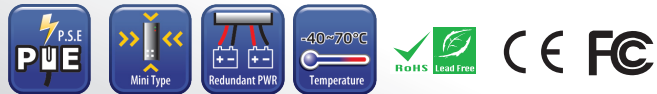# IPMC-111PB

❯ *Industrial mini type Ethernet to fiber PoE media converter with 1x10/100Base-T(X) P.S.E. and 1x100Base-FX, SFP socket*

Features

- Supports 1 port 10/100Base-T(X) P.S.E. auto-negotiation and auto-MDI/MDI-X
- Support Ethernet to fiber or Ethernet to SFP port
- Supports **LFP (Link Fault Pass-through)** function
- Supports full/half duplex operation
- **P.S.E.** fully compliant with IEEE802.3at standard; provides up to 30 Watts
- Supports store-and-forward transmission
- Provided DIP-Switch to setting function
- High reliability and rigid IP-30 housing
- DIN-Rail and wall mounting enabled

Introduction

IPMC-111PB is a cost-effective solution for the conversion interface between 10/100Base-T(X) and 100Base-FX, it allows you to extend communication distance by optical fiber. IPMC-111PB supports MDI/MDIX auto detection, so you don't need to use crossover wires. IPMC-111PB also support Power over Ethernet, a system to transmit electrical power up to **30 watts**, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each IPMC-111PB has 1x10/100Base-T(X) P.S.E. (Power Sourcing Equipment) port to provide power in a PoE setup. IPMC-111PB with wide operating temperature range from -40 ~70°C and accepts a wide voltage range from dual 50~57 VDC power inputs, so it is suitable for harsh operating environments.

IPMC-111PB also supports the **LFP (Link Fault Pass-through)** feature. When one side of the link fails, the other side continues transmitting packets, and waiting for a response that never arrives from the disconnected side. Use the DIP-Switch to enable the LFP function, then IPMC-111PB will force the link to shutdown as soon as noticed that the other link has failed, to notice the administrator to react to the situation. Therefore, the IPMC-111PB is reliable media converter with PoE capability and can satisfy most demand of operating environment.
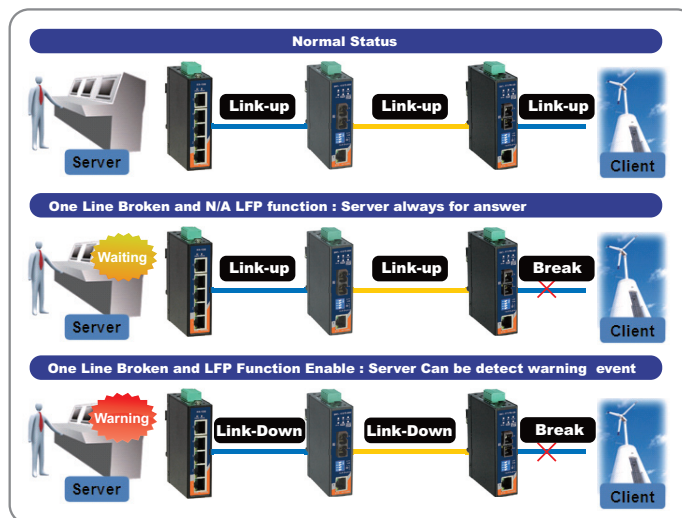
Connections of the LFP function

Industrial
Ethernet Switch

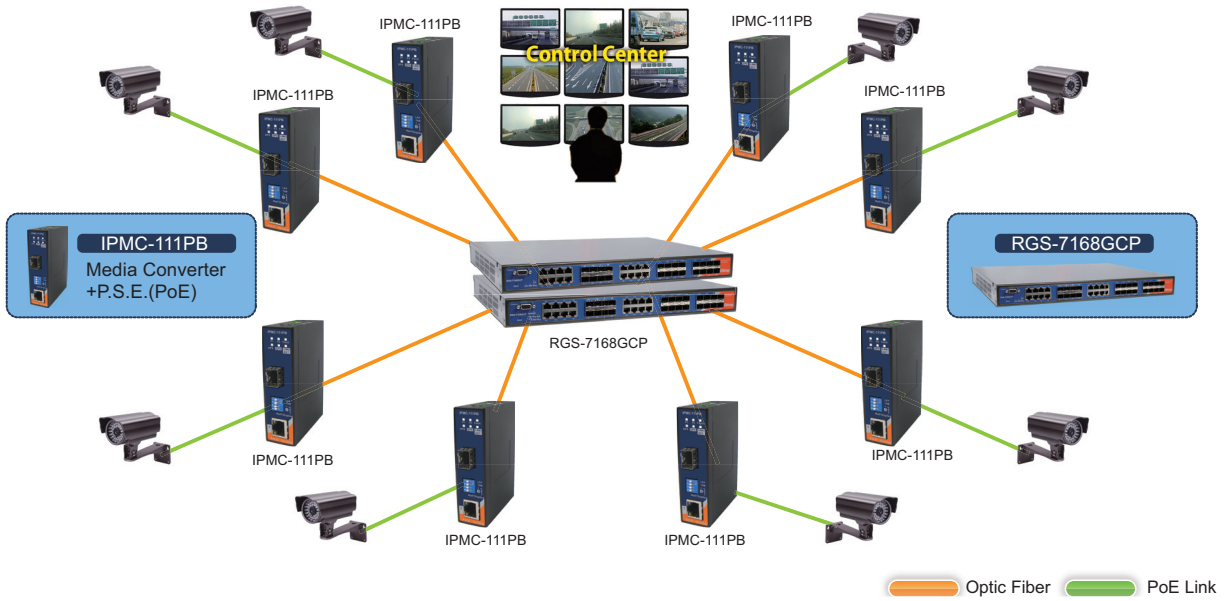Industrial
Media Converter

Industrial
Device Server

Industrial Wireless
Access Point

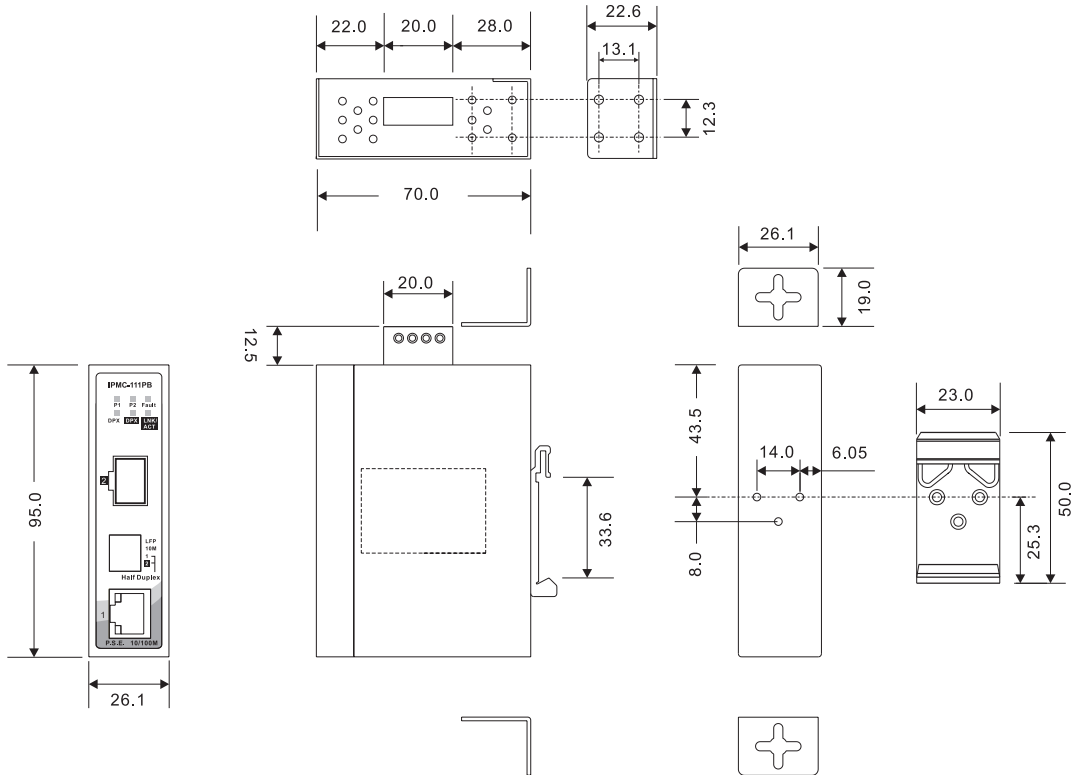Industrial Cellular
VPN Router

Accessories

Network
Management Software

Practical Operation

Connections of the media converters

Dimensions

(Unit=mm)

Connector and Pin Definition

Pin	RJ-45 Output (Data and Power)	
	Symbol	Description
1	Rx+ (Vdc+)	Data Receive and Feeding power(+)
2	Rx- (Vdc+)	Data Receive and Feeding power(+)
3	Tx+ (Vdc-)	Data Transmit and Feeding power(-)
4	NC	Not Connected
5	NC	Not Connected
6	Tx- (Vdc-)	Data Transmit and Feeding power(-)
7	NC	Not Connected
8	NC	Not Connected

Note: pins 3 and 6 (-Vdc) should not be shorted to ground

Specifications

ORing Media Converter Model	IPMC-111PB
Physical Ports	
10/100Base-T(X) Ports in RJ45 Auto MDI/MDIX	1
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3x for Flow control IEEE 802.3at PoE specification (up to 30 Watts per port for P.S.E.)
Processing	Store-and-Forward
DIP-Switch setting	DIP-Switch 1 for LFP mode selection : (ON) enable / (OFF) disable DIP-Switch 2 for Ethernet speed selection : (ON)10Mbps / (OFF) 10/100Mbps Auto-negotiate DIP-Switch 3 for Ethernet full/half duplex selection : (ON) Half-duplex / (OFF) Full/Half-Duplex Auto-negotiate DIP-Switch 4 for fiber full/half duplex selection : (ON) Half-Duplex / (OFF) Full-Duplex
LED Indicators	
Power Indicator	Green : Power LED x 2 (ON : power input on-line / (OFF) power input off-line
10/100Base-T(X) RJ45 Port Indicator	Green for port Link/Act – (ON) Link up / (Blinking) Acting / (OFF) Link down Amber for 100Mbps/10Mbps indicator – (ON) Working at 100Mbps / (OFF) Working at 10Mbps Green for port duplex indicator – (ON) Full-Duplex / (OFF) Half-Duplex
100Base-FX Fiber Port Indicator	Green for fiber port Link/Act - (ON) Link up / (Flash) Acting / (OFF) Link down Green for fiber port duplex indicator – (ON) Full-Duplex / (OFF) Half-Duplex
LFP status indicator	Amber LED – (ON) LFP function fail / (OFF) LFP function disable
PoE indicator	Amber for P.S.E. indicator
Power	
Input Power	Dual 50~57 VDC power inputs at 4-pin terminal block
Power Consumption (Typ.)	31.2 Watts (P.S.E. output included)
Overload Current Protection	Present
Reverse Polarity Protection	Present
Physical Characteristics	
Enclosure	IP-30
Dimensions (W x D x H)	26.1 (W) x 70 (D) x 95 (H)mm (1.03 x 2.76 x 3.74 inch)
Weight (g)	210 g
Environmental	
Storage Temperature	-40 to 85℃ (-40 to 185°F)
Operating Temperature	-40 to 70℃ (-40 to 158°F)
Operating Humidity	5% to 95% Non-condensing

Industrial
Ethernet Switch

Industrial
Media Converter

Industrial
Device Server

Industrial Wireless
Access Point

Industrial Cellular
VPN Router

Accessories

Network
Management Software

Regulatory Approvals	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Safety	EN60950-1
Warranty	5 years

Ordering Information

IPMC-1 A B C B

Code Definition	10/100Base-T(X) Port Number	Fiber Port Number	Fiber Port Type
Option	- **1** : 1 port	- **1**: 1 port	- **P**: 100Base-FX SFP

Available Model	Model Name	Description
	IPMC-111PB	Industrial mini type Ethernet to fiber media converter with 1x10/100Base-T(X) P.S.E. and 1x100Base-FX, SFP socket

Packing List
- IPMC-111PB
- DIN-Rail Kit
- Wall-Mount Kit
- Quick Installation Guide

Optional Accessories (Can be purchased separately)
- DR-75-48 : 75 Watts power supply
- DR-120 -48 : 120 Watts power supply
- SDR-240-48, 240W DIN-Rail power supply
- SDR-480-48, 480W DIN-Rail power supply
- FPC series : Fiber Patch cord
- SFP100 series : 100Mbps SFP optical transceiver

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Industrial Media Converter