



## IMC-100

### 10/100Base-TX to 100Base-FX Fiber Converter

IMC-100 is a family of Fast Ethernet non-managed media converters that support conversion between electrical 10/100Base-TX and optical 100Base-FX Ethernet. Simple DIP switch settings allow configuring the UTP port for auto-negotiation or for forced 10/100 speed and half/full duplex as well as for enabling LFPT (Link Fault Pass Through), Ethernet flow control(802.3x) and selecting Switch Mode (store & forward) or Converter Mode (Jumbo frame Pass-through). Housed in rugged DIN rail or wall mountable enclosures, these converters are designed for harsh environments, such as industrial networking and intelligent transportation systems (ITS) and are also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications.

### Features

- Redundant dual DC input power 12/24/48VDC (9.6 ~ 58VDC)
- IP30 rugged metal housing and fanless
- Wide operating temperature -40 ~ 75°C (IMC-100-E)
- UL60950-1, CE, FCC, Rail traffic EN50121-4 certification
- Industrial Grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified
- Store-and-Forward mode and Pass Through mode (set by DIP SW)
- Conversion between 10/100Base-TX and 100Base-FX cable interface
- Provides a DIP-Switch to set functions
- Supports LFPT (Link Fault Pass Through)

### Specifications

<b>Standard</b>	IEEE 802.3 10Base-T 10Mbit/s Ethernet IEEE 802.3u 100Base-TX, 100Base-FX, Fast Ethernet IEEE 802.3x Flow Control	<b>Power Supply</b>	12/24/48VDC(9.6~58VDC), Redundant power with polarity reverse protect function and removable terminal block Provide DC Power JACK adapter cable for external power adapter
<b>RJ45 Ports</b>	10/100Base-TX	<b>Alarm Relay Contact</b>	Relay outputs with current carrying capacity of 1 A @24VDC
<b>Fiber Ports</b>	100Base-FX (SC/ST connectors)	<b>Removable Terminal Block</b>	Provide 2 redundant power, alarm relay contact
<b>Switch Architecture</b>	Store and Forward in Switch mode Supports 1024 MAC addresses in Switch mode	<b>Power Consumption</b>	2.9 W
<b>Ethernet Packet length</b>	2046Byte (Max) in Switch mode	<b>Operating Humidity</b>	5% ~ 95% (Non-condensing)
<b>Jumbo Frame</b>	9K bytes in Pass through (Converter mode)	<b>Operating Temperature</b>	-10 ~ 60°C (IMC-100) -40 ~ 75°C (IMC-100-E)
<b>Fiber Parameters</b>	Fiber Cable (Multi-mode): 50/125um,62.5/125um Fiber Cable (Single-mode): 9/125um Wavelength: 1310nm (Multi-mode/Single-mode) Available distance: 2KM (Multi-mode) 30KM (Single-mode) 50KM (Single-mode)	<b>Storage Temperature</b>	-40 ~ 85°C
<b>Link Fault Pass Through (LFPT)</b>	TX- Fiber: If TX port link down, the media converter will force Fiber port to link down Fiber-TX: If Fiber port link down, the media converter will force TX port to link down	<b>Housing</b>	Rugged Metal, IP30 Protection and fanless
<b>DIP Switch</b>	TP Auto Negotiation OFF: Auto Mode, ON: Force Mode Force TP Speed OFF: 100 Mbps, ON: 10 Mbps Force TP Duplex OFF: Full Duplex, ON: Half Duplex DIP Switch: ON: Enables LFPT (Link Fault Pass through) OFF: Disables LFPT (Link Fault Pass through) DIP Switch: ON: Flow Control Enable OFF: Flow Control Disable DIP Switch: OFF: Switching mode ON: Pass through Converter mode	<b>Dimensions</b>	106 x 38.6 x 142.1mm (D X W X H)
<b>Connector</b>	Fiber: SC (Multi-mode, 2km), SC (Single-mode, 30km, 50KM) ST (Multi-mode, 2km), ST (Single-mode, 30km, 50KM) RJ-45 Socket: CAT-3/5 (10/100Mbps) Twisted Pair cable Auto MDI/MDI-X and Auto-Negotiation Function Support	<b>Weight</b>	0.62kg
<b>LED</b>	PWR 1 (Green): ON: Power1 active/ OFF: Power1 is inactive PWR 2 (Green): ON: Power2 active/ OFF: Power2 is inactive Fault (Red): ON: Fiber or TP has failed OFF: TP are functional Fiber (Green): ON : Connected to network OFF: Not connected to network/ BLK: Receive/Transmit Data 100 (Amber): ON: 100Mbps/ OFF: 10Mbps LAN (Green): ON : Connected to network OFF: Not connected to network/ BLK: Networking is active	<b>Installation</b>	DIN Rail mounting and Wall Mounting
<b>Reserve Polarity Protection</b>	Present	<b>MTBF</b>	852,727 Hrs
<b>Overload Current Protection</b>	Present	<b>Warranty</b>	5 years
		<b>Certification</b>	
		<b>EMI</b>	CE
		<b>EMI (Electromagnetic Interference)</b>	FCC Part 15 Subpart B Class A,CE EN55022 Class A
		<b>Railway Traffic</b>	EN50121-4
		<b>Immunity for Heavy Industrial Environment</b>	EN61000-6-2
		<b>Emission for Heavy Industrial Environment</b>	EN61000-6-4
		<b>EMS</b>	EN61000-4-2 (ESD) Level 3, Criteria B EN61000-4-3 (RS) Level 3, Criteria A EN61000-4-4 (Burst) Level 3, Criteria A EN61000-4-5 (Surge) Level 3, Criteria B EN61000-4-6 (CS) Level 3, Criteria A EN61000-4-8 (PFMF, Magnetic Field) Field Strength: 300A/m, Criteria A
		<b>Safety</b>	UL60950-1
		<b>Shock</b>	IEC 60068-2-27
		<b>Freefall</b>	IEC 60068-2-32
		<b>Vibration</b>	IEC 60068-2-6

## Application

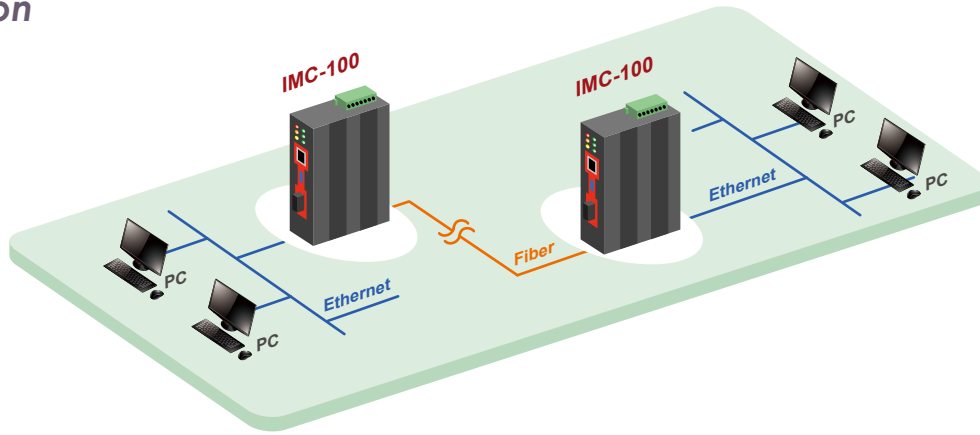
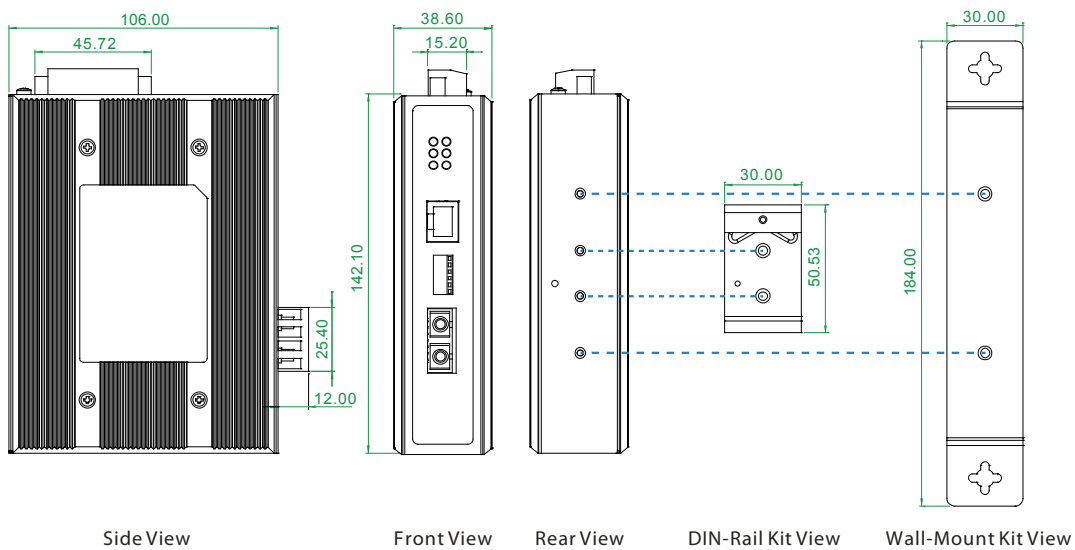


Figure : IMC-100 Media Converter Transmission

## Dimensions



Side View

Front View

Rear View

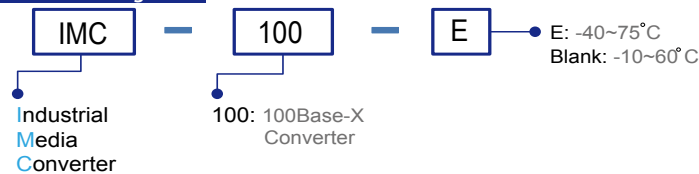
DIN-Rail Kit View

Wall-Mount Kit View

## Ordering Information

Model Name	UTP		Fiber		Certification				Operating Temperature	
	10/100Base-TX	10/100Base-TX	100Base-FX	100Base-FX	Safety UL60950-1	Railway EN50121-4	EN61000-6-2 EN61000-6-4	CE		FCC
IMC-100	1	1	1 SC	1 SC	V	V	V	V	V	-10~60 C
IMC-100-E	1	1	1 SC	1 SC	V	V	V	V	V	-40~75 C

### Model Naming Rule



Connector Type	Connectivity Distance
SC, ST	002:2km (M/M) 030:30km (S/M) 050:50km (S/M)
	020A: WDM 20km A type (TX:1310nm)
	020B: WDM 20km B type (TX: 1550nm)

### Accessories

DR-4524	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 48W, -10 ~ +50°C
MDR-40-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 40W, -20 ~ +70°C

Example: **IMC - 100 - E - SC002**