

ONS-C2-WDM-DE-1HL-OPC

Cisco® ONS-C2-WDM-DE-1HL Compatible TAA 200GBase-DWDM CFP2 Transceiver (SMF, 1528.77nm to 1568.36nm, 80km, LC)

Features

- CFP Multi-Source Agreement Compliant
- Hot pluggable CFP2 footprint
- Supports CAUI-4 for 100GE and CEI-28G-VSR for OTU4

Host Interface

- Proprietary Internal Soft-Decision Forward Error Correction (SD-FEC)
- Single-mode Fiber
- Tunable C-band Transmitter
- Tunable Optical Filter (TOF)
- Coherent Receiver
- Single-mode Fibre
- Operating temperature range 0C to 70C
- Power Consumption < 19W
- Single +3.3V Power Supply



Applications:

- 200GBase Ethernet
- Access and Enterprise

Product Description

This Cisco® ONS-C2-WDM-DE-1HL compatible CFP2 transceiver provides 200GBase-DWDM throughput up to 80km over single-mode fiber (SMF) using a wavelength of 1528.77nm to 1568.36nm 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.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Storage Temperature	Ts	-40		85	°C	
Operating Case Temperature	Tc	0		70	°C	
Relative Humidity (non-condensing)	RH			85	%	
Supported Host Signal Types			103.125		Gbps	1
			111.81		Gbps	2

Note:

1. 100GE as per IEEE 802.3ba. The line format can be selected as OTU4 (G.709 HD-FEC) or with SD-FEC (proprietary)
2. OTU4 as per ITU-T G.709. The line format can be selected as OTU4 (transparent) or with S-DFEC (proprietary)

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Power Supply Voltage	Vcc	3.2	3.3	3.4	V	
Power Supply Current	Icc			6	A	
Power Dissipation	PD			19	W	

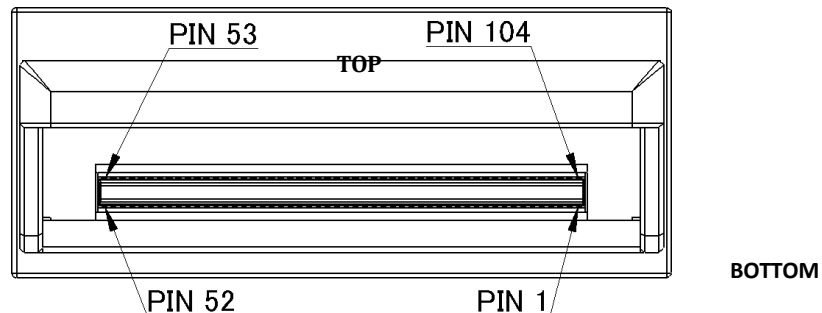
Optical Characteristics

Parameter	Min.	Typ.	Max.	Unit	Notes
Transmitter					
Average Output Power	-15		1	dBm	1, 2
Output Power Accuracy and Stability	-1		1	dB	2, 3
Centre Wavelength Range	1528.77		1567.54	nm	
Frequency Grid Setting		50		GHz	4
Centre Wavelength	$\lambda_T - 15$	λ_T	$\lambda_T + 15$	pm	4
Receiver					
Receiver Operating Wavelength	1528.77		1567.54	nm	
Receiver Input Power Range	-18		0	dBm	5
Receiver Sensitivity			-25	dBm	6
OSNR Tolerance		11.5		dB/0.1nm	7, 8
		17		dB/0.1nm	7, 9
		20		dB/0.1nm	7, 10
Chromatic Dispersion Tolerance			40	ns/nm	8
			20	ns/nm	9, 10

Notes:

1. The output power is settable in steps of 0.1 dB within the specified wavelength range
2. Output power coupled into a 9/125 μm single mode fibre
3. Difference between the set value and actual value
4. Per ITU-T G.694.1 grid definition
5. An input power in this range guarantees optimum OSNR performance
6. Minimum input power needed to achieve post-FEC BER $\leq 10^{-15}$ (OSNR > 35dB, SD-FEC enabled)
7. Post-FEC BER $\leq 10^{-15}$, SD-FEC enabled
8. 100G QPSK, post-FEC BER $\leq 10^{-15}$, SD-FEC enabled
9. 200G 8QAM, post-FEC BER $\leq 10^{-15}$, SD-FEC enabled
10. 200G 16QAM, post-FEC BER $\leq 10^{-15}$, SD-FEC enabled

Electrical Pad Layout

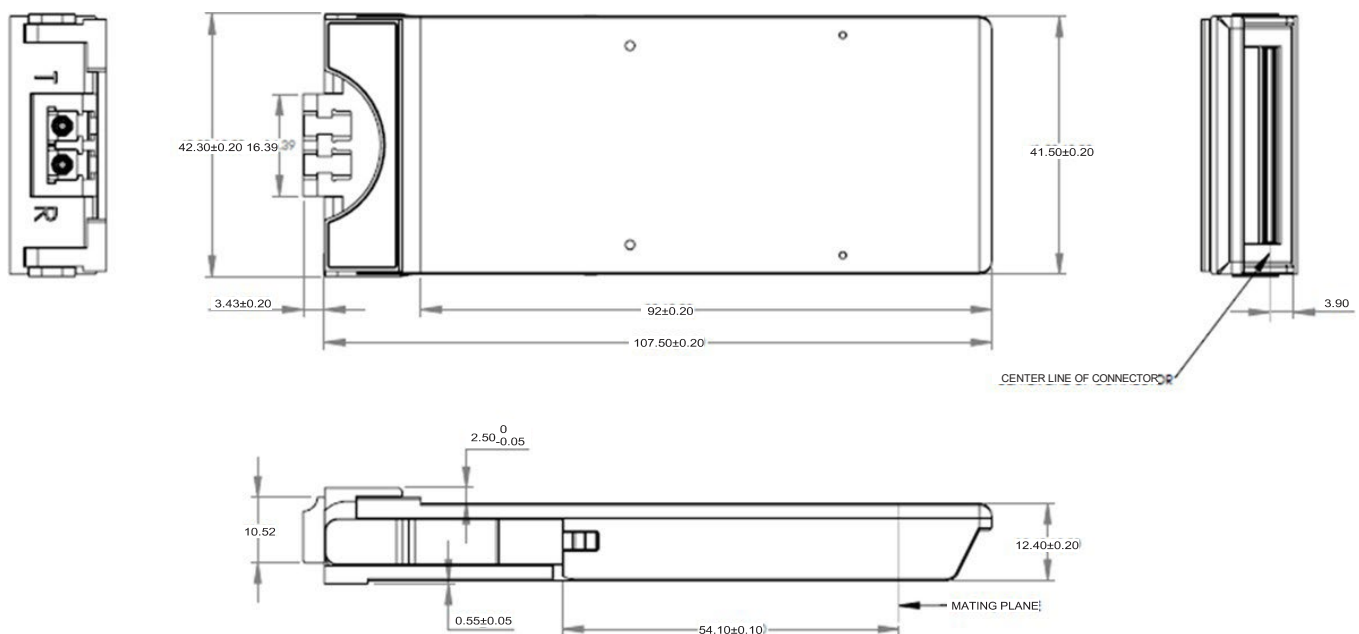


Pin Descriptions

Pin	Symbol	I/O	Description	Logic	Pin	Symbol	I/O	Description	Logic
1	GND		Ground		53	GND		Ground	
2	OHIO_RDn	O	Overhead extraction		54	RX7p	O	Ch7 25Gbps Receive Output	CML
3	OHIO_RDp				55	RX7n			
4	GND		Ground		56	GND		Ground	
5	OHIO_TDn	I	Overhead insertion		57	RX0p	O	Ch0 25Gbps Receive Output	CML
6	OHIO_TDP				58	RX0n			
7	3.3V_GND		Ground		59	GND		Ground	
8	3.3V_GND				60	RX1p	O	Ch1 25Gbps Receive Output	CML
9	3.3V		3.3V Power Supply		61	RX1n			
10	3.3V				62	GND		Ground	
11	3.3V				63	RX6p	O	Ch6 25Gbps Receive Output	CML
12	3.3V				64	RX6n			
13	3.3V_GND		Ground		65	GND		Ground	
14	3.3V_GND				66	RX5p	O	Ch5 25Gbps Receive Output	CML
15	VND_IO_A		Do not connect		67	RX5n			
16	VND_IO_B				68	GND		Ground	
17	PRG_CNTL1	I	Programmable Control 1	LVCMOS w/ PUR	69	RX2p	O	Ch2 25Gbps Receive Output	CML
18	PRG_CNTL2		Programmable Control 2		70	RX2n			
19	PRG_CNTL3		Programmable Control 3		71	GND		Ground	
20	PRG_ALRM1	O	Programmable Alarm 1	LVCMOS	72	RX3p	O	Ch3 25Gbps Receive Output	CML
21	PRG_ALRM2		Programmable Alarm 2		73	RX3n			
22	PRG_ALRM3		Programmable Alarm 3		74	GND		Ground	
23	GND		Ground		75	RX4p	O	Ch4 25Gbps Receive Output	CML
24	TX_DIS	I	Transmitter Disable	LVCMOS w/ PUR	76	RX4n			
25	RX_LOS	O	Loss of Optical Input Signal	LVCMOS	77	GND		Ground	
26	MOD_LOPWR	I	Module Low Power Mode	LVCMOS w/ PUR	78	REFCLKp		Not Used	
27	MOD_ABS	O	Module Absent Indicator	GND	79	REFCLKn			
28	MOD_RSTn	I	Module Reset	LVCMOS w/ PDR	80	GND		Ground	
29	GLB_ALRMn	O	Global Alarm	LVCMOS (open drain)	81	TX7p	I	Ch7 25Gbps Transmit Input	CML
30	GND		Ground		82	TX7n			
31	MDC	I	Management Data Clock	1.2V CMOS	83	GND		Ground	
32	MDIO	I/O	Management bi-dir. Data	1.2V CMOS	84	TX0p	I	Ch0 25Gbps Transmit Input	CML
33	PRTADR0		MDIO Physical Port addr. bit0	1.2V CMOS	85	TX0n			
34	PRTADR1	I	MDIO Physical Port addr. bit1		86	GND		Ground	
35	PRTADR2		MDIO Physical Port addr. bit2		87	TX1p	I	Ch1 25Gbps Transmit Input	CML

36	VND_IO_C				88	TX1n			
37	VND_IO_D		Do not connect		89	GND		Ground	
38	VND_IO_E				90	TX6p	I	Ch6 25Gbps Transmit Input	CML
39	3.3V_GND		Ground		91	TX6n			
40	3.3V_GND		Ground		92	GND		Ground	
41	3.3V		3.3V Power Supply		93	TX5p	I	Ch5 25Gbps Transmit Input	CML
42	3.3V				94	TX5n			
43	3.3V				95	GND		Ground	
44	3.3V				96	TX2p	I	Ch2 25Gbps Transmit Input	CML
45	3.3V_GND		Ground		97	TX2n			
46	3.3V_GND				98	GND		Ground	
47	OHIO_REFCLKn	I	Overhead I/O Reference Clock		99	TX3p	I	Ch3 25Gbps Transmit Input	CML
48	OHIO_REFCLKp				100	TX3n			
49	GND		Ground		101	GND		Ground	
50	RX_MCLKn		Not for normal use		102	TX4p	I	Ch4 25Gbps Transmit Input	CML
51	RX_MCLKp				103	TX4n			
52	GND		Ground		104	GND		Ground	

Mechanical Specifications



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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