

1001310 | 10G EPON XFP

Base Product



XFP Optical Transceiver for R-OLT PON interface, 10G/10G (10GBASE-PR30), 10G/1G (10/1GBASE-PRX30), 2G/1G (Turbo Mode), and 1G/1G (1000BASE-PX20)

The 1001310 Optical Transceiver Module enables 10G Ethernet bidirectional communications, supporting various high-bandwidth EPON products offered by CommScope such as the XE4202M Remote OLT (R-OLT). Conforming to the 10 Gbps Small Form Factor Pluggable Multisource Agreement, this state-of-the-art 1001310 optical transceiver is designed expressly for high-speed bidirectional communication applications that require 10 Gbps data rates. The transceiver complies with the IEEE 802.3av Draft 3.4 specification, supporting symmetric line rates of 10.3125 Gbps (10GBASE-PR30) (downstream/upstream) on 1577/1270 nm wavelengths and asymmetrical line rates of 10.3125/1.25 Gbps (10/1GBASE-PRX30) on 1577/1310 nm wavelengths, as well as 2.50 (Turbo-EPON)/1.25 Gbps or 1.25/1.25 Gbps (1000BASE-PX20) on 1490/1310 nm, utilizing a single fiber with a standard SC/UPC connector. The module features a very low jitter contribution, resulting in an extremely clean, high-quality eye pattern required for high transmission performance. The module's metal enclosure not only makes the unit sturdier, but also improves FCC EMI test margins. This emission and ESD control is particularly important in applications with sensitive multi-port switches.

Key features of the 1001310 :

- Bidirectional XFP transceiver supports CommScope 10G Ethernet optical product transmissions on a single fiber
- Supports 10.3125/10.3125 Gbps on 1577/1270 nm, 10.3125/1.25 Gbps on 1577/1310 nm, 2.50/1.25 Gbps (Turbo-mode) or 1.25/1.25 Gbps on 1490/1310 nm Transmit/Receive communications
- IEEE 802.3av D3.4 compliant
- Pluggable 10 Gbps XFP MSA compliant footprint
- SC/UPC fiber connector
- Low jitter provides high transmission performance
- Metal enclosure for durability and low EMI
- Extended operating temperature range of -40° to 90°C

Product Classification

Regional Availability	Asia Australia/New Zealand EMEA Latin America North America
Product Type	Optical transceiver
Product Brand	CommScope FLX™
Product Series	XFP

Dimensions

Height	8.382 mm 0.33 in
Width	18.288 mm 0.72 in
Length	78.74 mm 3.1 in

Electrical Specifications

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Input Voltage 3.3 VDC ±5% (supplied by node/VHub module) | 5.0 VDC ±5% (supplied by node/VHub module)

Power Consumption, typical 4 W

Optical Specifications

Supported Link Length 20 km (@ 1x32 split)

Optical Port Interface SC/UPC

Receiver Center Wavelength 1270 nm nominal (1260–1280 nm) | 1310 nm nominal (1260–1360 nm)

Receiver Data Rate (Burst Mode) 1.25 Gb/s | 10.312 Gb/s

Receiver Input Power, damage level -5 dBm

Receiver Input Power, maximum -6.0 dBm min | -9.3 dBm min. (operation between -9.3 and -5.0 dBm is not recommended)

Receiver Loss of Signal Assert Level, minimum -45 dBm

Receiver Loss of Signal de-Assert, maximum -31 dBm

Receiver Sensitivity at Temperature -28.0 dBm max @-40 to 85 degrees C, (@BER=10-3, ER=6dB, PRBS 231-1): EOL = -27 dBm | -29.78 max @-40 to 85 degrees C, (@BER=10-12, ER=9 dB, PRBS 27-1): EOL = -28.78 dBm

Transmitter Center Wavelength 1490 nm nominal (1480–1500 nm) | 1577 nm nominal (1575–1580 nm)

Transmitter Data Rate 10.312 Gb/s

Transmitter Data Rate (Turbo mode) 2.5 Gb/s

Transmitter Extinction Ratio, minimum 6 dB | 8 dB

Transmitter Output Power +2.0 to +7.0 dBm | +2.0 ±5.0 dBm

Transmitter Type CW DFB | CW EML

Environmental Specifications

Operating Temperature -40 °C to +90 °C (-40 °F to +194 °F)

Storage Temperature -40 °C to +90 °C (-40 °F to +194 °F)

Operating Humidity 0%–85%, non-condensing

Safety Standard Class 1 devices per FDA 21CFR1040.10 | IEC 60825-2 Class I laser safety compliant

Packaging and Weights

Weight, net 0.045 kg | 0.1 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted
UK-ROHS	Compliant



* Footnotes

Receiver Input Power, damage level at which damage occurs