IMC-1000M-PH12

10/100/1000Base-T to 100/1000Base-FX/SX/LX Managed with PoE+ (PSE) Fiber Converter

IMC-1000MS-PH12

10/100/1000Base-T to 100/1000Base-X SFP Managed with PoE+ (PSE) Fiber Converter

NEW

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PoE ethernet managed converter

IMC-1000M(S)-PH12 is a family of Managed Gigabit Ethernet media converters that support conversion between electrical 10/100/1000Base-TX and optical 1000Base-X Ethernet and as PSE (Power Source Equipment) provide PoE+ power over Ethernet. Two options are available for optical interfaces, the IMC-1000M uses a fixed optical transceiver operating at 1000Base-X, while the IMC-1000MS provides an SFP cage for 100/1000Base-X compatible SFP modules. Housed in rugged DIN rail or wall mountable enclosures, these converters are designed for harsh environments, such as industrial networking, intelligent transportation systems (ITS) and are 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 input Power, and Built-in power booster
- Constant and regulated PoE output voltage at 55VDC
- Provides IEEE802.3at PoE output (30Watts)
- IP30 rugged metal housing
- Wide operating temperature -20~75℃ (IMC-1000M-PHE12, IMC-1000MS-PHE12)

- UL60950-1, CE, FCC, Railway traffic EN50121-4 certification
- Industrial grade EMS, EMI EN61000-6-2, EN61000-6-4 certification
- Supports Jumbo frame 9K bytes packet
- Ingress/Egress bandwidth control with 64K granularity
- PoE configuration and monitor
- Auto Laser Shutdown (ALS)
- Digital Diagnostic DDM for SFP support
- Supports 16 IEEE802.1Q Tag VLAN Group
- RMON counters
- SNMP alarm trap for power loss and port link down
- Web based management, **SNMP** for management
- **SmartView** Management System

Specifications

Standard	
	IEEE802.3 10Base-T
	IEEE802.3u 100Base-TX
	IEEE802.3u 100Base-FX
	IEEE802.3ab 1000Base-TX
	IEEE802.3z 1000Base-SX/LX
	IEEE802.3x Flow Control and Back pressure
	IEEE802.3at Power over Ethernet+, PoE+
	IEEE802.3af Power over Ethernet, PoE
	IEEE802.1q Tag VLAN
Fiber Ports	100/1000Base-FX/SX/LX, 100M /1000M Speed set by Web (IMC-1000M-PH12, IMC-1000M-PHE12)
	SFP slot for 100Base-X or 1000Base-X, 100M/1000M speed set by Web (IMC-1000MS-PH12, IMC-1000MS-PHE12)
RJ45 Ports	10/100/1000Base-T
Push Button	Reset, Load default setting
Data Process Architecture	Pass through mode
Jumbo Frame	9K bytes
Fiber Parameters	Fiber Cable (Multi-mode): 50/125um,62.5/125um
	Fiber Cable (Single-mode): 9/125um
	Wavelength: 1310nm (Multi-mode/Single-mode)
	Available distance: 500M (Multi-mode SX), 20KM (Single-mode), 40KM (Single-mode) (IMC-1000M-PH12 , IMC-1000M-PHE12)
	SFP, Distance depend on plug Fiber Tranceiver (IMC-1000MS-PH12 , IMC-1000MS-PHE12)
Link Lose Forward	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
Connector and Pin Assignment	Fiber: SC (Multi-mode, 500M), SC (Single-mode, 20KM, 40KM) (IMC-1000M-PH12, IMC-1000M-PHE12) SFP Slot (IMC-1000MS-PH12, IMC-1000MS-PHE12)
	RJ-45 Socket: CAT-3/5 (10/100/1000Mbps) Twisted Pair cable
	Auto MDI/MDI-X and Auto-Negotiation Function Support
	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 Status (Green): Flash : PoE Fault (Over-load or short), ON : PoE normal working, OFF : PoE No Power output
Reverse Polarity Protection	Present for Power Input
Overload Current Protection	Present
Power Supply	12/24/48VDC (9.6~57VDC), Redundant power with polarity reverse protect function and removable terminal block
Alarm Relay Contact	Relay outputs with current carrying capacity of 1 A @24VDC
Removable Terminal Block	Provide 2 redundant power, alarm relay contact, 7 Pin
Operating Humidity	5%~95% (Non-condensing)
Operating Temperature	-10℃~60℃ (IMC-1000M-PH12, IMC-1000MS-PH12)
	-20℃~75℃ (IMC-1000M-PHE12, IMC-1000MS-PHE12)
Storage Temperature	-40℃~85℃
Housing	Rugged Metal, IP30 Protection
Dimensions	106 x 38.6 x 142 mm (D X W X H)
Installation	DIN Rail mounting or wall mounting
Warranty	5 years
EMI	FCC Part 15 Subpart B Class A, CE EN 55022 Class A EN 61000-6-4 - Emission for industrial environment

Specifications & design are subject to change without prior notice. Please visit CTC Union website for more details.

Specifications

EMS	EN 61000-6-2 – Immunity for Industrial environment
	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

EMS	EN61000-4-8 (Magnetic Field) Level 3, Criteria A
Safety	UL60950-1 (pending)
Railway Traffic	EN 50121-4
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
MTBF	TBD (Above 30 years)

Software Specifications

Management	Ingress/Egress bandwidth control with 64K granularity
	Firmware upgrade via Web
	SNMP V1/V2c management
	Web management
	Supports DHCP client for automatic TCP/IP configuration
	Supports 802.1Q tag VLAN,16Tag VLAN group,
	RMON counters display
	Configuration : IP configuration, password setting, converter configuration, port configuration, MIB counter, SNMP configuration, VLAN group configuration, alarm configuration

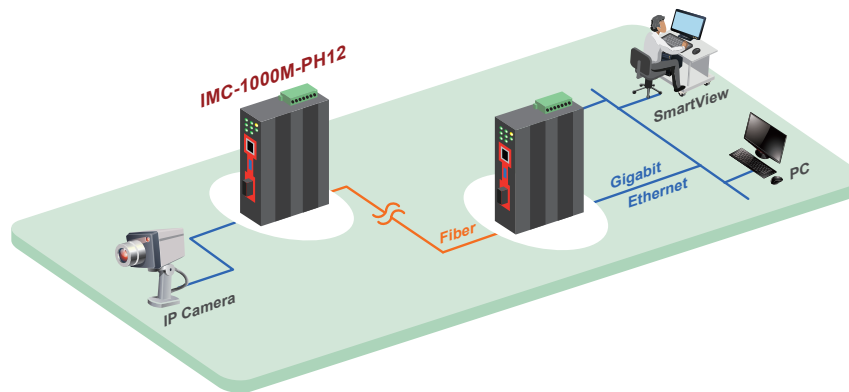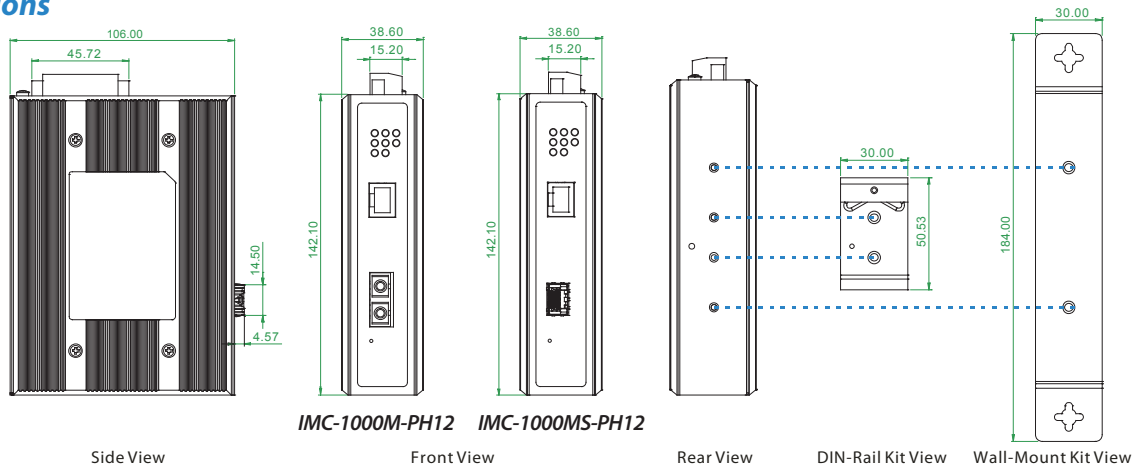| Management	Converter, Port, Alarm configuration
Diagnostic & Monitor	Supports Link Fault Pass-through (LFP) Function
	Supports DDM Diagnostic function for SFP fiber transceiver
	Broadcast/Multicast storm filter
	SNMP alarm trap for Power loss and Port link down
PoE Configuration & Monitor	PoE Output Enable/Disable
	PoE power output setting

Application

Figure : IMC-1000M-PH12 Industrial PoE Transmission

Dimensions

IMC-1000M-PH12   IMC-1000MS-PH12

Side View   Front View   Rear View   DIN-Rail Kit View   Wall-Mount Kit View

Ordering Information

Model Name	Description
IMC-1000M-PH12	10/100/1000Base-TX to 100/1000Base-FX/SX/LX Managment with PoE+ (PSE) Fiber Converter (30W, 12V Booster) (-10~60℃)
IMC-1000M-PHE12	10/100/1000Base-TX to 100/1000Base-FX/SX/LX Managment with PoE+ (PSE) Fiber Converter (30W, 12V Booster) (-20~75℃)
IMC-1000MS-PH12	10/100/1000Base-TX to 100/1000Base-X SFP Managment with PoE+ (PSE) Fiber Converter (30W, 12V Booster) (-10~60℃)
IMC-1000MS-PHE12	10/100/1000Base-TX to 100/1000Base-X SFP Managment with PoE+ (PSE) Fiber Converter (30W, 12V Booster) (-20~75℃)

Fiber Connector Type	Connectivity Distance
SC (IMC-1000M-PH12 & IMC-1000M-PHE12 only)	001:500M (M/M) 002 : 2km (M/M) 020:20km (S/M) 040:40km (S/M)
	020A: WDM 20km A Type (TX:1310nm)
	020B: WDM 20km B Type (TX:1550nm)

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Temperature   Connector Type   Connectivity Distance

Example: IMC-1000M – PHE12 – SC001

Accessories

DR-4524	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 48W, -10 ~ +50℃
MDR-40-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 40W, -20 ~ +70℃
MDR-60-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 60W, -20 ~ +70℃
SFP Transceiver	Compatible, Reliable, 5-year Warranty

ISFP – M 7 040 – 31 – E

E : -40~85℃
Blank : 0~70℃

Industrial SFP Transceiver
M : Multi Mode
S : Single Mode
T : Copper

7 : GbE
5 : FE

Distance 002(2km), 020(20km), 040(40km)...

Wavelength