Air Live®
Powered by OvisLink Corp.

# SFP-MiniGBIC Transceiver

LX and SX

## User Manual

www.airlive.com


# Copyright & Disclaimer



OvisLink Corp. has made the best effort to ensure the accuracy of the information in this user's guide. However, we are not liable for the inaccuracies or errors in this guide. Please use with caution. All information is subject to change without notice

This product contains some codes from GPL. In compliance with GPL agreement, AirLive will publish the GPL codes on our website. Please go to www.airlive.com and go to the "Support->GPL" menu to download source code.

## FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

## Disposal

| | |
|---|---|
|  | This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling. |

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# 1 Overview



The SFP-LX-10 v2 is a high performance and cost-effective module for serial optical data communication applications specified for singlemode of 1.25 Gb/s. The module is intended for single mode fiber, operates at a nominal wavelength of 1310nm. The module is a duplex LC connector transceiver designed for use in Gigabit Ethernet applications and to provide IEEE802.3z compliant link from 125Mbps to 2.125Gbps applications.

The SFP-SX v2 is a high performance and cost-effective module for serial optical data communication applications specified for multimode of 1.25 Gb/s. The module is intended for multimode mode fiber, operates at a nominal wavelength of 850nm. The module is a duplex LC connector transceiver designed for use in Gigabit Ethernet applications and to provide IEEE802.3z compliant link from 125Mbps to 2.125Gbps applications.

## 1.1 Adding to Module to a Switch

First time adding, make sure your switch has a SPF slot into which the SPF module can be placed. Slide the module straight into the SPF slot unit it clicks into place. When it does click it means the module was not pushed inside far enough. Ones the module is inside the switch your fiber cable can be connected and its ready for use.

## 1.2 Specifications

| Model | SFP-LX-10 v2 | SFP-SX v2 |
|---|---|---|
| **General** | | |
| Supply Voltage | 3.1 ~ 3.5 V | 3.1 ~ 3.5 V |
| Supply Current | 250 mA | 250 mA |
| Operating Temperature | 0°C ~ 70°C | 0°C ~ 70°C |
| Storage Temperature | -40°C ~ 85°C | -40°C ~ 85°C |
| Produce Weight (g) | 8 g | 6 g |
| Dimensions | 58 * 13 * 12 mm | 58 * 13 * 12 mm |
| **Transmitter (Electrical - Optical)** | | |
| Output Power | -9.5 dBm ~ -3 dBm | -9.5 dBm ~ -3 dBm |
| Extinction Ratio | 9 dB (min.) | >9 dB |
| Coupled Power Ratio | 12 ~ 20dB | >9 dB |
| Wavelength | 1310 nm | 830 ~ 860 nm |
| Spectral Width (RMS) | 2.5 nm | 0.85 nm |
| Rise/Fall Time, (20% ~ 80%) | 260 ps | 260 ps |
| Relative Intensity Noise | -120 dB/Hz | -117 dB/Hz |
| Total Jitter | 227 ps | 227 ps |
| Eye Mask | Compliant with IEEE 802.3z | Compliant with IEEE 802.3z |
| Max. Pout TX-DISABLE Asserted | >-45 dBm | >-45 dBm |
| Differential Input Voltage | 0.4 V ~ 2.0 V | 0.4 V ~ 2.0 V |
| **Receiver Specifications (Electrical - optical)** | | |
| Optical Input Power-maximum | -3 dBm (BER < 10-12) | -3 dBm (BER < 10-12) |
| Optical Input Power-minimum (Sensitivity) | -20 dBm (BER < 10-12) | -18 dBm (BER < 10-12) |
| Wavelength | 1310 nm | 770-860 nm |
| Optical Return Loss | 12 dB | 12 dB |
| Loss of Signal-Asserted | -20 dBm | -20 dBm |
| Loss of Signal-Deasserted | -35 dBm | -35 dBm |
| Differential Output Voltage | 0.5 V ~ 1.2 V | 0.5 V ~ 1.2 V |
| Data Output Rise, Fall Time (20% ~ 80%) | 0.35 ns | 0.35 ns |
| Receiver Loss of Signal Output Voltage-Low | 0 V ~ 0.5 V | 0 V ~ 0.5 V |
| Receiver Loss of Signal Output Voltage-High | 2.4 V | 2.4 V |

** Specifications are subject to change and improvement without notice.

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