



GZ25G-25G-AXX 25Gbps SFP28 AOC Transceivers

Features:

- Hot pluggable, SFP28 Structure
- Electrical interface compliant to SFF-8431
- Digital Monitoring Compliant to SFF-8472
- 850nm VCSEL laser and PIN photo-detector
- Maximum link length of 100m on OM4 MMF
- +3.3V single power supply
- Power consumption less than 1W
- Operating case temperature: 0°C to +70 °C
- RoHS compliant



Applications

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

Absolute Maximum Ratings

Table2- 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

Shenzhen Guangzhi Communication Technology Co., LTD.

Production Address: 5th floor, Building 2, Peninsula Industrial Park, No. 3, Gangbian Tian Road, East Lake High-tech Zone, Wuhan Hubei Province, China.

Contact: Mr. Yang Tel.: +86-18607555895 E-mail: yanghan@optst.com

Website: www.optst.com

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Recommended Operating Conditions

Table 3- 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 4- 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}	$V_{EE}-0.3$	-	0.4	V
	Transmitter Fault	V_{OH}	2.0	-	$V_{CC}+0.3$	V
Tx_Disable	Normal Operation	V_{IL}	$V_{EE}-0.3$	-	0.8	V
	Laser Disable	V_{IH}	2.0	-	$V_{CC}+0.3$	V
Receiver						
Differential Data Output	V_{out}	200	-	1000	mV	
Output Differential Impedance	Z_D	90	100	110	Ω	
Rx_LOS	Normal Operation	V_{OL}	$V_{EE}-0.3$	-	0.4	V
	Lose Signal	V_{OH}	2.0	-	$V_{CC}+0.3$	V
Bit Error Rate	BER				E-12	1

Note1: PRBS2^31-1 @25.78125Gbps

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Pin arrangement

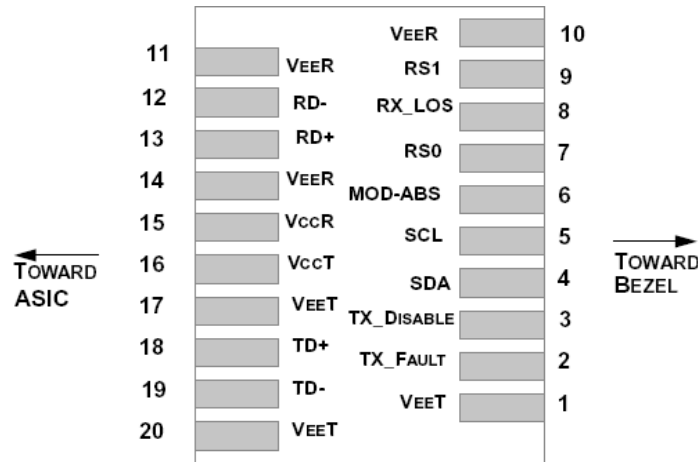


Figure 1, Pin Vie

Table 5-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	ModuleAbsent, connected to V_{EE} or V_{EE} 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	

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20	V _{EE} T	Module Transmitter Ground	1
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Note:

1. The module ground pins are isolated from the module case.
2. The pins shall be pulled up with 4.7K-10Kohm 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.

Monitoring Specification

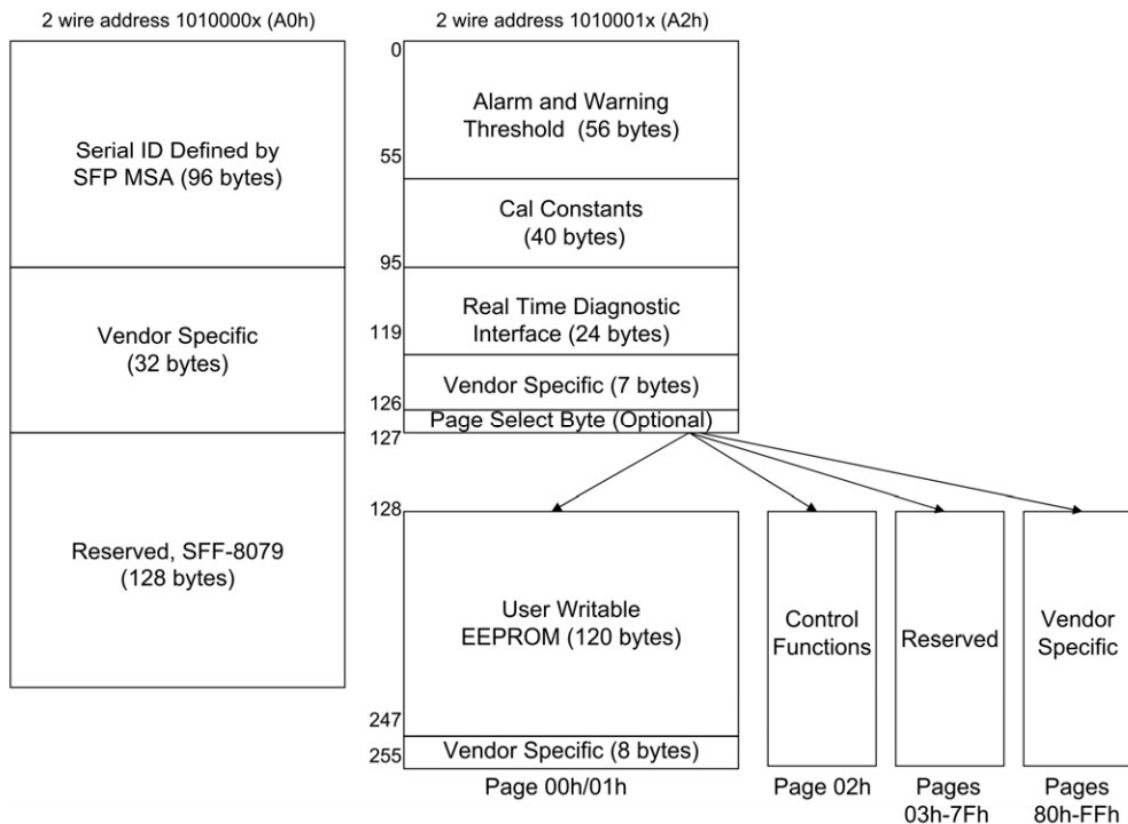


Figure 2, Memory Map

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Recommended Host Board Power Supply Circuit

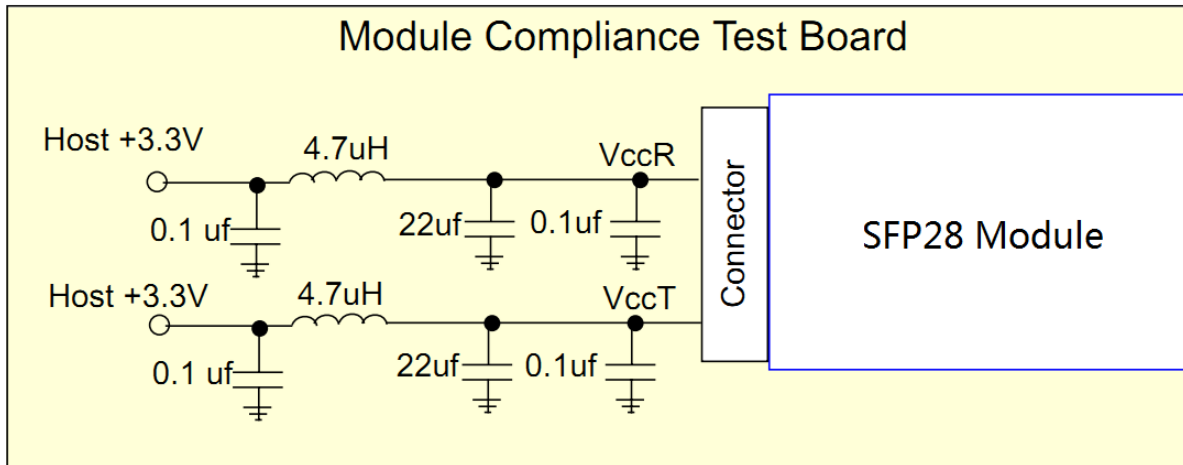


Figure 3, Recommended Host Board Power Supply Circuit

Recommended Interface Circuit

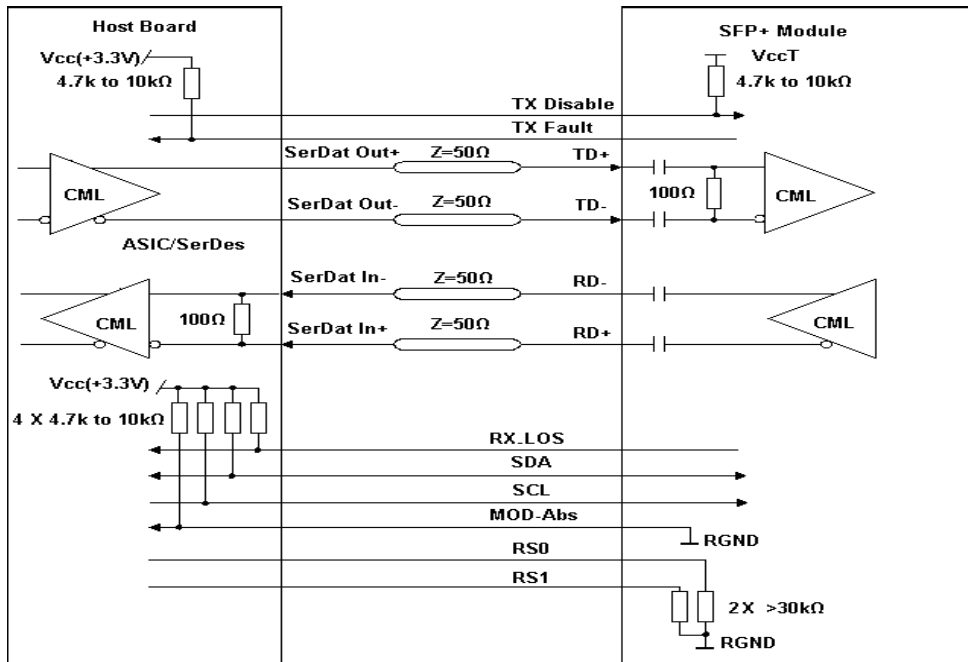


Figure 4, Recommended Interface Circuit

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Mechanical

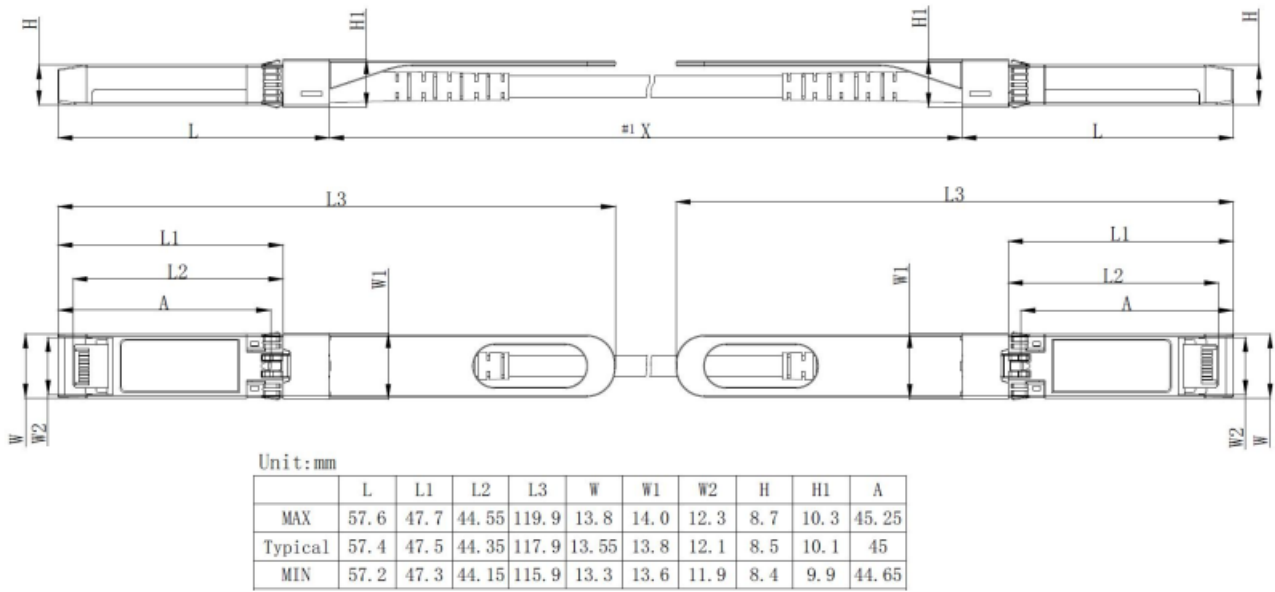


Figure 5, Mechanical Diagram

Table 6- Cable Length

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),Magenta(OM4)	-

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Order Information

Table 1-Ordering Information

Part Number	Product Description
GZ25G-25G-AXX	25G SFP28 AOC Transceivers, C-TEMP XX=01 □ cable length=1m XX=03 □ cable length=3m XX=05 □ cable length=5m XX=10 □ cable length=10m XX=15 □ cable length=15m XX=25 □ cable length=25m XX=50 □ cable length=50m XX=A0 □ cable length=100m

Warnings

Handling Precautions:

This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Please follow guidelines according to proper ESD procedures.

Laser Safety:

Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation.

Notice:

The information provided on this page contains the product target specifications which are subject to change without notice.

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