

## Industrial GbE PoE Converter

# IMC-1000S-PH12

**1x GbE RJ45 to 100/1000Base-X SFP with PoE+ (PSE)  
(30W, 12V Booster)**



Industrial unmanaged media converter with 1 Gigabit UTP port and 1 100/1000Mbps SFP slot for copper and fiber interface conversion, Not only it supports the PoE+ standard IEEE802.3af/at to inject up to 30 watts of power into PoE devices, but it also supports 12Vdc boost. IMC-1000S-PH12 converter is designed for harsh environments, such as IP surveillance, industrial networking, intelligent transportation systems (ITS) and is also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications.

### Features

- Conversion between 10/100/1000Base-T and 100/1000Base-X Fiber cable interface
- Supports dual rate (100/1000) SFP for selectable Fast or Gigabit speed on fiber
- 12/24/48VDC (9.6~57VDC) redundant dual power input with built-in very high efficiency booster (97~99%) to rise up 55 VDC for PoE output
- Regulate PoE output voltage (55VDC) to stabilize PoE device, and guarantee delivery PoE power distance to 100meter
- Provides IEEE802.3at PoE output (30Watts)
- Supports Remote PD reset by fiber port link down
- Supports LFPT (Link Fault Pass Through)
- IP30 rugged metal housing and fanless
- Wide operating temperature -20 ~ 75°C
- CE, FCC, Railway traffic EN50121-4 certification
- Heavy industrial grade EMS,EMI EN61000-6-2, EN61000-6-4 certification
- Supports Jumbo frame 9K bytes packet

### 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 and Back pressure
	IEEE 802.3at	PoE+ (Power over Ethernet enhancement)
	IEEE 802.3af	PoE (Power over Ethernet)
	IEEE802.1q	Tag VLAN
<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	

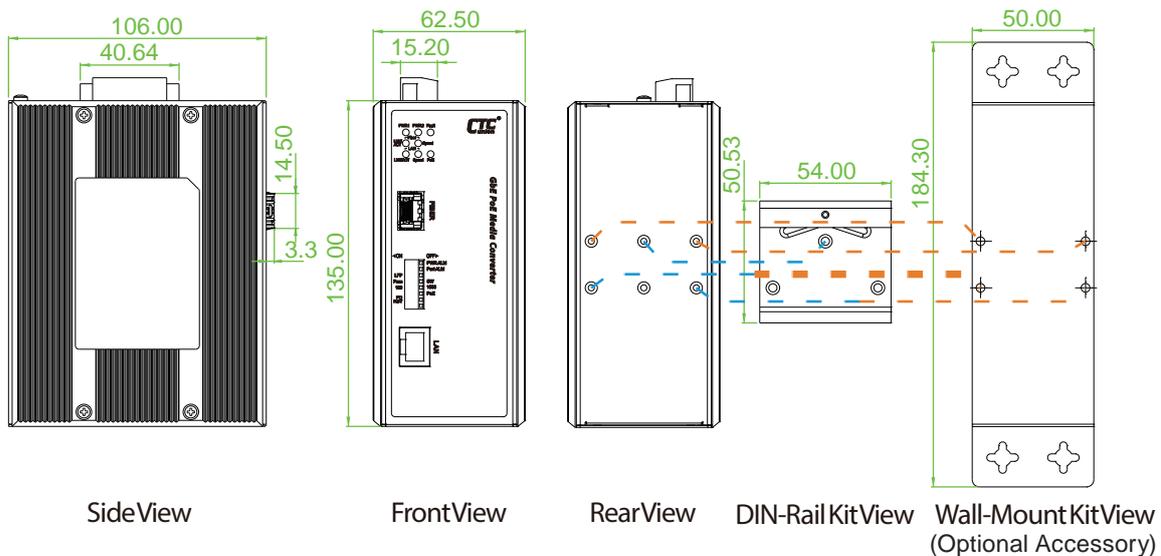


<b>Jumbo Frame</b>	9K bytes				
<b>Link Fault Pass Through (LFPT)</b>	TX- Fiber: If TX port link down, the media converter will force Fiber port to link down				
	Fiber-TX: If Fiber port link down, the media converter will force TX port to link down				
<b>DIP Switch</b>	ON: Disable Alarm For Power Loss / OFF: Enable Alarm For Power Loss				
	ON: Disable Alarm For Port Link-Failure / OFF: Enable Alarm For Port Link-Failure				
	ON: LFPT Enable / OFF: LFPT Disable				
	Data Process Architecture				
	ON : Pass through mode / OFF : Store and Forward switch mode				
	Fiber Speed				
	OFF: 1000Base-X / ON: 100Base-X				
	PoE Output				
OFF: Enable PoE output / ON: Disable PoE output					
Remote PD reset					
OFF : Disable Remote PD reset / ON: Enable Remote PD reset by fiber port link down					
<b>Connector and Pin Assignment</b>	SFP Slot				
	RJ-45 Socket: CAT.5e (10/100/1000Mbps) Twisted Pair cable				
	Auto MDI/MDI-X and Auto negotiation Function				
	RJ-45 Port supports IEEE 802.3at/af End-Span, Alternative A mode.				
	PoE (V+): RJ-45 pin 1, 2. / PoE (V-): RJ-45 pin 3, 6. / Data (1, 2, 3, 6, 4, 5, 7, 8)				
<b>LED</b>	<b>Per Unit:</b> Power 1 (Green ), Power 2 (Green), Fault (Amber )				
	<b>Fiber LNK/ACT (Green):</b> ON: Connected to network / OFF: Not connected to network, BLK: Receive /Transmit Data				
	<b>Fiber Speed:</b> (Yellow): 1000Base-X, Green : 100 Base- X				
	<b>RJ-45 Port:</b> Speed: 10 (OFF), 100 (Green), 1000 (Yellow)				
	<b>LNK/ACT for RJ45(Green):</b> ON: Connected to network, OFF: Not connected to network, BLK: Networking is active				
<b>PoE Status (Green):</b> Flash: PoE Fault (Over-load or short ), ON: PoE normal working / OFF : PoE No Power output					
<b>Reverse Polarity Protection</b>	Supported for Power Input				
<b>Overload Current Protection</b>	Supported				
<b>Power Supply</b>	12/24/48VDC (9.6~57VDC), Redundant power with polarity reverse protect function and removable terminal block				
	Built-in very high efficiency booster(97~99%) to rise up 55 VDC for PoE output				
	Regulated PoE output voltage (55VDC) to stabilize PoE device, and guarantee delivery PoE power distance to 100meter				
<b>PoE Power Budget</b>	30W				
<b>Power Consumption</b>	<b>Input Voltage</b>	<b>Total Power Consumption</b>	<b>Device Power Consumption</b>	<b>PoE Budget</b>	<b>Boost Efficiency</b>
	12VDC	34.2W	3.9W	30W	99.0%
	24VDC	34.7W	4.4W	30W	99.0%
	48VDC	35.4W	4.7W	30W	97.7%
<b>Alarm Relay Contact</b>	Relay outputs with current carrying capacity of 1A @24VDC				
<b>Removable Terminal Block</b>	Provides 2 redundant power, alarm relay contact, 6 Pin				
<b>Operating Humidity</b>	5%~95% (Non-condensing)				
<b>Operating Temperature</b>	-20°C ~ 75°C				
<b>Storage Temperature</b>	-40°C ~ 85°C				
<b>Housing</b>	Rugged Metal, IP30 Protection and fanless				
<b>Dimensions</b>	106 x 38.6 x 142mm (D x W x H)				
<b>Weight</b>	650g				
<b>Installation</b>	DIN Rail mounting or wall mounting (Optional)				
<b>MTBF</b>	881,372 Hours (MIL-HDBK-217)				
<b>Certification</b>					
<b>EMC</b>	CE				
<b>EMI</b>	FCC Part 15 Subpart B Class A, CE				
<b>Railway Traffic</b>	EN50121-4				
<b>Immunity for Heavy Industrial Environment</b>	EN 61000-6-2				
<b>Emission for Heavy Industrial Environment</b>	EN 61000-6-4				

EN61000-4-3 (RS) Level 3, Criteria A  
 EN61000-4-4 (EFT) Level 3, Criteria A  
 EN 61000-4-5 (Surge) Level 3, Criteria B  
 EN 61000-4-6 (CS) Level 3, Criteria A  
 EN61000-4-8 (PFMF) Field strength 300A/m Criteria A

**Shock** IEC 60068-2-27  
**Freefall** IEC 60068-2-32  
**Vibration** IEC 60068-2-6

## Dimensions



## Ordering Information

Model Name	RJ45	SFP	PoE		Power Input		Certification			Operating Temperature
	10/100/1000 Base-T(X)	Dual Speed 100/1000Base-X	IEEE802.3af/at (PSE)	Power Budget	Redundant	EN50121-4	EN61000-6-2 EN61000-6-4	CE FCC		
IMC-1000S-PHE12	1	1	1	30W	12/24/48VDC	V	V	V	-20~75°C	

## Optional Accessories

### ■ Wall Mount Kit

IND-WMK02 Wall Mount kit for Industrial product, 184 x 50mm

### ■ Industrial SFP Transceiver

The ISFP series of industrial grade SFP modules have been fully tested with all CTC Union industrial grade Ethernet switches for guaranteed compatibility and performance. Best performance can be guaranteed, even in mission-critical applications. (Please see CTC Union's Industrial SFP datasheets for more items and detailed information.)

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

### ■ Industrial Power Supply

MDR-40-48 Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 48VDC, 40W, -20 ~ 70°C