

## Product Specification

1000Base-X  
SINGLEMODE SFP OPTICAL MODULE  
1Gbps DUPLEX LC 10~180km



## 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 1.25Gbps 1000Base-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:** 1.25 Gbps
- **Distance:** 10 Km, 20 Km, 40 Km, 60 Km, 80 Km, 100 Km, 120 Km, 150 Km, 180 Km
- **Wavelength:** 1310 nm, 1550 nm, FP or DFB Laser
- **Temperature:** 0~70°C (Commercial) or -40~+85°C (Industrial)
- **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 10~20km		3.1		V
	Vcc 40km	3.15	3.3	3.45	
	Vcc 60~160km		3.3		
Absolute Max Voltage	Vcc	-0.5		3.6	V
Power Current	Icc 10~20km			250	mA
	Icc 40km			250	
	Icc 60~180km			300	
Data Rate	DR		1.25		Gbps

Tx Optical Parameters	Symbol	Min.	Typical	Max.	Unit
Central Wavelength	$\Delta c$ 10~40km	1260	1310	1360	nm
	$\Delta c$ 60~180km	1500	1550	1570	
Spectral Width (RMS)	$\sigma$ 10~20km			3	nm
	$\sigma$ 40km			4	
	$\sigma$ 60~180km			1	
Power Output	Pout 10~20km	-9		-3	dBm
	Pout 40km	-5		0	
	Pout 60~80km	0		5	
	Pout 100~150km	1		6	
	Pout 180km	2		7	
Extinction Ratio	ER	9			Db
Optical Rise/Fall Time	tr/tf			1	ns

Rx Optical Parameters	Symbol	Min.	Typical	Max.	Unit
Central Wavelength	$\lambda c$	1200	1310	1600	nm
Receive Sensitivity	PIN 10~20 km			-20	dBm
	PIN 40km			-22	
	PIN 60~80km			-23	
	PIN 100~150km			-35	
	PIN 180km			-36	
Receiver Overload	PMAX 10~20km	1			dBm
	PMAX 40km	5			
	PMAX 60~80km	1			
	PMAX 100~180km	-7			
LOS De-Assert	LOSD 10~20km			-24	dBm
	LOSD 40km			-25	
	LOSD 60~80km			-26	
	LOSD 100~180km			-38	
LOS Assert	LOSA 10~80km	-35			dBm
	LOSA 100~150km	-43			
	LOSA 180km	-40			

## Ordering Information

Part Number	Wavelength TX & RX	Distance 9/125µm SMF	Laser	Temperature
ASFP1GD1310-10 ASFP1GD1310-10I	1310 nm	10 Km	FP	0~70°C Commercial -40~+85°C Industrial
ASFP1GD1310-20 ASFP1GD1310-20I	1310 nm	20 Km	FP	0~70°C Commercial -40~+85°C Industrial
ASFP1GD1310-40 ASFP1GD1310-40I	1310 nm	40 Km	DFB	0~70°C Commercial -40~+85°C Industrial
ASFP1GD1550-60 ASFP1GD1550-60I	1550 nm	60 Km	DFB	0~70°C Commercial -40~+85°C Industrial
ASFP1GD1550-80 ASFP1GD1550-80I	1550 nm	80 Km	DFB	0~70°C Commercial -40~+85°C Industrial
ASFP1GD1550-120 ASFP1GD1550-120I	1550 nm	120 Km	DFB	0~70°C Commercial 40~+85°C Industrial
ASFP1GD1550-150 ASFP1GD1550-150I	1550 nm	150 Km	DFB	0~70°C Commercial 40~+85°C Industrial
ASFP1GD1550-180 ASFP1GD1550-180I	1550 nm	180 Km	DFB	0~70°C Commercial 40~+85°C Industrial

## 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.