

CommScope FLX™ Combo XGS-PON/GPON Optical Module, SFP+,
Single fiber bi-directional data links with Tx1: 9.953 Gbps Rx1: 9.953 Gbps
/ 2.488 Gbps Tx2: 2.488 Gbps Rx2: 1.244 Gbps

FEATURES

- Combination of XGS-PON OLT and GPON OLT optical transceivers in an SFP+ package
- Complies with ITU-T G.9807.1 N2 class
- Complies with ITU-T G.984.2 C+ class
- Single fiber bi-directional data links with
 - Tx1: 9.953 Gbps
 - Rx1: 9.953 Gbps / 2.488 Gbps
 - Tx2: 2.488 Gbps
 - Rx2: 1.244 Gbps
- 1577 nm continuous-mode transmitter with EML laser
- 1490 nm continuous-mode transmitter with DFB laser
- 1270 nm burst-mode receiver with APD-TIA
- 1310 nm burst-mode receiver with APD-TIA
- 2-wire interface for integrated digital diagnostic monitoring
- +3.3V power supply, 3.5W power consumption
- RoHS With Exemptions 7C(I)
- 20km Reach
- Operating temp: -40 ~ 90°C
- Supports 20 Pin-out

Product Classification

Product Type	Optical transceiver
Product Brand	CommScope FLX™
Product Series	SFP

General Specifications

Reflectance, maximum	-12 dB @ 1260–1280 nm (XGS) -20 dB @ 1290–1330 nm (GPON)
Differential Power, maximum	20 dB
Transmission Distance, maximum	20 km

Dimensions

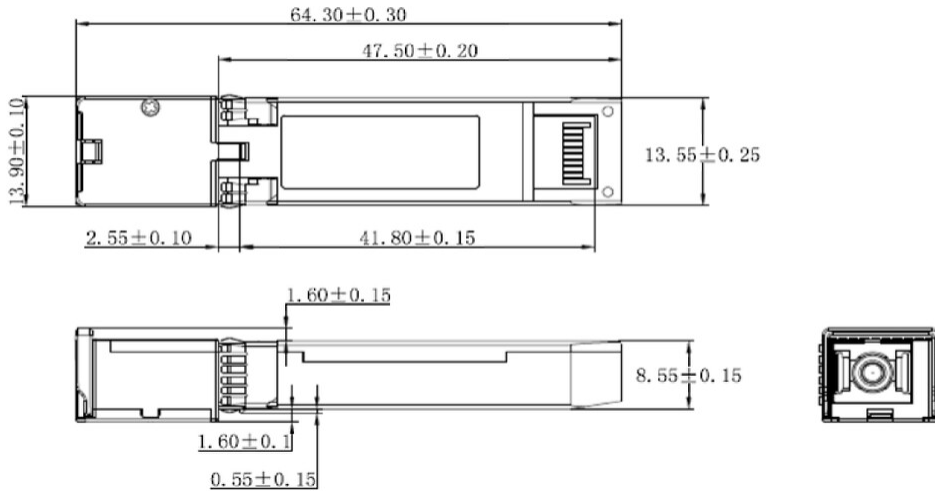
Height	12.294 mm 0.484 in
Width	13.894 mm 0.547 in

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Length

64.287 mm | 2.531 in

Dimension Drawing



Port Configuration

Pin	Logic	Name	Description
1	CML-I	GPON_TD+	GPON transmit data input, AC coupling
2	CML-I	GPON_TD-	Inverted GPON transmit data input, AC coupling
3		GND	Ground
4	LVTTTL	SDA	2-Wire serial interface SDA
5	LVTTTL	SCL	2-Wire serial interface SCL
6	LVPECL-O	GPON_RD-	Inverted GPON received data output, DC coupling
7	LVTTTL	XGSPON_Reset/Rate_select	High level (> 1.9V) for the RESET function, Low level (<0.9V) for 10G Rate selection signal, Intermediate level (0.9V ~1.9V) for 2.5g Rate select signal
8	LVTTTL-O	XGSPON_SD	XGS Receiver signal detect, logic 1 indicates normal operation
9	LVTTTL	Trig/Tx_disable	Signal pins are multiplexed through register, when use as Tx disable, active high.
10	LVPECL-O	GPON_RD+	GPON received data output, DC coupling
11		GND	Ground
12	CML-O	XGS-PON RD-	Inverted XGSPON received data output, DC coupling
13	CML-O	XGS-PON RD+	XGSPON received data output, DC coupling
14	LVTTTL-O	GPON SD	GPON Receiver signal detect, logic 1 indicates normal operation
15		VCC Rx	+3.3V Power supply
16		VCC Tx	+3.3V Power supply
17	LVTTTL-I	GPON Reset	Reset for GPON LA, active high
18	CML-I	XGS-PON TD+	XGS transmit data input, AC coupling
19	CML-I	XGS-PON TD-	Inverted XGS transmit data input, AC coupling
20		GND	Module Ground

Electrical Specifications

Input Current, maximum

1115 mA

Input Voltage

+3.14 to +3.47 Vdc

Input Voltage, maximum	3.6 V
Power Consumption, maximum	3.5 W
Receiver Data Output Differential Swing Range	300–800 mVpp @ 2.488 Gbps 300–800 mVpp @ 9.953 Gbps 600–1600 mVpp @ 1.244 Gbps
Receiver Loss of Signal Assert Time, maximum	100 ns @ 9.953 Gbps 50 ns @ 1.244 Gbps 50 ns @ 2.488 Gbps
Receiver Loss of Signal de-Assert Time, maximum	12.8 ns @ 1.244 Gbps 12.8 ns @ 2.488 Gbps 50 ns @ 9.953 Gbps
Receiver Loss of Signal Detected Voltage High, minimum	2.4 V
Receiver Loss of Signal Detected Voltage Low, maximum	0.4 V
Transmitter Data Input Differential Swing Range	200–850 mVpp @ 2.488 Gbps 200–850 mVpp @ 9.953 Gbps
Transmitter Differential Impedance, typical	100 ohm
Transmitter Fault Indication Voltage High, minimum	2.4 V
Transmitter Fault Indication Voltage Low, maximum	0.4 V
 Optical Specifications	
Optical Isolation, minimum	–30 dB (from external below 1260–1280 nm) –30 dB (from external below 1342–1650 nm)
Optical Port Interface	SC/UPC
Receiver Center Wavelength	1270 nm nominal (1260–1280 nm) @ 2.488 Gbps 1270 nm nominal (1260–1280 nm) @ 9.953 Gbps 1310 nm nominal (1290–1310 nm) @ 1.244 Gbps
Receiver Loss of Signal Assert Level, minimum	–30 dBm @ 9.953 Gbps –31 dBm @ 2.488 Gbps –33 dBm @ 1.244 Gbps
Receiver Loss of Signal de-Assert, maximum	–45 dBm @ 1.244 Gbps –45 dBm @ 2.488 Gbps –45 dBm @ 9.953 Gbps
Receiver Saturation, minimum	–12 dBm @ 1.244 Gbps –7 dBm @ 9.953 Gbps –9 dBm @ 2.488 Gbps
Receiver Sensitivity, maximum	–28 dBm @ 9.953 Gbps –29.5 dBm @ 2.488 Gbps –32 dBm @ 1.244 Gbps
Transmitter Center Wavelength	1490 nm nominal (1480–1500 nm) @ 2.488 Gbps 1577 nm nominal (1575–1580 nm) @ 9.953 Gbps
Transmitter Extinction Ratio, minimum	8.2 dB
Transmitter Reflected Power Tolerance, minimum	–15 dB
Transmitter Launch Power Range	+4 to +7 dBm
Transmitter Launch Power OFF Transmitter, maximum	–39 dBm @ 9.953 Gbps –40 dBm @ 2.488 Gbps

Environmental Specifications

Operating Temperature	-40 °C to +90 °C (-40 °F to +194 °F)
Operating Humidity	5%–85%