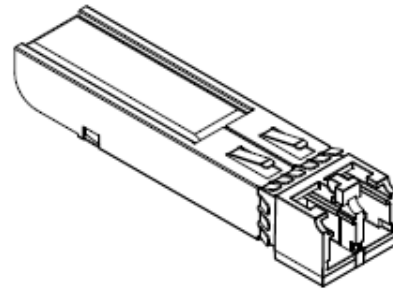


RM3-S1-4X03K-G0

Product Overview

The 3G-SDI dual channel optical fiber receiver perfectly converts from 2 optical signals to SDI electrical signals at SMPTE 424M, SMPTE 292M, SMPTE 259M and DVB-ASI. This high density design allows designers more flexibility on the product size. 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
- Pluggable and hot-swappable
- 10, 40, 80Km link distance (indicative only) by different module.
 - RM3-S1-4103K-G0: 10Km
 - RM3-S1-4403K-G0: 40Km
 - RM3-S2-4803K-G0: 80Km
- Single +3.3V power supply
- Low power consumption- Typical 200 mA
- Pb-free and RoHS compliant
- Operating temperature: 0°C to 70°C

RM3-S1-4X03K-G0**Receiver Optical Interface**

Parameter		Min.	Typ.	Max.	Unit
Receiver Sensitivity (Measured with pathological pattern; BER<10 ⁻¹²)	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	-	200	300	mA

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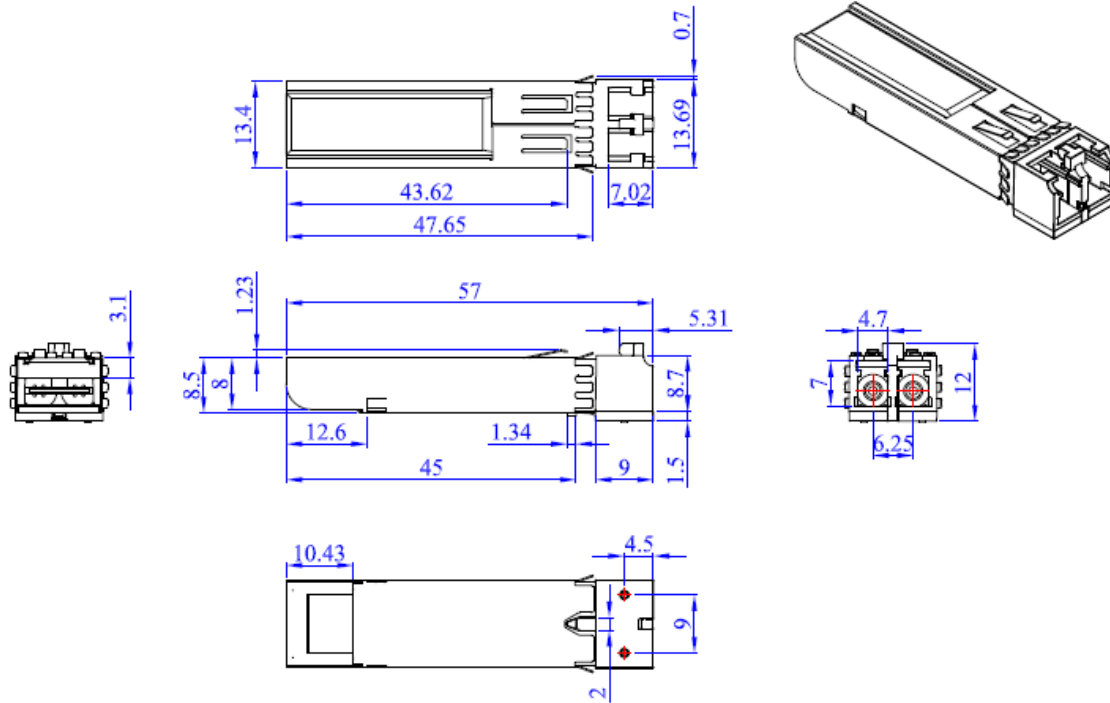
Pin Description

20	VeeR2
19	NC
18	LOS2
17	VeeR2
16	VccR2
15	VccR1
14	VeeR1
13	RD1+
12	RD1-
11	VeeR1
1	VeeR2
2	RD2-
3	RD2+
4	I ² C DATA
5	I ² C CLK
6	VeeR1
7	NC
8	LOS1
9	VeeR1
10	VeeR1

Pin No.	Name	Function	Notes
1	VeeR2	Receiver 2 Ground	
2	RD2-	Inv. Received Data Out	Negative differential receiver outputs (AC-coupled internally)
3	RD2+	Received Data Out	Positive differential receiver outputs (AC-coupled internally)
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 VccR.
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 VccR.
6	VeeR1	Receiver 1 Ground	
7	NC	Non-connection	
8	LOS1	Loss of Signal	LOS is an open collector/ drain output, which should be pulled up with a 4.7K – 10KΩ 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	VeeR1	Receiver 1 Ground	
10	VeeR1	Receiver 1 Ground	
11	VeeR1	Receiver 1 Ground	
12	RD1-	Inv. Received Data Out	Negative differential receiver outputs (AC-coupled internally)
13	RD1+	Received Data Out	Positive differential receiver outputs (AC-coupled internally)
14	VeeR1	Receiver Ground	
15	VccR1	Receiver Power	3.3V± 5%
16	VccR2	Receiver 2 Power	3.3V± 5%
17	VeeR2	Receiver 2 Ground	
18	LOS2	Loss of Signal 2	LOS is an open collector/ drain output, which should be pulled up with a 4.7K – 10KΩ 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.
19	NC	Non-connection	
20	VeeR2	Receiver 2 Ground	

RM3-S1-4X03K-G0

Mechanical Dimensions (Units in mm)



RM3-S1-4X03K-G0

Application Circuit

