



Vi-Link

Fiber Optic Communications

10 GB 850nm 300m LC SFP Transceiver

Optic Component Series

Model VO-850-10G

Features

- * Optical interface compliant to IEEE 802.3ae 10GBASE-SR
- * Electrical interface compliant to SFF-8431
- * Hot Pluggable
- * 850nm VCSEL transmitter, PIN photo-detector
- * Maximum link length of 300m on 2000MHz/km MMF
- * Operating case temperature: 0 to 70 °C
- * Low power consumption
- * All-metal housing for superior EMI performance
- * Advanced firmware allow customer system encryption information to be stored in transceiver
- * Cost effective SFP+ solution, enables higher port densities and greater bandwidth



Product Description

This 850nm VCSEL 10Gigabit SFP+ transceiver is designed to transmit and receive optical data over 50/125 μm or 62.5/125 μm multimode optical fiber (Table 1).

The SFP+ SR module electrical interface is compliant to SFI electrical specifications. The transmitter input and receiver output impedance is 100 Ohms differential. Data lines are internally AC coupled. The module provides differential termination and reduce differential to common mode conversion for quality signal termination and low EMI. SFI typically operates over 200 mm of improved FR4 material or up to about 150mm of standard FR4 with one connector.

The transmitter converts 10Gbit/s serial PECL or CML electrical data into serial optical data compliant with the 10GBASE-SR standard. An open collector compatible Transmit Disable (Tx_Dis) is provided. A logic "1," or no connection on this pin will disable the laser from transmitting. A logic "0" on this pin provides normal operation. The transmitter has an internal automatic power control loop (APC) to ensure constant optical power output across supply voltage and temperature variations. An open collector compatible Transmit Fault (TFault) is provided. TX_Fault is a module output contact that when high, indicates that the module transmitter has detected a fault condition related to laser operation or safety. The TX_Fault output contact is an open drain/collector and shall be pulled up to the Vcc_Host in the host with a resistor in the range 4.7-10 kΩ. TX_Disable is a module input contact. When TX_Disable is asserted high or left open, the SFP+ module transmitter output shall be turned off. This contact shall be pulled up to VccT with a 4.7 kΩ to 10 kΩ resistor.

The receiver converts 10Gbit/s serial optical data into serial PECL/CML electrical data. An open collector compatible Loss of Signal is provided. Rx_LOS when high indicates an optical signal level below that specified in the relevant standard. The Rx_LOS contact is an open drain/collector output and shall be pulled up to Vcc_Host in the host with a resistor in the range 4.7-10 kΩ, or with an active termination. Power supply filtering is recommended for both the transmitter and receiver. The Rx_LOS signal is intended as a preliminary indication to the system in which the SFP+ is installed that the received signal strength is below the specified range. Such an indication typically points to non-installed cables, broken cables, or a disabled, failing or a powered off transmitter at the far end of the cable. The physical IC can also be accessed via 2wire serial bus at address A0h.

Applications

- * 10GBASE-SR at 10.3125Gbps
- * 10GBASE-SW at 9.953Gbps

Ordering Information

Model	Descriptions
VO-850-10G	10 GB 850 nm, 300m SFP, LC Transceiver

*** Please Consult Factory for Additional Model Numbers***