SFP100-MM / SFP100-MM-I

100Mbps SFP optical Transceiver, Multi-mode / 2KM, 1310nm

Highlights

- Compliant with Fast Ethernet Standard
- Differential LVPECL inputs and outputs
- TTL signal detect indicator
- Single power supply 3.3VDC

RoHS Lead Free

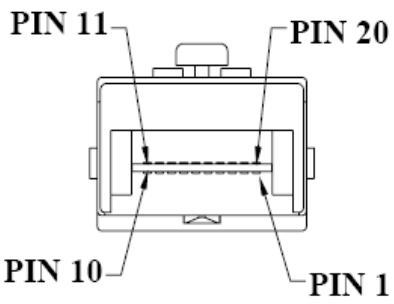
Features

- RoHS compliant
- Compliant with Fast Ethernet standard
- Industry standard small form pluggable (SFP) package
- Duplex LC connector
- Differential LVPECL inputs and outputs
- Single power detect indicator
- TTL signal detect indicator
- Hot Pluggable
- Class 1 laser product complies with EN 60825-1

Application

- Distributed multi-processing
- Switch to switch interface
- High speed I/O for file server
- Bus extension application
- Channel extender, data storage

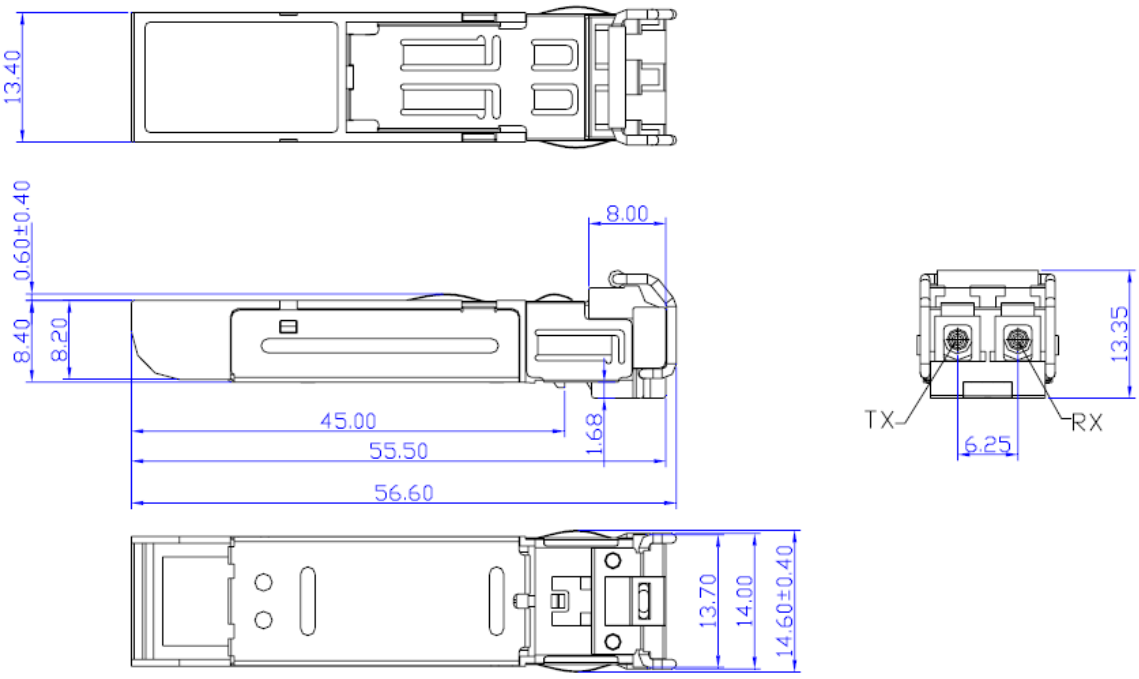
Pin-Assignment



Pin	Signal Name	Description
1	T_{GND}	Transmit Ground
2	TX_FAULT	Transmit Fault
3	TX_DISABLE	Transmit disable
4	MOD_DEF (2)	SDA Serial Data Signal
5	MOD_DEF (1)	SCL Serial Clock Signal
6	MOD_DEF (0)	TTL Low
7	RATE SELECT	Open Circuit
8	RX_LOS	Receiver Loss of Signal, TTL High, open collector
9	R_{GND}	Receiver Ground
10	R_{GND}	Receiver Ground
11	R_{GND}	Receiver Ground
12	RX-	Receiver Data Bar, Differential PECL, ac coupled
13	RX+	Receiver Data, Differential PECL, ac coupled
14	R_{GND}	Receiver Ground
15	V_{CCR}	Receiver Power Supply
16	V_{CCT}	Tranmitter Power Supply
17	T_{GND}	Transmit Ground
18	TX+	Transmit Data, Differential PCEL, ac coupled
19	TX-	Transmit Data Bar, Differential PCEL, ac coupled
20	T_{GND}	Transmit Ground

Dimension

Unit = mm



Specifications

ABSOLUTE MAXIMUM RATINGS :				
Parameter	**Symbol**	**Min**	**Max**	**Units**
Storage Temperature	Ts	-40	85	°C
Supply Voltage	V_{CC}	-0.5	4.0	V
Input Voltage	V_{IN}	-0.5	V_{CC}	V
Output Current	I_O	-	50	mA
Operating Current	I_{OP}	-	400	mA

RECOMMENDED OPERATING CONDITIONS :				
Parameter	**Symbol**	**Min**	**Max**	**Units**
Case Operating Temperature	T_C	SFP100-MM = 0 SFP100-MM-I = -40	SFP100-MM = 70 SFP100-MM-I = 85	°C
Supply Voltage	V_{CC}	3.1	3.5	V
Supply Current	$I_{TX} + I_{RX}$	-	300	mA

TRANSMITTER ELECTRO-OPTICAL CHARACTERISTICS : V_{CC} = 3.1V to 3.5V, T_C=0°C to 70°C (-40°C to 85°C)						
Parameter	**Symbol**	**Min**	**Typ.**	**Max**	**Units**	**Note**
Data Rate	B	10	155	200	Mb/s	
Output Optical Power 62.5/125 μm fiber	P_{OUT}	-20	-	-14	dBm	Average
Output Optical Power 50/125 μm fiber	P_{OUT}	-23.5	-	-14	dBm	Average
Extinction Ratio	ER	10	-	-	dB	
Center Wavelength	λ_C	1270	1310	1380	nm	
Spectral Width (FWHM)	$\Delta\lambda$	-	Fig 1	-	nm	
Rise / Fall Time , (10-90%)	$T_{r,f}$	-	-	3	ns	
Differential Input Voltage	V_{DIFF}	0.4	-	2.0	V	

RECEIVER ELECTRO-OPTICAL CHARACTERISTICS : V_{CC} = 3.1V to 3.5V, T_C=0°C to 70°C (-40°C to 85°C)						
Parameter	**Symbol**	**Min**	**Typ.**	**Max**	**Units**	**Note**
Data Rate	B	10	155	200	Mb/s	
Optical Input Power-maximum	P_{IN}	-8	-	-	dBm	
Optical Input Power-minimum (Sensitivity)	P_{IN}	-	-	-31	dBm	
Operating Center Wavelength	λ_C	1260	-	1600	nm	
Data Output Rise, Fall Time (10-90%)	$T_{r,f}$	-	1	2	ns	
Loss of Signal-Asserted	P_A	-	-	-32	dBm	Average
Loss of Signal-Deasserted	P_D	-47	-	-	dBm	Average
Loss of Signal-Hysteresis	$P_A - P_D$	1.0	-	-	dB	
Differential Output Voltage	V_{DIFF}	0.5	-	1.8	V	
Receiver Loss of Signal Output Voltage-Low	RX_LOS_L	0	-	0.5	V	
Receiver Loss of Signal Output Voltage-High	RX_LOS_H	2.4	-	V_{CC}	V	

Ordering Information

SFP100-MM-A

Code Definition	Additional Port Type
Option	**-I:** Industrial extended model for -40 ~ 85°C * Regular model : 0 ~ 70°C

	Model Name	Description	Operating Temperature
Available Model	**SFP100-MM**	100Mbps SFP optical Transceiver, Multi-mode / 2KM, 1310nm,	0 ~ 70°C
	SFP100-MM -I	100Mbps SFP optical Transceiver, Multi-mode / 2KM, 1310nm,	-40 ~ 85°C