FIBERROAD®

Power over Ethernet Fiber Media Converter

The Gigabit PoE Fiber Media Converter Series is a versatile solution that caters to the increasing demand for higher power network equipment, such as PTZ cameras, VoIP telephones, and wireless access points. With both Single-port and Dual-port options, it supports Mid-span IEEE 802.3at power over Ethernet plus conversion. This allows for direct data and power delivery to devices like PTZ speed dome cameras and color touch-screen phones via RJ45 interfaces without the need for extra power outlets or cables. The integrated fiber interface also extends the deployment range up to 120km, making it suitable for various network applications. Additionally, by converting 10/100/1000BASE-T signal to 1000BASE-X, it provides diverse fiber connection types to further enhance flexibility. With a maximum distance of 100 meters between the PoE PSE and PD, this series is an efficient solution for powering network devices.

Product Features

- **802.3af/at PoE+ Compliance:** Deliver up to 30W of power per port to connected devices such as IP cameras, wireless access points, VoIP phones, and IoT devices—eliminating the need for separate power sources.

- **Fiber Flexibility:** Supports both SFP modules (hot-swappable, for modern LC fiber connectivity) and traditional 1x9 optical fiber modules (SC/ST connectors), accommodating single-mode or multi-mode fiber for distances up to 120km.

- **Gigabit Performance:** Achieve lightning-fast data transfer rates up to 1000Mbps, ensuring smooth, lag-free communication between network segments.

- **External Power Supply:** Includes a stable, high-efficiency external power adapter for consistent performance, with optional redundancy support to minimize downtime.

- **Plug-and-Play Simplicity:** No configuration required—deploy instantly in existing networks for seamless copper-to-fiber conversion.

FR-POE232

FR-POE233

Hardware Specifications

Product	FR-POE232		FR-POE233
Copper Port	1 x 10/100/1000BASE-T Ethernet TP interface		2 x 10/100/1000BASE-T Ethernet TP interface
	Auto-negotiation, auto MDI/MDI-X with PoE injector function		
Fiber Port	1x 1000BASE-X		
Form Factor	1X9	1X9	SFP
Data Rate	1.25G	1.25G	1.25G
Fiber Port Type	SC	SC	LC
Transmission Distance	550m	10km	10km
Wavelength	850nm	1310nm	1310nm
Transmitter Power	-9 to -3 dBm	-9 to -3 dBm	-9 to -3 dBm
Receiver Sensitivity	＜ -18 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	94x71x26mm		
Installation	Desktop or Wall Mount		

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	60 watts
Power Supply	DC52V Input, external AC to DC adapter	

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	ON	Power On	
PWR	OFF	Power Off	
SPD	ON	On: RJ45 is connected at the 1000M speed	
SPD	OFF	Off: RJ45 is not connected or is connected at 10/100M speed	
FX L/A	Solid	SFP is connected but no data is being receiver	
FX L/A	Flashing	SFP is connected and data is being received	
PoE	ON	PoE power is being supplied	
PoE	OFF	No PoE power is being supplied	
DUP	ON	RJ45 is in full duplex mode	
DUP	OFF	RJ45 is in half duplex mode	

DIP Switch(FR-POE232)	Name	Status	Description
#1	LFP	OFF	LFP Disable
#1	LFP	ON	LFP Enable
#2	ALS	OFF	ALS Disable
#2	ALS	ON	ALS Enable
#3	FX Reset	OFF	FX Reset Disable
#3	FX Reset	ON	FX Reset Enable
#4	FX100M	OFF	FX 1000M
#4	FX100M	ON	FX 100M

DIP Switch(FR-POE233)	Name	Status	Description
#1	Reserved	OFF	\
#1	Reserved	ON	\
#2	Jumbo Frame	OFF	Jumbo Frame Disable
#2	Jumbo Frame	ON	Jumbo Frame Enable
#3	VLAN	OFF	VLAN Disable
#3	VLAN	ON	VLAN Enable
#4	FX100M	OFF	FX 1000M
#4	FX100M	ON	FX 100M

Notes:
LFP - Link Fault Pass-Through. When enabled a failure on either the RJ45 or SFP will cause the corresponding port to link down so that the fault can be detected by other connected devices.
ALS - Automatic Laser Shutdown. When enabled if the fibre link is broken or disconnected then the laser will be turned off except for sending periodic signals to check if the fibre link has been re-established. The ALS function helps to extend the life of the optical device and reduce power consumption.
FX Reset - When enabled (DIP Switch OFF) if the fibre link goes down then the media converter will perform an automatic power cycle to try and re-establish the fibre link operation.
FX Speed - When enabled the SFP port supports both 100Mb and 1Gb speeds. When disabled the SFP port is locked to 1Gb speed.

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	3 Years, Details See: https://fiberroad.com/warranty

Package Contents
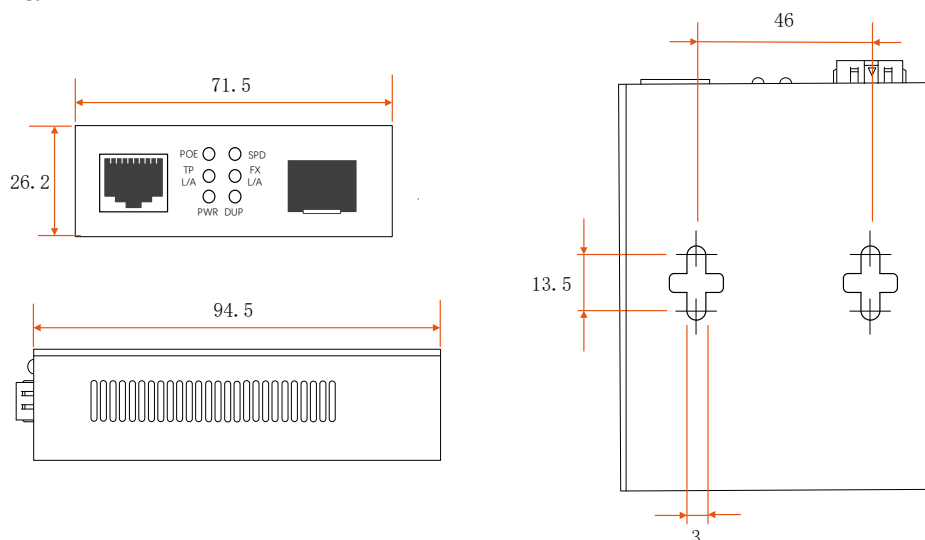
Device	1 x Fiber Media Converter
Accessories	1 x 52VDC Power Supply(with region specific plug)
Documentation	1 x Quick installation guide 1 x Warranty card 1 x Product notice

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	10/100/1000Base-T RJ45	1000Base-X SFP	PoE Standard	Input Voltage	Operating Temp.
FR-POE232	1	1	802.3 af/at	DC52V	0 to +50℃
FR-POE233	2	1	802.3 af/at	DC52V	0 to +50℃

Shipping

Model No.	FR-POE232	FR-POE233
Classification Codes	HS Code: 851762	
	HTS: 8517.62.00	
NDAA Compliant	Yes	
Individual Gross Weight	600g	650g
Individual Package Dimension	180x93x90mm	
Package Quantity	30 Units	
Package Gross Weight	20kg	21kg
Package Dimension	502x375x305mm	

The information in this document is subject to change without notice. Fiberroad Technology., 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.