IMC-1000MS-PH12

1x GbE RJ45 to 100/1000Base-X SFP with PoE PSE (30W, 12/24/48VDC)

Industrial Managed PoE Media Converter

>> *12/24/48VDC (9.6~57VDC) Redundant Dual Power input*
>> *Regulate PoE Output Voltage (52VDC) to Stabilize PoE Device, and Guarantee Delivery PoE Power Distance to 100m*
>> *SNMP, Web Based and In-Band Management, Remote Loop-Back Test*
>> *Supports LFPT (Link Fault Pass Through) and FEF (Far End Fault)*
>> *EN50121-4, EN61000-6-2, EN61000-6-4, CE and FCC Certified*

Industrial managed 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-1000MS-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
- Provides IEEE 802.3at PoE output (30W)
- IP30 rugged metal housing and fanless
- Supports Jumbo frame 9K bytes packet
- Ingress/Egress bandwidth control with 64K granularity
- PoE configuration and monitor
- Supports EMS Management

Specifications

Standard	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)
	IEEE 802.1q	Tag VLAN
Fiber Ports	SFP slot for 100Base-X or 1000Base-X, 100M/1000M speed set by Web	
RJ45 Ports	10/100/1000Base-T Auto MDI/MDI-X and Auto negotiation Function Supports UTP CAT.5e Twisted Pair cable	
Push Button	Reset, Load default setting	
Data Process Architecture	Pass through mode	
Jumbo Frame	9K bytes	
LFPT (Link Fault Pass Through)	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	
Far-End Fault (FEF)	Work with LFPT to prevents data loss	

Connector and Pin Assignment	SFP Slot
	RJ-45 Socket: Cat 5e (10/100/1000Mbps) Twisted Pair cable
	Auto MDI/MDI-X and Auto negotiation Function
Connector and Pin Assignment	RJ-45 Port support 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)
LED	Per Unit: Power 1 (Green), Power 2 (Green), Fault (Amber)
	Fiber LNK/ACT (Green): ON : Connected to network, OFF: Not connected to network, BLK : Receive /Transmit data
	Fiber Speed: Yellow : 1000Base-X, Green : 100Base-X
	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
	PoE : On (Green) Flash : PoE Fault (Over-load or short), ON : PoE normal working, OFF : PoE No power output
Reverse Polarity Protection	Supported for Power Input
Overload Current Protection	Supported
Alarm Relay Contact	Relay outputs with current carrying capacity of 1A @24VDC
Removable Terminal Block	Provides 2 redundant power, alarm relay contact, 6 Pin
Operating Humidity	5% ~ 95% (Non-condensing)
Operating Temperature	-20 ~ 75°C
Storage Temperature	-40 ~ 85°C
Housing	Rugged Metal, IP30 Protection and fanless
Dimensions	106 x 62.5 x 135mm (D x W x H)
Weight	650g
Installation	DIN Rail mounting or wall mounting (Optional)
Power Supply	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 52VDC for PoE output
	Regulated PoE output voltage (52VDC) to stabilize PoE device, and guarantee delivery PoE power distance to 100meter
PoE Power Budget	30W

Power Consumption

Power consumption & Boost efficiency

Input Voltage	Total Power Consumption	Device Power Consumption	PoE Budget	Boost Efficiency
12VDC	34.2W	3.9W	30W	99.0%
24VDC	34.7W	4.4W	30W	99.0%
48VDC	35.4W	4.7W	30W	97.7%

MTBF	864,121 Hours (MIL-HDBK-217)

Certification

EMC	CE
EMI	FCC Part 15 Subpart B Class A, CE
Railway Traffic	EN50121-4
Immunity for Heavy Industrial Environment	EN61000-6-2
Emission for Heavy Industrial Environment	EN61000-6-4
EMS (Electromagnetic Susceptibility) Protection Level	EN61000-4-2 (ESD) Level 3, Criteria B
	EN61000-4-3 (RS) Level 3, Criteria A
	EN61000-4-4 (EFT) Level 3, Criteria A
	EN61000-4-5 (Surge) Level 3, Criteria B
	EN61000-4-6 (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

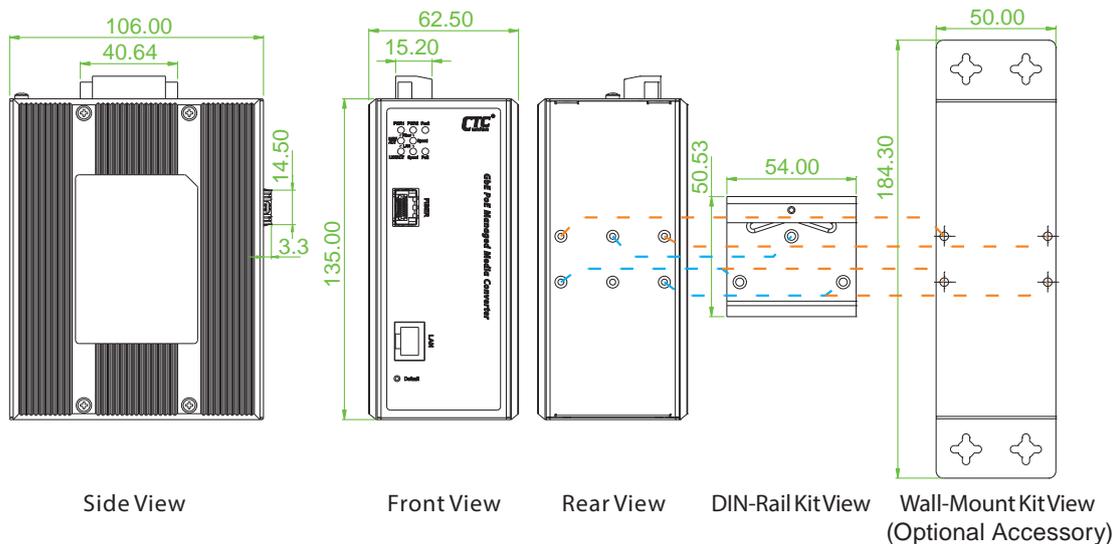## Software Specifications

SNMP or Web Mode

Management	Ingress/Egress bandwidth control with 64K granularity
	Web management, Firmware upgrade via Web
	Supports SNMP, MIB for management
	Supports 802.1Q tag VLAN, 16 Tag VLAN group, MIB counters display
Configuation	IP Configuration, Password Setting, Converter Configuration, Port Configuration, VLAN Group Configuration, Alarm Configuration and PoE Configuration
Diagnostic & Monitor	Supports Link Fault Pass-Through (LFPT) Function, Broadcast/Multicast/Unicast Storm Filter, SNMP Alarm Trap for Power Loss and Port Link Up/Down, and PoE Status

In-Band Remote mode

Management	Supports in-band management from FRM220 Chassis With FRM220-1000MS card
	Ingress/Egress bandwidth control with 64K granularity
Configuation	IP Configuration, Converter Configuration, Port Configuration, MIB Counter, VLAN Group Configuration, Alarm Configuration and PoE Configuration
Diagnostic & Monitor	Remote loop back test
	Supports Link Fault Pass-Through (LFPT) Function
	Broadcast/Multicast/Unicast storm filter
	PoE Status

Dimensions

Side View   Front View   Rear View   DIN-Rail Kit View   Wall-Mount Kit View (Optional Accessory)

Ordering Information

Model Name	Managed	RJ45 10/100/1000 Base-T(X)	SFP Dual Speed 100/1000Base-X	PoE IEEE802.3af/at (PSE)	Power Budget	Power Input Redundant	Certification EN50121-4	EN61000-6-2 EN61000-6-4	CE FCC	Operating Temperature
IMC-1000MS-PHE12	V	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