CommScope FLX™ XGS-PON Optical Module, Single fiber bi-directional data links with 9.953 Gbps downstream and 9.953 Gbps / 2.488 Gbps upstream, SFP+ package with SC/UPC receptacle interface

FEATURES

- Support ITU-T G.9807.1 XGS-PON OLT N2 Application
- Single fiber bi-directional data links with 9.953 Gbps downstream and 9.953 Gbps / 2.488 Gbps (compatible) upstream
- 1577 nm continuous-mode transmitter with EML laser
- 1270 nm burst-mode receiver with APD-TIA
- 2-wire interface for integrated digital diagnostic monitoring
- SFP+ package with SC/UPC receptacle optical interface
- +3.3V power supplies
- RoHS With Exemptions
- 20Km Reach
- Operating case temperature Industrial temp: -40 ~ +90°C

Product Classification

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

General Specifications

Transmission Distance, maximum: 20 km

Dimensions

Height: 12.294 mm | 0.484 in
Width: 13.894 mm | 0.547 in
Length: 64.287 mm | 2.531 in

Dimension Drawing
Port Configuration

<table>
<thead>
<tr>
<th>Pin</th>
<th>Logic</th>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LV TTL</td>
<td>Rate Sel</td>
<td>2.5G = Low, 10G = High</td>
</tr>
<tr>
<td>2</td>
<td>LV TTL</td>
<td>TX_Fault</td>
<td>High voltage: TX Laser fault or safety, low voltage: Normal operation</td>
</tr>
<tr>
<td>3</td>
<td>LV TTL</td>
<td>Tx_Disable</td>
<td>Active high to disable laser</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>SDA</td>
<td>2-Wire serial interface SDA</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>SCL</td>
<td>2-Wire serial interface SCL</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>MOB_ABS</td>
<td>Module Ground</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>RESET</td>
<td>Reset for TIAA, Active High</td>
</tr>
<tr>
<td>8</td>
<td>LV TTL</td>
<td>Rx_SD</td>
<td>Receiver signal detect, logic 1 indicates normal operation</td>
</tr>
<tr>
<td>9</td>
<td>LV TTL</td>
<td>RSSI_T</td>
<td>RSSI trigger input, active high</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>GND</td>
<td>Module Ground</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>GND</td>
<td>Module Ground</td>
</tr>
<tr>
<td>12</td>
<td>LV CML</td>
<td>RD-</td>
<td>2.5/10G LVCM output with DC coupling</td>
</tr>
<tr>
<td>13</td>
<td>LV CML</td>
<td>RD+</td>
<td>2.5/10G LVCM output with DC coupling</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>GND</td>
<td>Module Ground</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>VCC</td>
<td>+3.3V Power supply</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>VCC</td>
<td>+3.3V Power supply</td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>GND</td>
<td>Module Ground</td>
</tr>
<tr>
<td>18</td>
<td>LV CML</td>
<td>TD+</td>
<td>10G LVCM input with AC coupling</td>
</tr>
<tr>
<td>19</td>
<td>LV CML</td>
<td>TD-</td>
<td>10G LVCM input with AC coupling</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>GND</td>
<td>Module Ground</td>
</tr>
</tbody>
</table>

Electrical Specifications

- **Input Current, maximum**: 796 mA
- **Input Voltage**: +3.13 to +3.47 Vdc
- **Input Voltage, maximum**: 3.6 V
- **Power Consumption, maximum**: 2.5 W
Receiver Data Output Differential Swing Range | 300–800 mVpp
---|---
Receiver Loss of Signal Assert Time, maximum | 100 ns
Receiver Loss of Signal de-Assert Time, maximum | 50 ns
Receiver Loss of Signal Detected Voltage High, minimum | 2 V
Receiver Loss of Signal Detected Voltage Low, maximum | 0.8 V
Transmitter Data Input Differential Swing Range | 200–850 mVpp
Transmitter Differential Impedance, typical | 100 ohm

Optical Specifications

Optical Isolation, minimum | –32 dB (from external above 1280 nm) | –32 dB (from external below 1260 nm)
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Optical Port Interface | SC/UPC
Receiver Center Wavelength | 1270 nm nominal (1260–1280 nm)
Receiver Loss of Signal Assert Level, minimum | –30 dBm
Receiver Saturation, minimum | –7 dBm
Receiver Loss of Signal de-Assert, maximum | –42 dBm
Receiver Sensitivity, maximum | –28 dBm
Transmitter Center Wavelength | 1577 nm nominal (1575–1580 nm)
Transmitter Optical Path Penalty, maximum | 1 dBm
Transmitter Extinction Ratio, minimum | 8.2 dB
Transmitter Side Mode Suppression, minimum | 30 dB
Transmitter Eye Diagram, maximum | 3.2 dB
Transmitter Launch Power Range | +4 to +7 dBm
Transmitter Launch Power OFF Transmitter, maximum | –39 dBm

Environmental Specifications

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