

## TRA-SFP-1G-BD-EZX 120KM

1.25G-Tx1550nm/Rx 1490nm/ 120km / Gigabit Ethernet 1000 BASE-BD-EZX

### Features

- SFP Multi-Source Agreement compliant (INF-8074)
- Hot pluggable SFP footprint
- Serial ID functionality supported according to (SFF-8472)
- Single LC connector
- 1550nm DFB transmitter, 1490nm PIN receiver
- 120km 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 transceiver module for Gigabit Ethernet data links over one single mode fibre. The maximum reach<sup>1</sup> is 120km, with 30dB end of life (EOL) power budget. The transmitter is a 1550nm DFB laser, the receiver is a 1490nm PIN photodiode. Consequently, a module with a 1490nm transmitter and a 1550nm receiver is required at the opposite side of the link. The recommended counterpart is TRA-SFP-1G-BD-EZX.

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 Power <sup>2</sup> [dBm]	Optical Receiver Sensitivity <sup>3</sup> [dBm]	Optical Receiver Overload <sup>4</sup> [dBm]	Power Budget <sup>2</sup> [dB]
TRA-SFP-1G-BD-EZX 120KM	Tx 1550 nm Rx 1490 nm	0 to 5	≤ -26	-3	≥ 30

### 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	%	Noncondensing
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		5	dBm	5
Centre Wavelength	1530	1550	1570	nm	
Spectral Width (-20dB)	9			dB	
Extinction Ratio			1	nm	

### Receiver Optical Specification

Parameter	Min	Typ	Max	Unit	Notes
Receiver Sensitivity			-26	dBm	6
Receiver Overload	-3			dBm	6
Operating Wavelength	1470	1490	1510	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-EZX 120KM	1G Single Mode SFP Transceiver, Tx : 1550nm ,Rx 1490, 120km, LC, DDM, 0°C~+70°C

**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

## TRA-SFP-1G-BD-EZX 120KM

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### Features

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- Hot pluggable SFP footprint
- Serial ID functionality supported according to (SFF-8472)
- Single LC connector
- 1490nm DFB transmitter, 1550nm PIN receiver
- 120km 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 transceiver module for Gigabit Ethernet data links over one single mode fibre. The maximum reach<sup>1</sup> is 120km, with 26dB end of life (EOL) power budget. The transmitter is a 1490nm DFB laser, the receiver is a 1550nm PIN photodiode. Consequently, a module with a 1490nm transmitter and a 1550nm receiver is required at the opposite side of the link. The recommended counterpart is TRA-SFP-1G-BD-EZX.

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### Optical Interfaces

P/N	Wavelength [nm]	Optical Output Power <sup>2</sup> [dBm]	Optical Receiver Sensitivity <sup>3</sup> [dBm]	Optical Receiver Overload <sup>4</sup> [dBm]	Power Budget <sup>2</sup> [dB]
TRA-SFP-1G-BD-EZX 120KM	Tx 1490 nm Rx 1550 nm	0 to 5	≤ -26	-3	≥ 30

**Recorded 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	%	Noncondensing
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	0		5	dBm	5
Centre Wavelength	1470	1490	1510	nm	
Spectral Width (-20dB)	9			dB	
Extinction Ratio			1	nm	

**Receiver Optical Specification**

Parameter	Min	Typ	Max	Unit	Notes
Receiver Sensitivity			-26	dBm	6
Receiver Overload	-3			dBm	6
Operating Wavelength	1530	1550	1570	nm	

**Module Electrical Pin Definition**

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**Laser Safety**

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