

ONS-C2-WDM-DE-1HL-PRO

Cisco® ONS-C2-WDM-DE-1HL Compatible TAA Compliant 200GBase-DWDM CFP2 Transceiver (SMF, 1528.77nm to 1568.36nm, 80km, 0 to 70C, LC)

Features

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

Host Interface

- Hot pluggable CFP2 footprint
- Single-mode Fiber
- Tunable C-band Transmitter
- Proprietary Internal Soft-Decision Forward Error

Correction (SD-FEC)

- Coherent Receiver
- Tunable Optical Filter (TOF)
- Operating temperature range 0C to 70C
- Single-mode Fibre
- Power Consumption < 19W
- MDIO Management Interface



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.

Proline'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.



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 | |

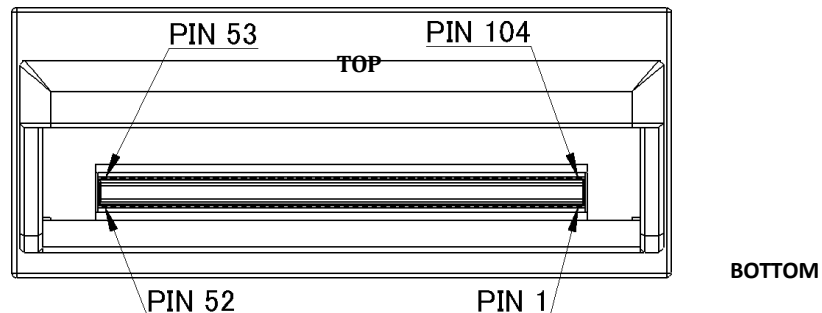
Optical Characteristics

| 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

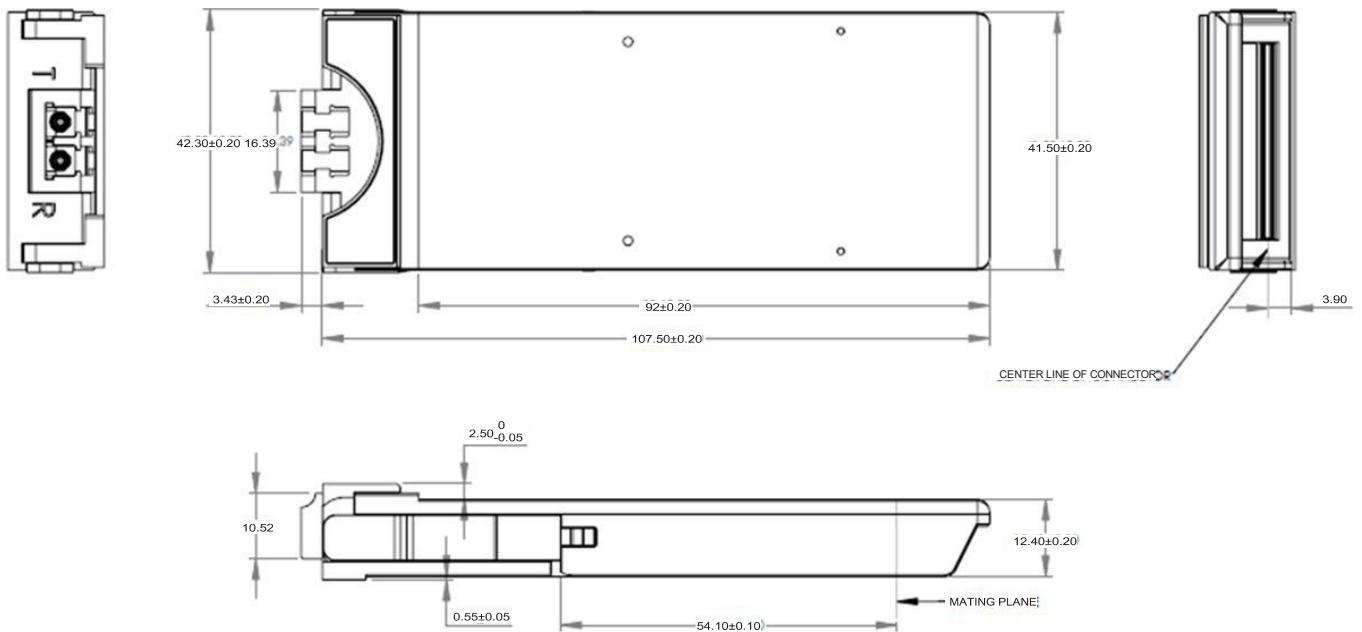


Pin Descriptions

| 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 | | | | Ch6 25Gbps Receive Output | CML | |
| 11 | 3.3V | | | | 63 | RX6p | O | | | | | |
| 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 | | Ground | | | | |
| 16 | VND_IO_B | | | | 68 | GND | | | | | | |
| 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 | 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 | | |

| | | | | | | | | | |
|----|--------------|---|------------------------------|----|------|------|---|---------------------------|-----|
| 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 | 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



About Us:

Proline Options is one of North America's leading providers of transceivers and high speed cabling. With a reputation for quality, tested products that cover the connectivity spectrum, Proline Options has a solution for you regardless of the specification.

At Proline Options, every product is tested in its intended application - never batch or spec tested only. We run bandwidth, distance and IOS network tests. We have documented an impressive 0.03% failure rate over the last 10 years. To continue this rate of success we invest millions annually in our own on-site testing lab.



Tel: 855.933.3223

Email: sales@prolineoptions.com

Email: techsupport@prolineoptions.com

Web: <https://www.prolineoptions.com>