

Datasheet

XFP Optical Transceiver Product Features

- 10GBASE-ER/EW Ethernet 14.1dB XFP
- 40 km ER XFP for SMF @ 10Gbps
- 1470nm - 1610nm EML+PIN Laser 40 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-10GCXXK040

XFP-10G-K040CXX



Applications

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

Description

OptoSpan XFP-10G-K040CXX is a CWDM 10GBASE-ER/EW Ethernet 10G Ethernet / 8G FC XFP transceiver designed for long distance optical communications up to 40 km with signaling rates up to 10Gbps.

OptoSpan 10Gb CWDM 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-10GCXXK040.

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 CWDM transceivers with LC interface.

Optical Budget Calculation for 40 km XFP Optical Transceiver

XFP- 10G- K040CXX	Distance: 40 km				Fiber: 1470nm - 1610nm	
	Tx Min dBm	Tx Max dBm	Rx Min dBm	Rx Max dBm	Link Attenuation dB	Power Budget dB
Product Specifications	-0.9	4	-15	0.5		
Optical Calculation Results			-14.7	-9.8	13.8	14.1



XFP CWDM 40 km transceiver | 10G ER 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	-5		+70
Recommended Operating Condition				
Supply Voltage	V	3.13	3.3	3.45
Supply Current	mA			300
Data Rate	Gbps	9.95		11.3

Electrical Characteristics

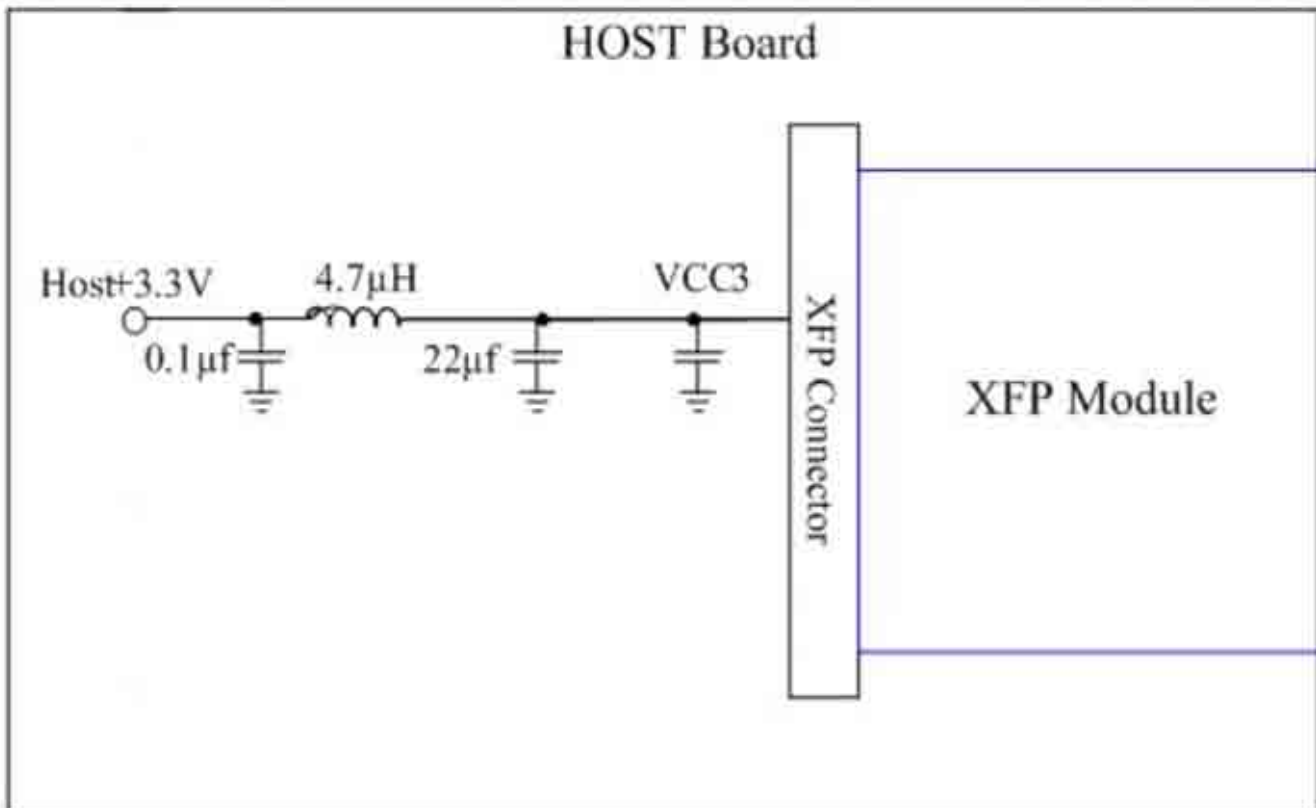
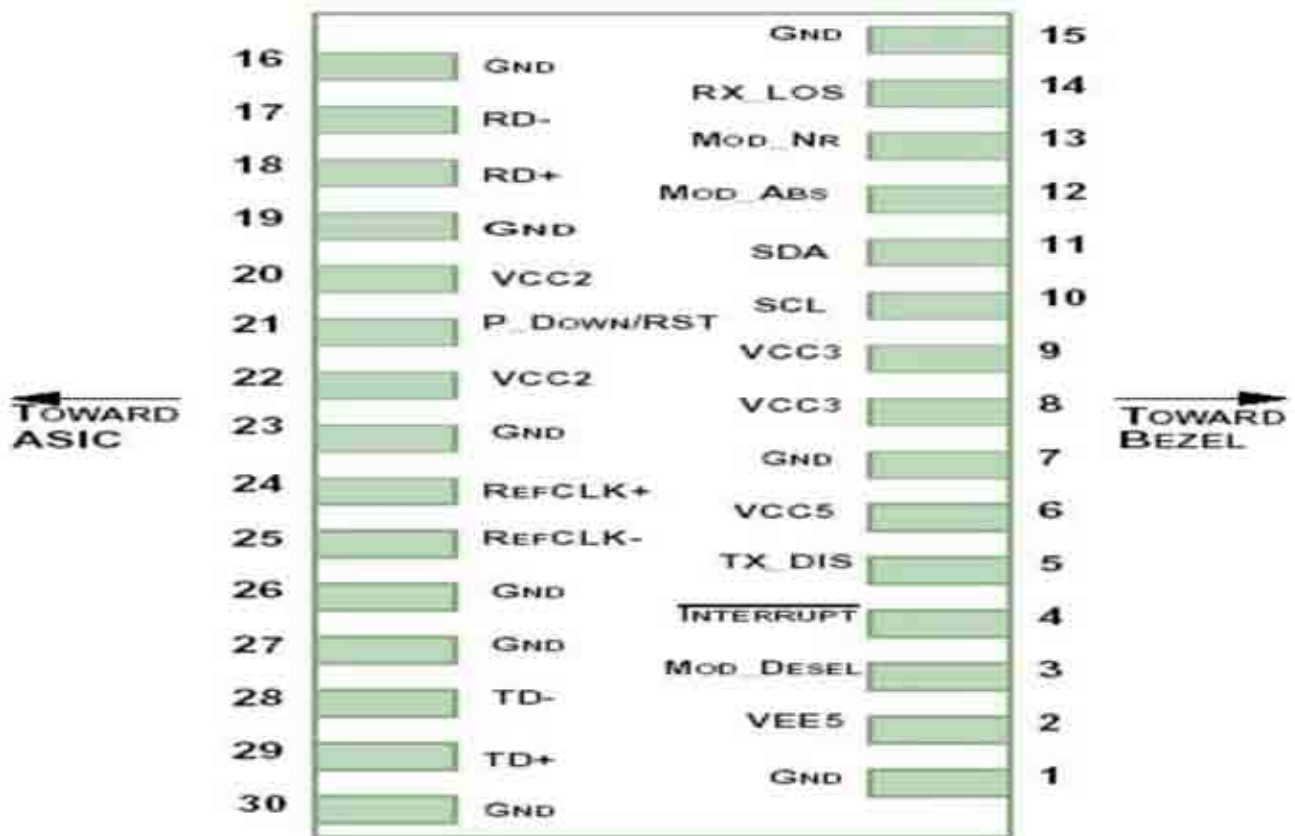
Parameter	Unit	Min.	Typ.	Max
Transmitter				
Differential Input Voltage Swing	mVpp	180		820
Input Differential Impedance	ohm		100	
Transmit Disable Voltage - High	V	2.0		Vcc
Transmit Disable Voltage - Low	V	GND		GND+0.8
Transmit Fault Voltage - High	V			
Transmit Fault Voltage - Low	V			
Receiver				
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

Optical Characteristics

Parameter	Unit	Min.	Typ.	Max
Transmitter				
Output Optical Power	dBm	-0.9		4
Optical Extinction Ratio	dB	8.2		
Optical Wavelength	nm	$\lambda_c - 6$	λ_c	$\lambda_c + 7.5$
Spectral Width	nm			1
Side Mode Suppression Ratio	dB	30		
Receiver				
Optical Center Wavelength	nm	1260		1620
Receiver Sensitivity @ 11.3Gbps	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.

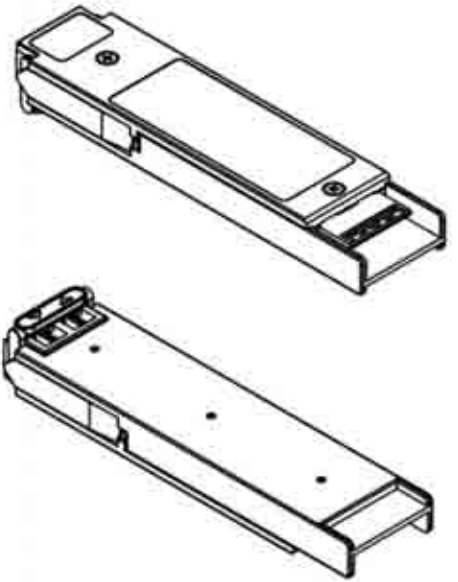
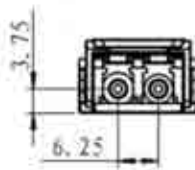
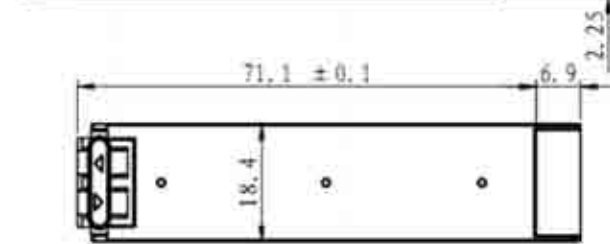
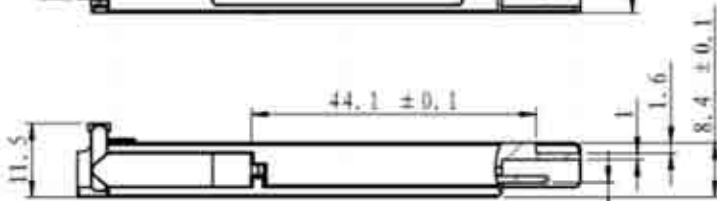
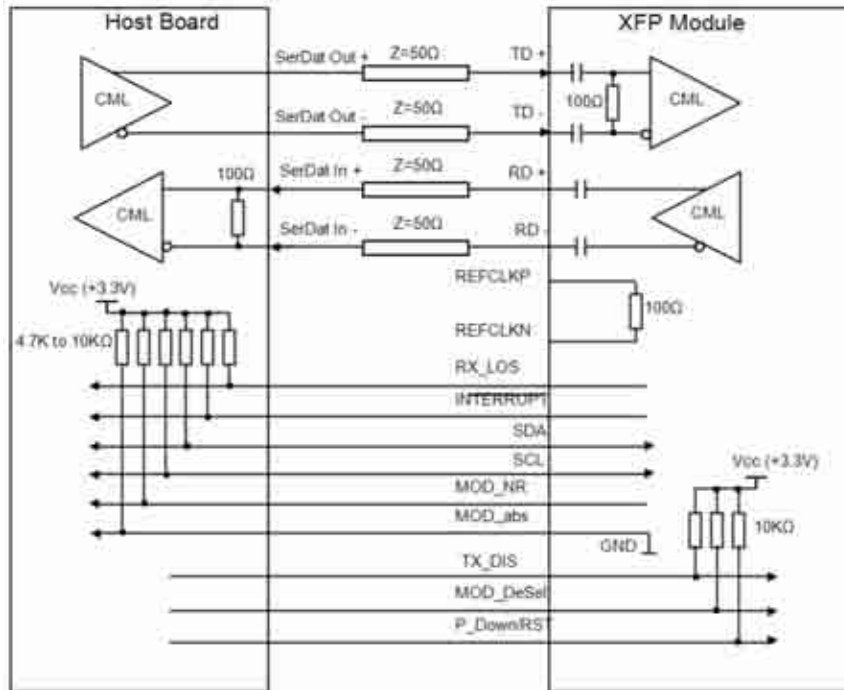




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PIN Functions

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); Indicates presence of an important condition which can be read over
5	Transmitter Disable; Transmitter laser source turned off
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. Grounded in the module
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
21	Power Down; When high, places the module in the low power stand-by mode
22	+1.8V Power Supply
23	Module Ground
24	Reference Clock non-inverted input, AC coupled on the host board – Not required
25	Reference Clock inverted input, AC coupled on the host board – Not required
26	Module Ground
27	Module Ground
28	Transmitter inverted data input
29	Transmitter non-inverted data input
30	Module Ground

XFP CWDM 40 km transceiver | 10G ER Ethernet Mechanical Layouts



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