

TRS5A20EH-GA001 25GE SFP28 LR 10 km Transceiver



Description

CIG's 25GbE SFP28 LR transceiver module (TRS5A20EH) enables dense port count and high throughput capacity with its compact size (W x L x H = 56.5 x 13.9 x 11.85 (mm)) and low power consumption (1.0 W). These modules can be used in a wide range of network applications, including Wireless Fronthaul and Ethernet switches. A maximum transmission distance of up to 10km over single mode fiber is realized using a 1310nm uncooled DFB-based optical transmitter and PIN-PD based optical receiver. Clock and data recovery ICs in transmit and receive paths ensure robust link performance over all operating conditions. The module is hot pluggable when mated to a compliant 20-pin connector that delivers a supply voltage of 3.3 V.

Features

- 25 Gigabit Ethernet (25GbE) Transceiver
- Data Rate: 25.781 Gbit/s
- Optical Interface: Compliant to 25GBASE-LR [1]
- Electrical Interface: Compliant to 25GAUI [1]
- Reach: Up to 10km over single mode fiber
- Form Factor: Compliant to SFP28 (SFF-8402) [2]
- Optical Transmitter: 1310nm uncooled DFB
- Optical Receiver: PIN photodetector with limiting amplifier
- Power Consumption: 1.0 W max
- Operating Case Temperature: -40 to 85 degC
- Size (W x L x H): 56.5 mm x 13.9 mm x 11.85 mm
- Hot Z-Pluggable to 20-pin electrical connector
- Latching Mechanism: Lever Latching
- Management Interface: Two-wire management interface protocol (SFF-8472) [4]
- Environmental: RoHS6 compliant

References

- [1] IEEE Std 802.3cc-2017
- [2] SFF-8402 Rev 0.6 September 13, 2012
- [3] SFF-8472 Rev 12.2 November 14, 2014
- [4] SFF-8471 Rev 1.7 September 22, 2014
- [5] SFF-8432 Rev5.0 July 16, 2017

Operating Environments

Table 1 Operating Environment

No	Parameter	Symbol	Min.	Typ.	Max.	Unit	Remarks
1	Supply Voltage	Vcc	3.135	3.3	3.465	V	
2	Power Consumption	P	-	-	1.0	W	
3	Case Temperature	Tc	-45	-	85	°C	

Optical Characteristics

Table 2 Optical Characteristics

No.	Parameter	Symbol	Min.	Typ.	Max.	Unit	Remarks
1	Channel data rate		25.78125			Gbit/s	
2	Transmitter Center Wavelength		1295~1325			nm	
3	Average Launch Power		-7.0		+2.0	dBm	
4	Optical Output Power (OMA)	OMA	-4.0		+2.2	dBm	
5	Average Optical Output Power of OFF Transmitter	P _{off}			-30	dBm	
6	Extinction Ratio	ER	3			dB	
7	Receiver Sensitivity (OMA)				-12.0	dBm	BER=5E-5
8	Stressed Receiver Sensitivity (OMA)	SRS			-9.5	dBm	BER=5E-5
9	Average Receive Power				+2.0	dBm	

EMI Compliance

This product meets Electromagnetic Interference (EMI) specifications of following standards.

- 1 FCC Part 15, Subpart B (Class B)
- 2 EN55032 (Class B)

Laser Safety

Certified as a Class 1 laser product per international standard IEC 60825-1:2014 3rd edition

Complies with 21 CFR 1040.10 except for deviations pursuant to Laser Notice No. 50, and IEC 60825-1 as Class 1 and with FDA 21 CFR as Class I laser product.

For more Information

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