

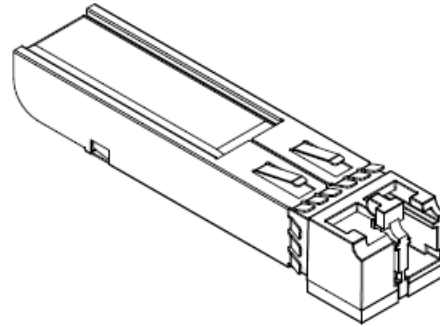
## RM3-S1-4X03K-R0

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### Product Overview

The 3G-SDI optical fiber receiver perfectly converts from optical signal to SDI electrical signals at SMPTE 424M, SMPTE 292M, SMPTE 259M and DVB-ASI. It supports data rate 3Gbps and handles pathological patterns. The package is pluggable SFP. Paired with PALCONN 3G-SDI optical fiber transmitter, it will receive error-free signals with maximum distance up to 10km, 40km or 80km at wavelength 1260nm to 1620nm.

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-R0: 10Km
  - RM3-S1-4403K-R0: 40Km
  - RM3-S2-4803K-R0: 80Km
- Pluggable and hot-swappable
- Single +3.3V power supply
- Low power consumption- Typical 100 mA
- Pb-free and RoHS compliant
- Operating temperature: 0°C to 70°C

**RM3-S1-4X03K-R0****Receiver Optical Interface**

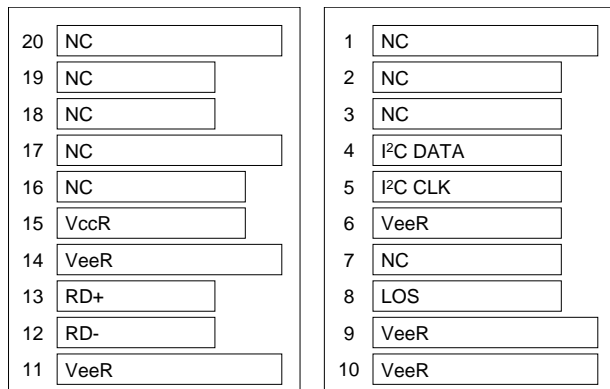
Parameter	Min.	Typ.	Max.	Unit
Receiver Sensitivity (Measured with pathological pattern; BER<10 <sup>-12</sup> )	2.97Gb/s	-16	-	dBm
	1.485Gb/s	-16	-	
	270Mb/s	-16	-	
Wavelength (nm)	1260	-	1620	Nm
Overload (dBm)	-	-	-3	dBm
Loss of Signal Asserted (dBm)	-35	-	-	dBm
Loss of Signal De-asserted (dBm)	-	-	-16	dBm
Optical Hysteresis (dB)	0.5	2	-	dB

**Receiver 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
Power consumption	-	100	150	mA

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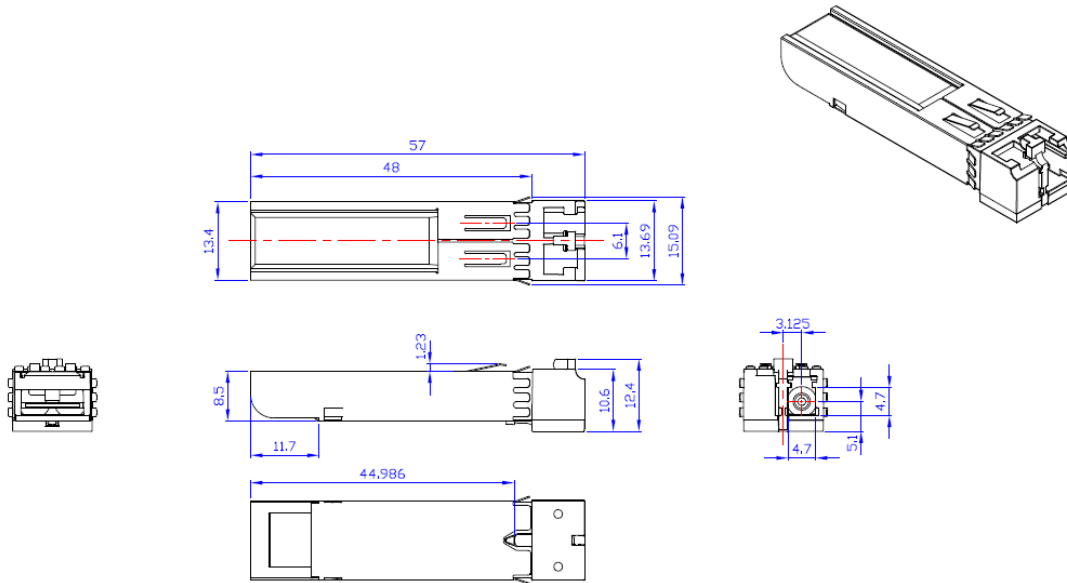
### Pin Description



Pin No.	Name	Function	Notes
1	NC	Non-connection	
2	NC	Non-connection	
3	NC	Non-connection	
4	I <sup>2</sup> C DATA	Data Line of Two Wire Serial Interface for Serial ID	I <sup>2</sup> C Data is a bi-directional digital signal. It should be pulled up with a 4.7K – 10K $\Omega$ resistor on the host board. The pull-up voltage shall be VccR.
5	I <sup>2</sup> C CLK	Clock Line of Two Wire Serial Interface for Serial ID	I <sup>2</sup> C clock is a digital input signal. It should be pulled up with a 4.7K – 10K $\Omega$ resistor on the host board. The pull-up voltage shall be VccR.
6	VeeR	Receiver Ground	
7	NC	Non-connection	
8	LOS	Loss of Signal	LOS is an open collector/ drain output, which should be pulled up with a 4.7K – 10K $\Omega$ resistor. Pull up voltage between 2.0V and VccT, R+0.3V. When high, this output indicates the received optical power is below the worst case receiver sensitivity. Low indicates normal operation. In the low state, the output will be pulled to < 0.8V.
9	VeeR	Receiver Ground	
10	VeeR	Receiver Ground	
11	VeeR	Receiver Ground	
12	RD-	Inv. Received Data Out	Negative differential receiver outputs (AC-coupled internally)
13	RD+	Received Data Out	Positive differential receiver outputs (AC-coupled internally)
14	VeeR	Receiver Ground	
15	VccR	Receiver Power	3.3V $\pm$ 5%
16	NC	Non-connection	
17	NC	Non-connection	
18	NC	Non-connection	
19	NC	Non-connection	
20	NC	Non-connection	

## RM3-S1-4X03K-R0

### Mechanical Dimensions (Units in mm)



## RM3-S1-4X03K-R0

### Application Circuit

