

Ciena Compatible XCVR-010M31 Quick Spec:

| | |
|-----------------|-------------|
| Part Number | XCVR-010M31 |
| Form Factor: | SFP |
| TX Wavelength: | 1310nm |
| Reach: | 10km |
| Cable Type: | SMF |
| Rate Category: | 1000Base |
| Interface Type: | LX |
| DDM: | No |
| Connector Type: | Dual-LC |



Ciena Compatible XCVR-010M31 Features

- Up to 1.25Gb/s data links
- Hot-pluggable SFP Footprint
- Compliant with specifications for IEEE802.3Z
- Eye Safety Designed to meet Laser Class1 Compliant with IEC60825-1
- Single +3.3V Power Supply
- RoHS compliance
- 10km links on standard 9/125 micron singlemode fiber
- Operating temperature range:
 - Standard 0 to +70 °C
 - Industrial -40 to +85 °C

Ciena Compatible XCVR-010M31 Applications

- Gigabit Ethernet
- 1x Fiber Channel
- Other optical links

Ciena Compatible XCVR-010M31 Specification

Electrical and Optical Characteristics (Condition: Ta=TOP)

| Parameter | Symbol | Min. | Typ | Max. | Unit |
|-------------------------------------|-----------------|------|-----|-----------------|--------|
| Transmitter Differential Input Volt | +/-TX_DAT | 650 | | 2000 | mV p-p |
| Supply Current | I _{CC} | | 200 | 250 | mA |
| Tx_Disable Input Voltage – Low | V _{IL} | 0 | | 0.8 | V |
| Tx_Disable Input Voltage – High | V _{IH} | 2.0 | | V _{CC} | V |
| Tx_Fault Output Voltage – Low | V _{OL} | 0 | | 0.8 | V |
| Tx_Fault Output Voltage – High | V _{OH} | 2.0 | | V _{CC} | V |
| Receiver Differential Output Volt | +/-RX_DAT | 0.4 | | 2000 | mV p-p |
| Rx_LOS Output Voltage- Low | V _{OL} | 0 | | 0.8 | V |
| Rx_LOS Output Voltage- High | V _{OH} | 2.0 | | V _{CC} | V |

Optical Characteristics

| TX | | | | | |
|-------------------------|---------------------------|---------------|------|---------------|------|
| Parameter | Symbol | Min | Typ | Max | Unit |
| Data Rate | B | - | 1250 | - | Mb/s |
| Centre wavelength | λ_c | 1296 | 1310 | 1330 | nm |
| Output Spectral Width | $\Delta\lambda$ | - | - | 4 | nm |
| Average Output Power | P_o | -9 | - | -3 | dBm |
| Extinction Ratio | EXT | 10 | - | - | dB |
| Data Input Voltage-High | V_{IHS} | $V_{cc}-1.16$ | - | $V_{cc}-0.89$ | V |
| Data Input Voltage -Low | V_{ILS} | $V_{cc}-1.82$ | - | $V_{cc}-1.48$ | V |
| Supply Current | I_{cc} | - | 90 | 150 | mA |
| Output Optical Eye | Compliant with IEEE802.3Z | | | | |

| RX | | | | | |
|--------------------------------------|-------------|---------------|-----|---------------|------|
| Parameter | Symbol | Min | Typ | Max | Unit |
| Receive Sensitivity | P_{min} | - | - | -21 | dBm |
| Maximum Input Power | P_{MAX} | -3 | 0 | - | dBm |
| Signal Detect Threshold-Assertion: | SD_{HIGH} | - | - | -23 | dBm |
| Signal Detect Threshold-Deassertion: | SD_{LOW} | -35 | - | - | dBm |
| Hysteresis | - | - | 2.0 | - | dBm |
| Output High Voltage | V_{OH} | $V_{cc}-1.03$ | - | $V_{cc}-0.89$ | V |
| Output Low Voltage | V_{OL} | $V_{cc}-1.82$ | - | $V_{cc}-1.63$ | V |
| Operating Wavelength | λ_c | 1100 | - | 1600 | nm |
| Supply Current | I_{cc} | - | 80 | 110 | mA |

Absolute Maximum Ratings ($T_C=25^\circ\text{C}$)

| Parameter | Symbol | Min | Max | Unit |
|------------------------------------|----------|-----|-----|------------------|
| Storage Temperature | T_{ST} | -40 | +85 | $^\circ\text{C}$ |
| Operating Temperature (Standard) | T_{IP} | 0 | +70 | $^\circ\text{C}$ |
| Operating Temperature (Industrial) | T_{IP} | -40 | +85 | $^\circ\text{C}$ |
| Input Voltage | T_{CC} | 0 | 5 | V |

Recommended Operation Environment

| Parameter | Symbol | Min | Typ | Max | Unit |
|-----------------------|----------|------|-----|------|------------------|
| Supply Voltage | V_{CC} | +3.0 | 3.3 | +3.6 | V |
| Operating Temperature | T_{OP} | 0 | - | +50 | $^\circ\text{C}$ |