



XPS00000100D117

Cisco® XENPAK-10GB-ZR Compatible 10GBase-ZR XENPAK Transceiver (SMF, 1550nm, 80km, SC, DOM)

Product Description

This Cisco® XENPAK-10GB-ZR compatible XENPAK transceiver provides 10GBase-ZR throughput up to 80km over single-mode fiber (SMF) using a wavelength of 1550nm via an SC connector. It can operate at temperatures between 0 and 70C. Our transceiver is built to meet or exceed OEM specifications and is guaranteed to be 100% compatible with Cisco®. It has been programmed, uniquely serialized, and tested for data-traffic and application to ensure that it will initialize and perform identically. All of our transceivers comply with Multi-Source Agreement (MSA) standards to provide seamless network integration. Additional product features include Digital Optical Monitoring (DOM) support which allows access to real-time operating parameters. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

Skylane's transceivers are RoHS compliant and lead-free.

Features:

- INF-8474 Compliance
- Duplex SC Connector
- Commercial Temperature 0 to 70 Celsius
- Single-mode Fiber
- Hot Pluggable
- Excellent ESD Protection
- Metal with Lower EMI
- RoHS Compliant and Lead Free



Applications:

- 10GBase-ZR Ethernet
- Access, Metro and Enterprise
- 8x/10x Fibre Channel

For your product safety, please read the following information carefully before any manipulation of the transceiver:



ESD

This transceiver is specified as ESD threshold 1kV for SFI pins and 2kV for all others electrical input pins, tested per MIL-STD-883G, Method 3015.4 / JESD22-A114-A (HBM). However, normal ESD precautions are still required during the handling of this module.



LASER SAFETY

This is a Class1 Laser Product according to IEC 60825-1:2007. This product complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated (June 24, 2007).

The optical ports of the module need to be terminated with an optical connector or with a dust plug in order to avoid contamination.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Supply Voltage +5V	Vcc5	0		6.0	V	
Supply Voltage +3.3V	Vcc3	0		4	V	
Supply Voltage APS	Vaps	0		2	V	
Storage Temperature	Tstg	-20		85	°C	
Optical Input Received Power	APD			-7	dBm	
Operating Case Temperature	Tc	0		70	°C	
Supply Voltage +5V	Vcc5	4.75	5	5.25	V	
Supply Current +5V	Icc5			500	mA	
Supply Voltage +3.3V	Vcc3	3.14	3.3	3.47	V	
Supply Current +3.3V	Icc3			1000	mA	
Supply Voltage APS	Vaps	1.14	1.2	1.26	V	
Supply Current APS	Iaps			1100	mA	
Module Power Dissipation	PD			4	W	

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Data Rate (TXLINE0-3)	TX-xaui		3125		Mbps	
Differential Impedance	ZOUT	80	100	120	Ω	
Differential Input Amplitude	VIN,pp	160		2000	mVp-p	
Input Rise/Fall	Tr/Tf	60		130	ps	
Differential Impedance of ZIN	ZIN		100		Ω	
Receiver						
Data Rate (TXLINE0-3)	RX-xaui		3125		Mbps	
Supply Voltage	VccRx	3.13	3.3	3.47	V	
Differential Output Amplitude	VOUT,pp	800		1600	mV	
Rise/Fall Time	Tr/Tf	50		90	ps	
Differential Impedance of ZOUT	ZOUT		100		Ω	

Electrical Signal Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
1.2V CMOS						
Input High Voltage	VIL (MAX)			0.36	V	
Input Low Voltage	VIH (MIN)	0.84		1.25	V	
Capacitance				320	pF	
Pull-Up Resistance	Rpull	10k		22k	Ω	
MDIO I/O						
Output Low Voltage	VOL	-0.3		0.2	V	
Output Low Current	IOL			4	mA	
Input High Voltage	VIH	0.84		1.5	V	
Input Low Voltage	VIL	-0.3		0.36	V	
Pull-Up Supply Voltage	VPULL	1.14	1.2	1.26		
Input Capacitance	CIN			10	Pf	
Load Capacitance	CLOD			470	Pf	
External Pull-Up Resistance	EPULL	200			Ω	

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Receiver						
Received Power	Rpo	-24.0		-7	dBm	
Maximum Input Power	Rx-overload	-7			dBm	
Input Operating Wavelength	λ	1260		1565	nm	
Dispersion Tolerance	DT	0		1600	ps/nm	

Pin Descriptions

Pin	Symbol	I/O	Name/Description	Notes
1	GND		Electrical Ground.	1
2	GND		Electrical Ground.	1
3	GND		Electrical Ground.	1
4	5.0V		Power.	2
5	3.3V		Power.	2
6	3.3V		Power.	2
7	APS=1.2V		Adaptive Power Supply.	2
8	APS=1.2V		Adaptive Power Supply.	2
9	LASI		Open drain compatible. 10-22kΩ pull-up on host. Logic high: normal operation. Logic low: LASI asserted.	4
10	RESET	I	Open drain compatible. 10-22kΩ pull-up on transceiver. Logic high = normal operation. Logic low = reset. Minimum reset assert time 1ms.	4
11	VENDOR-SPECIFIC		Vendor-Specific Pin. Leave unconnected when not in use.	8
12	TX ON/OFF	I	Open drain compatible. 10-22kΩ pull-up on transceiver. Logic high = transmitter on (capable). Logic low = transmitter off (always).	4
13	RESERVED		Reserved.	4
14	MOD_DETECT	O	Pulled low inside the module through 1k.	
15	VENDOR-SPECIFIC		Vendor-Specific Pin. Leave unconnected when not in use.	8
16	VENDOR-SPECIFIC		Vendor-Specific Pin. Leave unconnected when not in use.	8
17	MDIO	I/O	Management Data IO.	4, 5
18	MDC	I	Management Data Clock.	4, 5
19	PRTAD4	I	Port Address Bit 4 (Low = 0).	4
20	PRTAD3	I	Port Address Bit 3 (Low = 0).	4
21	PRTAD2	I	Port Address Bit 2 (Low = 0).	4
22	PRTAD1	I	Port Address Bit 1 (Low = 0).	4
23	PRTAD0	I	Port Address Bit 0 (Low = 0).	4
24	VENDOR-SPECIFIC		Vendor-Specific Pin. Leave unconnected when not in use.	8
25	APS SET		Feedback Input for APS.	
26	RESERVED		Reserved for Avalanche Photodiode Use.	8
27	APS SENSE		APS Sense Connection.	
28	APS=1.2V		Adaptive Power Supply.	2

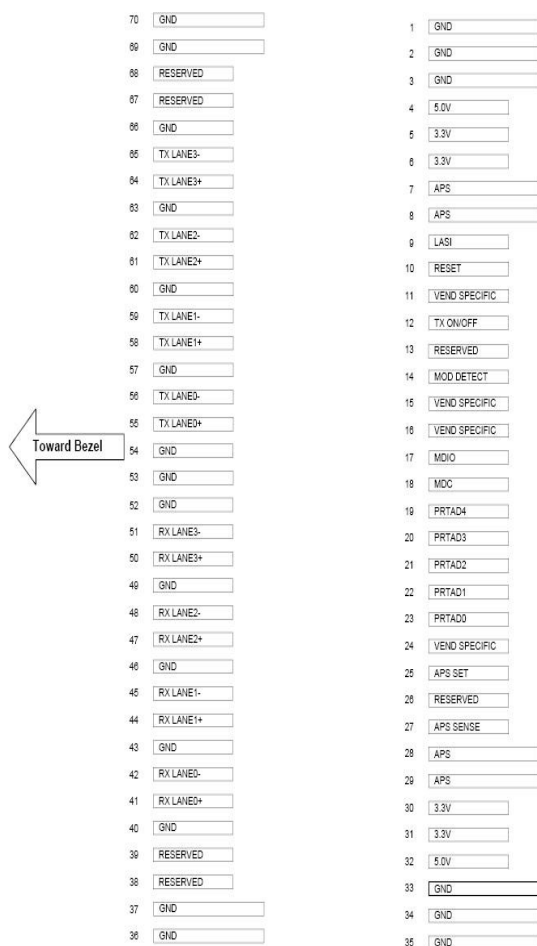
29	APS=1.2V		Adaptive Power Supply.	2
30	3.3V		Power.	2
31	3.3V		Power.	2
32	5.0V		Power.	2
33	GND		Electrical Ground.	1
34	GND		Electrical Ground.	1
35	GND		Electrical Ground.	1
36	GND		Electrical Ground.	1
37	GND		Electrical Ground.	1
38	RESERVED		Reserved.	
39	RESERVED		Reserved.	
40	GND		Electrical Ground.	1
41	RX LANE0+	O	Module XAUI Output Lane 0+.	7
42	RX LANE0-	O	Module XAUI Output Lane 0-.	7
43	GND		Electrical Ground.	1
44	RX LANE1+	O	Module XAUI Output Lane 1+.	7
45	RX LANE1-	O	Module XAUI Output Lane 1-.	7
46	GND		Electrical Ground.	1
47	RX LANE2+	O	Module XAUI Output Lane 2+.	7
48	RX LANE2-	O	Module XAUI Output Lane 2-.	7
49	GND		Electrical Ground.	1
50	RX LANE3+	O	Module XAUI Output Lane 3+.	7
51	RX LANE3-	O	Module XAUI Output Lane 3-.	7
52	GND		Electrical Ground.	1
53	GND		Electrical Ground.	1
54	GND		Electrical Ground.	1
55	TX LANE0+	I	Module XAUI Input Lane 0+.	7
56	TX LANE0-	I	Module XAUI Input Lane 0-.	7
57	GND		Electrical Ground.	1
58	TX LANE1+	I	Module XAUI Input Lane 1+.	7
59	TX LANE1-	I	Module XAUI Input Lane 1-.	7
60	GND		Electrical Ground.	1
61	TX LANE2+	I	Module XAUI Input Lane 2+.	7
62	TX LANE2-	I	Module XAUI Input Lane 2-.	7
63	GND		Electrical Ground.	1
64	TX LANE3+	I	Module XAUI Input Lane 3+.	7

65	TX LANE3-	I	Module XAUI Input Lane 3-	7
66	GND		Electrical Ground.	1
67	RESERVED		Reserved.	
68	RESERVED		Reserved.	
69	GND		Electrical Ground.	1
70	GND		Electrical Ground.	1

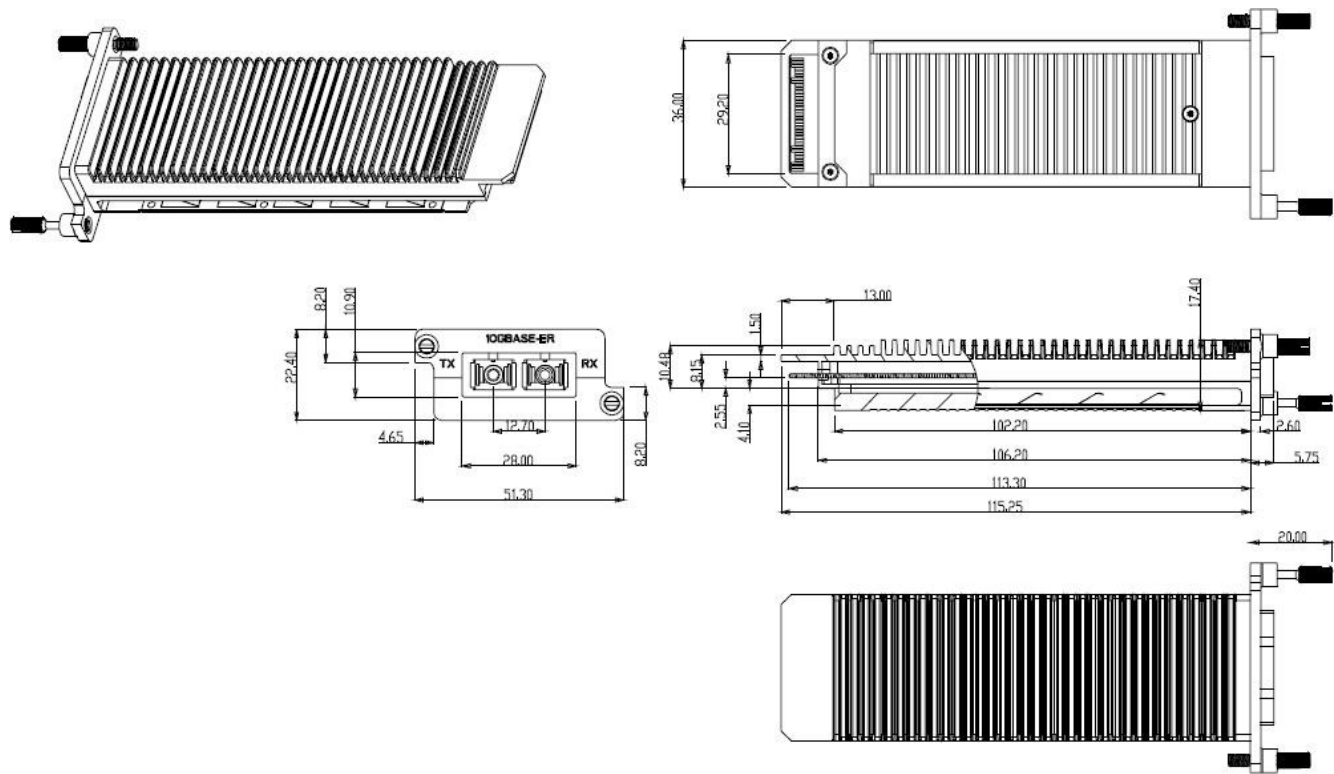
Notes:

1. Ground connections are common for Tx and Rx.
2. All connector contacts are rated at 0.5A nominal.
3. 1.2V CMOS compatible.
4. MDIO and MDC timing must comply with IEEE802.3ae, Clause 45.3
5. XAUI output characteristics should comply with IEEE802.3ae Clause 47.
6. Transceivers will be MSA compliant when no signals are present on the vendor-specific pins.

Electrical Pin-Out Details



Mechanical Specifications



About Skylane Optics

Skylane is a leading provider of transceivers for optical communication.

We offer an extensive portfolio for the enterprise, access, datacenter and metropolitan fiber optical market as well as for smart home applications and home networks.

We cover the European, South American and North American market with a strong partner network and have offices in Belgium, Brazil, Sweden and USA.

Our offerings are characterized by high quality and performance. In combination with our strong technical support, we enable our customers to build cost optimized network solutions.

We offer an extensive range of high-quality products including transceivers (Optical and copper), Active Optical Cable (AOC), Direct Attach Cable (DAC), Mux/Demux, Coding Box.

