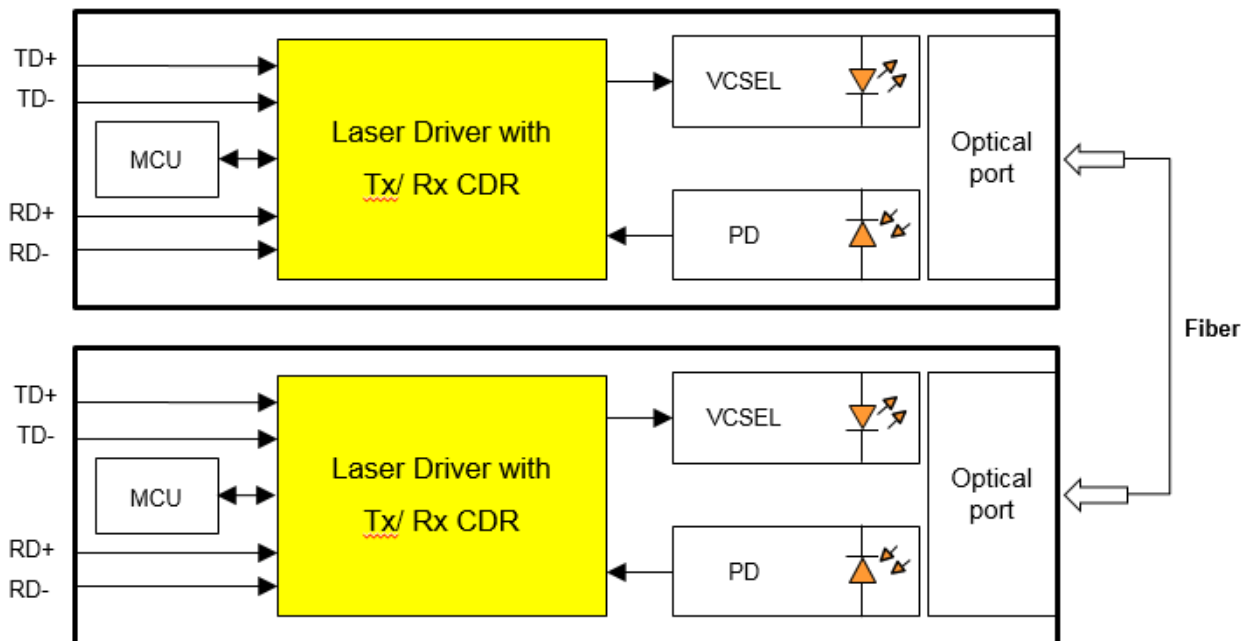
Specification

Parameter	Symbol	Min	Typ.	Max	Unit	Note
Transmitter						
Power Consumption	P_dis			0.8	W	
Input Differential Impedance	Zin_d		100		Ω	
Receiver						
Differential Output Impedance	R _{OUT}		100		Ω	

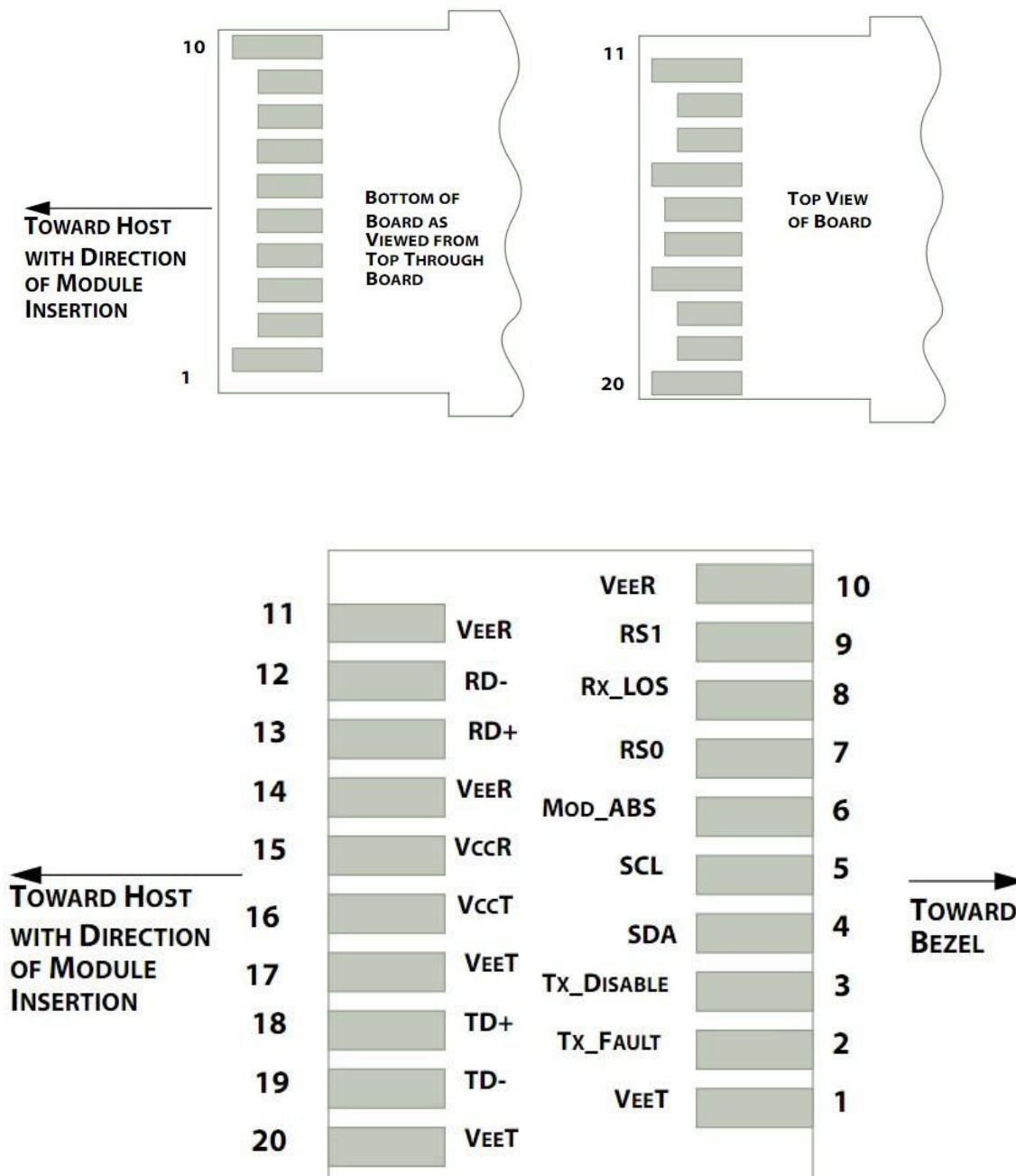
Proposed Application Schematics



AOC Block Diagram



Pin Description



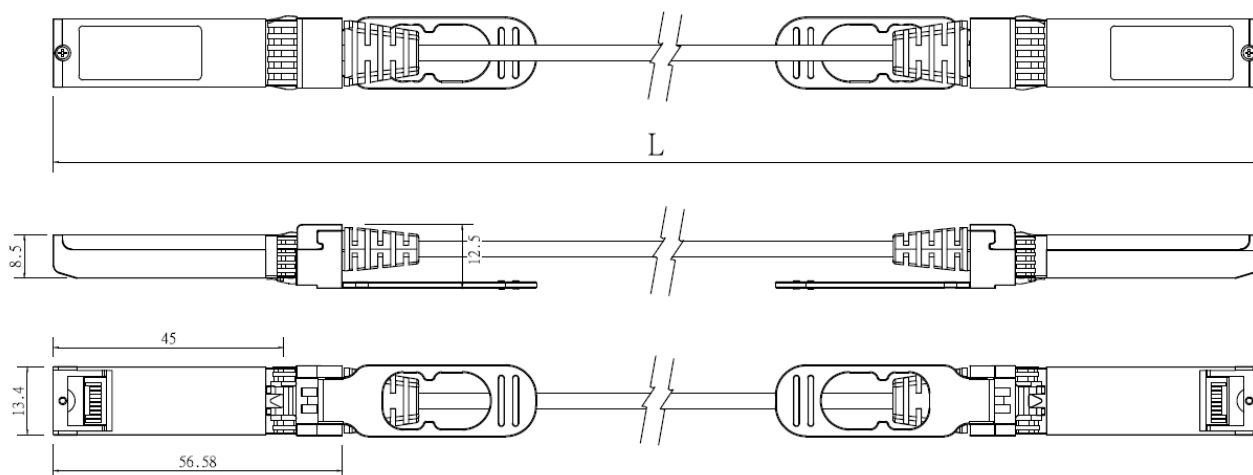
PIN	Logic	Symbol	Name / Description	Note
1		VeeT	Module Transmitter Ground	1
2	LVTTL-O	TX_Fault	Module Transmitter Fault	2
3	LVTTL-I	TX_Disable	Transmitter Disable; Turns off transmitter laser output	3
4	LVTTL-I/O	SDA	2-Wire Serial Interface Data Line	4
5	LVTTL-I	SCL	2-Wire Serial Interface Clock	4
6		MOD_ABS	Module Absent	4
7	LVTTL-I	RS0	No connection requirement	
8	LVTTL-O	RX_LOS	Receiver Loss of Signal Indication Active LOW	5
9	LVTTL-I	RS1	No connection requirement	
10		VeeR	Module Receiver Ground	1
11		VeeR	Module Receiver Ground	1
12	CML-O	RD-	Receiver Inverted Data Output	
13	CML-O	RD+	Receiver non-inverted Data Output	
14		VeeR	Module Receiver Ground	1
15		VccR	Module Receiver 3.3 V Supply	
16		VccT	Module Transmitter 3.3 V Supply	
17		VeeT	Module Transmitter Ground	1
18	CML-I	TD+	Transmitter non-inverted Data Input	
19	CML-I	TD-	Transmitter inverted Data Input	
20		VeeT	Module Transmitter Ground	1

Note:

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

Module Outline

Unit: mm



Note:

1. Standard length as L in drawing with tolerance
2. L (+1 /- 0 M)

ESD

Normal ESD precautions are required during the handling of this module. This AOC is shipped in ESD protective packaging. It should be removed from the packaging and handled only in an ESD protected environment.

Laser Safety

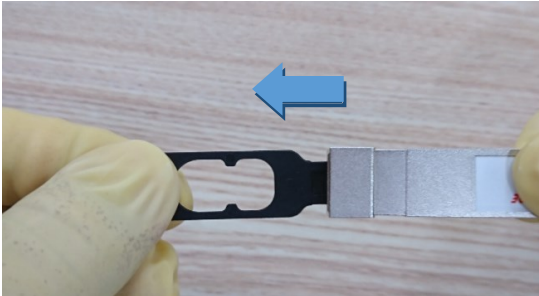
This is a laser class 1 product according to IEC/EN60825-1:2014 (Third Edition). This product complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.

User Manual

1. INSTRUCTION FOR USE:

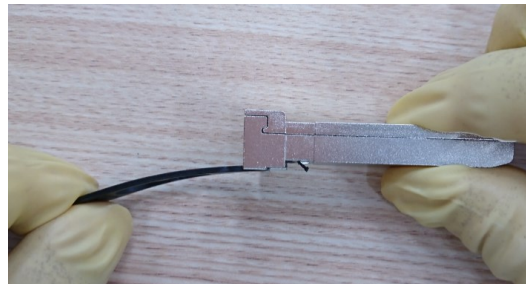
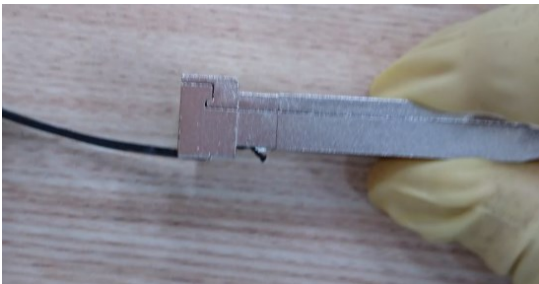
1.1 Pulling out the tab horizontally, then the mechanism will be active.

1.2 The mechanism will get back to former position once releasing the tab.

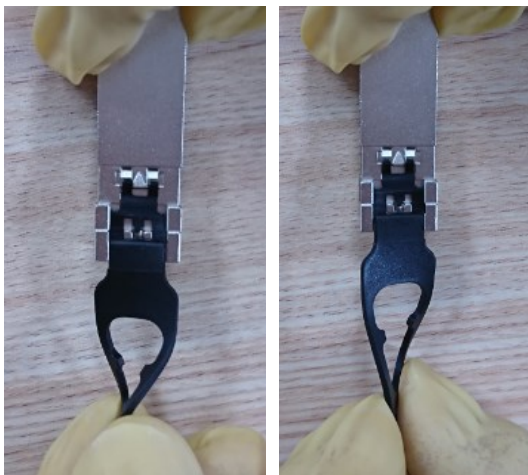


2. NO GOOD HANDLING:

2.1 Non pulling horizontally, upward angle over 5°, downward angle over 15°.



2.2 The angle of twisting the tab over 45°.



Contact Information

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Revision History

Date	Version	Description
11/28/2017	1.0	Initial release
12/29/2017	1.1	Add user manual
01/31/2018	1.2	Modify the description of Laser Safety . Add Caution .
03/01/2018	1.3	Modify the description of Laser Safety .
03/06/2019	1.4	1. Footer style change. 2. Contact information has been added on the last page.
04/18/2019	1.5	1. Add TAS-A1EH8-X3101 2. Cover page update
03/09/2020	1.6	1. Correct typo of compliance 2. Correct the product description from "Transceiver AOC" to "AOC".
4/30/2020	1.7	1. Add 50M and 100M options in ordering information table. 2. Remove "category" column in in ordering information table.