

Product Specification

10GBase-LR/ER/ZR

SINGLEMODE OPTICAL SFP+ TRANSCEIVER

10Gbps DUPLEX LC 10~100km



Overview

Atrian optical transceivers are Small Form Factor Pluggable (SFP) compatible with the Multi Sourcing Agreement (MSA) and available as a vendor compatible SFP upon request. This family of transceivers are designed for 10Gbps 10GBase-X Ethernet transmission and operates with an integrated duplex data link over 9/125µm Single Mode Fiber (SMF).

Atrian Small Form Factor Pluggable (SFP) transceivers provides a reliable and high-performing Gigabit Ethernet network connectivity. They can be easily installed without interrupting the host equipment in operation thanks to the hot pluggable feature.

Atrian optical transceivers are designed to be used on Atrian's media converters and switches as well as third party equipments that supports SFP transceivers.

Key Features

- **Fiber Mode:** Single Mode @ 9/125µm
- **Speed:** 10 Gbps
- **Distance:** 10 Km, 20 Km, 40 Km, 80 Km, 100 Km
- **Wavelength:** 1310 nm DFB laser, 1550 nm EML Laser
- **Temperature:** 0~75°C (Commercial)
- **Connector:** Duplex LC/UPC Connector
- **DMI:** SFF-8472 DOM/DMI Diagnostic Monitoring

Regulatory Compliance

aTrian Communication Technologies transceivers are products with Class 1 Lasers that complies with FDA regulations on eye safety and ETSI EN 60825 and electrical safety measures in accordance with ETSI EN 60950.

Technical Specifications

General Parameters	Symbol	Min.	Typical	Max.	Unit
Storage Temperature	Ts	-40		+85	°C
Operating Temperature	Tc		See Ordering Information;		
Power Voltage	Vcc	3.15	3.3	3.45	V
Absolute Max Voltage	Vcc 10~40km (1310nm)	-0.5		3.6	V
	Vcc 40~100km (1550nm)	-0.5		4.0	
Power Current	Icc 10~40km			200	mA
	Icc 40km (1550nm)			350	
	Icc 80~100km			450	
Data Rate	DR		10		Gbps

Tx Optical Parameters	Symbol	Min.	Typical	Max.	Unit
Central Wavelength	Δc 10~40km	1260	1310	1360	nm
	Δc 40~100km	1530	1550	1570	
Spectral Width (RMS)	σ			3	nm
Power Output	Pout 10~20km	-5		0	dBm
	Pout 40km (1310nm)	-1		4	
	Pout 40km (1550nm)	-2		5	
	Pout 80km	0		5	
	Pout 100km	1		5	
Extinction Ratio	ER	8			dB
	ER 40km (1310nm)	3.5			
Launch Power of Off Transmitter	POFF			-30	dBm

Rx Optical Parameters	Symbol	Min.	Typical	Max.	Unit
Central Wavelength	λc	1200	1310	1600	nm
Receive Sensitivity	PIN 10~20km			-14	dBm
	PIN 40km			-16	
	PIN 80~100km			-25	
Receiver Overload	PMAX 10~40km (1310nm)	2.5			dBm
	PMAX 40km (1550 nm)	5			
	PMAX 80~100km	-7			
LOS De-Assert	LOSD 10~40km			-20	dBm
	LOSD 80~100km			-30	
LOS Assert	LOSA 10~20km	-23			dBm
	LOSA 40km	-25			
	LOSA 80~100km	-35			
LOS Hysteresis	tr/tf	0.5		4.5	dB

Ordering Information

Part Number	Wavelength TX & RX	Distance 9/125µm SMF	Laser	Temperature
ASFP10GD1310-10	1310 nm	10 Km	DFB	0~70°C Commercial
ASFP10GD1310-20	1310 nm	20 Km	DFB	0~70°C Commercial
ASFP10GD1310-40	1310 nm	40 Km	DFB	0~70°C Commercial
ASFP10GD1550-40	1550 nm	40 Km	EML	0~70°C Commercial
ASFP10GD1550-80	1550 nm	80 Km	EML	0~70°C Commercial
ASFP10GD1550-100	1550 nm	100 Km	EML	0~70°C Commercial

*Contact us for industrial grade SFP+

Warranty

FIVE years of limited warranty for products sold directly by Atrian Technologies, unless special agreements have been set. Warranty period start from the ship date and will be only valid for the original customer who bought the product. If you have purchased the product from a reseller you must contact him directly. RMA Form and full warranty details are available on our website.