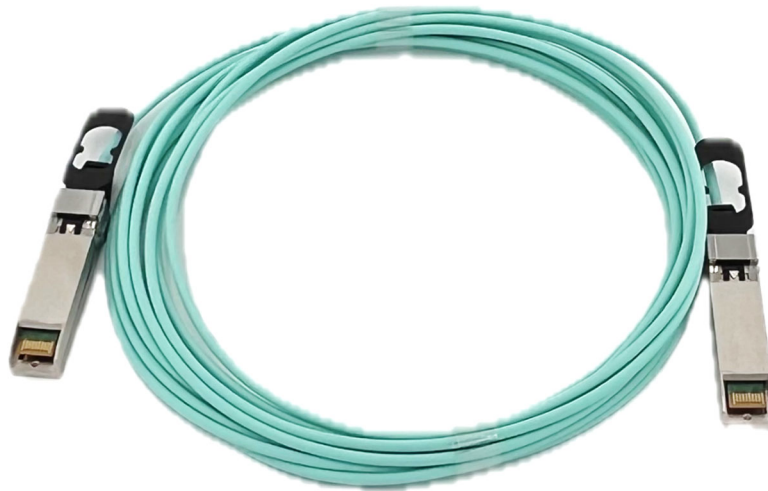


Specification
Small Form Factor Pluggable
 COB Process – SFP28
Optical Transceiver AOC
 25 Gigabit Ethernet



TAS-A1EH8-X31xx

↓
Distance

Model Name	TAS-A1EH8-X31xx							Note
	xx:01	03	5	7	10	20	25	
Voltage	3.3V							
Device type	VCSEL / PIN							
Interface	AC AC/ PECL							
Temperature	-20°C ~+85°C							
Distance	1m	3m	5m	7m	10m	20m	25m	
Latch Color	Black 							

■ 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.
- 1~70m OM3, 70.1~100m OM4
- 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

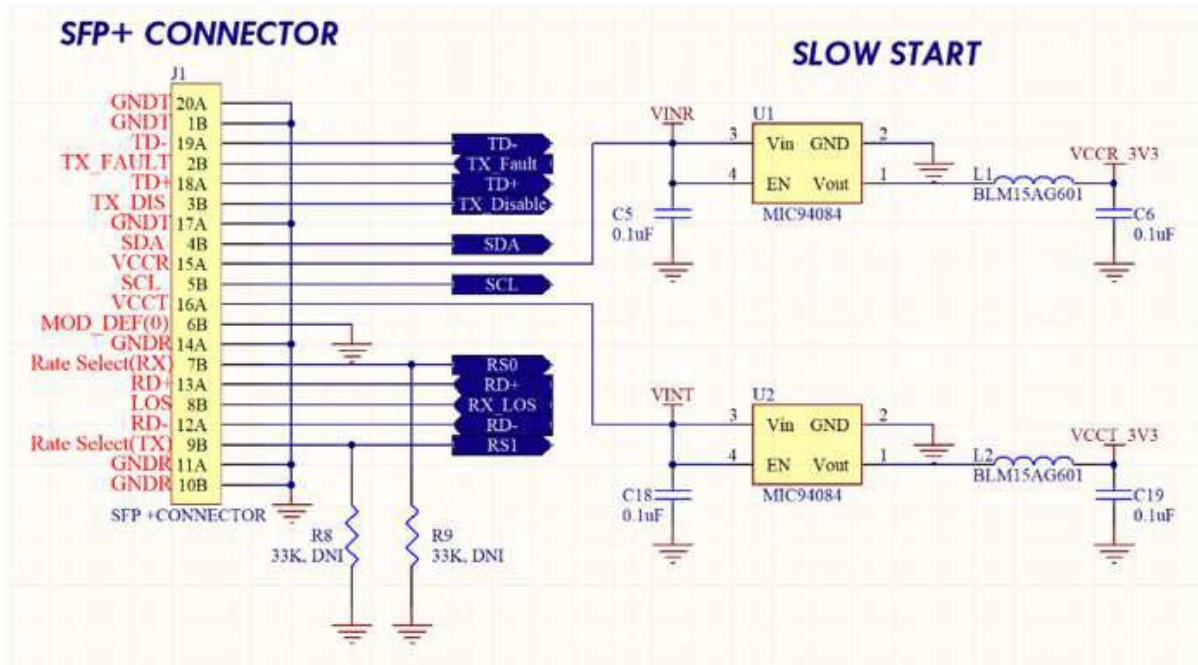
Recommended Operating Conditions

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

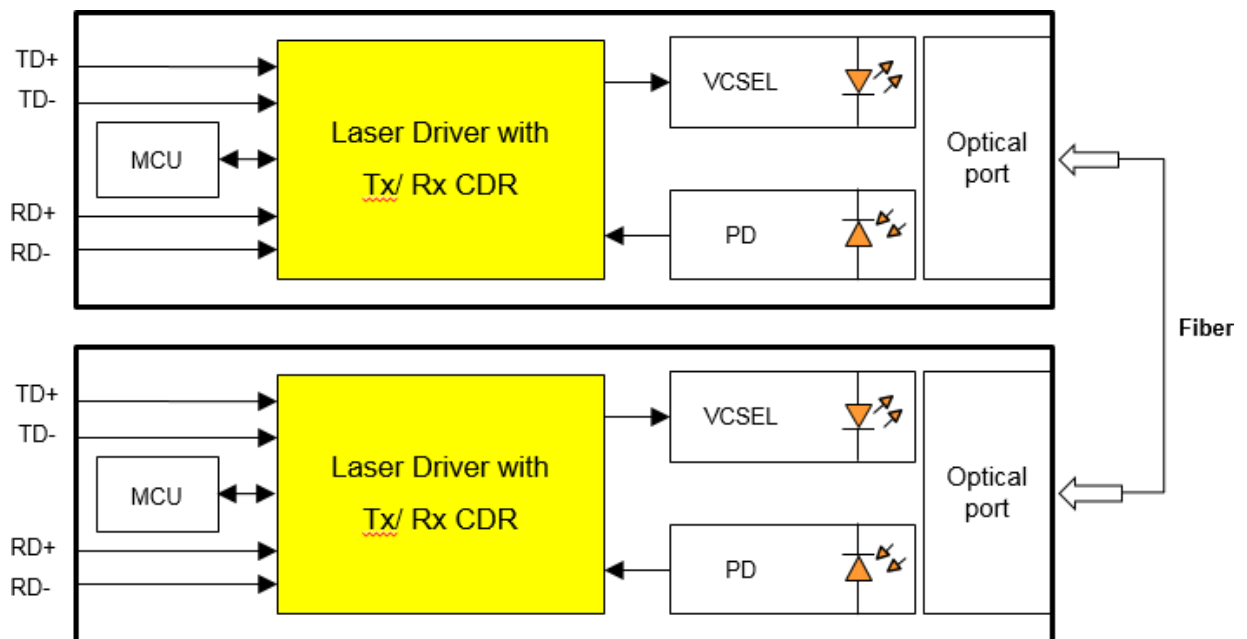
Specification

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	

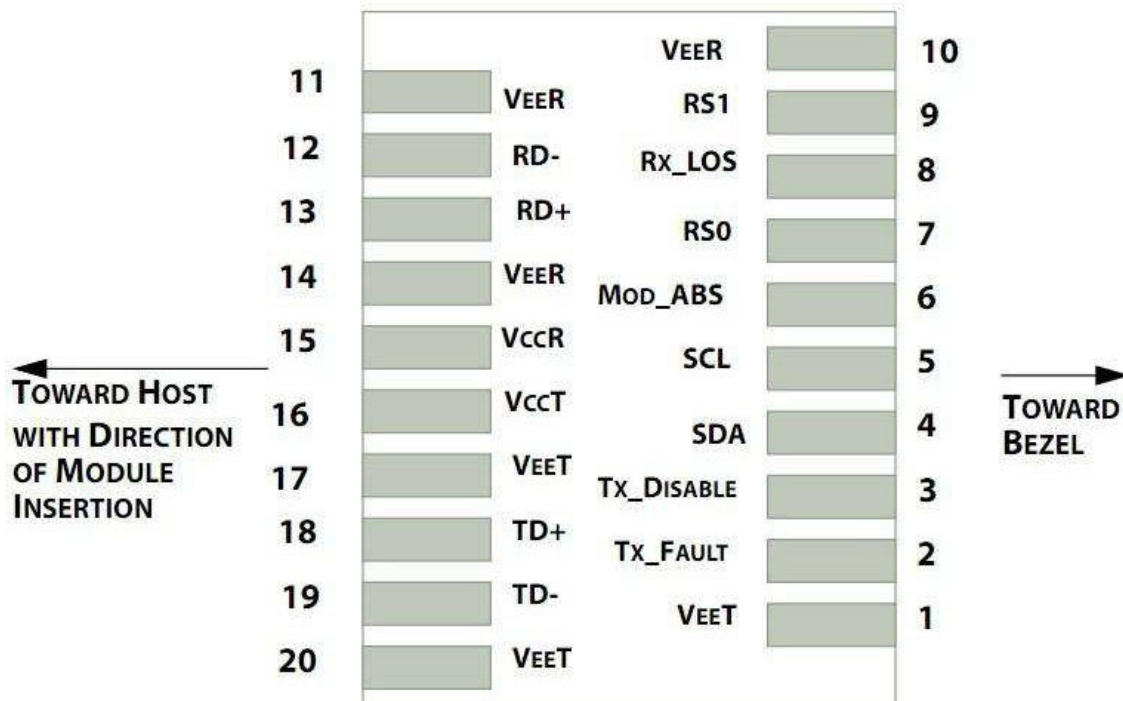
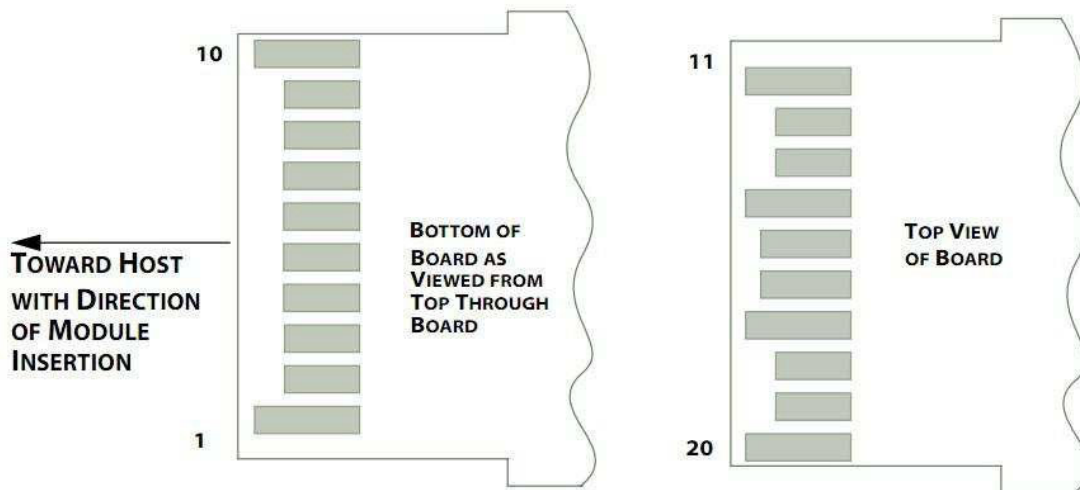
Proposed Application Schematics



AOC Block Diagram



■ Pin Description



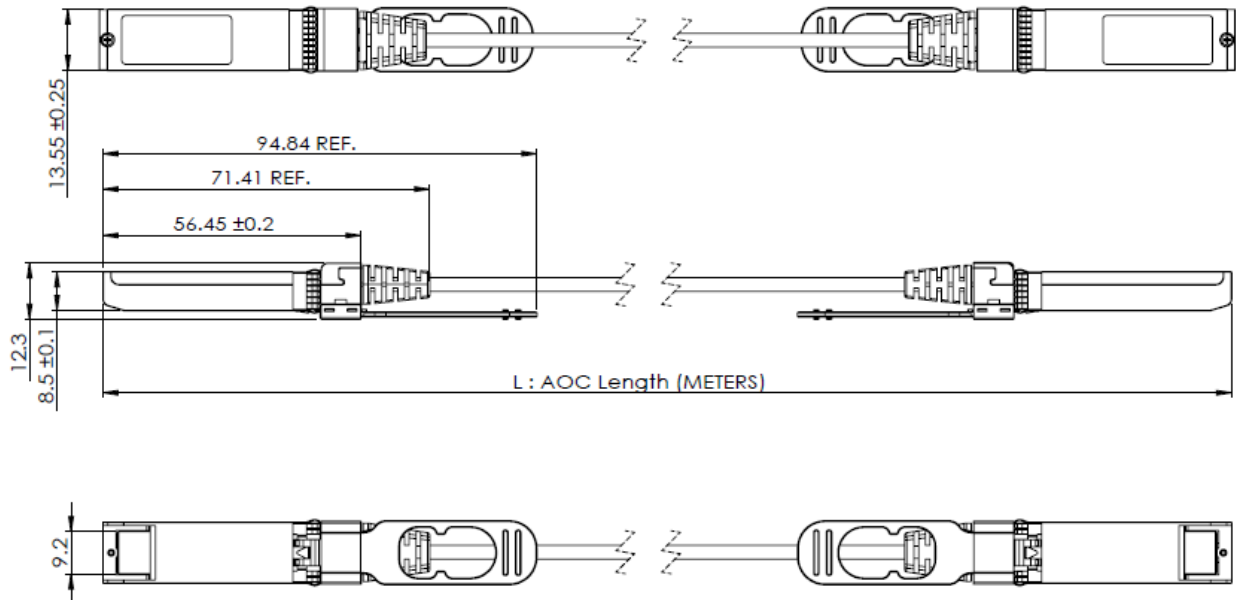
PIN	Logic	Symbol	Name / Description	Note
1		VeeT	Module Transmitter Ground	1
2	LVTTL-O	TX Fault	Module Transmitter Fault	2
3	LVTTL-I	TX Disable	Transmitter Disable; Turns off transmitter laser output	3
4	LVTTL-I/O	SDA	2-Wire Serial Interface Data Line	4
5	LVTTL-I	SCL	2-Wire Serial Interface Clock	4
6		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. Pull up to Vcc Host with 4.7k – 10k Ω
3. No connection required.
4. Power supply filtering circuit required.

Outline Drawing

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 transceiver 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 Class 1 Laser 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. 56, May 8, 2019. Caution: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Attention: L'utilisation de commandes ou de réglages ou l'exécution de procédures autres que celles spécifiées dans le document peut entraîner une exposition à des radiations dangereuses.

■ 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
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
01/13/2022	1.6	Cover page update
03/08/2024	1.7	1. Change the product picture 2. Add distance in the features 3. Modified outline drawing