

**NEW**



## FRM220-FXO/FXS FRM220-FXO-4 FRM220-FXS-4

1ch / 4ch POTS over Fiber Media Converter

The FRM220-FXO/FXS is one channel POTS (Plain Old Telephone System) over fiber converter/extender and FRM220-FXO-4/FRM220-FXS-4 is a 4 channels POTS over fiber converter/extender. The POTS connection uses a standard RJ-11C modular connectors for each copper pair connection. A pair of the FRM220 POTS fiber converter is required to implement an end to end system. FXO mode connects to a telephone line (PSTN) or PBX station line and has ability to detect ringing voltages and to act as a telephone. FXS mode is the reciprocal unit and has ability to act as PSTN and connects to a telephone device. When the FRM220 POTS fiber converter card is placed in the FRM220 rack with SNMP management, in-band management allows configuring and viewing the card and remote converter's status, type, version, fiber link status, on hook status and alarms. When placed in a single slot chassis and used standalone without management, the card may be configured by DIP switch.

### Features

- Extend telephone voice transmission up to 120km over fiber
- Network management via terminal, web or SNMP in FRM220 chassis
- Supports telephone voice transmission
- Supports caller ID Pass-Through
- Supports FXS to FXS hot line

### Specifications

<b>Optical Interface</b>	Connector	SFP-LC (FRM220-FXO/FXS) SC (1x9) (FRM220-FXO-4, FRM220-FXS-4)
	Fiber	MM 62.2/125μm, 50/125μm SM 9/125μm
	Distance	MM 2km, SM 15/30/50km WDM 20/40km
	Wavelength	MM 1310nm, SM 1310, 1550nm WDM 1310Tx/1550Rx (type A) 1550Tx/1310Rx (type B)
<b>Indications</b>	LED (Power, FX Link, Phone Act, Test)	
<b>Power Input</b>	12VDC	
<b>Power Consumption</b>	< 5W	
<b>Dimensions</b>	155 x 88 x 23mm (D x W x H)	
<b>Weight</b>	120g	
<b>Temperature</b>	0 ~ 50°C (Operating), -10 ~ 70°C (Storage)	
<b>Humidity</b>	10 ~ 90% non-condensing	
<b>Certification</b>	CE, FCC, RoHS compliant	
<b>MTBF</b>	65,000 hrs	

<b>Electrical Interface</b>	Connector	RJ-11
	FXO mode	Impedance : 600 ohms Coding : 16 bits liner Loop Current : 10~100mA Ring Frequency : Acceptable 20 ~50Hz Insertion Loss: 0.0 ± 1.0dB at 1000Hz Impedance : 600 ohms
	FXS mode	Coding : 16 bits liner Dial: DTMF and Dial Pulse Battery Source: 48VDC ± 4V Ringing Waveform : Sine wave Ringing Frequency : 20/25/30/35/40/45/50 Hz selectable Ring Cadence: FXS to FXS : On / 1 sec, Off / 2 sec FXO to FXS; Reproduces the cadence detected by FXO Insertion Loss 0.0 ± 1.0dB at 1000Hz REN: 4.0B(Ring Equivalence Number)

### Application

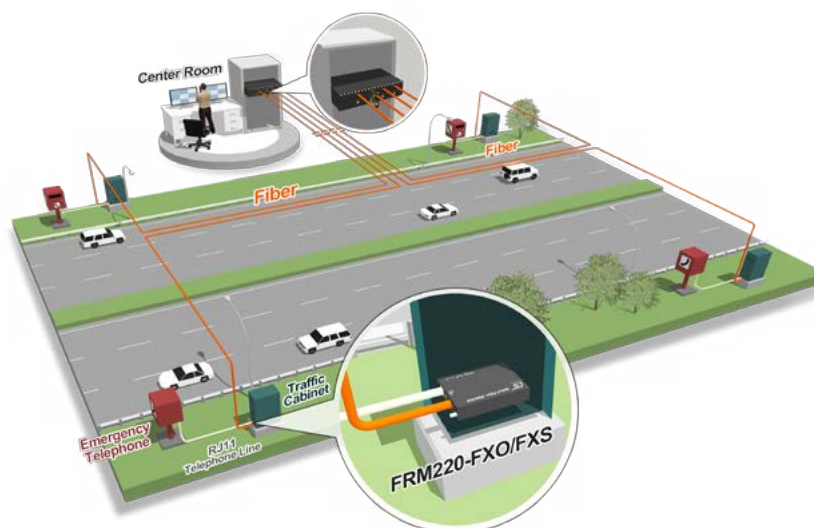


Figure 1: Voice Transmission in the highway application

## Application

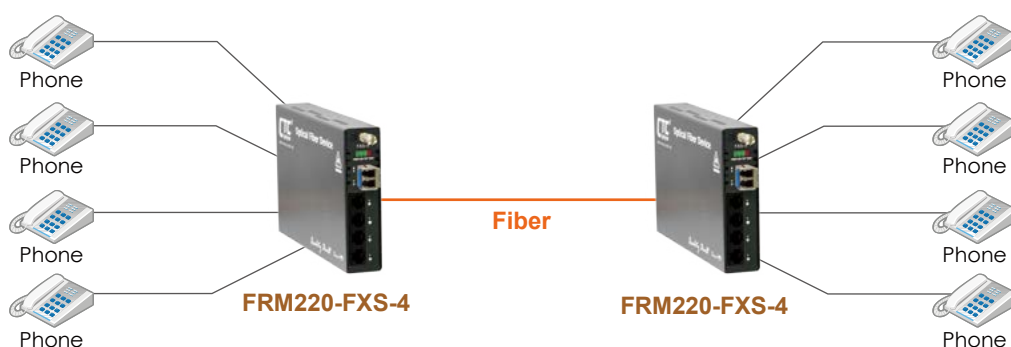


Figure 2: Automatic Ring down hotline

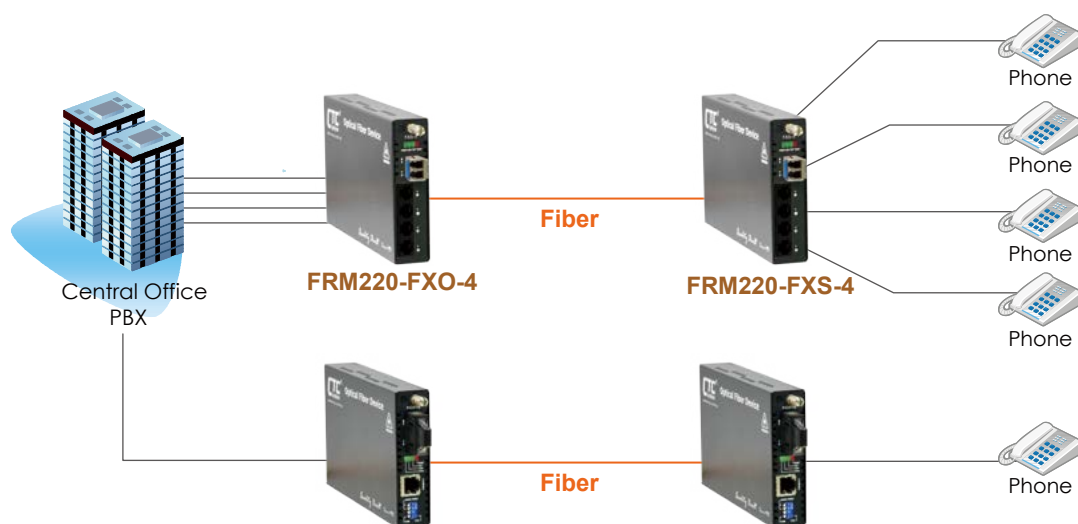


Figure 3: Voice transmission from 2km to 120km over fiber

## Ordering Information

Model Name	Description
FRM220-FXO-4	4-port FXO fiber converter SFP-LC
FRM220-FXS-4	4-port FXS fiber converter SFP-LC
FRM220-FXO/FXS	1 Port FXO / FXS fiber converter, (1x9) SC, ST, FC

Connector Type	Connectivity Distance
SC, ST, FC	002: 2km 015: 15km 030: 30km 050: 50km 20A: WDM 20km A type 20B: WDM 20km B type 40A: WDM 40km A type 40B: WDM 40km B type

Note: This card may be set by DIP switch and placed in CH01 standalone chassis.

When connected as a remote to a managed central chassis, this card supports in-band management.

FRM220 – FXO/FXS –      
 Example: FRM220 – FXO/FXS – SC002