

SFP-160-GD

1000BASE, SFP, EZX, SMF TRANSCEIVER

1550nm, 160km REACH, DUPLEX LC CONNECTOR

Product Features

- Up to 1.25Gb/s data links
- DFB laser transmitter and APD receiver
- Up to 160km on 9/125µm SMF
- Hot-pluggable SFP footprint
- Duplex LC/UPC type pluggable optical interface
- Low power dissipation
- Metal enclosure, for lower EMI
- RoHS compliant and lead-free
- Support Digital Diagnostic Monitoring interface
- Single +3.3V power supply
- Compliant with SFF-8472
- Available operating temperature ranges:
 - Commercial: 0°C to 70°C
 - Industrial: -40°C to 85°C



Product Applications

- 1000Base-EZX Ethernet
- Switch to Switch Interface
- Gigabit Ethernet
- Switched Backplane Applications
- Router/Server Interface
- Other Optical Links

I. Maximum Ratings

Exceeding the limits below may damage the transceiver module permanently.

Parameter	Symbol	Min.	Typ.	Max.	Units
Storage Temperature	TS	-40		+85	°C
Power Supply Voltage	Vcc	-0.5		4	V
Relative Humidity	RH	5		95	%
Signal Input Voltage		-0.3		Vcc+0.3	V
Receiver Damage Threshold		5			dBm

II. Operating Specifications

Parameter		Symbol	Min.	Typ.	Max.	Units
Case Operating Temperature	Commercial	TC	0		+70	°C
	Industrial		-40		+85	°C
Power Supply Voltage		VCC	3.135		3.465	V
Power Supply Current		Icc			300	mA
Data Rate (TX Rate/RX Rate)				1250/1250		Mbps
Transmission Distance (9/125um SMF)					160	km

III. Optical Characteristics

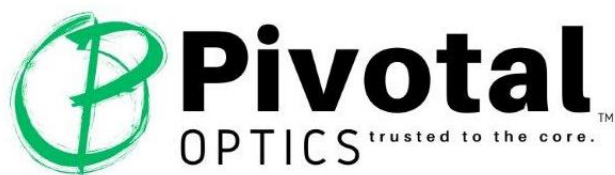
Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Center Wavelength	λ_c	1530	1550	1570	nm	
Average Output Power	P _{out}	1		6	dBm	1
Extinction Ratio	ER	9			dB	
Side Mode Suppression Ratio	SMSR	30			dB	
Spectrum Bandwidth (-20dB)	σ			1	Nm	
Transmitter OFF Output Power	P _{off}			-45	dBm	
Receiver						
Optical Input Wavelength	λ_c	1260		1610	nm	
Input Saturation Power (Overload)	P _{sat}	-6			dBm	
Receiver Sensitivity	Sen			-33	dBm	1
RX_LOS Assert	LOS A	-45			dBm	1
RX_LOS De-assert	LOS D			-34	dBm	
RX_LOS Hysteresis	LOS H	0.5	2	6	dB	

Notes:

1. Measured with Light source 1550nm, ER=9dB; BER =<10⁻¹² @PRBS=2⁷-1 NRZ
2. When LOS de-asserted, the RX data+/- output is High-level (fixed)

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IV. Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Total Supply Current	ICC			A	mA	1
Transmitter Disable Input-High	VDISH	2		V _{cc} +0.3	V	
Transmitter Disable Input-Low	VDISL	0		0.8	V	
Transmitter Fault Input-High	VTxFH	2		V _{cc} +0.3	V	
Transmitter Fault Input-Low	VTxFL	0		0.8	V	
Receiver						
Total Supply Current	ICC			B	mA	1
LOSS Output Voltage-High	VLOSH	2		V _{cc} +0.3	V	
LOSS Output Voltage-Low	VLOSL	0		0.8	V	

Notes:

1. A (TX) + B (RX) = 300mA (Not include termination circuit)

v. Ordering Information

Pivotal Part Number	Description
SFP-160-GD	SFP, 1550nm, EZX SMF 160km, 1000Base DDM, C-Temp
SFP-160-GDI	SFP, 1550nm, EZX SMF 160km, 1000Base DDM, I-Temp

Notes:

1. Please contact sales for specific OEM Platform part numbers to fit your network.

Warranty

<https://pivotaloptics.com/warranty/>

Disclaimer

External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.