TRA-SFP-10G-BD-LR

Tx 1270 nm Rx 1330nm/20km/10x Gigabit Ethernet

Features

- SFP+ Multi-Source Agreement compliant (SFF-8431)
- Hot pluggable SFP+ footprint
- Serial ID functionality supported according to (SFF-8472)
- Class 1 laser safety standard IEC 60825 compliant
- Single LC connector
- 1270nm DFB transmitter, 1330nm PIN receiver
- 20km point-to-point transmission on single mode fibre
- Operating temperature range 0°C to 70°C or 0°C to 85°C
- Low power dissipation (<1.5W)
- Digital diagnostics monitoring (DDM)

Applications

- 10x Gigabit Ethernet
- 9.83 Gbps CPRI
- 8x Fiber Channel
- 4x Fiber Channel
- 2x´Fiber Channel

Description

TRansceiver.Asia is a high-performance transceiver module for up to 10x Gigabit Ethernet data links over a single mode fibre. The maximum reach[1] is 20km, with 9dB end of life (EOL) power budget. The transmitter is a 1270nm DFB laser, the receiver a 1330nm PIN photodiode. This transceiver module is compliant with the Small Form-factor Pluggable (SFP+) Multisource Agreement (MSA) and hot pluggable. Always contact **TRansceiver.Asia** commercial agents for compatibility with different equipment platforms.

Optical Interfaces

P/N	Wavelength [nm]	Optical Output Power2 [dBm]	Receiver Sensitivity3 [dBm]	Dispersion Penalty [dB]	Receiver Overload4 [dBm]	Power Budget2 [dB]
TRA-SFP-10G-BD-LR	Tx 1270 Rx 1330	-5 to 0	≤ -14	N/A	0	≥ 9

Recommended Operating Conditions

Parameter	Min	Typ	Max	Unit	Notes
Storage temperature	-40		85	°C	
Operating Case Temperature	0		70	°C	
	-40		85	**°C**	
Relative Humidity	5		95	%	
Power Supply Voltage	3.15	3.3	3.45	V	
Power Supply Current	-40		85	°C	

Transmitter Optical Specifications

Parameter	Min	Typ	Max	Unit	Notes
Average Output Power	-5		0	dBm	5
Centre Wavelength	1260	1270	1280	nm	
Spectral Width (-20dB)			1	nm	
Extinction Ratio	3.5			dB	
Dispersion Penalty		N/A		dB	

Receiver Optical Specification

Parameter	Min	Typ	Max	Unit	Notes
Receiver Sensitivity			-14	dBm	6
Receiver Overload	0			dBm	6
Receiver Operating Range	1320		1340	nm	

Module Electrical Pin Definition

Pin Number	Name	Function
1	VeeT	Module Transmitter Ground
2	Tx_Fault	Module Transmitter Fault
3	Tx_ Disable	Transmitter Disable

4	SDA	2-Wire Serial Interface Data
5	SCL	2-Wire Serial Interface Clock
6	Mod_ABS	Module Absent
7	RS0	Not Used
8	Rx_LOS	Receiver Loss of Signal
9	RS1	Not Used
10	VeeR	Module Receiver Ground
11	VeeR	Module Receiver Ground
12	RD-	Receiver Inverted Data Output
13	RD+	Receiver Non-Inverted Data Output
14	VeeR	Module Receiver Ground
15	VccR	Module Receiver 3.3V Supply
16	VccT	Module Transmitter 3.3V Supply
17	VeeT	Module Transmitter Ground
18	TD+	Transmitter Non-Inverted Data Input
19	TD-	Transmitter Inverted Data Input
20	VeeT	Module Transmitter Ground

Ordering information

Part Number	Description
TRA-SFP-10G-BD-LR	SFP+ Single Fibre, Tx 1270nm (DFB) , Rx 1330nm (PIN), maximum distance 20km, power budget 9dB, 10x Gigabit Ethernet, LC connector, 0°C to 70°C, DDM

Warnings

Process plug

The transceiver optics is supplied with a dust cover. This plug protects the transceiver optics during standard manufacturing processes by preventing contamination from air borne particles. It is recommended that the dust cover remain in the transceiver whenever an optical fiber connector is not inserted.

Handling Precautions

The transceiver optics is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures.

Laser Safety

The transceiver optics is a Class 1 laser product per international standard IEC 60825-1. Radiation emitted by laser

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TRA-SFP-10G-BD-LR	Tx 1330	-5 to 0	≤ -14	N/A	0	≥ 9

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Operating Case Temperature	0		70		
	-40		85	°C	
Relative Humidity	5		95	%	
Power Supply Voltage	3.15	3.3	3.45	V	
Power Supply Current			430	mA	

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