



CWDM-XFP-1550-100-OPC

Cisco® CWDM-XFP-1550-100 Compatible TAA 10GBase-CWDM XFP Transceiver (SMF, 1550nm, 100km, LC)

Features

- INF-8077i Compliance
- Duplex LC Connector
- Single-mode Fiber
- Commercial Temperature 0 to 70 Celsius
- Hot Pluggable
- Metal with Lower EMI
- Excellent ESD Protection
- RoHS Compliant and Lead Free



Applications:

- 10x Gigabit Ethernet over CWDM
- 8x/10x Fibre Channel
- Access, Metro and Enterprise
- Mobile Fronthaul CPRI/OBSAI

Product Description

This Cisco® CWDM-XFP-1550-100 compatible XFP transceiver provides 10GBase-CWDM throughput up to 80km over single-mode fiber (SMF) using a wavelength of 1550nm via an LC connector. It is guaranteed to be 100% compatible with the equivalent Cisco® transceiver. This easy to install, hot swappable transceiver has been programmed, uniquely serialized and data-traffic and application tested to ensure that it will initialize and perform identically. It is built to meet or exceed the specifications of Cisco®, as well as to comply with MSA (Multi-Source Agreement) standards to ensure seamless network integration. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

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

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S.-made or designated country end products."



Regulatory Compliance

- ESD to the Electrical PINs: compatible with MIL-STD-883E Method 3015.4.
- ESD to the LC Receptacle: compatible with IEC 61000-4-3.
- EMI/EMC: compatible with FCC Part 15 Subpart B Rules, EN55022:2010.
- Laser Eye Safety: compatible with FDA 21CFR, EN60950-1& EN (IEC) 60825-1, 2.
- RoHS: compliant with EU RoHS 2.0 directive 2015/863/EU.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate	DR	9.95		11.1	Gbps	
Bit Error Rate	BER			10 ⁻¹²		
Storage Temperature	Tstg	-40		85	°C	
Operating Case Temperature	Tc	0		70	°C	1
Maximum Voltage 5V	Vcc5	-0.5		5.5	V	
Maximum Voltage 3.3V	Vcc3	-0.5		4	V	
Total Power Consumption	P			2.5	W	

Notes:

1. Case temperature.

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Supply Voltage - 5V	Vcc5	4.75		5.25	V	1
Supply Voltage - 3.3V	Vcc3	3.14		3.46	V	1
Supply Current - Vcc5 Supply	Icc5			350	mA	
Supply Current - Vcc3 Supply	Icc3			500	mA	
Transmitter						
Input Differential Impedance	RIN		100		Ω	2
Differential Data Input Swing	VIN,pp	120		820	mV	
Transmit Disable Voltage	VD	2		Vcc	V	3
Transmit Enable Voltage	Ven	GND		GND+0.8	V	
Transmit Disable Assert Time				10	us	
Receiver						
Differential Data Output Swing	VOUT,pp	340	650	850	mV	
Data Output Rise Time (20-80%)	Tr/Tf			38	ps	
LOS Fault	VLOSA	Vcc-0.5		Host_Vcc	V	
LOS Normal	VLOSD	GND		GND+0.5	V	

Notes:

1. Operating Environment.
2. After internal AC coupling.
3. Or open circuit.

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Optical Center Wavelength	λ_c	1545	1551	1557	nm	
Output Optical Power	P _{tx}	2.5		4	dBm	1
Extinction Ratio	ER	9	11	15	dB	
Side-Mode Suppression Ratio	SMSR	30			dB	
Relative Intensity Noise	RIN			-130	dB/Hz	
Transmitter Dispersion Penalty	TDP			3	dB	
Launch Power of Off Transmitter	P _{off}			-30	dBm	1
Transmitter Jitter (Peak-to-Peak)	TJ			0.1	UI	
Receiver						
Central Wavelength Range	λ_c	1260		1600	nm	
Receiver Overload	Pol	-7			dBm	
Receiver Sensitivity @10.3Gbps	R _{x_Sen}			-25	dBm	2
Receiver Reflectance	TR _{rx}			-27	dB	
LOS Assert	LOSA	-35			dBm	
LOS De-Assert	LOSD			-27	dBm	
LOS Hysteresis	LOSH	0.5			dB	

Notes

1. Average.
2. Measured with worst ER: BER<10⁻¹² and 2³¹-1 PRBS.

Pin Descriptions

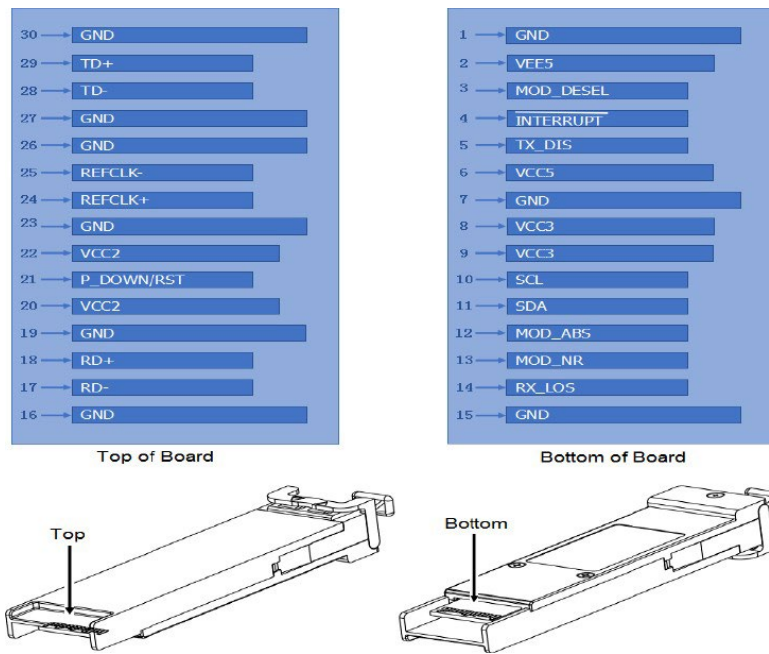
Pin	Symbol	Description	Ref.
1	GND	Module Ground.	1
2	Vee5	Optional -5.2 Power Supply. Not required.	
3	Mod_Desel	Module de-select. When held, allows the module to respond to 2-wire serial interface commands.	
4	Interrupt	Indicates presence of an import condition which can be read over the serial 2-wire interface.	2
5	Tx_Disable	Transmitter Disable. Transmitter laser source turned off.	
6	Vcc5	+5 Power Supply.	
7	GND	Module Ground.	1
8	Vcc3	+3.3V Power Supply.	
9	Vcc3	+3.3V Power Supply.	
10	SCL	Serial 2-Wire Interface Clock.	2
11	SDA	Serial 2-Wire Interface Data Line.	2
12	Mod_ABS	Module Absent. Indicates module is not present. Grounded in the module.	2
13	Mod_NR	Module Absent. Indicated module operating fault.	2
14	Rx_LOS	Receiver loss of signal indicator.	2
15	GND	Module Ground.	1
16	GND	Module Ground.	1
17	RD-	Receiver inverted data output.	
18	RD+	Receiver non-inverted data output.	
19	GND	Module Ground.	1
20	Vcc2	+1.8V Power Supply.	
21	P_Down/RST	Power Down. When "high," places the module in the low-power stand-by mode and on the falling edge of P_Down initiates a module rest. Reset. The falling edge initiates a complete reset of the module including the 2-wire serial interface, equivalent to a power cycle.	
22	Vcc2	+1.8V Power Supply.	
23	GND	Module Ground.	1
24	RefCLK+	Reference clock non-inverted input. AC coupled on the host board.	
25	RefCLK-	Reference clock inverted input. AC coupled on the host board.	
26	GND	Module Ground.	1
27	GND	Module Ground.	1
28	TD-	Transmitter inverted data input.	
29	TD+	Transmitter non-inverted data input.	
30	GND	Module Ground.	1

Notes:

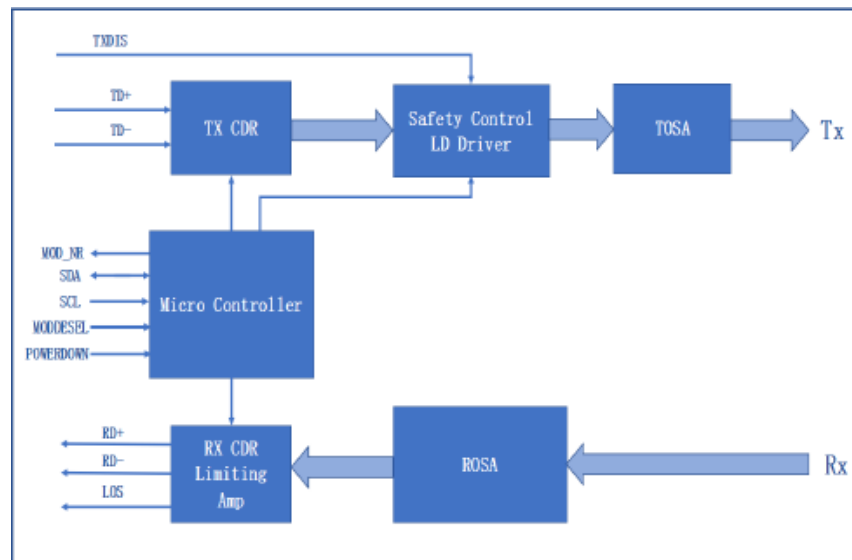
1. Module ground pins (GND) are isolated from the module case and chassis ground within the module.
2. Open collector. Should be pulled up with 4.7kΩ-10kΩ on the host board to a voltage between 3.15V and

3.6V.

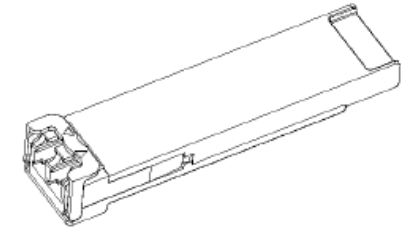
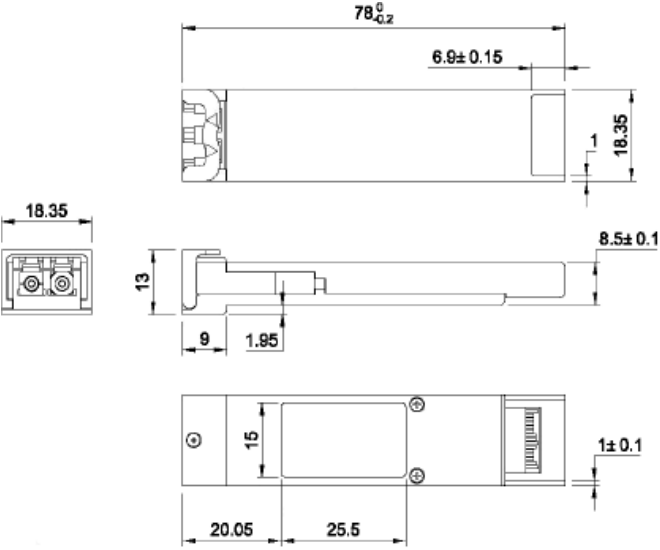
Electrical Pad Layout



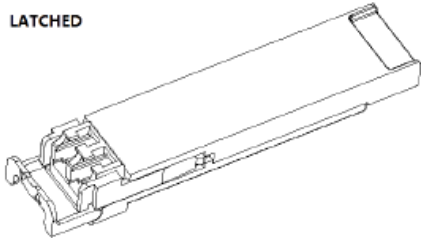
Block Diagram of Transceiver



Mechanical Specifications



LATCHED



UNLATCHED

OptioConnect

Innovation for the Future of High-Speed Networking

Who We Are

OptioConnect is reshaping the landscape of communication and high-speed networking through intelligent technology. With a core focus on cutting edge technology, we deliver smarter fiber optic solutions for enterprise networks, data centers, and next-gen telecom infrastructures.

What We Do

At OptioConnect, we fuse advanced engineering with intelligent automation to drive the future of networking. Our AI-integrated solutions are designed to optimize performance and streamline operations with:

- Superior Performance
- Network and traffic optimization
- Intelligent energy management
- Seamless OEM compatibility
- Scalable cost-efficiency

Smarter Networks by Design

Innovation isn't just a goal—it's our process. We embed AI and machine learning across our R&D and product lines, enabling adaptive performance, automated tuning, and faster deployment cycles. The result? Networks that don't just work—they learn, evolve, and outperform.

Our Team

Our engineers, data scientists, and network architects bring decades of experience and a future-focused mindset. We provide hands-on support with intelligent insights that turn complex challenges into simple solutions.

Our Mission

To deliver AI-enhanced connectivity that reduces cost, increases speed, and maximizes efficiency—empowering our partners to operate at the forefront of a rapidly evolving digital world.

Let's Connect

Discover how OptioConnect's intelligent infrastructure solutions can power your network's next leap forward.

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