FIBERROAD®

Power over Ethernet Fiber Media Converter

Product Data Sheet

PoE Fiber Media Converter

The PoE Fiber Media Converter with Internal Power Supply is a versatile networking solution designed to bridge copper and fiber networks while delivering seamless Power over Ethernet (PoE) support. Compliant with IEEE 802.3af/at standards, it powers devices such as IP cameras, wireless APs, and VoIP phones with up to 30W of PoE output, eliminating the need for external power sources. This converter supports both Fast Ethernet (10/100Mbps) and Gigabit Ethernet (1000Mbps) speeds, ensuring compatibility with diverse network infrastructures. Key features include Link Fault Pass-Through (LFP) to maintain network integrity by mirroring link statuses and a PD remote reset function via DIP switch for effortless troubleshooting of connected devices. Built with an integrated power supply (100–240V AC) to reduce installation clutter, it operates reliably in 0–50°C environments, making it ideal for demanding commercial applications like surveillance systems, industrial IoT deployments, and enterprise networks.

Main Features

- **Ethernet Support**: Compatible with both Fast Ethernet (10/100 Mbps) and Gigabit Ethernet (10/100/1000 Mbps)
- **Power over Ethernet (PoE) Compliance**: Supports IEEE 802.3af/at PoE standards, delivering up to 30W of power to connected PD (Powered Device) equipment such as IP cameras, wireless access points, and VoIP phones.
- **Internal Power Supply**: Integrated power design eliminates the need for an external adapter, simplifying installation and reducing cable clutter.
- **Link Fault Pass-Through (LFP):** Automatically detects and mirrors link failures between fiber and copper ports, ensuring seamless network troubleshooting and redundancy.
- **PD Remote Reset via DIP Switch**: Allows remote power cycling of connected PoE devices without physical access, improving maintenance efficiency.
- **Plug-and-Play Installation**: No software configuration required, ensuring quick and hassle-free deployment.
- **Commercial-Grade Reliability**: Designed for enterprise, surveillance, and industrial networks, ensuring stable connectivity in mission-critical applications.

Hardware Specifications			
Product	FR-POE331	FR-POE332	
Copper Port	1 x 10/100BASE-TX RJ45	1 x 10/100/1000BASE-T RJ45	
	Auto-negotiation, auto MDI/MDI-X with PoE injector function		
Fiber Port	1x 100BASE-X	1x 1000BASE-X	
Form Factor	1X9	1X9	SFP
Data Rate	155M	1.25G	1.25G
Fiber Port Type	SC	SC	LC
Transmission Distance	20km	10km	10km
Wavelength	1310nm	1310nm	1310nm
Transmitter Power	-14 to -3 dBm	-9 to -3 dBm	-9 to -3 dBm
Receiver Sensitivity	＜ -34 dBm	＜-22 dBm	＜-22 dBm
Transmission mode	Store-and-Forward		
Flow Control	Back pressure for half duplex mode IEEE 802.3x pause frame for full duplex mode		
Maximum Frame Size	9K		
Dimension	140x110x40mm		
Installation	Desktop		
Power over Ethernet & Power Supply			
Standard	IEEE 802.3af PoE Standard IEEE 802.3at PoE+ Standard		
Power Output	52V DC, 30 watts, max		
PoE Power Supply Type	Mid-span		
Power Pin Assignment	1/2(+), 3/6(-)		
PoE Power Budget	30 watts		
Power Supply	100 - 240V AC 50/60Hz		
Environmental			
Operating Temperature	0 to +50℃ (32 to +122℉)		
Storage Temperature	-20 to +70℃ (-4 to +158℉)		
Humidity	5% to 90% (non-condensing)		
MTBF	＞100,000 Hours @Telcordia SR-332 GB 25℃		
Heat Dissipation	113 BTU/h (with 30W PoE)		
Cooling	Passive Cooling		
Noise Level	0 dBA		

LED	State	Indication
PWR	Green	Power On
	Off	Power Off
100M	Green	100Base-TX
LINK/ACT	Steady	A valid network connection established
	Flashing	Transmitting or receiving data. ACT Stands for Activity
PoE	Green	Indicates PoE function status
FDX	Green	Full Duplex

DIP Switch

DIP Switch	Name	Status	Description
#1	ENROM	OFF	FX Reset Disable
		ON	FX Reset Disable
#2	N/A		
#3	PoE Shutdown	OFF	PoE Shutdown Disable
		ON	PoE Shutdown Enable
#4	LFP	OFF	LFP Disable
		ON	LFP Enable
#5	MODE1	OFF	ALS Disable
		ON	ALS Enable
#6	MODE2	OFF	Ai PoE Disable
		ON	Ai PoE Enable

Notes: 1. ENROM：When enabled, when the optical link is down, the media converter will reboot

2. LFP: Link fault pass through, When enabled, the UTP receiver is passed to the fiber transmitter to make the media converter appear transparent to the connected end devices. It uses link fault pass-through to indicate when far-end fault issues occur. If a fault occurs, the end device indicates a failure for troubleshooting.

3. ALS，Automatic laser shutdown is a procedure to automatically shut down the laser when there is no input light and stop emitting optical signals。

4. Ai PoE: When enabled, the PoE will restart if there is no data input to the UTP receiver.

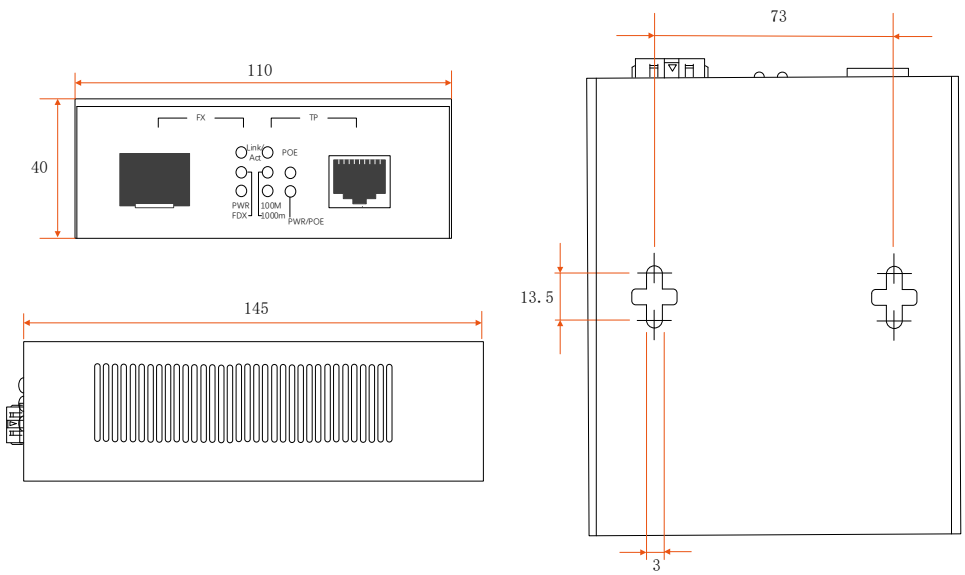
Regulatory & Warranty	
Standard Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3z Gigabit Ethernet over Fiber Optic IEEE 802.3x Full-Duplex Flow Control
ISO	Manufactured in ISO-9001facility
Safety	IEC62368-1:2020+A11:2020
EMI	FCC Part 15B Class A, CE
Warranty	1 Year, Details See: https://fiberroad.com/warranty
Package Contents	
Device	1 x Fiber Media Converter
Accessories	1 x Power Cord with regional plug
Documentation	1 x Quick installation guide 1 x Warranty card 1 x Product notice

Accessories(Sold Separately)

SFP Optical Transceiver

Model	Data Rate	Connector	Mode	Distance	Wavelength	Operating Temp.
FRSX-1L1P2C	1.25G	LC	Multi Mode	550m	850nm	0 to 60℃
FRSX-1L3Q1C	1.25G	LC	Multi Mode	2km	1310nm	0 to 60℃
FRSX-1L311C	1.25G	LC	Single Mode	20km	1310nm	0 to 60℃
FRSX-1L541C	1.25G	LC	Single Mode	40km	1310nm	0 to 60℃
FRSX-1L581C	1.25G	LC	Single Mode	80km	1550nm	0 to 60℃
FRSX-1L5X1C	1.25G	LC	Single Mode	120km	1550nm	0 to 60℃
FRSX-1L3523C/1L5323C	1.25G	LC	Single Mode(BIDI)	20km	1310nm/1550nm	0 to 60℃
FRSX-1L3543C/1L3443C	1.25G	LC	Single Mode(BIDI)	40km	1310nm/1550nm	0 to 60℃
FRSX-1L4583C/1L5483C	1.25G	LC	Single Mode(BIDI)	80km	1490nm/1550nm	0 to 60℃

Dimensions (Unit: mm)



Precautions

To avoid damage to the equipment and personal injury caused by improper use, please observe the following precautions:

- Keep the power off during installation, wear an anti-static wrist, and ensure that the anti-static wrist is in good contact with the skin to avoid potential safety hazards.
- The Switch/Media Converter can work normally under the correct power supply. Please confirm that the power supply voltage matches the
- voltage indicated by the Switch/Media Converter.
- Before powering on the Switch/Media Converter, please make sure that the power circuit is not overloaded, so as not to affect the normal operation of the Switch/Media Converter and even cause unnecessary damage.
- To avoid the risk of electric shock, do not open the case while the Switch/Media Converter is working, even if it is not charged, do not open it yourself.
- Before cleaning the Switch/Media Converter, pull out the power plug of the Switch/Media Converter. Do not wipe with a wet cloth. Do not use liquid to clean it.
- The equipment installed in the rack is generally from bottom to top to avoid overload installation.
- Avoid placing other heavy objects on the surface of the Switch/Media Converter to avoid accidents.

Order Information

Model Number	10/100BASE-TX RJ45	100BASE-X SFP	10/100/1000Base-TX RJ45	1000Base-X SFP	PoE Standard	Input Voltage	Operating Temp.
FR-POE331	1	1			802.3 af/at	AC220V	0 to +50℃
FR-POE332			1	1	802.3 af/at	AC220V	0 to +50℃

Shipping

Model No.	FR-POE331	FR-POE332
Classification Codes	HS Code: 851762	
	HTS: 8517.62.00	
NDAA Compliant	Yes	
Individual Gross Weight	750g	
Individual Package Dimension	255*202*55mm	
Package Quantity	20 Units	
Package Gross Weight	17.6kg	
Package Dimension	540x315x430mm	

The information in this document is subject to change without notice. Fiberroad Technology Co., Ltd has made all effects to ensure the accuracy of the information, but all information in this document does not constitute any kind of warranty. Visit our website for the most up-to-date product information

For more information

For more information about Fiberroad Fiber Media Converter series products,
Visit https://www.fiberroad.com or contact your local account representative.