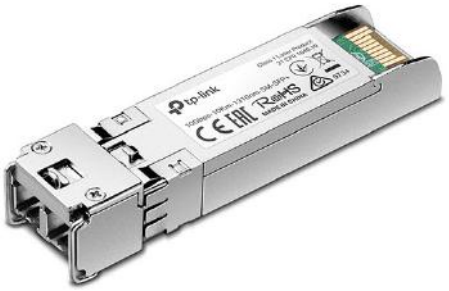
10GBase-LR SFP+ LC Transceiver

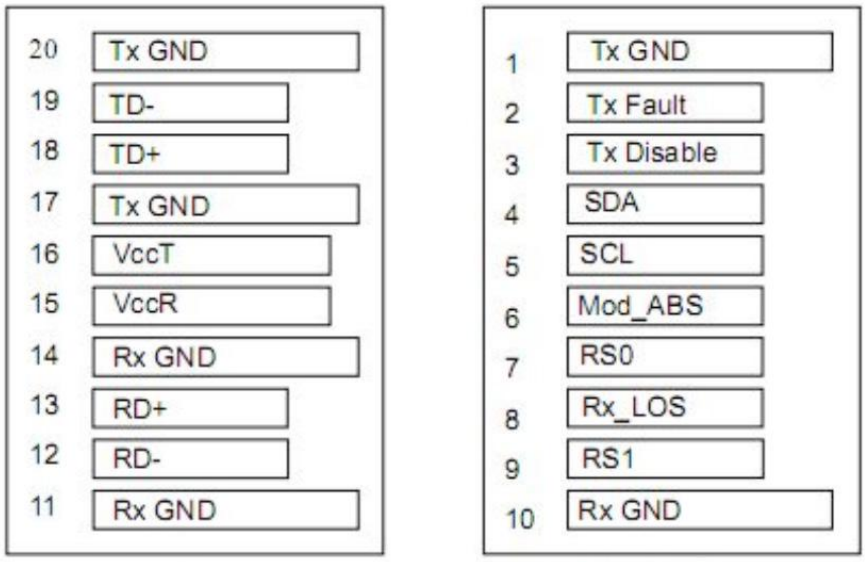
MODEL: TL-SM5110-LR



Overview

- Compatible with SFP+ MSA, IEEE 802.3ae, SFF-8472
- Up to 10.3125 Gbps transmission speed and 10 km transmission distance
- Digital Diagnostic Monitoring (DDM)
- Supports Hot Swappable

Pin Assignment



Pin Description

Pin	Name	Function
1	VeeT/Tx GND	Module transmitter ground
2	Tx Fault	Module transmitter fault
3	Tx Disable	Transmitter Disable; Turns off transmitter laser output
4	SDA	2 wire serial interface data input/output (SDA)
5	SCL	2 wire serial interface clock input (SCL)
6	MOD_ABS	Module Absent, connect to VeeR or VeeT in the module
7	RS0	Receiver Rate Select
8	LOS	Receiver Loss of Signal Indication
9	RS1	Transmitter Rate Select (not used)
10	VeeR/Rx GND	Module receiver ground
11	VeeR/Rx GND	Module receiver ground
12	RD-	Receiver inverted data output
13	RD+	Receiver non-inverted data output
14	VeeR/Rx GND	Module receiver ground
15	VccR	Module receiver 3.3V supply
16	VccT	Module transmitter 3.3V supply
17	VeeT/Tx GND	Module transmitter ground
18	TD+	Transmitter inverted data output
19	TD-	Transmitter non-inverted data output
20	VeeT/Tx GND	Module transmitter ground

Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply Voltage	V_{cc}	3.14	3.3	3.47	V
Operating Temperature	T_{case}	0	-	70	℃

- Transmitter (Operating Conditions: T = 25℃, V_{cc} = 3.14V - 3.47V)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Output Power	P_0	-8.2	-	0.5	dBm
Center Wavelength	λ_p	1290	1310	1330	nm
Spectral Width (▵λ-20dB)	Δλ	-	-	1	nm
Extinction Ratio	ER	3.5	-	6	dB
Differential Input Voltage	V_{IN}-V_{IL}	150	-	1000	mV
Eye Diagram	Compliance with IEEE 802.3ae				

- Receiver (Operating Conditions: T = 25℃, V_{cc} = 3.14V - 3.47V)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating Wavelength	λ_p	1270	-	1610	nm
Overloda Power	P_0	1	-	-	dBm
MAX. Input Power (Saturation)	P_{MAX}	1	-	-	dBm
MIN. Input Power (Sensitivity)	P_{MIN}	-	-	-14.6	dBm
Differential Data Output Swing	V_{pp}	-	900	-	mV
LOS Deasserted	LOSD	-	-	P_{MIN}	dBm
LOS Asserted	LOSA	-30	-	-	dBm
LOS Hysteresis	LOSH	0.5	-	4	dB
Return Loss	ORL	-	-	-12	dB

Disclaimer:
All the above parameters are measured in a laboratory environment under specific conditions.