

## Product Specification

100Base-BX

SINGLEMODE OPTICAL SFP TRANSCEIVER

155Mbps BiDi 20~80 Km



## 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 155Mbps 100Base-BX 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 Fast 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:** 155 Mbps
- **Distance:** 20 Km, 40 Km, 80 Km
- **Wavelength:** 1310nm, 1550 - FP, DFB, PIN laser
- **Temperature:** 0~70°C (Commercial) or -40~+85°C (Industrial)
- **Connector:** Simplex LC/UPC, SC/UPC Connector
- **DMI:** SFF-8472 DOM/DMI Diagnostic Monitoring
- **Application:** SDH STM 1, SONET OC-3, Fast Ethernet

## 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
Power Voltage	VCC	-0.5		3.6	V
Storage Temperature	Ts	-40		+85	°C
Operating Temperature	Tc Commercial	-5		+75	°C
	Tc Industrial	-40		+85	°C
Power Supply Voltage	Vcc	3.15	3.1	3.45	V
Power Supply Current	Icc			300	mA
Data Rate			155		Mbps
Max. Link Distance for 9/125µm SMF	Lmax		See Ordering Information		

Tx Optical Parameters	Symbol	Min.	Typical	Max.	Unit
Central Wavelength	$\lambda_c$	1270	1310	1370	nm
		1500	1550	1580	nm
Spectral Width (RMS)	$\sigma$			4	nm
Output Power	Pout (20~40Km)	-8		0	dBm
	Pout (80Km)	-3		5	dBm
Extinction Ratio	ER	9			dB
Optical Rise/Fall Time	tr/tf			2	ns

Rx Optical Parameters	Symbol	Min.	Typical	Max.	Unit
Central Wavelength	$\lambda_c$	1260		1600	nm
Receive Sensitivity	PIN			-33	dBm
Rx Over-Current	P <sub>MAX</sub>	5			dBm
LOS De-Assert	LOSD			-37	dBm
LOS Assert	LOSA	-40			dBm
	LOSA (100~160Km)	-40			dBm
LOS Hysteresis	tr/tf	0.5		4.5	dB

## Ordering Information

Part Number	Wavelength TX/RX	Distance	Laser Type	Temperature
ASFP100MT31R55-20	1310/1550 nm	20 Km	FP/PIN	0~70°C Commercial
ASFP100MT55R31-20	1550/1310 nm		FP/PIN	0~70°C Commercial
ASFP100MT31R55-20I	1310/1550 nm		FP/PIN	-40~+85°C Industrial
ASFP100MT55R31-20I	1550/1310 nm		FP/PIN	-40~+85°C Industrial
ASFP100MT31R55-40	1310/1550 nm	40 Km	FP/PIN	0~70°C Commercial
ASFP100MT55R31-40	1550/1310 nm		DFB/PIN	0~70°C Commercial
ASFP100MT31R55-40I	1310/1550 nm		FP/PIN	-40~+85°C Industrial
ASFP100MT55R31-40I	1550/1310 nm		DFB/PIN	-40~+85°C Industrial
ASFP100MT31R55-80	1310/1550 nm	80 Km	DFB/PIN	0~70°C Commercial
ASFP100MT55R31-80	1550/1310 nm		DFB/PIN	0~70°C Commercial
ASFP100MT31R55-80I	1310/1550 nm		DFB/PIN	-40~+85°C Industrial
ASFP100MT55R31-80I	1550/1310 nm		DFB/PIN	-40~+85°C Industrial

Connector options: LC: default P/N  
SC: add -SC at the end for the P/N

## 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.