



# IMC-1000S

100/1000Base-T to 100/1000Base-X SFP  
Fiber Converter



IMC-1000S is an unmanaged industrial grade Gigabit Ethernet media converter that supports conversion between electrical 10/100/1000Base-T and optical 100/1000Base-X Ethernet. Simple DIP switch settings allow configuring the UTP port for auto-negotiation or for forced 10/100/1000 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 (See Figure).

## Features

- Redundant dual DC input power 12/24/48VDC (9.6 ~ 60VDC)
- IP30 rugged metal housing and fanless
- Wide operating temperature -20 ~ 75°C
- UL60950-1, CE, FCC, Railway traffic EN50121-4 certification
- Heavy 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 10/100/1000Base-T and 100/1000Base-X Fiber 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 802.3ab 1000Base-T Gbit/s Ethernet over twisted pair IEEE 802.3z 1000Base-X Gbit/s Ethernet over Fiber-Optic IEEE 802.3x Flow Control
<b>RJ45 Ports</b>	10/100/1000Base-T Auto MDI/MDI-X and Auto-Negotiation Function Supports UTP CAT.5e Twisted Pair cable
<b>Fiber Ports</b>	100Base-X or 1000Base-X SFP slot 100Base-X or 1000Base-X set by DIP SW
<b>Data Process Architecture</b>	Store and Forward mode or Pass through mode set by DIP SW
<b>Jumbo Frame</b>	9K bytes
<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) SFP, Distance depend on Fiber Transceiver
<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>DIP Switch</b>	Off: Alarm For Power Enable On: Alarm For Power Disable Off: Alarm For Port Enable On: Alarm For Port Disable Off: LFPT Disable On: LFPT Enable Off: Switch Mode On: Converter Mode Off: 1000Base-X On: 100Base-FX
<b>LED</b>	Per Unit: Power 1 (Green), Power 2 (Green), Fault (Amber) LNK/ACT for Fiber(Green): ON: Connected to network/ OFF: Not connected to network/ BLK: Receive /Transmit Data SFP Fiber speed: Yellow: 1000Base-X Green: 100Base-FX RJ-45 port: Speed: 10 (OFF), 100 (Green), 1000 (Yellow) LNK/ACT for RJ45(Green): ON: Connected to network/ OFF: Not connected to network/ BLK: Networking is active
<b>Reverse Polarity Protection</b>	Supported for power input

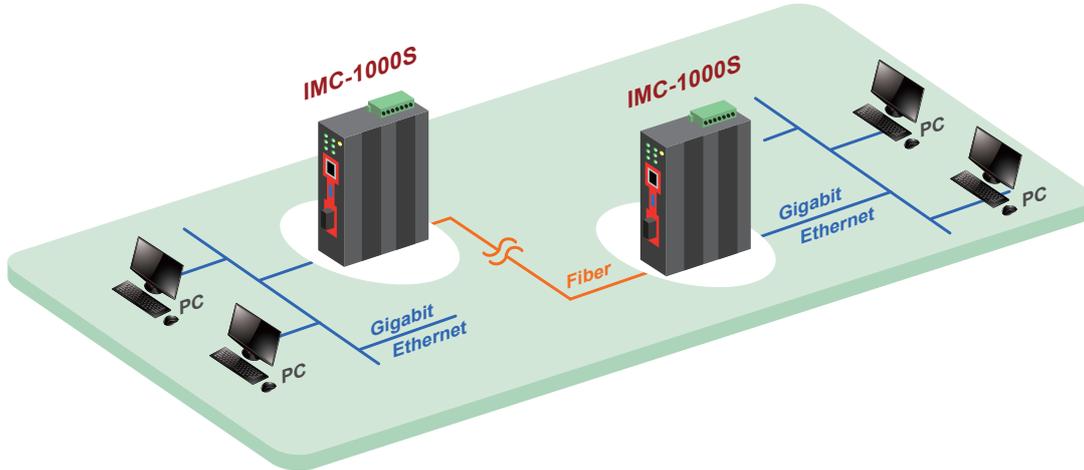
<b>Overload Current Protection</b>	Supported
<b>Power Supply</b>	12/24/48VDC (9.6~60VDC) , Redundant power with polarity reverse protect function and removable terminal block
<b>Power Consumption</b>	4.2W
<b>Alarm Relay Contact</b>	Relay outputs with current carrying capacity of 1 A @24VDC
<b>Removable Terminal Block</b>	Provides 2 Redundant power, Alarm relay contact
<b>Operating Humidity</b>	5% ~ 95% (Non-condensing)
<b>Operating Temperature</b>	-20 ~ 75°C (IMC-1000S-E)
<b>Storage Temperature</b>	-40 ~ 85°C
<b>Housing</b>	Rugged Metal, IP30 Protection and fanless
<b>Dimensions</b>	106 x 38.6 x 142 mm (D x W x H)
<b>Weight</b>	620g
<b>Installation</b>	DIN Rail mounting, or wall mounting (Optional)
<b>MTBF</b>	1,198,203 Hours MIL-HDBK-217
<b>Warranty</b>	5 years
<b>Certification</b>	
<b>EMC</b>	CE
<b>EMI (Electromagnetic Interference)</b>	FCC Part 15 Subpart B Class A, CE
<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 (Electromagnetic Susceptibility) Protection Level</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

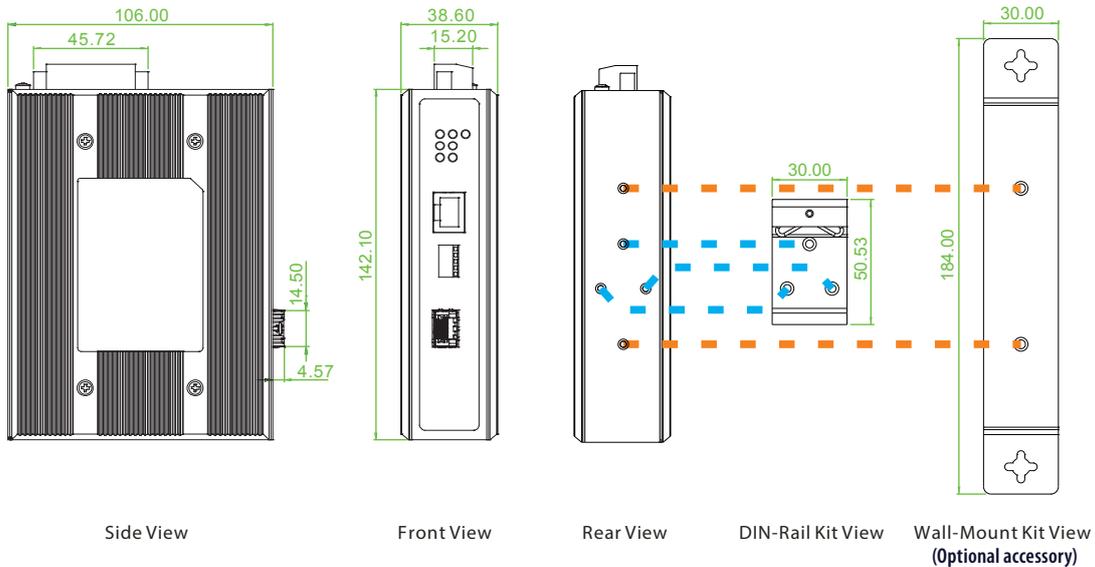
<b>Safety</b>	UL60950-1
<b>Shock</b>	IEC 60068-2-27
<b>Freefall</b>	IEC 60068-2-32
<b>Vibration</b>	IEC 60068-2-6

## Application

Figure : IMC-1000S Media Converter Transmission



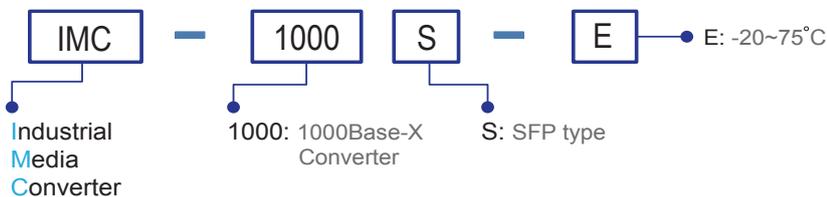
## Dimensions



## Ordering Information

Model Name	RJ45 UTP Port	Fiber	Power Input	Certification					Operating Temperature
	10/100/1000 Base-T	Dual Speed 100/1000Base-X	Redundant	Safety UL60950-1	Railway EN50121-4	EN61000-6-2 EN61000-6-4	CE	FCC	
IMC-1000S-E	1	1 SFP	12/24/48VDC	V	V	V	V	V	-20~75°C

### Model Naming Rule



■ Package List

- IMC-1000S device
- Quick installation guide
- Din Rail with screws
- Terminal block
- Protective caps for SFP ports

Optional Accessories

■ Wall mount kit Accessories

**IND-WMK01** Wall Mount kit for Industrial product, 184 x 30mm

■ Industrial SFP Transceiver

The ISFP series of industrial grade SFP modules have been fully tested with the IMC-1000S product for guaranteed compatibility and performance. The best performance can be guaranteed even in mission-critical applications. (Please see CTC Union's Industrial SFP datasheet for more details and more items.)

<b>ISFP-M7000-85-(E)</b>	Industrial SFP GbE 1000Base-SX, M/M, 500 meter, wave length 850nm, 7.5dB, LC, -10~70°C (-40~85°C)
<b>ISFP-S7020-31-(E)</b>	Industrial SFP 1000Base-LX, S/M, 20km, wave length 1310nm, 15dB, LC, -10~70°C (-40~85°C)
<b>ISFP-T7T00-00-(E)</b>	Industrial SFP 1000Base-T UTP 100meter, -10~70°C (-40~85°C)
<b>ISFP-M5002-31-(E)</b>	Industrial SFP 155M 100Base-FX, MM, 2km, wave length 1310nm, 12dB, LC, -10~70°C (-40~85°C)
<b>ISFP-S5030-31-(E)</b>	Industrial SFP 155M 100Base-FX, SM, 30km, 1310nm, 19dB, LC, -10~70°C (-40~85°C)

SFP Naming Rule

