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30 Watts,
i2V Booster



IMC-1000-PH12

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

IMC-1000S-PH12

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

IMC-1000(S)-PH12 is a family of non-managed Gigabit Ethernet media converters that support conversion between electrical 10/100/1000Base-T 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-1000-PH12 uses a fixed optical transceiver operating at 1000Base-X, while the IMC-1000S-PH12 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 with built-in very high efficiency booster (97~99%) to rise up 55 VDC for PoE output
- Constant and regulated PoE output voltage at 55VDC
- 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 (IMC-1000-PHE12, IMC-1000S-PHE12)
- CE, FCC, Railway traffic EN50121-4 certification
- Industrial grade EMS,EMI EN61000-6-2, EN61000-6-4 certification
- Supports Jumbo frame 9K bytes packet

Specifications

Standard	IEEE802.3 10Base-T 10Mbit/s Ethernet IEEE802.3u 100Base-TX, 100Base-FX, Fast Ethernet IEEE802.3ab 1000Base-T Gbit/s Ethernet over twisted pair IEEE802.3z 1000Base-X Gbit/s Ethernet over Fiber-Optic IEEE802.3x Flow Control and Back pressure IEEE802.3at Power over Ethernet+, PoE+ IEEE802.3af Power over Ethernet, PoE IEEE802.1q Tag VLAN
RJ45 Ports	10/100/1000Base-T
Fiber Ports	100/1000Base-SX/LX (IMC-1000-PH12, IMC-1000-PHE12) 100/1000Base-X SFP (IMC-1000S-PH12, IMC-1000S-PHE12)
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: • 500M (Multi-mode SX), 20KM (Single-mode), • 50KM(Single-mode) (IMC-1000-PH12, IMC-1000-PHE12) • SFP, Distance depend on plug-in Fiber Transceiver (IMC-1000S-PH12, IMC-1000S-PHE12)
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
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 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
Connector and Pin Assignment	Fiber: SC (Multi-mode, 500M), SC (Single-mode, 20KM, 40KM) (IMC-1000-PH12, IMC-1000-PHE12) SFP Slot (IMC-1000S-PH12, IMC-1000S-PHE12)

Connector and Pin Assignment	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 : 100 Base- 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 Built-in very high efficiency booster(97~99%) to rise up 55 VDC for PoE output																																								
Power Consumption	<p>IMC-1000-PH12 Power consumption & Booser efficiency</p> <table border="1"> <thead> <tr> <th>Input Voltage</th> <th>Total Power Consumption</th> <th>Device Power Consumption</th> <th>PoE Budget</th> <th>Boost Efficiency</th> </tr> </thead> <tbody> <tr> <td>12VDC</td> <td>34.4W</td> <td>3.9W</td> <td>30W</td> <td>98.4%</td> </tr> <tr> <td>24VDC</td> <td>34.9W</td> <td>4.5W</td> <td>30W</td> <td>98.7%</td> </tr> <tr> <td>48VDC</td> <td>35.4W</td> <td>4.7W</td> <td>30W</td> <td>97.7%</td> </tr> </tbody> </table> <p>IMC-1000S-PH12 Power consumption & Booser efficiency</p> <table border="1"> <thead> <tr> <th>Input Voltage</th> <th>Total Power Consumption</th> <th>Device Power Consumption</th> <th>PoE Budget</th> <th>Boost Efficiency</th> </tr> </thead> <tbody> <tr> <td>12VDC</td> <td>34.2W</td> <td>3.9W</td> <td>30W</td> <td>99.0%</td> </tr> <tr> <td>24VDC</td> <td>34.7W</td> <td>4.4W</td> <td>30W</td> <td>99.0%</td> </tr> <tr> <td>48VDC</td> <td>35.4W</td> <td>4.7W</td> <td>30W</td> <td>97.7%</td> </tr> </tbody> </table>	Input Voltage	Total Power Consumption	Device Power Consumption	PoE Budget	Boost Efficiency	12VDC	34.4W	3.9W	30W	98.4%	24VDC	34.9W	4.5W	30W	98.7%	48VDC	35.4W	4.7W	30W	97.7%	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%
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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																																								

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Operating Humidity	5%~95% (Non-condensing)
Operating Temperature	-10°C~60°C (IMC-1000-PH12, IMC-1000S-PH12) -20°C~75°C (IMC-1000-PHE12, IMC-1000S-PHE12)
Storage Temperature	-40°C~85°C
Housing	Rugged Metal, IP30 Protection and fanless
Dimensions	106 x 38.6 x 142 mm(D x W x H)
Weight	655g (IMC-1000-PH12, IMC-1000-PHE12) 650g (IMC-1000S-PH12, IMC-1000S-PHE12)
Installation	DIN Rail mounting or wall mounting
Certification	
EMC	CE
EMI	FCC Part 15 Subpart B Class A, CE EN 55022 Class A
Railway Traffic	EN50121-4
Immunity for Heavy Industrial environment	EN 61000-6-2

Emission for Heavy industrial environment EMS	EN 61000-6-4
Safety	UL60950-1 (pending)
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
MTBF	419,822Hrs (IMC-1000-PH12, IMC-1000-PHE12) 432,104Hrs (IMC-1000S-PH12, IMC-1000S-PHE12) MIL-HDBK-217
Warranty	5 years

Application

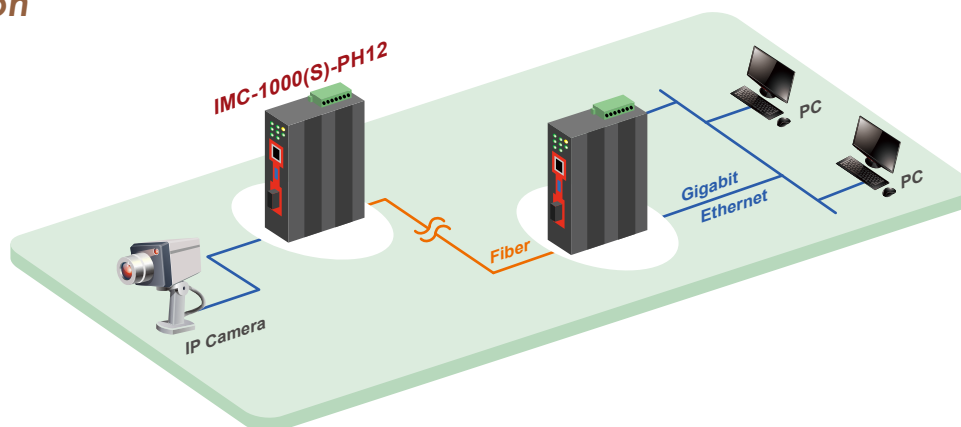
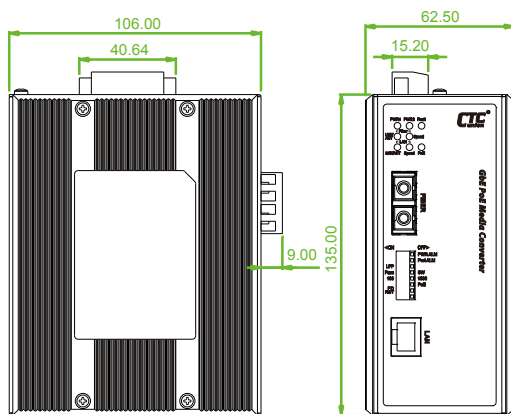


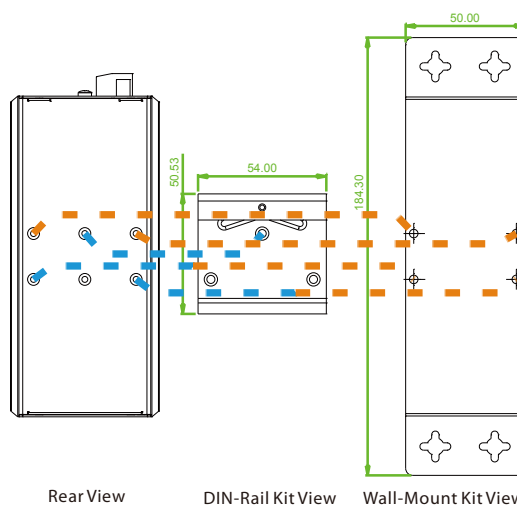
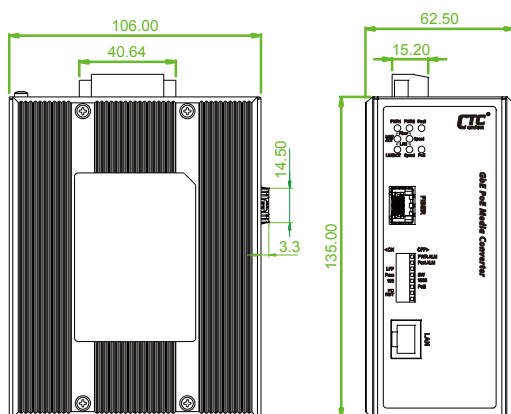
Figure : IMC-1000(S)-PH12 Industrial PoE Transmission

Dimensions

IMC-1000-PH12



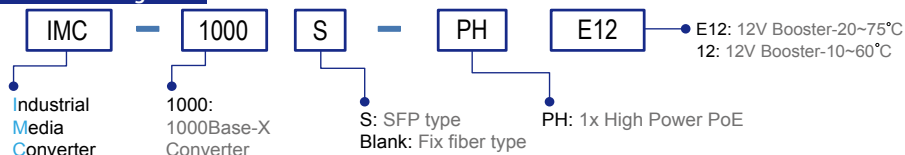
IMC-1000S-PH12



Ordering Information

Model Name	UTP	Fiber	PoE Port		Input Voltage (Boost)	Certification				Operating Temperature
	10/100/1000 Base-T	Dual Speed 100/1000Base-X	IEEE802.3at (PSE)	Power Budget		Railway EN50121-4	EN61000-6-2 EN61000-6-4	CE	FCC	
IMC-1000-PH12	1	1 SC	1	30W	12/24/48VDC	V	V	V	V	-10~60 C
IMC-1000-PHE12	1	1 SC	1	30W	12/24/48VDC	V	V	V	V	-20~75 C
IMC-1000S-PH12	1	1 SFP	1	30W	12/24/48VDC	V	V	V	V	-10~60 C
IMC-1000S-PHE12	1	1 SFP	1	30W	12/24/48VDC	V	V	V	V	-20~75 C

Model Naming Rule



Fiber Connector Type Connectivity Distance

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

Example: IMC-1000 - PH 12 -

Temperature Connector Type Connectivity Distance

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
SFP Transceiver	Compatible, Reliable, 5-year Warranty

SFP Naming Rule

