

25G SFP28 1310nm 10km DOM Transceiver

AA094688-LL



Application

- Data Center Backbone
- Ethernet Switches
- High-speed Servers
- High-performance Computing Clusters
- SAN, Routers, Hubs, Load Balancer

Features

- 25Gbps serial optical interface
- 1310nm DFB transmitter and PIN PD receiver
- Wide Operating Temperature(0°C~70°C)
- Maximum link length of 10km via Single Mode Fiber (SMF)

Description

The Technologies SFP28-25GLR-31 is a single-Channel, Pluggable, Fiber-Optic SFP28 for 25 Gigabit Ethernet and Infiniband SAN Applications. It is a high performance module for long-range data communication and interconnect applications which operate at 25.78125Gbps up to 10 km using single mode fiber(SMF).

This module is designed to operate over singlemode fiber systems using a nominal wavelength of 1310nm. The electrical interface uses a 20 contact edge type connector. The optical interface uses duplex LC receptacle. This module incorporates Technologies proven circuit and DFB technology to provide reliable long life, high performance, and consistent service.

Product Specifications

I. Optical and Electrical Characteristics

Parameter	Symbol	Min	Typ.	Max	Unit
Power Consumption	P			1.2	W
Supply Current	I _{cc}			300	mA
Transmitter(T=25° C, unless noted)					
Data Rate	R		25.8	28.05	Gbps
Centre Wavelength	λ_c	1290	1310	1330	nm
Spectral Width (-20dB)	$\Delta\lambda$			1	nm
Average Optical Power	P _{avg}	-4.5		2	dBm
Optical Power OMA	P _{OMA}	-6.4			dBm
Extinction Ratio	ER	3.5			dB
Differential data input swing	V _{IN,PP}	180		700	mV
Input Differential Impedance	R _{in}		100		Ω

Receiver(T=25° C, unless noted)

Center Wavelength	λ_r	1270	1360	nm
Damage Threshold		3.5		dBm
Overload	Sat	2		dBm
Receiver Reflectance	R_{rx}		-12	dB
Receiver Sensitivity (OMA)	Sen		-8.6	dBm
LOS Assert	LOS_A	-30		dBm
LOS De-Assert	LOS_D		-11	dBm
LOS Hysteresis	LOS_H	0.5	5	dB

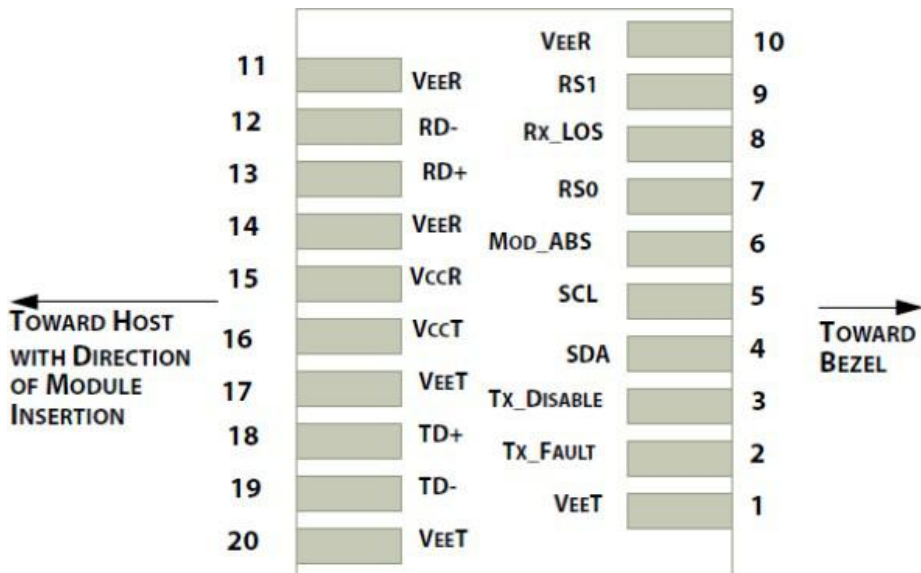
II. Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	T_S	-40	85	°C
Relative Humidity	RH	5	95	%

III. Recommended Operating Conditions

Parameter	Symbol	Min	Typ.	Max	Unit
Case Temperature	T_c	0		+70	°C
Power Supply Voltage	V_{CC}	3.15	3.3	3.45	V
Signaling Rate each Channel			25.78125		Gbps

IV. PIN ASSIGNMENT

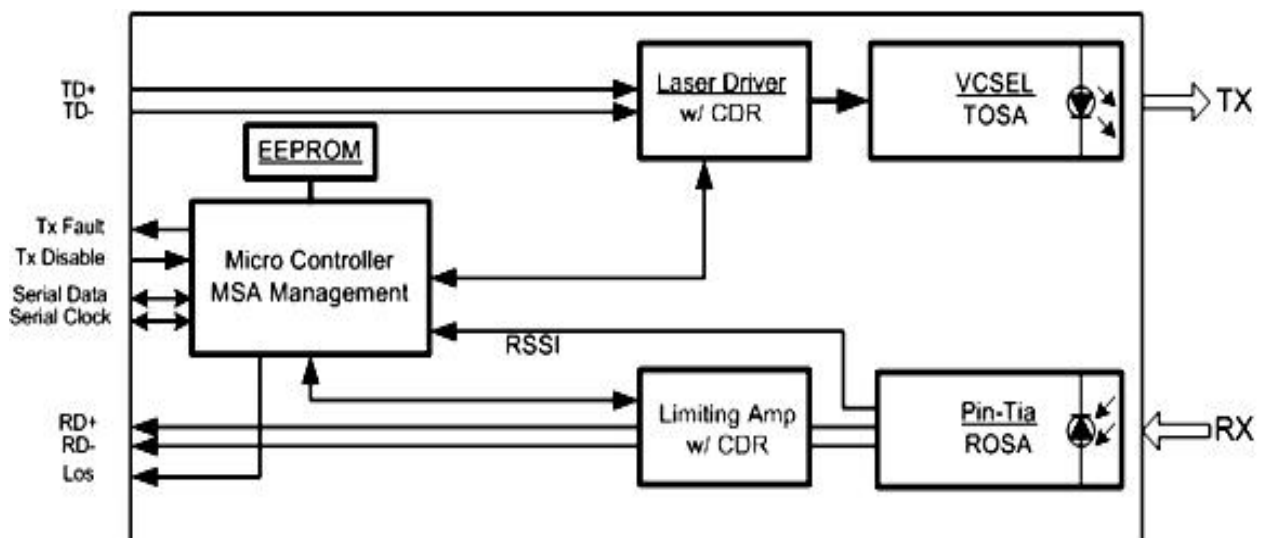


Pin Description

Pin	Logic	Symbol	Name/Description
1		VeeT	Module Transmitter Ground
2	LVTTL-O	TX_Fault	Module Transmitter Fault
3	LVTTL-I	TX_Dis	Transmitter Disable; Turns off transmitter laser output
4	LVTTL-I/O	SDA	2-Wire Serial Interface Data Line
5	LVTTL-I	SCL	2-Wire Serial Interface Clock
6		MOD_DEFO	Module Definition, Grounded in the module
7	LVTTL-I	RS0	Receiver Rate Select
8	LVTTL-O	RX_LOS	Receiver Loss of Signal Indication Active LOW
9	LVTTL-I	RS1	Transmitter Rate Select (not used)

10		VeeR	Module Receiver Ground
11		VeeR	Module Receiver Ground
12	CML-O	RD-	Receiver Inverted Data Output
13	CML-O	RD+	Receiver Data Output
14		VeeR	Module Receiver Ground
15		VccR	Module Receiver 3.3 V Supply
16		VccT	Module Receiver 3.3 V Supply
17		VeeT	Module Transmitter Ground
18	CML-I	TD+	Transmitter Non-Inverted Data Input
19	CML-I	TD-	Transmitter Inverted Data Input
20		VeeT	Module Transmitter Ground

V. Transceiver Block Diagram



VI. Mechanical Dimensions

