TRA-SFP-1G-BD-EX 40KM

1.25G-Tx1550nm/ Rx 1310nm/ 40km/ Gigabit Ethernet 1000 BASE-BD-EX

Features

- SFP Multi-Source Agreement compliant [INF-8074]
- Hot pluggable SFP footprint
- Serial ID functionality supported according to [SFF-8472]
- Class 1 laser safety standard IEC 60825 compliant
- Single LC or SC connector
- 1550nm DFB transmitter, 1310nm PIN receiver
- 40km point-to-point transmission on single mode fibre
- Operating temperature range 0°C to 70°C or -40°C to 85°C
- Low power dissipation (<1W)
- Digital diagnostics monitoring (DDM)

Applications

- Gigabit Ethernet
- 1×Fiber Channel

Description

TRansceiver.Asia is a high performance SFP transceiver module for Gigabit Ethernet data links over one single mode fibre. The maximum reach[1] is 40km, with 18dB end of life (EOL) power budget. The transmitter is a 1550nm DFB laser, the receiver is a 1310nm PIN photodiode. Consequently, a module with a 1310nm transmitter and a 1550nm receiver is required at the opposite side of the link. The recommended counterpart is TRA-SFP-1G-BD-EX.

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]	Optical Receiver Sensitivity 3 [dBm]	Optical Receiver Overload[4] [dBm]	Power Budget[2] [dB]
TRA-SFP-1G-BD-EX 40KM	Tx 1550 nm Rx 1310 nm	-5 to 0	≤ -23	-3	≥ 18

Recommended Operating Conditions

Parameter	Min	Typ	Max	Unit	Notes
Storage temperature	-40		85	°C	
Operating Case Temperature	0		70	°C	
	-40		85		
Relative Humidity	5		95	%	Non condensing
Power Supply Voltage	3.15	3.3	3.45	V	
Power Supply Current			300	mA	

Transmitter Optical Specifications

Parameter	Min	Typ	Max	Unit	Notes
Average Output Power	-5		0	dBm	5
Centre Wavelength	1520	1550	1580	nm	
Spectral Width (-20dB)			1	nm	
Extinction Ratio	8.2			dB	

Receiver Optical Specification

Parameter	Min	Typ	Max	Unit	Notes
Receiver Sensitivity			-23	dBm	6
Receiver Overload	-3			dBm	6
Operating Wavelength	1290		1330	nm	

Module Electrical Pin Definition

Pin Number	Name	Function
1	VeeT	Transmitter Ground
2	TX Fault	Transmitter Fault Indication
3	TX_ Disable	Transmitter Disable
4	MOD-DEF2	2-Wire Serial Interface Data
5	MOD-DEF1	2-Wire Serial Interface Clock
6	MOD-DEF0	Grounded in Module
7	Rate Select	Not Used
8	LOS	Loss of Signal
9	VeeR	Receiver Ground
10	VeeR	Receiver Ground
11	VeeR	Receiver Ground
12	RD-	Inverted Received Data Out
13	RD+	Received Data Out
14	VeeR	Receiver Ground
15	VccR	Receiver Power
16	VccT	Transmitter Power
17	VeeT	Transmitter Ground
18	TD+	Transmit Data In
19	TD-	Inverted Transmit Data In
20	VeeT	Transmitter Ground

Ordering information

Part Number	Description
TRA-SFP-1G-BD-EX 40KM	1G Single Mode SFP Transceiver,Rx : 1550nm ,Tx 1310, 40km, LC, DDM, 0ºC~+70ºC

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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Features

- SFP Multi-Source Agreement compliant [INF-8074]
- Hot pluggable SFP footprint
- Serial ID functionality supported according to [SFF-8472]
- Class 1 laser safety standard IEC 60825 compliant
- Single LC or SC connector
- 1310nm DFB transmitter, 1550nm PIN receiver
- 40km point-to-point transmission on single mode fibre
- Gigabit Ethernet compliant
- 1x Fibre Channel compatible
- Operating temperature range 0°C to 70°C or -40°C to 85°C
- Low power dissipation (<1W)
- Digital diagnostics monitoring (DDM)

Applications

- Gigabit Ethernet
- 1×Fiber Channel

Description

TRansceiver.Asia is a high performance SFP transceiver module for Gigabit Ethernet data links over one single mode fibre. The maximum reach[1] is 40km, with 20dB end of life (EOL) power budget. The transmitter is a 1310nm DFB laser, the receiver is a 1550nm PIN photodiode. Consequently, a module with a 1550nm transmitter and a 1310nm receiver is required at the opposite side of the link. The recommended counterpart is TRA-SFP-1G-BD-EX.

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Optical Interfaces

P/N	Wavelength [nm]	Optical Output Power2 [dBm]	Optical Receiver Sensitivity3 [dBm]	Optical Receiver Overload[4] [dBm]	Power Budget[2] [dB]
TRA-SFP-1G-BD-EX 40KM	Rx 1310 nm Tx 1550 nm	-3 to 2	≤ -23	-3	≥ 20

Recommended Operating Conditions

Parameter	Min	Typ	Max	Unit	Notes
Storage temperature	-40		85	°C	
Operating Case Temperature	0		70	°C	
	-40		85		
Relative Humidity	5		95	%	Non condensing
Power Supply Voltage	3.15	3.3	3.45	V	
Power Supply Current			300	mA	

Transmitter Optical Specifications

Parameter	Min	Typ	Max	Unit	Notes
Average Output Power	-3		2	dBm	5
Centre Wavelength	1260	1310	1360	nm	
Spectral Width (-20dB)			1	nm	
Extinction Ratio	8.2			dB	

Receiver Optical Specificatio

Parameter	Min	Typ	Max	Unit	Notes
Receiver Sensitivity			-23	dBm	6
Receiver Overload	-3			dBm	6
Operating Wavelength	1500	1550	1600	nm	

Module Electrical Pin Definition

Pin Number	Name	Function
1	VeeT	Transmitter Ground
2	TX Fault	Transmitter Fault Indication
3	TX_ Disable	Transmitter Disable
4	MOD-DEF2	2-Wire Serial Interface Data
5	MOD-DEF1	2-Wire Serial Interface Clock
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7	Rate Select	Not Used
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9	VeeR	Receiver Ground
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Part Number	Description
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Laser Safety

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