Industrial Media Converter

IMC-1021FX User's Manual

Version 1.0
May, 2008.

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Getting to Know Your Switch

1.1 About the IMC-1021FX Industrial Media Converter

The IMC-1021FX is reliable industrial media converter which convert signal between optical fiber and cooper Ethernet. It can work under wide temperature, dusty environment and humid condition.

1.2 Hardware Features

- 10/100Base-T(X) Ethernet port
- 100Base-FX Fiber port
- Casing: IP-30
- Dimensions(W x D x H) : 88 mm(W)x 102 mm(D)x 24 mm(H)
- Operating Temperature: -10 to 60°C (Wide temperature model: -40 to 70°C)
- Storage Temperature: -40 to 85°C
- Operating Humidity: 5% to 95%, non-condensing

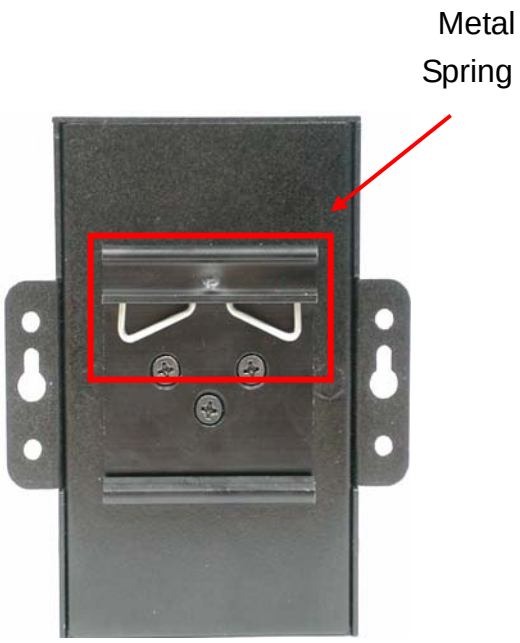
Hardware Installation

2.1 Installation Media converter on DIN-Rail

Each media converter has a DIN-Rail kit on rear panel. The DIN-Rail kit helps media converter to fix on the DIN-Rail. It is easy to install the media converter on the DIN-Rail:

2.1.1 Mount IMC-1021FX

Step 1: Slant the media converter and mount the metal spring to DIN-Rail.



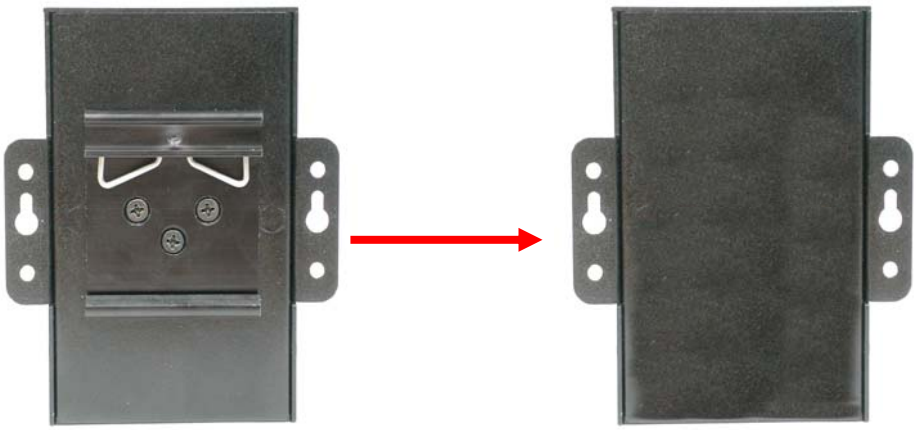
Step 2: Push the media converter toward the DIN-Rail until you heard a "click" sound.

2.2 Wall Mounting Installation

Each media converter has another installation method for users to fix the media converter. The following steps show how to mount the media converter on the wall:

2.2.1 Mount IMC-1021FX on wall

Step 1: Remove DIN-Rail kit.



Step 2: Use 4 screws to mount the media converter on the wall.

Hardware Overview

3.1 Front Panel

The following table describes the labels that stick on the IMC-1021FX.

Port	Description
10/100 RJ-45 fast Ethernet ports	10/100Base-T(X) RJ-45 fast Ethernet ports support auto-negotiation. Default Setting : Speed: auto
Fiber port	100BaseFX

IMC-1021FX

1. LED for PWR. When the Power on, the green led will be light on.
2. LED for Ethernet ports link status.
3. LED for Ethernet ports link duplex.
4. DC 9~30V power input.
5. 10/100Base-T(X) Ethernet ports..
6. 100BaseFX Fiber port.

3.2 Front Panel LEDs

LED	Color	Status	Description
PWR	Green	On	DC power feeded
10/100Base-T(X) Fast Ethernet ports			
LNK / ACT	Green	On	Port link up.
		Blinking	Data transmitted.
Duplex	Amber	On	Port acts under full duplex.
Fiber ports			
LNK / ACT	Green	On	Port link up.
		Blinking	Data transmitted.
Duplex	Amber	On	Port acts under full duplex.

Cables

4.1 Ethernet Cables

The IMC-1021FX media converter has standard Ethernet ports. According to the link type, the media converter use CAT 3, 4, 5,5e UTP cables to connect to any other network device (PCs, servers, media converter, routers, or hubs). Please refer to the following table for cable specifications.

Cable Types and Specifications

Cable	Type	Max. Length	Connector
10BASE-T	Cat. 3, 4, 5 100-ohm	UTP 100 m (328 ft)	RJ-45
100BASE-TX	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	RJ-45

4.1.1 100BASE-TX/10BASE-T Pin Assignments

With 100BASE-TX/10BASE-T cable, pins 1 and 2 are used for transmitting data, and pins 3 and 6 are used for receiving data.

RJ-45 Pin Assignments

Pin Number	Assignment
1	TD+
2	TD-
3	RD+
4	Not used
5	Not used
6	RD-
7	Not used
8	Not used

The IMC-1021FX media converter supports auto MDI/MDI-X operation. You can use a straight-through cable to connect PC and media converter. The following table below shows the 10BASE-T/ 100BASE-TX MDI and MDI-X port pin outs.

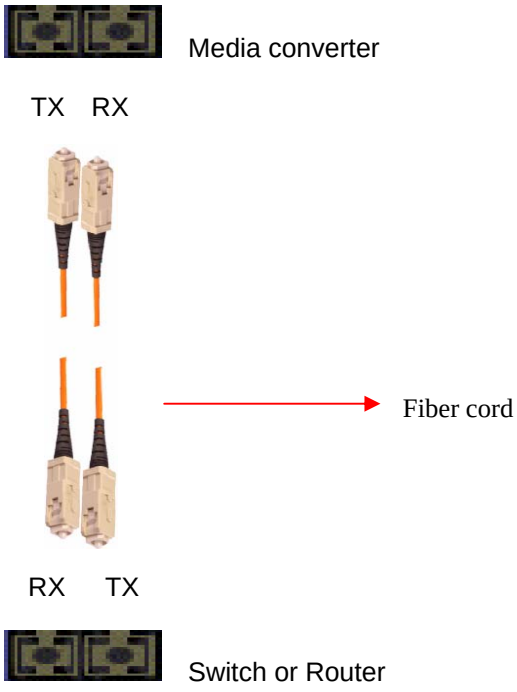
MDI/MDI-X pins assignment

Pin Number	MDI port	MDI-X port
1	TD+(transmit)	RD+(receive)
2	TD-(transmit)	RD-(receive)
3	RD+(receive)	TD+(transmit)
4	Not used	Not used
5	Not used	Not used
6	RD-(receive)	TD-(transmit)
7	Not used	Not used
8	Not used	Not used

Note: "+" and "-" signs represent the polarity of the wires that make up each wire pair.

4.2 Fibers

The following two models, IMC-1021FX-MM and IMC-1021FX-SS, have fiber optical ports. The fiber optical ports are in multi-mode (0 to 2 km, 1310 nm, 50/125 µm, 62.5/125 µm) and single-mode (0 to 30 km, 1310 nm, 9/125 µm) with SC connector. Please remember that the TX port of Media converter should be connected to the RX port of Switch or Router



Technical Specifications

Technology	
Ethernet Standards	802.3-10BaseT, 802.3u-100BaseTX, and 100BaseFX,
Interface	
RJ45 Ports	10/100Base-T(X), Auto MDI/MDI-X
Fiber Ports	100 Base-FX (SC Connector) Multi-Mode 0 to 2 km, 1310 nm (50/125 µm to 62.5/125 µm) Single-Mode 0 to 30 km, 1310 nm (9/125 µm)
LED Indicators	Per Unit : Power(Green) RJ45 Ports: Per Port : Link/Activity(Green/Blinking Green), Full duplex(Amber) Fiber Ports: Per Port : Link/Activity(Green/Blinking Green), Full duplex(Amber)
Power Requirements	
Power Input Voltage	9 ~ 30VDC in 3-pin Terminal Block
Reverse Polarity Protection	Present at terminal block
Power Consumption	4.5 Watts Max
Environmental	
Operating Temperature	-10 to 60 °C (Wide temperature model -40 to 70°C)
Storage Temperature	-40 to 85 °C
Operating Humidity	5% to 95%, non-condensing
Mechanical	

Dimensions(W x D x H)	88 mm(W)x 102 mm(D)x 24 mm(H)
Regulatory Approvals	
Regulatory Approvals	FCC Part 15, CISPER (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge),, EN61000-4-6 (CS)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Waranty	5 years