FIBERROAD

Compact Media Converters

FR-2201-XX Series • FR-2203-XX Series • FR-2000-AA

- Mini-Type 10/100Base-TX to 100Base-FX Ethernet Media Converter
- Mini-Type 10/100/1000Base-TX to 1000Base-FX Ethernet Media Converter
- 19" Rack for Mini-type Products with Redundant AC Power Inputs

Product Data Sheet

FR-2201-XX Series • FR-2203-XX Series • FR-2000-AA

Main Features

- Ideal for confined spaces, and provides highly cost-effective solutions
- Auto-Negotiation – automatically determines the best connection speed
- Wall mountable using the integrated mounting holes
- Rack mountable using the optional 19 inch 1U rack
- Fast or Gigabit ethernet, 1X9 transceiver supports single-mode and multimode
- Supports up to 10K Bytes Jumbo Frame
- Build-in DIP switch supported including link fault pass-through, auto laser shutdown, port speed setting, etc.

Overview

The Mini Type Ethernet Media Converter provides flexible solutions for extending Ethernet communication over fiber through SFP interfaces. It supports 100Mbps and Gigabit Ethernet transmission and includes intelligent features such as link fault pass-through, auto laser shutdown, and port speed configuration for stable network operation.

Advantages of Mini Media Converter

LAN Extension
Extend LAN connections beyond the 100-meter limitation of CATx copper cabling by converting copper links to fiber, enabling transmission distances of up to 80 km depending on the optical module used.

EMI Immunity
Fiber optic transmission is immune to electromagnetic interference (EMI), ensuring stable and reliable data communication.

Infrastructure Protection
Allows migration from copper to fiber networks while maintaining compatibility with existing Ethernet infrastructure.

Reliable Data Transmission
Optical transmission improves communication stability and reduces the risk of connection loss in extended networks.

Physical Port

Model	FR-2201	FR-2203
Copper Port	1x 10/100Base-TX	1x 10/100/1000Base-TX
Optical Slot	1x 100Base-FX 1x9 Transceiver SC (ST as an option)	1x 1000Base-FX 1x9 Transceiver SC (ST as an option)
Standard	IEEE802.3i IEEE802.3u IEEE 802.3x	IEEE802.3i IEEE802.3u IEEE802.3ab IEEE802.3z IEEE 802.3x
Jumbo Frame	12K	
LEDs	TP/LNK, SPD, FX/LNK, PWR	TP/LNK, 1000M, FX/LNK, PWR

Power Supply

Power Input	1
Operating Voltage	5-12VDC
Power Consumption	3W Max(100Mb & 1Gb Models) 5W Max(10Gb Models)

Mechanical

Housing	Metal
Dimensions	90mm×60mm×20mm(W x D x H)
IP Rating	IP30
Weight	0.12kg/0.26lb(Bare Hardware)
Installation	Desktop, Wall Mount, Rack(*require optional rack chassis)

Environmental

Temperature	Operating: 0 to 50℃ （32 to 122℉） Storage: -20 to +70℃ （-4 to +158℉）
Humidity	5 to 95% noncondensing
Altitude	＜3000m(＜10000 ft.)
MTBF	100,819 Hours
MTBF Standard	Telcordia SR-332 GB 25℃
Heat Dissipation	10 BTU/h (100M/1G Models No SFP) 17 BTU/h （10Gb Models No SFP+)
Cooling	Passive Cooling
Noise Level	0 dBA

Packaging

Shipping Weight	0.35kg / 0.77lb
Dimensions	133x82x80mm (W x D x H) 5.16 x 3.23 x 3.15 in

Package Contents

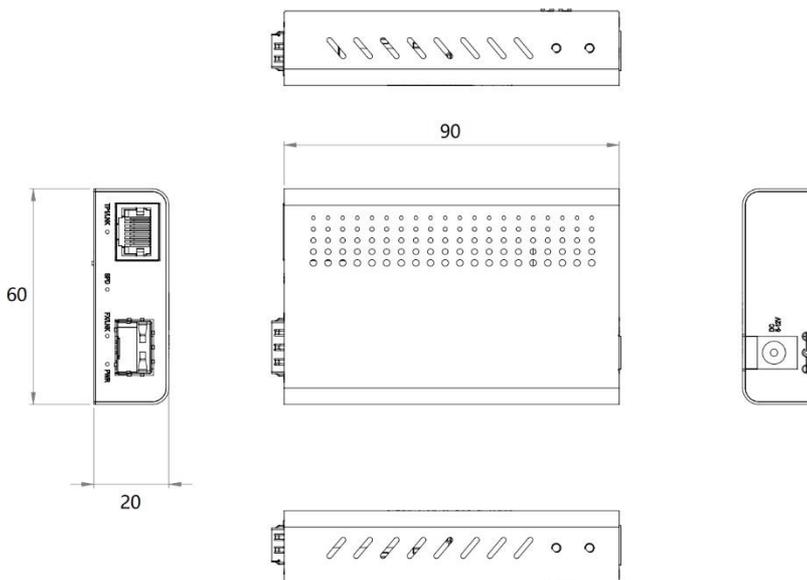|	
Device	Mini Fiber Media Converter
Power Supply	5-12VDC Power Supply(with region specific plug)
Documentation	User Manual

DIP Switch (FR-2201 AND FR-2203)

DIP Switch	Name	Status	Description
#1	LFP	OFF	LFP Disable
		ON	LFP Enable
#2	ALS	OFF	ALS Disable
		ON	ALS Enable
#3	FX Reset	OFF	FX Reset Disable
		ON	FX Reset Enable
#4	FX Speed Set	OFF	Disable
		ON	FX 100M(FR-2203)

Notes:
1. LFP: Link fault pass through,   When enabled, the UTP receiver is passed to the fibre 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.
2. ALS: Automatic laser shutdown is a procedure to automatically shut down the laser when there is no input light and stop emitting optical signals
3. FX: Optical Fiber Port
4. FX Reset: When enabled, the PoE will restart if there is no data input to the UTP receiver.
5. Loop: When enabled, run a loop back test to check the interconnection between two media converter devices.

Dimensions   Unit: mm

Ordering Information

Available Model	Description	Input Voltage	Operating Temp.
FR-2201-AA	Mini-Type 10/100Base-TX to 100Base-FX Ethernet Media Converter, Multimode / 2-fiber / SC / 1310nm / 2km	DC5-12V	-10 to +60℃
FR-2201-BB	Mini-Type 10/100Base-TX to 100Base-FX Ethernet Media Converter, Singlemode / 2-fiber / SC / 1310nm / 20km	DC5-12V	-10 to +60℃
FR-2201-CD	Mini-Type 10/100Base-TX to 100Base-FX Ethernet Media Converter, Multimode / 1-fiber / SC / TX: 1310 / RX: 1550nm / 2km	DC5-12V	-10 to +60℃
FR-2201-DC	Mini-Type 10/100Base-TX to 100Base-FX Ethernet Media Converter, Multimode / 1-fiber / SC / TX: 1550 / RX: 1310nm / 2km	DC5-12V	-10 to +60℃
FR-2201-EF	Mini-Type 10/100Base-TX to 100Base-FX Ethernet Media Converter, Singlemode / 1-fiber / SC / TX: 1310 / RX: 1550nm / 20km	DC5-12V	-10 to +60℃
FR-2201-FE	Mini-Type 10/100Base-TX to 100Base-FX Ethernet Media Converter, Singlemode / 1-fiber / SC / TX: 1550 / RX: 1310nm / 20km	DC5-12V	-10 to +60℃
FR-2203-AA	Mini-Type 10/100/1000Base-TX to 1000Base-FX Ethernet Media Converter, Multimode / 2-fiber / SC / 1310nm / 2km	DC5-12V	-10 to +60℃
FR-2203-BB	Mini-Type 10/100/1000Base-TX to 1000Base-FX Ethernet Media Converter, Singlemode / 2-fiber / SC / 1310nm / 20km	DC5-12V	-10 to +60℃
FR-2203-CD	Mini-Type 10/100/1000Base-TX to 1000Base-FX Ethernet Media Converter, Multimode / 1-fiber / SC / TX: 1310 / RX: 1550nm / 2km	DC5-12V	-10 to +60℃
FR-2203-DC	Mini-Type 10/100/1000Base-TX to 1000Base-FX Ethernet Media Converter, Multimode / 1-fiber / SC / TX: 1550 / RX: 1310nm / 2km	DC5-12V	-10 to +60℃
FR-2203-EF	Mini-Type 10/100/1000Base-TX to 1000Base-FX Ethernet Media Converter, Singlemode / 1-fiber / SC / TX: 1310 / RX: 1550nm / 20km	DC5-12V	-10 to +60℃
FR-2203-FE	Mini-Type 10/100/1000Base-TX to 1000Base-FX Ethernet Media Converter, Singlemode / 1-fiber / SC / TX: 1550 / RX: 1310nm / 20km	DC5-12V	-10 to +60℃

Optional Accessories (to be purchased separately)

Armored Fiber Patch Cable / LAN Cable	
FRPC-A-LC	Armored LSZH LC UPC to LC UPC Duplex OS2 single mode 7.0mm for Outdoor Application, 1-50m
FRLC-A-CAT6	Armored Cat6 Snagless shielded(SFTP) Ethernet Network Patch Cable, 26AWG, 1000Base-T, 0.5m – 3m
FRLC-A-CAT6A	Armored Cat6a Snagless shielded(SFTP) Ethernet Network Patch Cable, 26AWG, 10GBase-T, 10.7m(35ft)

FR-2000-AA

Overview

The chassis-based media converter system includes standalone media converters and a chassis capable of accommodating up to **12 fiber media converter modules**. Each converter module can be easily installed or removed by sliding the converter board into the chassis.

When mounted in an equipment rack, the chassis allows multiple media converters to be integrated with other network devices, helping save rack space and maintain organized cabling.

The chassis is powered by an **AC power supply by default** and supports an **optional redundant power module** to ensure continuous power availability and improved system reliability.

Product Specifications

Parameters	
Product Type	1RU 12 Solts Fiber Media Converter Rack Chassis
Number of Slots	12
Input Power	AC 100V~240V, 1.5~3.0A, 50/60Hz, Redundant Power Supply
Output Power	DC 12V Per Slot, 5A
Power Consumption	36W Max
Dimensions (HxWxD)	44.5x485x270mm
Weight	3.2kg
Operating Temperature	0 ℃ to 50 ℃
Storage Temperature	-20℃ to 70℃
Humidity	90% Max, Non-condensing
Cooling	Brushless DC Fan
Compliance	FCC, CE, RoHS
Warranty	3 Years

Ordering Information

Available Model	Description	Input Voltage	Operating Temp.
FR-2000-AA	19" Rack for Mini-type Products with Redundant AC Power Inputs	AC100-240V	0 to +50℃

Precautions

To prevent equipment damage or personal injury caused by improper operation, please observe the following precautions:

❖ Turn off the power before installation. Wear an anti-static wrist strap and ensure proper skin contact to prevent electrostatic discharge (ESD) damage.

❖ Ensure the power supply voltage matches the voltage specified on the switch.

❖ Before powering on the switch, verify that the power circuit is not overloaded to avoid abnormal operation or equipment damage.

❖ Do not open the chassis while the switch is operating. To avoid the risk of electric shock, do not disassemble the device.

❖ Disconnect the power before cleaning. Do not use a wet cloth or liquid cleaners.

❖ When installing in a rack, mount equipment from bottom to top to prevent overloading.

❖ Do not place heavy objects on the switch.