

IMC-100M-PH12

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



IMC-100MPH12 is a 10/100Base-TX to 100Base-FX Ethernet Media converter which not only offers 100M fixed fiber transceiver for the optical interface, but also injects PoE+ power through the electrical RJ-45 port. Housed in rugged DIN rail or wall mountable enclosures, IMC-100M(S)-PH12 converters are designed for harsh environments, such as IP surveillance, industrial networking, intelligent transportation systems (ITS) and are also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications. IMC-100M-PH12 also provides many advanced L2 functions (VLAN, storm filter, ingress/egress bandwidth control, etc.) and can be managed via easy-to-use GUI or standard SNMP manager such as CTC SarmtView. With built-in OAM (Operation, Administration, Maintenance & Provisioning) functions such as loop-back test and dying gasp, IMC-100M-PH12 can be monitored from a centrally located OAM-enabled FRM220-1000MS via remote in-band management which helps to reduce operational expenditures by keeping truck rolls to a minimum.

Features

- Conversion between 10/100Base-TX and 100Base-FX fiber cable interface
- 12/24/48VDC (9.6~57VDC) redundant dual input power and built-in very high efficient power booster
- Constant and regulated PoE output voltage at 55VDC
- Provides IEEE802.3at PoE output (30W)
- IP30 rugged metal housing
- Wide operating temperature -20~75°C (IMC-100M-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)
- Supports Digital Diagnostic Monitor Interface (DDMI) for SFP
- Supports 16 IEEE802.1Q Tag VLAN Group
- MIB counters
- SNMP alarm trap for power loss and port link down
- Web based and SNMP for management
- Remote Loop-Back test
- Supports in-band management from FRM220 Chassis With FRM220-1000MS
- SmartView Management System support

Specifications

Standard	IEEE802.3 10Base-T IEEE802.3u 100Base-TX IEEE802.3u 100Base-FX 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	100Base-FX, 100M Speed
RJ45 Ports	10/100Base-TX
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: 2KM (Multi-mode), 30KM,50KM(Single-mode),20KM (WDM Bidi)
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/ST (Multi-mode, 2km), SC/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 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)
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: Green : 100Base-X RJ-45 port: Speed: 10 (OFF), 100 (Green) 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
Alarm Relay Contact	Relay outputs with current carrying capacity of 1 A @24VDC

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

Specifications

Removable Terminal Block	Provide 2 redundant power, alarm relay contact, 6 Pin				
Operating Humidity	5%~95% (Non-condensing)				
Operating Temperature	-10°C~60°C (IMC-100M-PH12) -20°C~75°C (IMC-100M-PHE12)				
Storage Temperature	-40°C~85°C				
Housing	Rugged Metal, IP30 Protection				
Dimensions	106 x 62.5 x 134.8 mm (D X W X H)				
Weight	655g				
Installation	DIN Rail mounting or wall mounting				
Power Supply	12/24/48VDC (9.6~5.7VDC), Redundant power with polarity reverse protect function and removable terminal block				
Power Consumption	Input Volt	Total Power consumption (W)	Device Power consumption (W)	PoE Budget (W)	Boost Efficiency
	12 VDC	34.4	3.9	30	98.4%
	24 VDC	34.9	4.5	30	98.7%
	48 VDC	35.4	4.7	30	97.7%

Certifications	
EMC	CE
EMI	FCC Part 15 Subpart B Class A, CE EN 55022 Class A
Rail Way Traffic	EN50121-4
Immunity for Heavy Industrial environment	EN 61000-6-2
Emission for Heavy industrial environment	EN 61000-6-4
EMS (Electromagnetic Susceptibility) Protection leve	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
Safety	UL60950-1 (pending)
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
MTBF	410,235 Hrs (IMC-100M-PH12, IMC-100M-PHE12)
Warranty	5 years

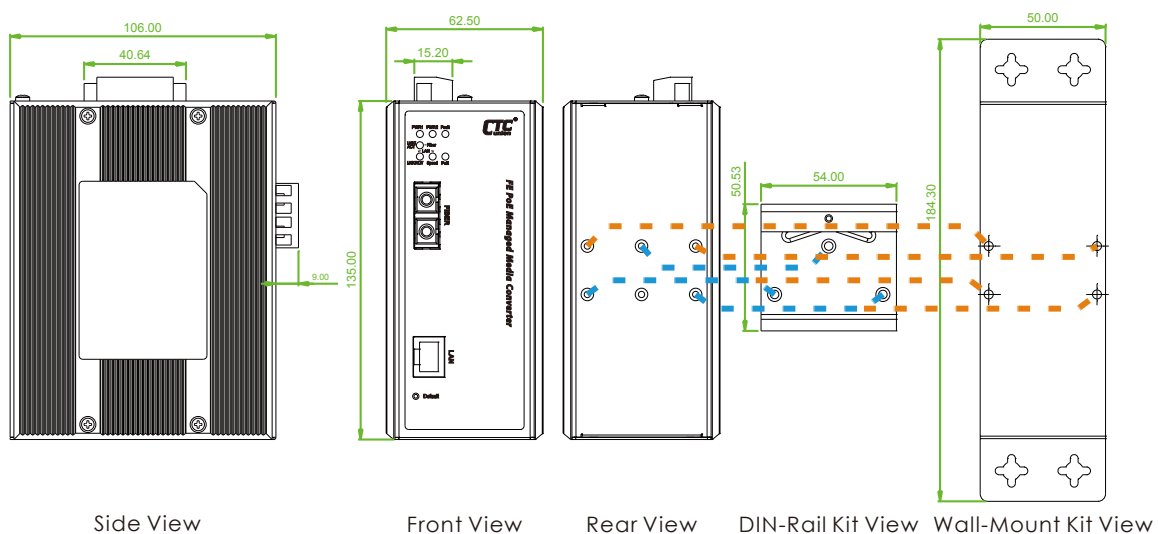
Software Specifications

Stand-alone or Web Mode	
Management	Ingress/Egress bandwidth control with 64K granularity Web management, Firmware upgrade via Web Supports SNMP, MIB for management Supports DHCP client for automatic IP configuration Supports 802.1Q tag VLAN, 16 Tag VLAN group, MIB counters display
Configuration	IP configuration, password setting, converter configuration port configuration, MIB counter, SNMP configuration VLAN group configuration, alarm configuration 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 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
Configuration	IP configuration, converter configuration, port configuration, MIB counter VLAN group configuration, alarm configuration, PoE Configuration
Diagnostic & Monitor	Remote loop-back test Supports Link Fault Pass-Through (LFPT) Function Broadcast/Multicast/Unicast storm filter PoE Status

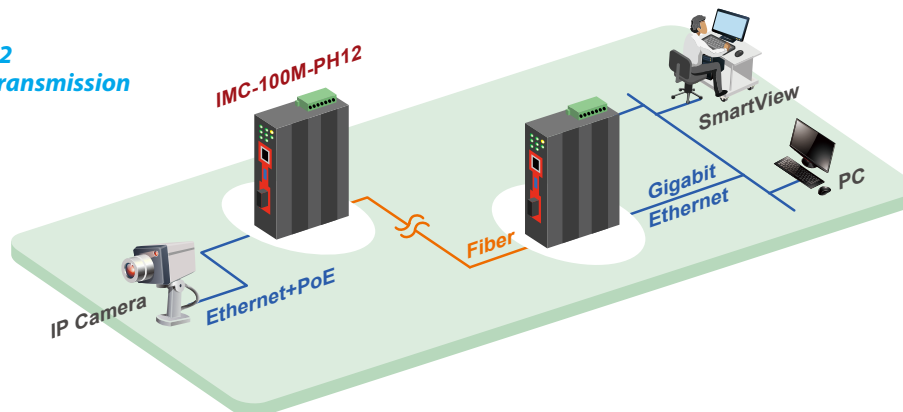
Dimensions

IMC-100M-PH12, IMC-100M-PHE12

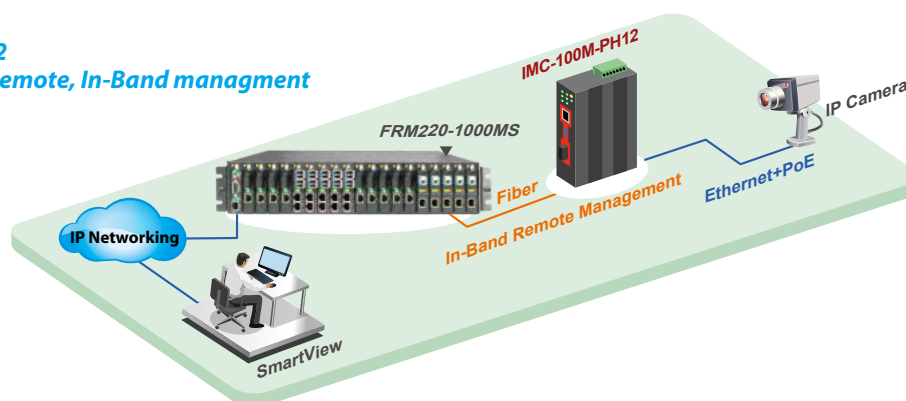


Application

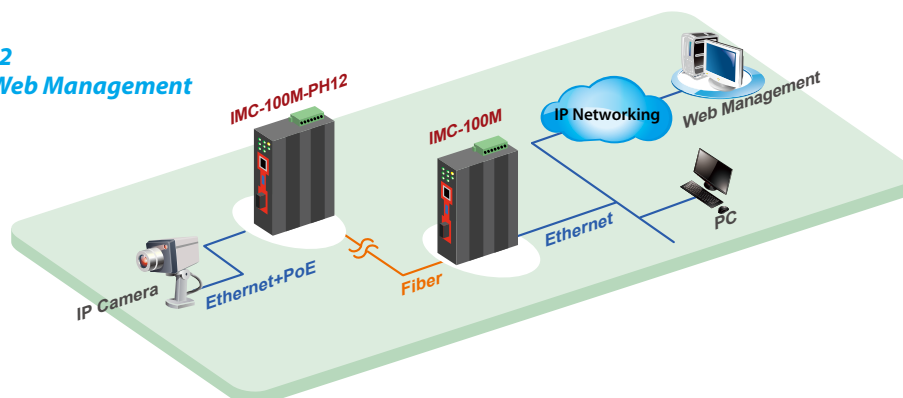
**Figure 1 : IMC-100M-PH12
Industrial PoE Transmission**



**Figure 2 : IMC-100M-PH12
Application in Remote, In-Band management**



**Figure 3 : IMC-100M-PH12
Application in Web Management**



Ordering Information

Model Name	Description
IMC-100M-PH12	10/100Base-TX to 100Base-FX Managed With PoE+ (PSE) Fiber Converter (30W, 12V Booster) (-10~60°C)
IMC-100M-PHE12	10/100Base-TX to 100Base-FX Managed With PoE+ (PSE) Fiber Converter (30W, 12V Booster) (-20~75°C)

Fiber 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
MDR-60-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 60W, -20 ~ +70°C

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Temperature Connector Connectivity
Type Distance
IMC-100M -PH 12 -
 Example: IMC-100M - PHE12 - SC002