

Specification

ETS
ENTA SOURCE CO., LTD.



ETSFP28-SFP25G AOC-xM

25G SFP28 to SFP25G AOC Length 5 M.

Contact US



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087-412-2552



ETSFP28-SFP25G AOC-xM

Features:

- Compliant to SFP+ Electrical MSA SFF 8431
- Compliant to SFP+ Mechanical MSA SFF-8432
- Compliant to Digital Monitoring SFF-8472
- Maximum link length of 100m on OM4 MMF
- Operating case temperature Commercial: 0°C to +70 °C
- +3.3V single power supply
- Power consumption less than 1W
- RoHS compliant
- Password protection for A0h and A2h

Applications

- 25GBASE-SR Ethernet
- Servers, switches, storage and host card adapters
- Other optical links

Absolute Maximum Ratings

Table1- Absolute Maximum Ratings

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Supply Voltage	V _{CC3}	-0.5	-	+3.6	V	
Storage Temperature	T _s	-5	-	+75	°C	
Operating Humidity	RH	5	-	85	%	1

Note: 1 No condensation

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Recommended Operating Conditions

Table 2- Recommended operating Conditions

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Operating Case Temperature	T _C	0		+70	°C	
Power Supply Voltage	V _{CC}	3.14	3.3	3.47	V	
Power Supply Current	I _{CC}	-	-	300	mA	
Power Dissipation	P _d	-	-	1.0	W	
Bit Rate	BR	10.3125	25.78125		Gbps	

Electrical Characteristics

Table 3- Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
Transmitter						
Differential Data Input Swing	V _{in,P-P}	200	-	1000	mV _{PP}	
Input Differential Impedance	Z _{IN}	90	100	110	Ω	
Tx_Fault	Normal Operation	V _{OL}	-	0.4	V	
	Transmitter Fault	V _{OH}	-	V _{CC} +0.3	V	
Tx_Disable	Normal Operation	V _{IL}	-	0.8	V	
	Laser Disable	V _{IH}	-	V _{CC} +0.3	V	
Receiver						
Differential Date Output	V _{out}	200	-	1000	mV	
Output Differential Impedance	Z _D	90	100	110	Ω	
Rx_LOS	Normal Operation	V _{OL}	-	0.4	V	
	Lose Signal	V _{oH}	-	V _{CC} +0.3	V	
Bit Error Rate	BER			E-12		1

Note: 1 PRBS2^31-1@10.3125Gbps

Recommended Host Board Power Supply Circuit

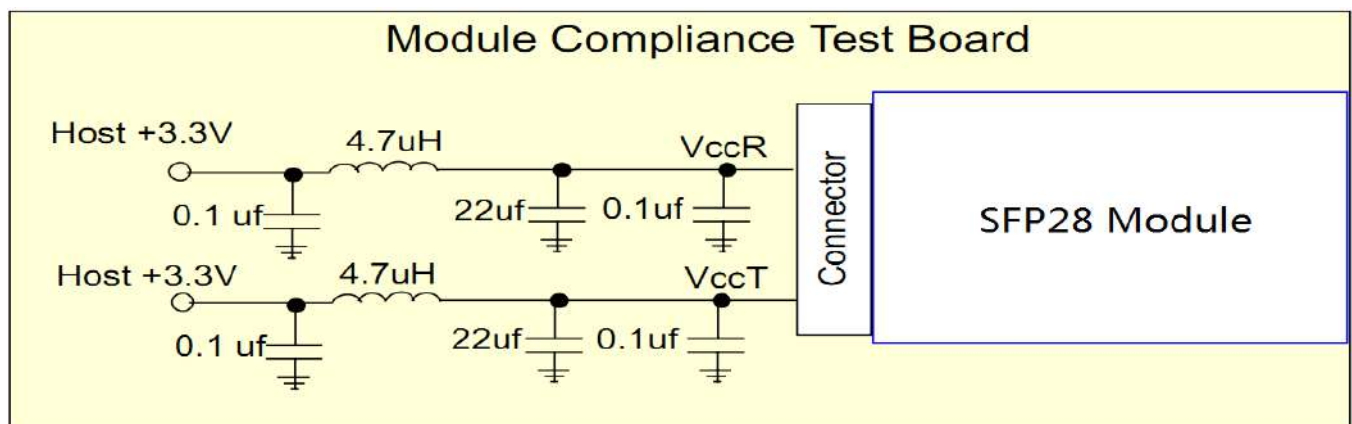


Figure 1, Recommended Host Board Power Supply Circuit

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Recommended Interface Circuit

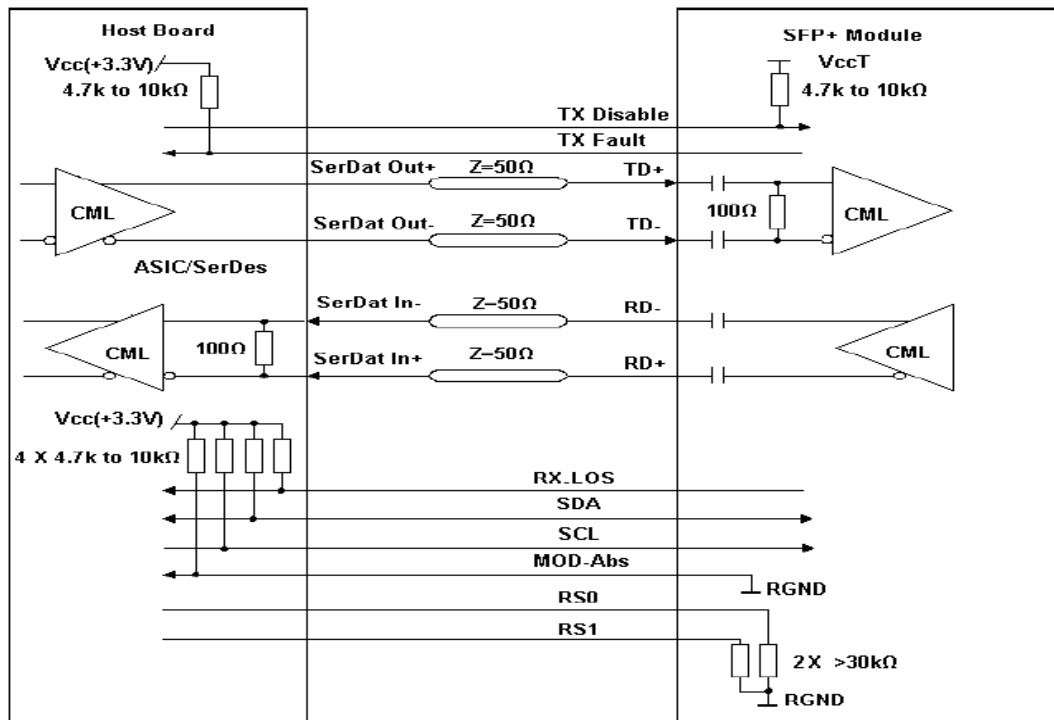


Figure 2, Recommended Interface Circuit

Pin arrangement

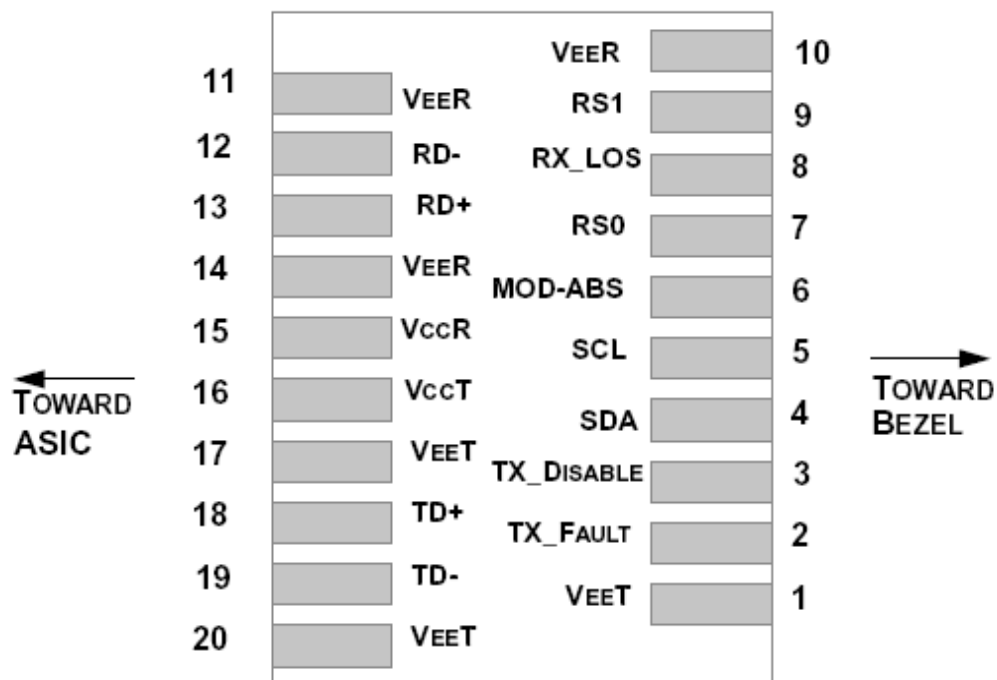


Figure 3, Pin View

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Table 4-Pin Function Definitions

Pin	Symbol	Name/Description	Notes
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 (MOD-DEF2)	
5	SCL	2-Wire Serial Interface Clock (MOD-DEF1)	
6	MOD_ABS	Module Absent, connected to V _{EE} T or V _{EE} R in the module	2
7	RS0	Rate Select 0, optionally controls SFP+ module receiver	
8	RX_LOS	Receiver Loss of Signal Indication (In FC designated as Rx_LOS and in Ethernet designated as NOT Signal Detect)	2
9	RS1	Rate Select 1, optionally controls SFP+ module transmitter	
10	V _{EE} R	Module Receiver Ground	1
11	V _{EE} R	Module Receiver Ground	1
12	RD-	Receiver Inverted Data Output	
13	RD+	Receiver Non Inverted Data Output	
14	V _{EE} R	Module Receiver Ground	1
15	V _{CC} R	Module Receiver 3.3 V Supply	
16	V _{CC} T	Module Transmitter 3.3 V Supply	
17	V _{EE} T	Module Transmitter Ground	1
18	TD+	Transmitter Non-Inverted Data Input	
19	TD-	Transmitter Inverted Data Input	
20	V _{EE} T	Module Transmitter Ground	1

Note:

1. The module ground pins are isolated from the module case.
2. The pins shall be pulled up with 4.7K-10Kohms to a voltage between 3.14V and 3.46V on host board.
3. The pin is pulled up to VCCT with a 4.7K-10KΩ resistor in the module.

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Monitoring Specification

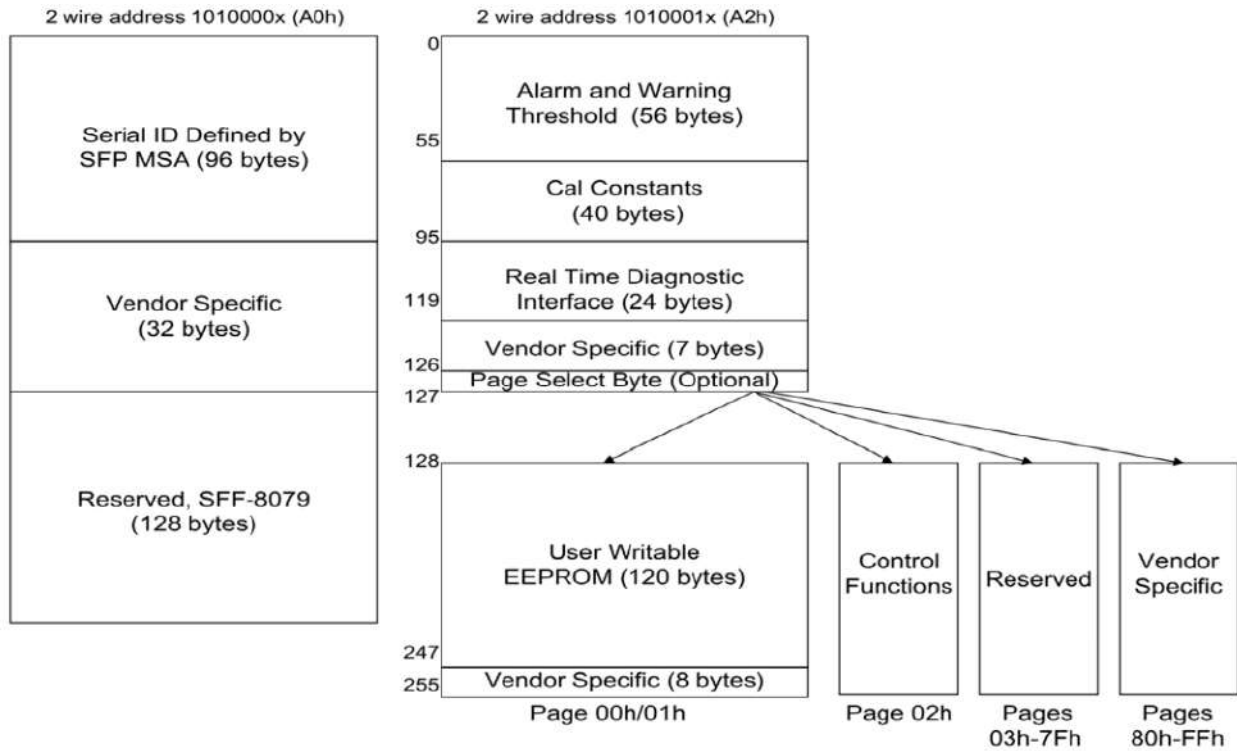


Figure 4, Memory Map

Mechanical

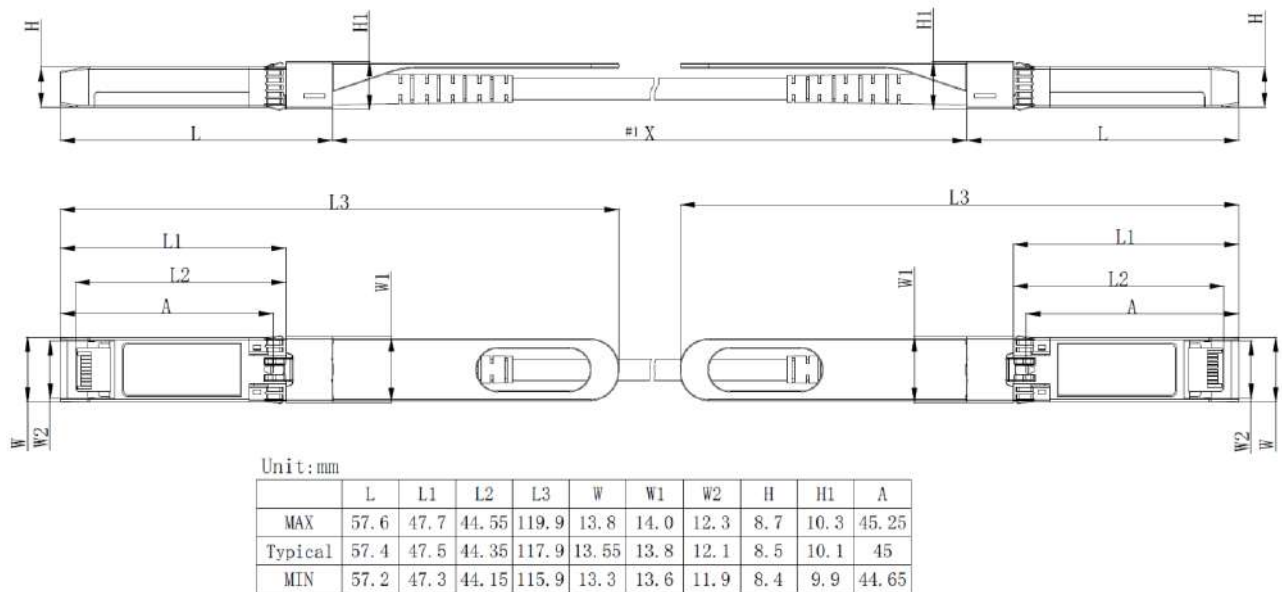


Figure 5, Mechanical Diagram

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Table 5-Cable Mechanical Specifications

Parameter	Value	Units
Diameter	3	mm
Minimum bend radius	30	mm
Length tolerance	Length < 1 m: +5 / -0	cm
	1 m ≤ length ≤ 4.5 m: +15 / -0	cm
	5 m ≤ length ≤ 14.5 m: +30 / -0	cm
	Length ≥ 15.0 m +2% / -0	m
Cable color	Orange(OM2),Aqua(OM3),Megenta(OM4)	

Ordering Information

Part No.	Data Rate	AOC Length	CASE Temp.	DDM
ETSFP28-SFP25G AOC-xM	25Gbps	X=1~100m	0-70°	Yes

Note: Case Temperature after assembling

Revision history

Version	Initiated	Reviewed	Revision	Release Date
A0	Lee	Angela	New Release	2018-05-29
A1	Lee	Angela	New structure	2018-12-21
A2	Chen	Angela	Change of address	2019-11-8
A3	Chen	Angela	Revise contents and mechanical	2020-7-16

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