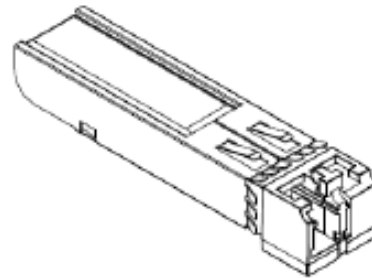


RM3-S1-4X03K-T0

Product Overview

The 3G-SDI optical fiber transmitter perfectly converts SDI electrical signals at SMPTE 424M, SMPTE 292M, SMPTE 259M and DVB-ASI to optical signal. It supports data rate 3Gbps and handles pathological patterns. The package is pluggable SFP. Paired with PALCONN 3G-SDI optical fiber receiver, it will transmit signals with maximum distance up to 10km, 40km or 80km over single mode fiber.

PALCONN 3G-SDI Optical Fiber module complies with FCC, TUV, and UL standards. It is also Pb-free and RoHS compliant.



Features

- Support SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
- Handles pathological patterns for 3G-SDI, HD-SDI and SD-SDI
- 3Gbps transmission for 10km, 40km or 80km over single mode fiber
- 10, 40, 80Km link distance (indicative only) by different module.
RM3-S1-4103K-T0: 10Km
RM3-S1-4403K-T0: 40Km
RM3-S2-4803K-T0: 80Km
- Single +3.3V power supply
- Low power consumption- Typical 120 mA
- Laser disable pin
- Operating temperature: 0°C to 70°C

Laser Safety

This single mode fiber module is a Class 1 laser product. It complies with IEC 825 and FDA 21 CFR 1040.10 and 1040.11. The fiber module must be operated within the specified temperature and voltage limits. The optical ports of the module shall be terminated with an optical connector or with a dust plug.

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Transmitter Optical Interface

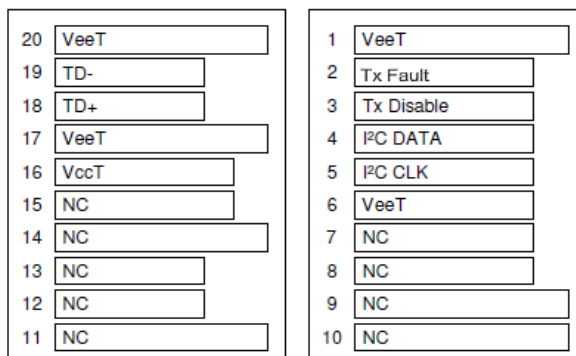
Parameter		Min.	Typ.	Max.	Unit
Optical Power		-8	-5	-3	dBm
Wavelength		1290	1310	1330	nm
Linear Extinction Ratio		5.0	9	-	dB
Intrinsic Jitter <i>PRBS 2²³-1 test pattern</i>	2.97Gb/s	-	45	80	ps
	1.485Gb/s	-	45	80	
	270Mb/s	-	45	80	
Optical Signal Rise Time	2.97Gb/s	-	-	135	ps
	1.485Gb/s			270	
	270Mb/s			400	
Optical Signal Fall Time	2.97Gb/s	-	-	135	ps
	1.485Gb/s	-	-	270	
	270Mb/s	-	-	400	

Transmitter Electrical Interface

Parameter	Min.	Typ.	Max.	Unit
Operating case temperature range	0	-	70	°C
Storage temperature range	-40	-	85	°C
Power supply voltage	3.1	3.3	3.5	V
TX_Disable – High	2	-	Vcc	V
TX_Disable – Low	Vee	-	Vee+0.8	V
Power consumption	-	120	200	mA

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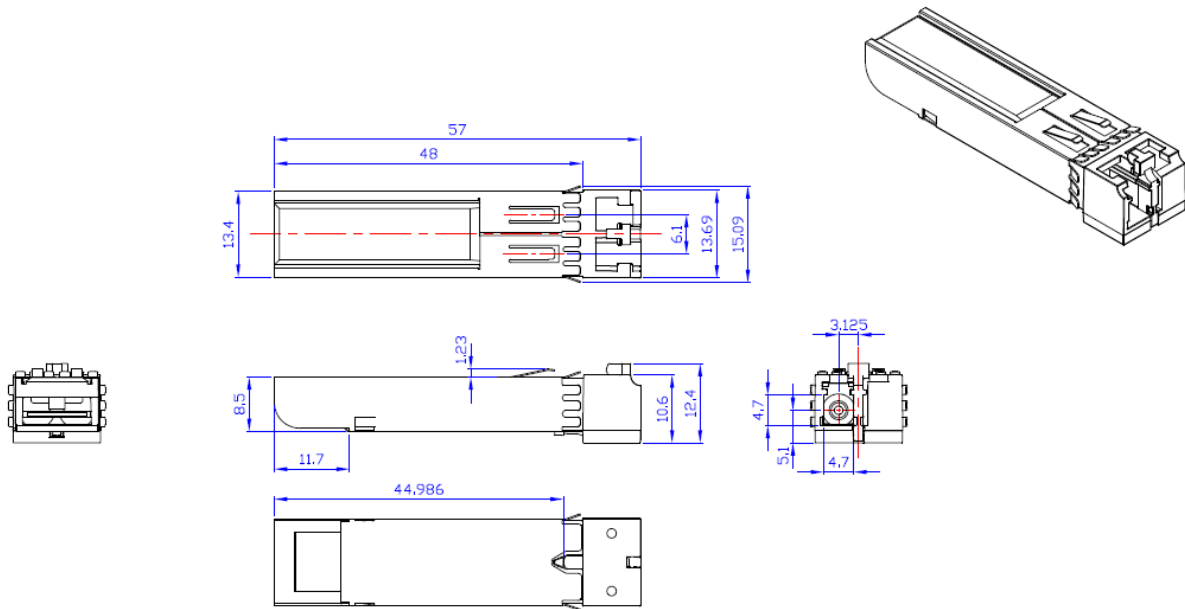
Pin Description



Pin No.	Name	Function	Notes
1	VeeT	Transmitter Ground	
2	Tx Fault	Transmitter Fault Indication	TX Fault is an open collector/ drain output, which should be pulled up with a 4.7K – 10KΩ resistor on the host board. Pull up voltage between 2.0V and VccT, R+0.3V. When high, output indicates a laser fault of some kind. Low indicates normal operation. In the low state, the output will be pulled to < 0.8V.
3	TX Disable	Transmitter Disable	TX Disable is an input that is used to shut down the transmitter optical output. It is pulled up within the module with a 4.7K – 10KΩ resistor. It's states are: Low (0 - 0.8V) Transmitter on (>0.8, <2.0V) Undefined High (2.0-3.465V): Transmitter Disable Open: Transmitter Disable
4	I ² C DATA	Data Line of Two Wire Serial Interface for Serial ID	I ² C Data is a bi-directional digital signal. It should be pulled up with a 4.7K – 10KΩ resistor on the host board. The pull-up voltage shall be VccT.
5	I ² C CLK	Clock Line of Two Wire Serial Interface for Serial ID	I ² C clock is a digital input signal. It should be pulled up with a 4.7K – 10KΩ resistor on the host board. The pull-up voltage shall be VccT.
6	VeeT	Transmitter Ground	
7	NC	Non-connection	
8	NC	Inv. Transmit Data In	
9	NC	Transmitter 2 Ground	
10	NC	Transmitter 2 Ground	
11	NC	Transmitter 2 Ground	
12	NC	Non-connection	
13	NC	Non-connection	
14	NC	Non-connection	
15	NC	Non-connection	
16	VccT	Transmitter Power	3.3V± 5%
17	VeeT	Transmitter Ground	
18	TD+	Transmit Data In	Positive differential transmitter inputs (AC-coupled internally)
19	TD-	Inv. Transmit Data In	Negative differential transmitter inputs (AC-coupled internally)
20	VeeT	Transmitter Ground	

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Mechanical Dimensions (Units in mm)



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Application Circuit

