

Datasheet

XFP Optical Transceiver Product Features

- 10GBASE-LR/LW Ethernet 12dB XFP
- 20 km LR XFP for SMF @ 10Gbps
- 1310nm DFB+PIN Laser 20 km XFP
- 0°C - 70°C Temperature - Extended/Industrial Available
- 2-Wire Interface Digital Diagnostic Monitoring (SFF-8724)
- Hot-swappable for XFP LC ports
- OptoSpan 1 year standard warranty
- Use with Finisar, Avago, JDSU & networks not requiring OEM compatibility
- XFP MSA, IEEE 802.3ae
- RoHS compliant

* For OEM Compatibility, use Platinum Series Part# PXP-10GT31K020

XFP-10G-K020T31



Applications

- 10GBASE-LR @ 10.31Gbps
- 10 Gigabit Ethernet
- Fibre Channel 8x
- Fibre Channel 4x

Description

OptoSpan XFP-10G-K020T31 is a Duplex 10GBASE-LR/LW Ethernet 10G Ethernet / 8G FC XFP transceiver designed for long distance optical communications up to 20 km with signaling rates up to 10Gbps.

OptoSpan 10Gb Standard optical transceivers are compatible with many brands such as Finisar, Avago, JDSU and network environments that do not require any special compatibility. For networks that require special OEM compatibility, such as CISCO, BROCADE, JUNIPER, ALCATEL, HP, NORTEL, EMC, QLOGIC and other OEMs, consider OptoSpan Platinum OEM Series transceiver model# PXP-10GT31K020.

All OptoSpan long-reach XFP s are ROHS compliant, allow for real-time diagnostic monitoring as per SFF-8472 and designed to meet Multi-Source Agreement (MSA) standards for Duplex transceivers with LC interface.

Optical Budget Calculation for 20 km XFP Optical Transceiver

XFP-10G-K020T31	Distance: 20 km				Fiber: 1310nm SMF	
	Tx Min dBm	Tx Max dBm	Rx Min dBm	Rx Max dBm	Link Attenuation dB	Power Budget dB
Product Specifications	-3	1	-15	+0.5		
Optical Calculation Results			-13	-9	10	12



XFP 20 km transceiver | 10G LR Ethernet

General Specifications

Parameter	Unit	Min.	Typ.	Max
Absolute Maximum Ratings				
Maximum Supply Voltage	V	-0.5		4.0
Storage Temperature	°C	-40		+85
Case Operating Temperature	°C	0		+70
Recommended Operating Condition				
Supply Voltage	V	3.13		53.45
Supply Current	mA			720
Data Rate	Gbps	9.95		10.31

Electrical Characteristics

Parameter	Unit	Min.	Typ.	Max
Transmitter				
Differential Input Voltage Swing	mVpp	120		820
Input Differential Impedance	ohm		100	
Transmit Disable Voltage - High	V	2.0		Vcc
Transmit Disable Voltage - Low	V	GND		GND+0.8
Transmit Fault Voltage - High	V			
Transmit Fault Voltage - Low	V			
Receiver				
Differential Output Voltage Swing	mVpp	340	650	850
Differential Output Impedance	ohms			
LOS Output Voltage - High	V	Vcc-0.5		VccHOST
LOS Output Voltage - Low	V	GND		GND+0.5



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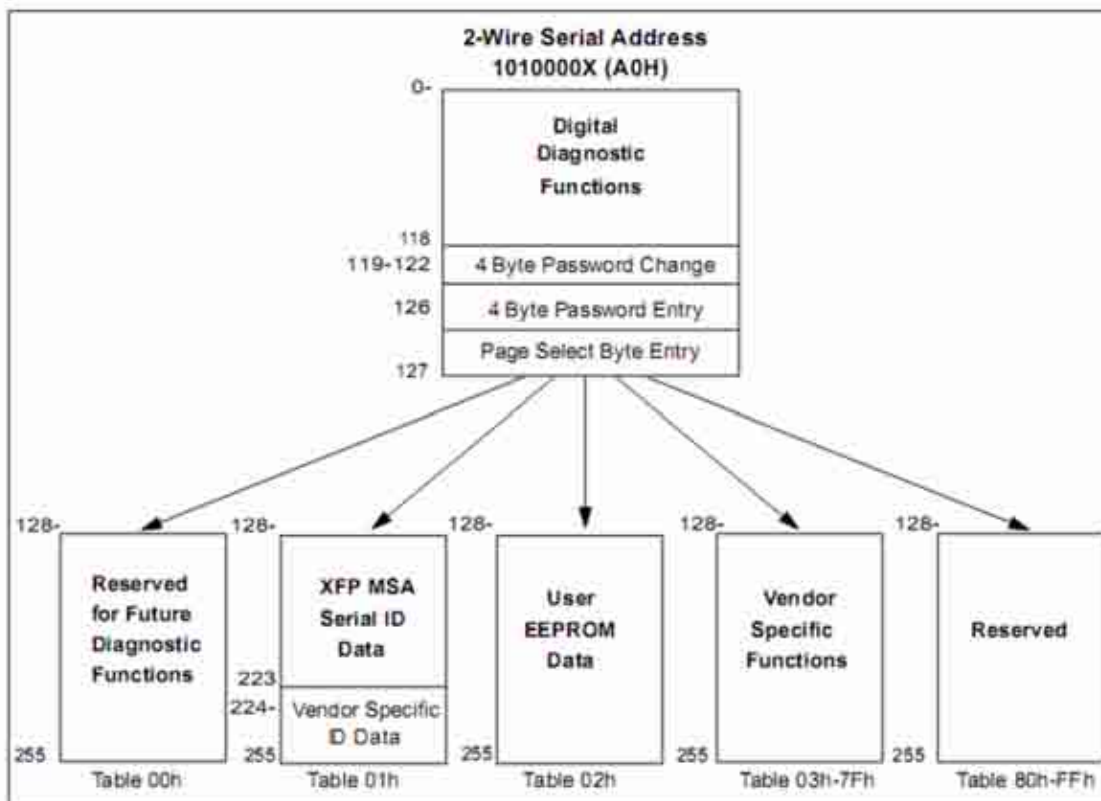
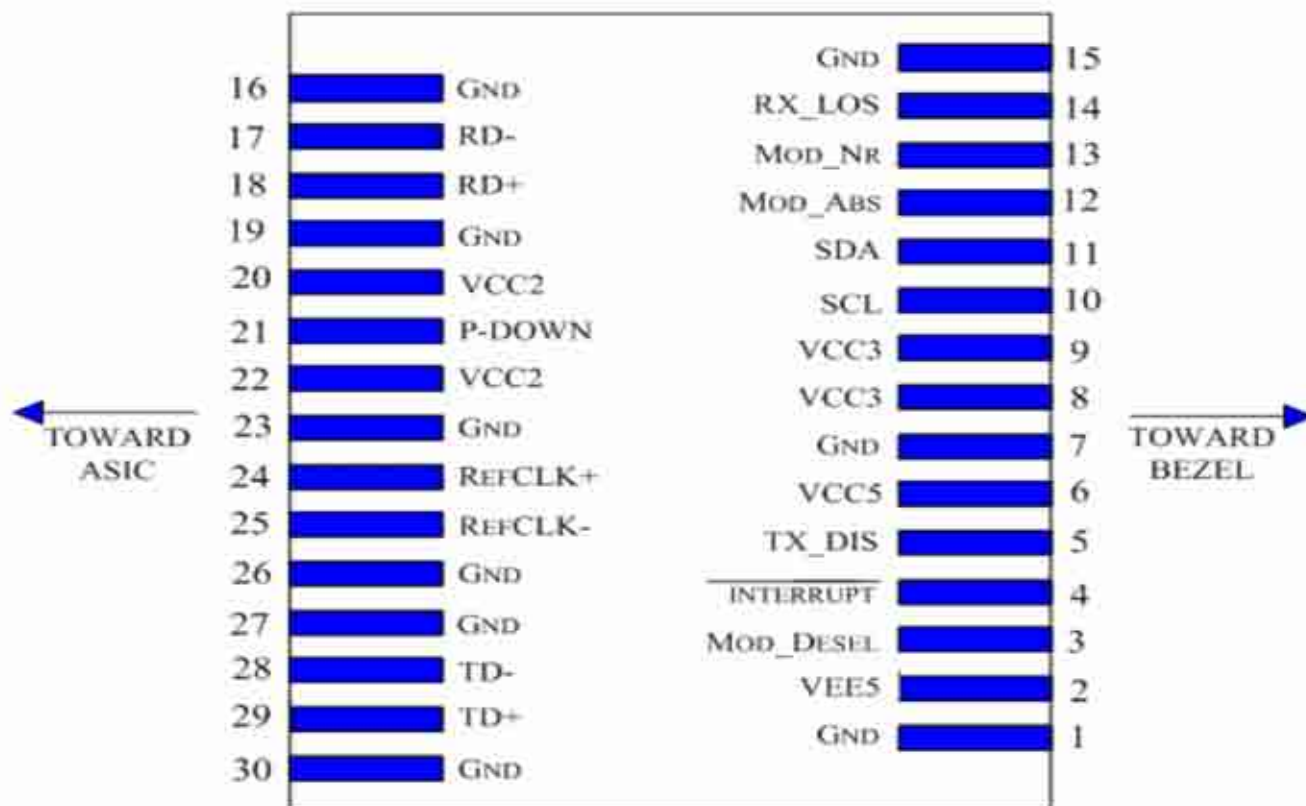
Optical Characteristics

Parameter	Unit	Min.	Typ.	Max
Transmitter				
Output Optical Power	dBm	-3		1
Optical Extinction Ratio	dB	6		
Optical Wavelength	nm	1290		1330
Spectral Width	nm			
Side Mode Suppression Ratio	dB			30
Receiver				
Optical Center Wavelength	nm	1270		1600
Receiver Sensitivity @ 10.31Gbp	dBm	-15		+0.5
LOS DE-Assert	dBm			-17
LOS Assert	dBm	-29		

Laser Safety

This is a class 1 Laser Product according to IEC 60825-1:1993:+A1:1997+A2:2001. This product complies with 21 CFR 1040.10 and 1040 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001.

PIN Layout



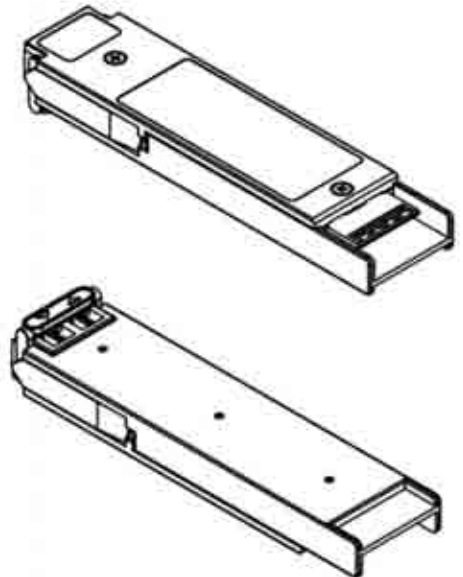
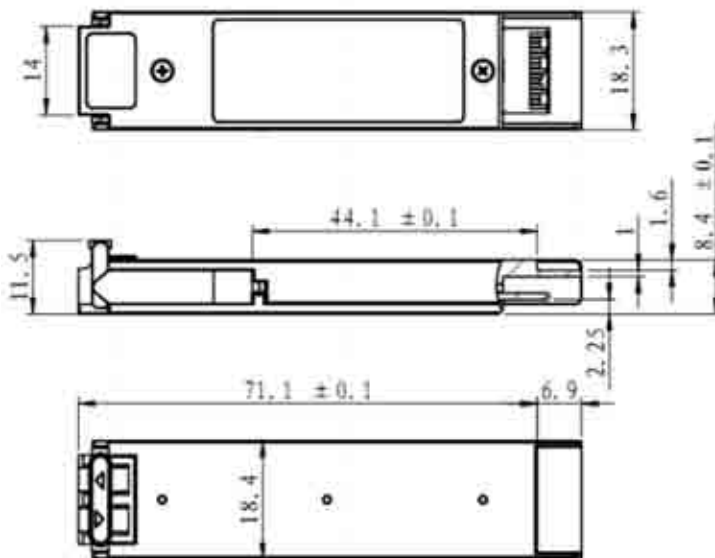
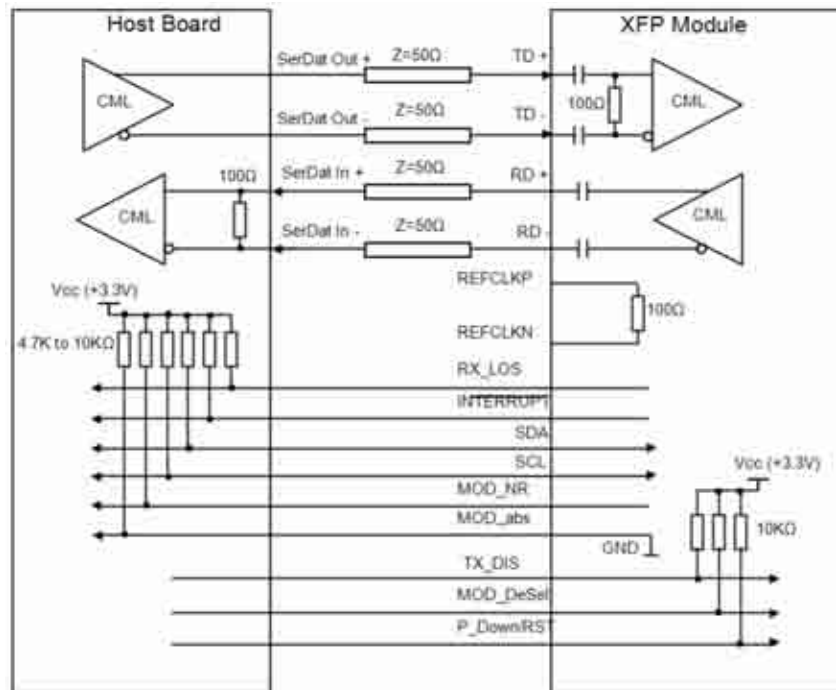


XFP 20 km transceiver | 10G LR Ethernet

PIN Functions

Pin #	Name - Description
1	Module Ground
2	Optional –5.2 Power Supply – Not required
3	Module De-select; When held low allows the module to, respond to 2-wire serial
4	Interrupt (bar)
5	Transmitter Disable
6	+5 Power Supply
7	Module Ground
8	+3.3V Power Supply
9	+3.3V Power Supply
10	Serial 2-wire interface clock
11	Serial 2-wire interface data line
12	Module Absent; Indicates module is not present.
13	Module Not Ready;
14	Receiver Loss of Signal indicator
15	Module Ground
16	Module Ground
17	Receiver inverted data output
18	Receiver non-inverted data output
19	Module Ground
20	+1.8V Power Supply – Not required
21	Power Down
22	+1.8V Power Supply – Not required
23	Module Ground
24	Reference Clock non-inverted input, AC coupled on
25	Reference Clock inverted input, AC coupled on the
26	Module Ground
27	Module Ground
28	Transmitter inverted data input
29	Transmitter non-inverted data input
30	Module Ground

Mechanical Layouts



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