



Features

- Up to 25.78Gbps bi-directional fiber link
- Compliant with IEEE802.3by 25GBase-SR Ethernet
- Compatible with eCPRI/CPRI option 10 wireless standard
- Compliant with SFP28 MSA SFF-8402
- Compliant with SFF8472 diagnostic monitoring interface for Optical Transceivers (DOM)
- 850nm VCSEL transmitter
- Built-in CDR on both Transmitter and Receiver
- MMF OM3 70m / OM4 100m point-to-point transmission
- Support Hot Pluggable
- Duplex LC receptacle connector
- 2-wire I2C interface for management and diagnostic monitor
- RoHS Compliant

Application

- 25GBase-SR Ethernet
- CPRI Option 10 Wireless Application
- eCPRI 5G Mobile Network Application

Ordering Information

PART NO.	TX	RX	DISTANCE	DOM	TEMPERATURE
GL25G-SFP-SR	850 nm	850nm	MMF OM4 100m MMF OM3 70m	Support	0~70°C
GL25G-SFP-SR-I	850 nm	850nm	MMF OM4 100m MMF OM3 70m	Support	-40~85°C

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25GBase-SR SFP28 Optical Transceiver Multi-Mode 850nm, OM4 100m, DOM



Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNITS	NOTE
Storage Temperature	T_s	-40	+85	°C	
Supply Voltage	V_{cc}	-0.5	4.0	V	
Storage Relative Humidity	RH	5	95	%	

Recommended Operating Conditions

PARAMETER	SYMBOL	MIN	TYP.	MAX	UNITS	NOTE
Case Operating Temperature	T_c	0	---	70	°C	GL25G-SFP-SR
		-40	---	85	°C	GL25G-SFP-SR-I
Supply Voltage	V_{cc}	3.13	3.3	3.47	V	
Supply Current	$I_{TX} + I_{RX}$	---		300	mA	
Power Consumption	P			1.0	W	

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Transmitter Electro-optical Interface

PARAMETER	SYMBOL	MIN	TYP.	MAX	UNITS	NOTE
Data Rate	DR	24.3	25.78		Gbps	
Optical Output Power	P _O	-8.4		+2.4	dBm	1
Optical Extinction Ratio	ER	2			dB	
Center Wavelength	λ_C	840	850	860	nm	
Spectral Width (RMS)	$\Delta\lambda$			0.6	nm	
Output Eye		Compliant with IEEE802.3by				
Output Power @Tx_Dis Asserted	P _{OFF}			-30	dBm	
Differential Input Voltage Swing	V _{DIFF}	180		950	mV	
Differential Input Impedance	Z _d	90	100	110	Ω	
Tx_Fault – High (Tx Fault)	V _{Fault_H}	2.0		V _{cc}	V	
Tx_Fault – Low (Tx Normal)	V _{Fault_L}	V _{ee}		0.8	V	
Tx_Disable – High (Tx Off)	V _{Disable_H}	2.0		V _{cc}	V	
Tx_Disable – Low (Tx On)	V _{Disable_L}	V _{ee}		0.5	V	

Note 1: Coupling into a 50/125 μ m multi-mode fiber.

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Receiver Electro-optical Interface

PARAMETER	SYMBOL	MIN	TYP.	MAX	UNITS	NOTE
Data Rate	DR	24.3	25.78		Gbps	
Optical Input Power-maximum	P _{IN}			+2.4	dBm	
Receiver Sensitivity	P _{IN}			-10.3	dBm	1
Operating Center Wavelength	λ_c	840	850	860	nm	
Loss of Signal (LOS) - Asserted	P _A	-30			dBm	
Loss of Signal (LOS) - De-asserted	P _D			-12	dBm	
Differential Output Voltage Swing	V _{DIFF}	500		900	mV	
Differential Input Impedance	Z _d	90	100	110	Ω	
LOS Signal Output Voltage - Low	LOS _{VL}	V _{ee}		0.5	V	
LOS Signal Output Voltage - High	LOS _{VH}	2.4		V _{cc}	V	

Note 1: With BER better than or equal to 5×10^{-5} , measured in the center of the eye opening with 25.78125Gbps, PRBS 2³¹-1

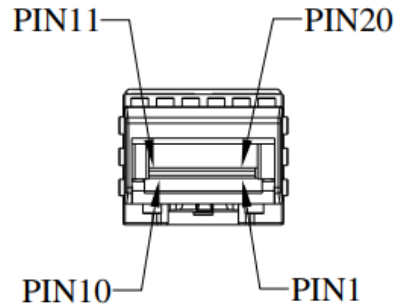
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Pin Assignment



PIN NO.	PIN NAME	FUNCTION	NOTE
1	VeeT	Transmitter Ground	
2	TX Fault	Transmitter Fault Indication	
3	TX Disable	Transmitter Disable	
4	MOD_DEF 2	Module Definition 2 (Serial Data Signal)	SDA
5	MOD_DEF 1	Module Definition 1 (Serial Data Clock)	SCL
6	MOD_DEF 0	Module Definition 0	TTL Low
7	RS0	Rx Rate Select	No used
8	Rx_LOS	Loss of Signal	Open collector
9	RS1	Tx Rate Select	No used
10	VeeR	Receiver Ground	
11	VeeR	Receiver Ground	
12	RD-	Inv. Receiver Data Out (AC coupled)	
13	RD+	Receiver Data Out (AC coupled)	
14	VeeR	Receiver Ground	
15	V _{CC} R	Receiver Power	
16	V _{CC} T	Transmitter Power	
17	VeeT	Transmitter Ground	
18	TD+	Transmitter Data In (AC coupled)	
19	TD-	Inv. Transmitter Data In (AC coupled)	
20	VeeT	Transmitter Ground	

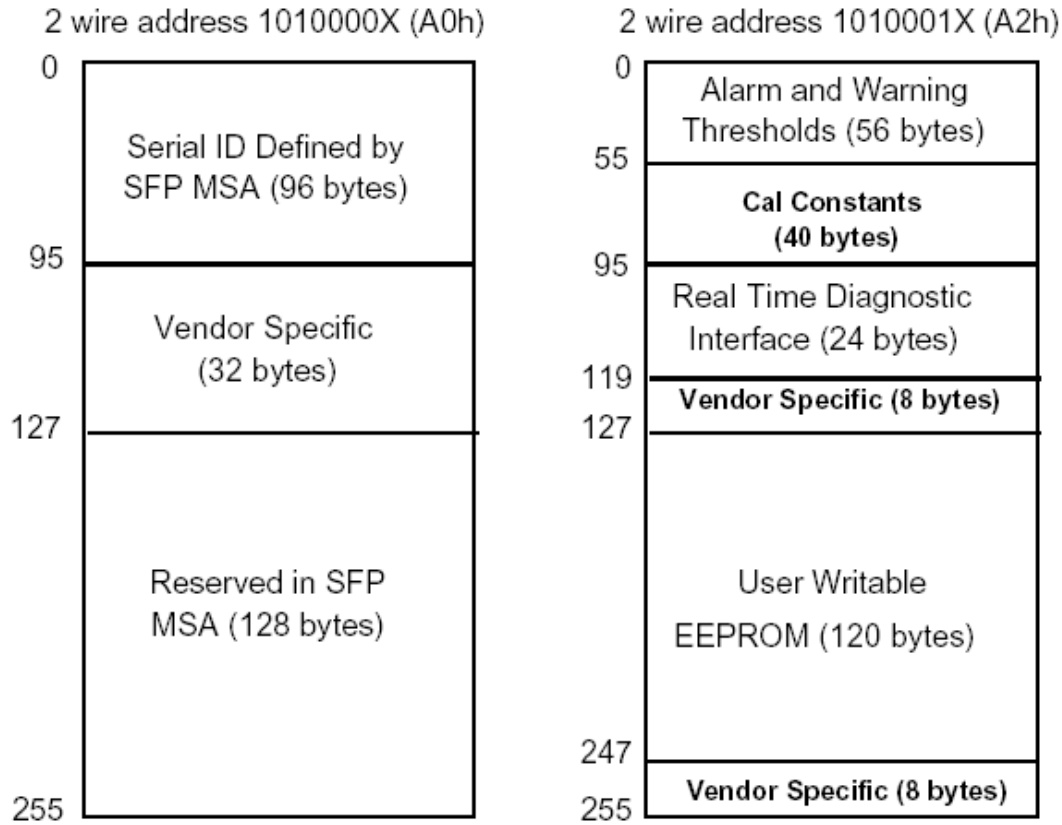
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Digital Diagnostic Memory Map

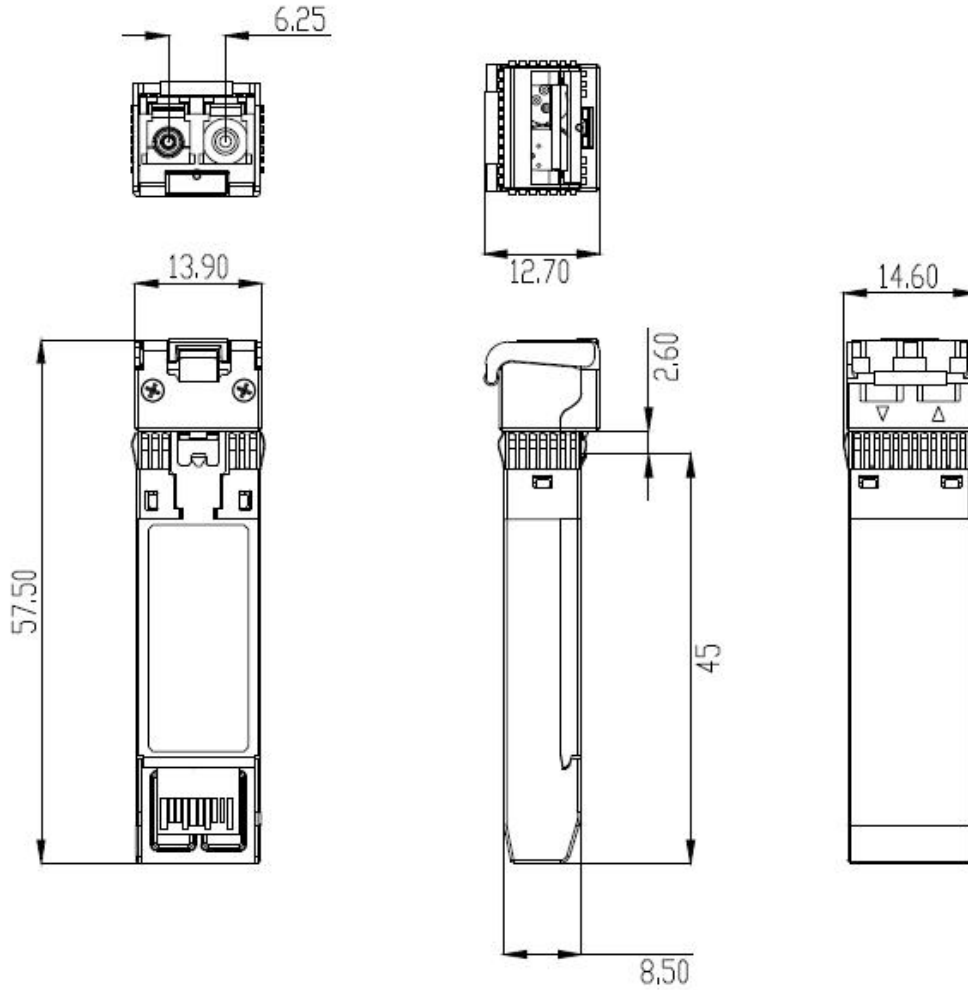


Digital Diagnostic Monitoring Characteristics

PARAMETER	SYMBOL	ACCURACY	UNIT	NOTE
Transceiver Temperature	T_{INT}	± 3	$^{\circ}C$	
Transceiver Supply Voltage	V_{INT}	± 3	%	
TX Bias Current	I_{BIAS}	± 10	%	
TX Output Power	P_{TX}	± 3	dB	
RX Received Optical Power	P_{RX}	± 3	dB	



Mechanical Dimensions (All dimensions are $\pm 0.20\text{mm}$ Unless Otherwise Specified, Unit: mm):



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