



Compact Media Converters

FR-2703

Industrial Microtype 10/100/1000Base-TX to 1000Base-SFP Ethernet
Media Converter

Product Data Sheet



FR-2703



Main Features

- Converts 10/100/1000Base-TX to 1000Base-SFP
- Compliant with IEEE 802.3u/802.3z/802.3ab
- Full/Half Duplex, Auto-Negotiation and Auto-MDI/MDIX
- All SFP ports are multi-rate 100Mb/Gigabit – support single and multimode, single or dual fiber options up to 120Km
- Robust IP40 Aluminum Metal Enclosure for Harsh Environments
- Sleek Microtype design, fits within most camera housing
- Supports DIP-switch Ethernet OAM
- Environmentally hardened -20° C to 70° operating temperature

Overview

The FR-2703 are designed to provide reliable media conversion Gigabit Ethernet and optical signal in industrial networking environments. Its design allows straightforward deployment without complex configuration requirements, supporting simple plug-and-play installation within existing network infrastructures.

With a compact form factor, the converter is suitable for installations where space is limited, such as control cabinets or equipment enclosures. Engineered for industrial applications, it operates within a wide temperature range of -20°C to 70°C and features an IP40-rated metal housing for protection against dust and debris.

The Compact Media Converters are well suited for use in factories, transportation facilities, and outdoor installations where stable performance and environmental durability are required.

Product Specifications

Hardware Specifications	
Model	FR-2703
Ports	1x10/100/1000Base-T RJ45 1x1000Base-X SFP
Port Mode(Tx)	Auto Negotiation Speed Full/Half Duplex Mode Auto MDI/MDI-X Connection
Maximum Packet Length	Up to 10K

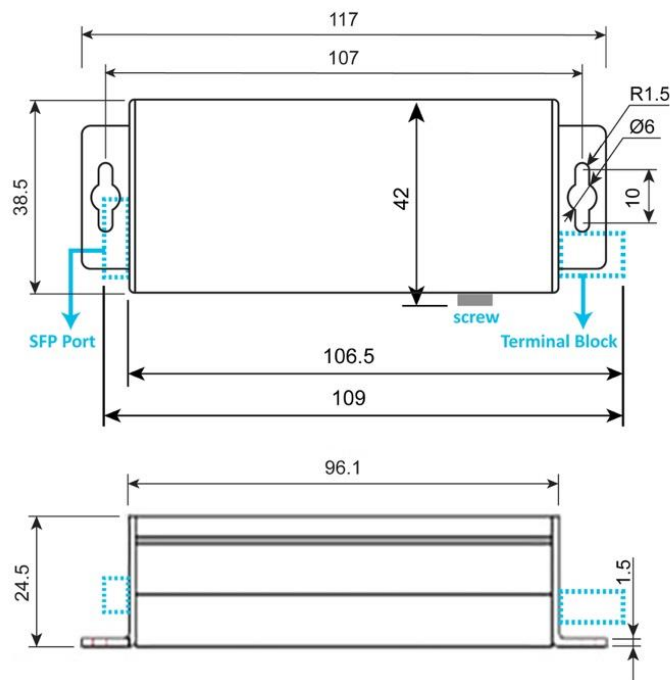
Hardware Specifications	
Forward Filter Rate	14,880pps(10Mbps) 148,800pps(100Mbps) 1,488,000pps(1000Mbps)
Transmission Mode	Store and Forward (full/half duplex mode)
Transmission Distance	
Optical Fiber Port	Depends on optical module(0-160km)
Copper RJ45 Port	100m (using standard CAT5/CAT5e cable)
Power	
Input Power	DC12V or DC24V or AC24V
Power Consumption	2.4W Max. 0.2A@12VDC
Physical Characteristics	
Housing	Aluminum case
IP Rating	IP40
Dimensions	36.2mm*117mm*24.5mm
Weight	100g(Bare weight), 250g(With package)
Installation	Wall Mount and Desktop
Environmental	
Operating Temperature	-20°C to +70°C
Operating Humidity	5%~90% (non-condensing)
Storage Temperature	-30°C to +85°C (-30 to 185 °F)
MTBF	>500,000 hours @MIL-HDBK-217F GF 25°C
Heat Dissipation	7 BTU/h
Cooling	Passive Cooling
Noise Level	0 dBA
Package Contents	
Device	1x Industrial Media Converter
Installation Kit	1x 1.25A 12VDC Power Adapter
Documentation	1x Quick installation guide, 1x Warranty card, 1x Product notice
Regulatory & Warranty	
Standard Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet
ISO	Manufactured in ISO-9001 facility
Safety	IEC62368-1:2020+A11:2020
EMI	FCC Part 15B Class A, IEC 61000-3-2
EMS	IEC61000-4-2 ESD: Contact:±8kV, Air:±15kV IEC61000-4-5 Surge: Power: ±4kV; RJ45:±2kV
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	RoHS 2011/65/EU Annex II(EU)
Warranty	3 Years, Details See: https://fiberroad.com/warranty

DIP Switch			
No.	Function	State	Description
1	LFP	OFF	Disable
		ON	Enable
2	ALS	OFF	Disable
		ON	Enable
3	FX Reset	OFF	Disable
		ON	Enable
4	FX Speed	OFF	FX Speed 1000M
		ON	FX Speed 100M/1000M

Note: 1. LFP: Link Fault Pass Through
 2. ALS: Automatic Laser Shutdown Function
 3. FX Reset : If it is enabled, when the FX link is down, the power will shut down. A few seconds later, the power will restart automatically.

LEDs	States	Description
PWR	On	The device is powered on
LINK/ACT	On	The twisted pair is connected well, but there is no data transmission.
	Blinking	The port is sending or receiving data
SPD	On	The port is operating at 1000Mbps(RJ45) (FR-2703)
	Off	The port is operating at 10/100Mbps(RJ45) (FR-2703)
FX/SPD	On	The optical fiber port is operating at 1000M
	Off	The optical fiber port is operating at 100M
FX/LNK	On	The optical fiber cable is connected well, but there is no data transmission
	Blinking	The port is sending or receiving data

Dimensions Unit: mm



Ordering Information

Available Model	Description	Input Voltage	Operating Temp.
FR-2703	Industrial Microtype 10/100/1000Base-TX to 1000Base-SFP Ethernet Media Converter	DC12V or DC24V or AC24V	-40 to +75°C

Optional Accessories (to be purchased separately)

Power Adapter	
1AA-120-0100-A	Input: AC100-240V, Output: DC12V-1A
SFP Optical Transceiver	
(S)=SFP Option	Please select your SFP on our SFP Modules page for details.
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

Shipping

Model No.	FR-2703
Classification Codes	HS Code: 851762
	HTS: 8517.62.00
NDAA Compliant	Yes
Individual Gross Weight	250g
Individual Package Dimension	165x150x50mm
Package Quantity	60Units
Package Gross Weight	16kg
Package Dimension	535x345x470mm

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.

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