

CFP2-WDM-DET-1HL-AO

Cisco® CFP2-WDM-DET-1HL Compatible TAA Compliant 100/200GBase-DCO 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)
- Supports Host and Line-Side Loopback
- Tunable C-band Transmitter
- Tunable Optical Filter (TOF)
- Coherent Receiver
- Beyond 1000/2000km reach on Single Mode Fibre
- Operating temperature range 0°C to 70°C
- Power Consumption < 19W
- Single +3.3V Power Supply
- MDIO Management Interface
- RoHS Compliant



Applications

- 1x IEEE 100GBASE or ITU-T OTU4
- 2x IEEE 100GBASE or ITU-T OTU4 or mix (MUXPONDER)

Product Description

This Cisco® CFP2-WDM-DET-1HL compatible CFP2 transceiver provides 200GBase-DCO 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. Digital optical monitoring (DOM) support is also present to allow access to real-time operating parameters. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

AddOn'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
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	

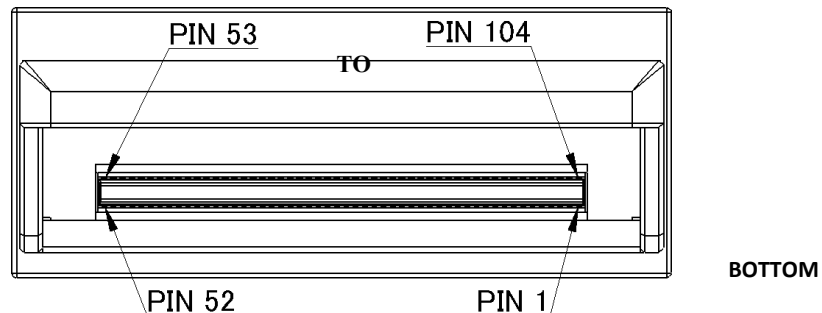
Optical Characteristics

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

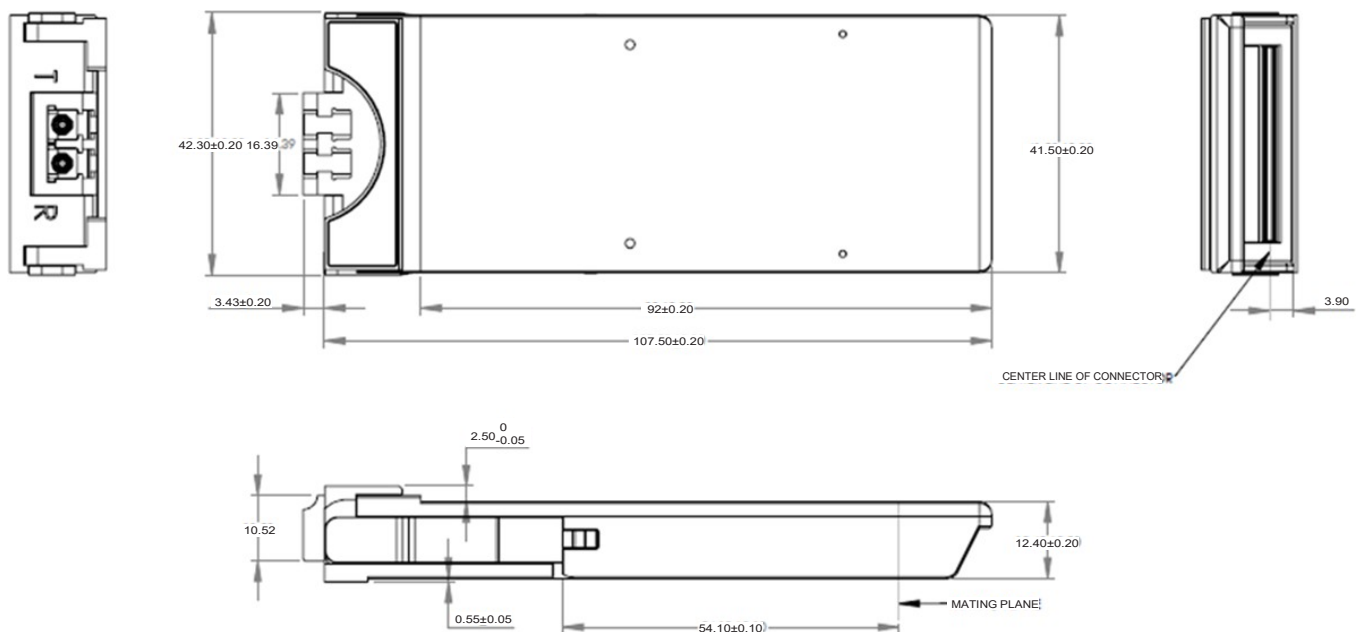


Pin Descriptions

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		3.3V Power Supply		59	GND		Ground	
8	3.3V_GND				60	RX1p	O	Ch1 25Gbps Receive Output	CML
9	3.3V				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_ALARM1	O	Programmable Alarm 1	LVCMOS	72	RX3p	O	Ch3 25Gbps Receive Output	CML
21	PRG_ALARM2		Programmable Alarm 2		73	RX3n			
22	PRG_ALARM3		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	I	MDIO Physical Port addr. bit0	1.2V CMOS	85	TX0n			
34	PRTADR1		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	Do not connect		88	TX1n		
37	VND_IO_D			89	GND	Ground	
38	VND_IO_E			90	TX6p	I	Ch6 25Gbps Transmit Input
39	3.3V_GND	Ground		91	TX6n		CML
40	3.3V_GND	Ground		92	GND	Ground	
41	3.3V	3.3V Power Supply		93	TX5p	I	Ch5 25Gbps Transmit Input
42	3.3V			94	TX5n		CML
43	3.3V			95	GND	Ground	
44	3.3V			96	TX2p	I	Ch2 25Gbps Transmit Input
45	3.3V_GND	Ground		97	TX2n		CML
46	3.3V_GND			98	GND	Ground	
47	OHIO_REFCLKn	I	Overhead I/O Reference Clock	99	TX3p	I	Ch3 25Gbps Transmit Input
48	OHIO_REFCLKp			100	TX3n		CML
49	GND	Ground		101	GND	Ground	
50	RX_MCLKn	Not for normal use		102	TX4p	I	Ch4 25Gbps Transmit Input
51	RX_MCLKp			103	TX4n		CML
52	GND	Ground		104	GND	Ground	

Mechanical Specifications



About AddOn Networks

In 1999, AddOn Networks entered the market with a single product. Our founders fulfilled a severe shortage for compatible, cost-effective optical transceivers that compete at the same performance levels as leading OEM manufacturers. Adhering to the idea of redefining service and product quality not previously had in the fiber optic networking industry, AddOn invested resources in solution design, production, fulfillment, and global support.

Combining one of the most extensive and stringent testing processes in the industry, an exceptional free tech support center, and a consistent roll-out of innovative technologies, AddOn has continually set industry standards of quality and reliability throughout its history.

Reliability is the cornerstone of any optical fiber network and is ingrained in AddOn's DNA. It has played a key role in nurturing the long-term relationships developed over the years with customers. AddOn remains committed to exceeding industry standards with certifications from ranging from NEBS Level 3 to ISO 9001:2005 with every new development while maintaining the signature reliability of its products.

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