IMC-100-PH12

1x 10/100Base RJ45 to 1x 100Base Fiber (SC/ST) with PoE PSE (30W, 12/24/48VDC)

- 12/24/48VDC (9.6~57VDC) redundant dual input power with power booster
- Regulate PoE output voltage (52VDC) to stabilize PoE device, and guarantee delivery PoE power distance to 100meter
- Supports Remote PD reset by fiber port link down
- Supports LFPT (Link Fault Pass Through) and FEF (Far End Fault)

IMC-100-PH12 is a 10/100Base-TX to Fixed 100Base-FX unmanaged Ethernet media converter that also injects PoE+/PoE power through the electrical RJ-45 port. Housed in rugged DIN rail or wall mountable enclosures, the converter is designed for harsh environments, such as 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 10/100Base-TX and 100Base-FX SC or ST Fiber interface
- Provides IEEE 802.3at PoE output (30Watts)
- Provides a DIP-Switch to set functions
- IP30 rugged metal housing and fanless
- Wide operating temperature -20~75°C
- Supports Jumbo frame 9K bytes packet

Specifications

Standard	IEEE 802.3 10Base-T 10Mbit/s Ethernet
	IEEE 802.3u 100Base-TX, 100Base-FX, Fast Ethernet
	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
RJ45 Ports	10/100Base-TX Auto MDI/MDI-X and Auto-Negotiation Function Supports UTP CAT.5e Twisted Pair cable
Fiber Ports	100Base-FX with SC or ST connector
Data Process Architecture	Store and Forward mode or Pass Through mode (Set by DIP SW)
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 (Single-mode), 50KM(Single-mode)
Link Fault Pass Through (LFPT)	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
DIP Switch	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
	PoE Output OFF: Enable PoE output ON: Disable PoE output
	Remote PD reset (Figure 2) OFF : Disable Remote PD reset ON: Enable Remote PD reset by fiber port link down

Fiber Connector	Fiber: SC / ST (Multi-mode, 2KM), SC / ST (Single-mode, 30KM, 50KM)
RJ45 Connector and Pin Assignment	RJ-45 Socket: CAT.5e (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 : 100 Base- 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 States (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
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 (Figure 1)
PoE Power budget	30W

Power Consumption	Power consumption & Boost efficiency

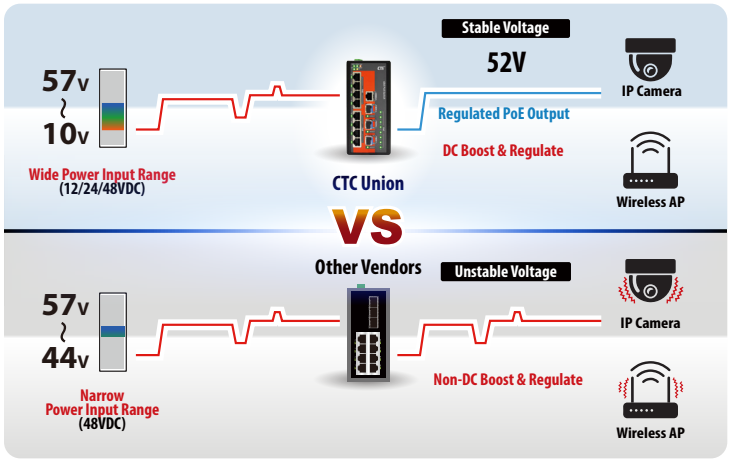
Input Voltage	Total Power Consumption	Device Power Consumption	PoE Budget	Boost Efficiency
12VDC	34W	3.5W	30W	98.4%
24VDC	34.4W	4.1W	30W	99.0%
48VDC	34.9W	4.3W	30W	98.0%

Alarm Relay Contact	Relay outputs with current carrying capacity of 1 A @24VDC
Removable Terminal Block	Provide 2 redundant power, alarm relay contact, 6 Pin
Operating Humidity	5%~95% (Non-condensing)
Operating Temperature	-20°C ~ 75°C
Storage Temperature	-40°C ~ 85°C
Housing	Rugged Metal, IP30 Protection and fanless
Dimensions	106 x 62.5 x 135 mm (D x W x H)
Weight	655g
Installation	DIN Rail mounting, or wall mounting (Optional)
MTBF	801,948 Hours MIL-HDBK-217
Warranty	5 years

Certifications	
EMC	CE
EMI	FCC Part 15 Subpart B Class A, CE
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

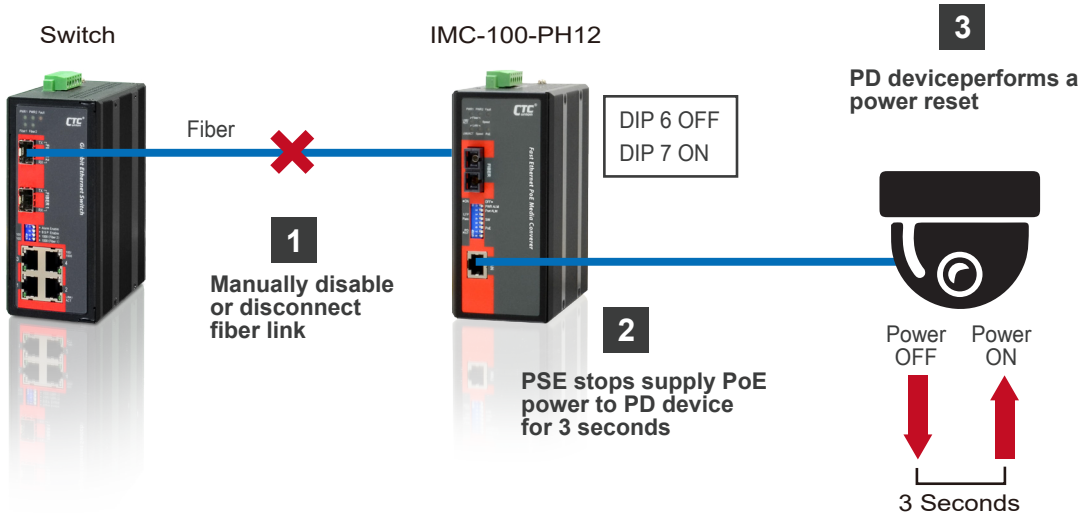
Application

Figure 1 : High efficiency boost technology for PoE

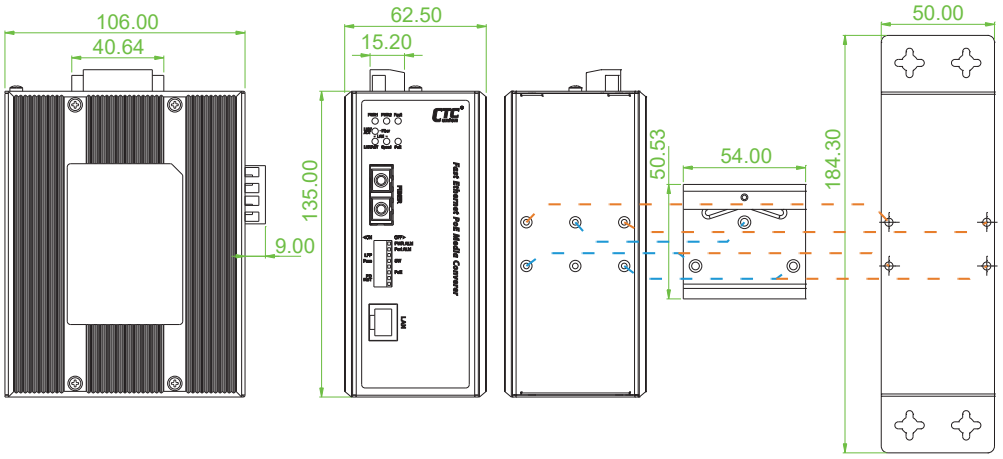


- Regulated PoE output voltage (52VDC) to stabilize PoE device
- Guarantee delivery PoE power distance to 100 meters
- Wide range input power 12/24/48VDC (9.6~57VDC)
- Built-in very high efficiency (94~97%) to boost PoE output voltage

Figure 2 : Remote PD Reset Application



Dimensions



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

Ordering Information

Model Name	RJ45 UTP	Fiber	PoE Port		Power Input	Certification		Operating Temperature
	10/100 Base-TX	100Base-FX	IEEE802.3at (PSE)	Power Budget	Redundant	CE	FCC	
IMC-100-PHE12	1	1 SC/ST	1	30W	12/24/48VDC	V	V	-20~75℃

Fiber Connector Type	Connectivity Distance
SC, ST	002: 2km (M/M) 030: 30km (S/M) 050: 50km (S/M) 020A: WDM Bidi 20km A Type (TX:1310nm) 020B: WDM Bidi 20km B Type (TX:1550nm)

■ Package List

- IMC-100-PH12 device
- Din Rail bracket with screws
- Terminal block

Optional Accessories

■ Wall Mount Kit

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

■ Industrial Power Supply

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