

Industrial Level 10G Multi Giga SFP+ MiniGBIC Transceiver, Up to 10KM, Hot pluggable, Auto-fall back

ISFP-LR-10G-10KM

airlive®



10G SFP+ transceiver

1310nm DFB

Up to 10KM

Single Mode Dual Fiber

Industrial-level

LC Duplex Connector

DDM Function

ESD Protection

Hot Pluggable

-40°C~+85°C

Overview

The AirLive ISFP-LR-10G-10KM is a low power, high performance and cost-effective single mode Industrial level SFP+ Fiber transceiver for serial optical data communication applications up to 10Gbps and 10KM in Industrial environments. The low jitter and high sensitivity module is intended for multi mode dual fiber and operates at a nominal wavelength of 1310nm, the higher operating temperature of $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ makes the module ideally suited for Industrial and higher temperature areas, the module is hot pluggable.

The transceiver incorporates TX Disable control, TX-Fault, and RX_LOS monitor functions. It is a duplex LC connector transceiver designed to work on Multi Gigabit Ethernet applications and to provide IEEE802.3ae compliant link and Class I Laser safety compliant link.

The suitable applications such as High-speed storage area networks, computer cluster cross-connect, customized high-speed data pipes, and more.

Features

- 10Gbps Fiber Mini GBIC SFP+ Transceiver
- Single mode SFP+ fiber
- Duplex LC connector Interface
- Wavelength 1310nm DFB Laser and PIN photo detector
- 10Gbps high speed
- Distance up to 10KM
- Low Power consumption < 1.0W
- Hot-pluggable capability
- Very low EMI
- Excellent ESD protection
- Compatible with SFF8472
- Operating Temperature : $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Application

- Fiber Channel Infrastructure
- STM-16 Optical Interface
- ATM Switches and Routers
- SDH/SONET Switch Infrastructure

Application Environment examples

- Bank
- AirPort
- Hotel
- Expressway
- Petrochemical Industry
- Metro
- Factory

Transmitter Operating Characteristic Optical, Electrical

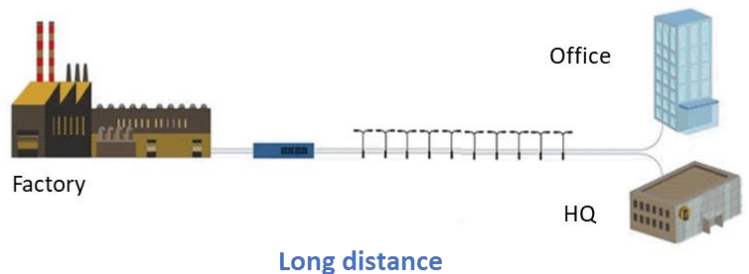
| Transmitter | | | | | |
|-------------------------------|----------------------|------|---------|------|-------|
| Parameter | Symbol | Min. | Typical | Max. | Unit |
| Centre Wavelength | λ_c | 1290 | 1310 | 1330 | nm |
| Sid-Mode Suppression Ratio | SMSR | 35 | - | - | dB |
| Average Output Power | Po | -5 | - | +0.5 | dBm |
| Extinction Ratio | Er | 3.5 | - | | dB |
| Dispersion Penalty | | | | 3.2 | dB |
| Relative Intensity Noise | RIN _{12OMA} | | | -128 | dB/Hz |
| Total jitter | Tj | | | 215 | PS |
| Input Differential Impedence | Zin | 90 | 100 | 110 | Ohm |
| Data Input Swing Differential | Vin | 180 | | 700 | mV |
| TX Disable - Disable | | 2.0 | | Vcc | V |
| TX Disable - Enable | | 0 | | 0.8 | V |
| TX Fault - Assert | | 2.0 | | Vcc | V |
| TX Fault – De-Assert | | 0 | | 0.8 | V |

Receiver Operating Characteristic Optical, Electrical

| Receiver | | | | | |
|-------------------------------|-------------|------|---------|------|------|
| Parameter | Symbol | Min. | Typical | Max. | Unit |
| Centre Wavelength | λ_c | | 1310 | | nm |
| Receiver Sensitivity | Rsen | - | - | -13 | dBm |
| Receiver Overload | Rov | | | -12 | dBm |
| Return Loss | | -3 | | | dB |
| LOS Assert | LOSA | -28 | | | dBm |
| LOS De-Assert | LOSD | | | -14 | dBm |
| LOS Hysteresis | | 0.5 | | 4 | |
| Output differential impedance | Zout | - | 100 | - | Ohm |
| Data Input Swing Differential | Vout | 300 | - | 800 | mV |
| Rx_LOS - Assert | - | 2.0 | - | Vcc | V |
| Rx_LOS – De-Assert | - | 0 | - | 0.8 | V |

Industrial level Fiber for Long Distance up to 10Km, 10Gbps, auto- fallback

Extend the network further with the AirLive network switches and fiber modules. Use the Industrial SFP+ modules in the SFP+ ports which also supports DDM and offers more information about the fiber connection and makes it easier to find any faults or bad connections.



| Model | AirLive ISFP-LR-10G-10KM |
|--|--|
| <p>Hardware</p> <ul style="list-style-type: none"> • Power Supply Voltage 3.15V~3.45V Typical Power Supply Voltage: 3.3V • Standard Compliant with IEEE 802.3ae Compliant with Digital Diagnostic SFF-8472 Compliant with IEC-60825 DDM Support ESD Protection • Total Supply Current: 300mA • Data Rate: 103125 Mbps • Power Dissipation Max 1.0 W • Transmitter (Electrical - Optical) Centre Wavelength: - Min.:1290nm - Typical: 1310nm - Max.: 1330nm Average Output Power Extinction Ratio: 3.5dB Operating Data Rate: 10Gbps Tx Input Differential. Voltage: - Min. 180 Mv - Max. 700 mV Tx Fault Output Voltage – Assert: - Min. 2.0V - Max. Vcc Tx Fault Output Voltage – De-Assert: - Min. 0V - Max. 0.8V • Receiver -Optical, Electrical Center Wavelength: - Typical 1310nm Receive Sensitivity In Average Power: - Max. -13dBm Los Assert: -12dB Los De-Assert: -28dBm Los Hysteresis - Min. 0.5 - Max. 4 Overload: -12dBm Data Input Swing Differential Voltage - Min. 180mV - Max. 700mV | <p>Environment</p> <ul style="list-style-type: none"> • Operating Temperature: -40°C to +85°C • Storage Temperature: -40°C to +85°C • Working Humidity: 0%~85%, non-condensing <p>Standard package of SFP</p> <ul style="list-style-type: none"> • Product size: 58.4 x 13.7 x 8.5 mm(L*W*H) • Package size: TBD mm(L*W*H) • Package Weight: N.W: TBD kgs; G.W:TBD KGS • Package content: 1 x SFP Module <p>Standard carton package</p> <ul style="list-style-type: none"> • Quantity: 10 pcs / 1 Blister • Dimensions TBD mm(L*W*H) • Weight TBD kgs <p>Ordering Information</p> <ul style="list-style-type: none"> • Model: ISFP-LR-10G-10KM • Name: 10Gbps Fiber Mini GBIC ISFP+ Transceiver, 1310nm, LC connector, 10KM, hot-pluggable |

* Specification will be changed without prior notice

