

# FRONTNICHE

## 12G - 6G - 3G

The SFP12FR2 12G-SDI Optical SFP module is a dual channel PIN type receiver



#### Features

- Support 2-channel transmission of SMPTE 2082/2081, SMPTE 424M, SMPTE 292M, SMPTE 259M, DVB-ASI
- Handles pathological patterns for 12G-SDI, 6G-SDI, 3G-SDI, HD-SDI
- 10km over single mode fiber
- Re-Clocker
- Single +3.3V power supply
- Pb-free and RoHS compliant
- Operating temperature: 0°C to 70°C
- Non-MSA pinout

The SFP12FR2 12G-SDI Optical SFP module is a dual channel PIN type receiver, capable of receiving two optical SDI signals up to 11.88Gbps as defined in ST297.

The SFP12FR2 12G-SDI Optical SFP module is designed to support 12G-SDI as defined in ST2082 and 6G-SDI as defined in ST2081. The module is also compliant to 3G-SDI, HD-SDI and SD-SDI video standards.

The SFP12FR2 12G-SDI Optical SFP module contains a high performance re-clocker to ensure that the SDI signal reception is done with optimum quality for high performance applications.

The SFP12FR2 12G-SDI Optical SFP module is a hot-pluggable device that allows easy upgrade and maintenance in the field. The module is fully interchangeable with other non-MSA SFP devices.

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### OPTICAL PERFORMANCE SPECIFICATIONS

Parameter	Min	Typ	Max
Wavelength (nm)	1260	-	1620
Receiver Sensitivity (dBm) (Measured with pathological pattern; BER<10 <sup>-12</sup> )	11.88Gb/s	-	-9
	6Gb/s	-	-10
	2.97Gb/s	-	-10
	1.485Gb/s	-	-10
Overload (dBm)	-2	-	-
Loss of Signal Asserted (dBm)	-30	-	-
Loss of Signal De-asserted (dBm)	-	-	-9
Optical Hysteresis (dB)	0.5	2	-

### ELECTRICAL SPECIFICATIONS

Parameter	Min	Typ	Max
Operating case temperature range (°C)	0	-	70
Storage temperature range (°C)	-40	-	85
Power supply voltage (V)	3.1	3.3	3.5
Power consumption (mA)	-	350	400

### PIN DESCRIPTION

20	NC	1	Vee
19	NC	2	RD2-
18	NC	3	RD2+
17	Vee	4	Vee
16	VccR2	5	I <sup>2</sup> C CLK
15	VccR1	6	I <sup>2</sup> C DATA
14	Vee	7	Vee
13	RD1+	8	NC
12	RD1-	9	NC
11	Vee	10	NC

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Pin No.	Name	Function	Notes
1	Vee	Receiver 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	Vee	Receiver Ground	
5	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.
6	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.
7	Vee	Receiver Ground	
8	NC	Non-connection	
9	NC	Non-connection	
10	NC	Non-connection	
11	Vee	Receiver 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	Vee	Receiver Ground	
15	VccR1	Receiver 1 Power	3.3V $\pm$ 5%
16	VccR2	Receiver 2 Power	3.3V $\pm$ 5%
17	Vee	Receiver Ground	
18	NC	Non-connection	
19	NC	Non-connection	
20	NC	Non-connection	

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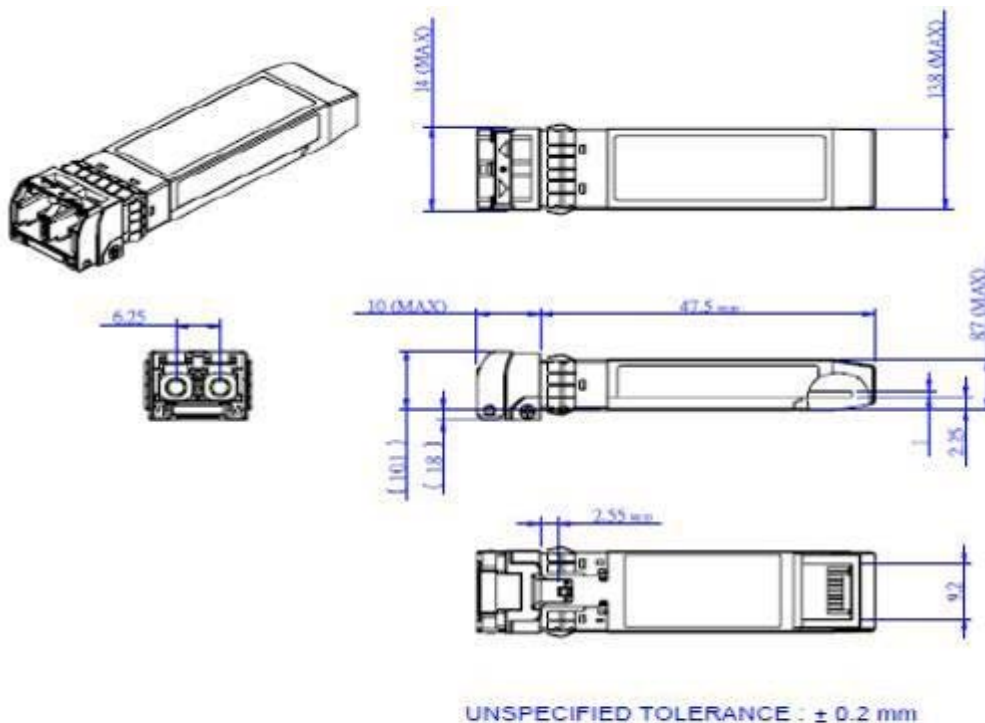
Specifications are subject to change without prior notice. E&OE.

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### DIMENSIONS



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