

# 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

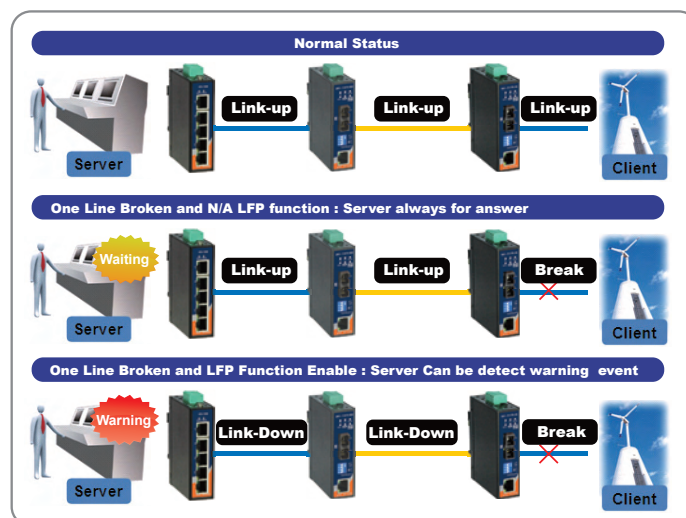
- Supports 1 port 10/100Base-T(X) P.S.E. auto-negotiation and auto-MDI/MDI-X
- Support Ethernet to fiber or Ethernet to SFP port
- Supports **LFP (Link Fault Pass-through)** function
- Supports full/half duplex operation
- **P.S.E.** fully compliant with IEEE802.3at standard; provides up to 30 Watts
- 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

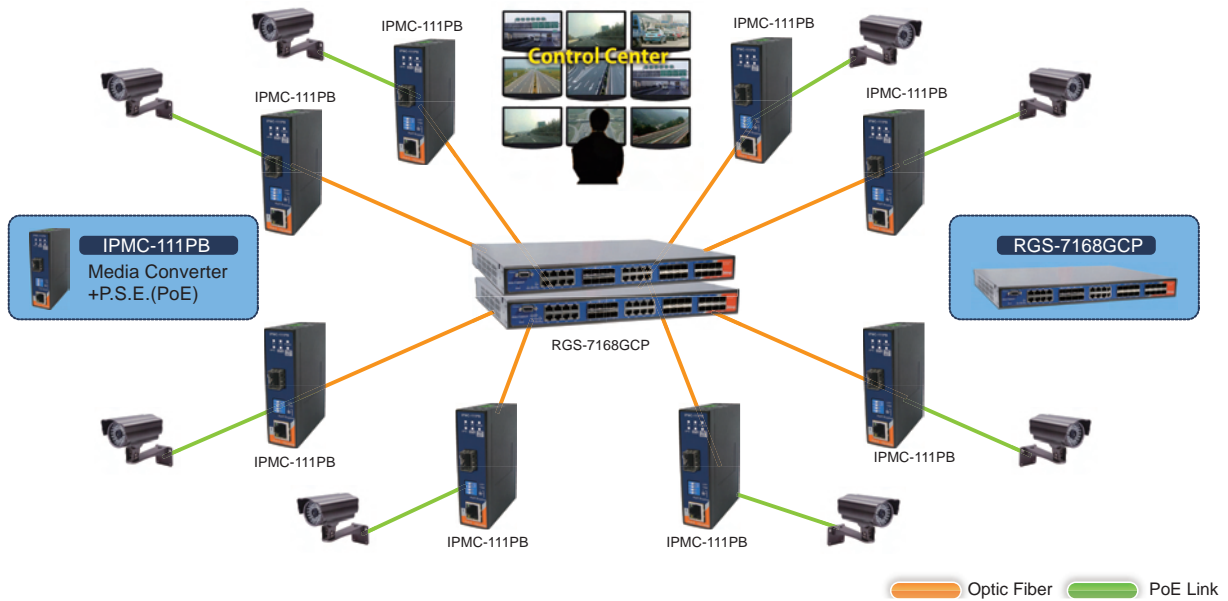
IPMC-111PB is a cost-effective solution for the conversion interface between 10/100Base-T(X) and 100Base-FX, it allows you to extend communication distance by optical fiber. IPMC-111PB supports MDI/MDIX auto detection, so you don't need to use crossover wires. IPMC-111PB also support Power over Ethernet, 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.



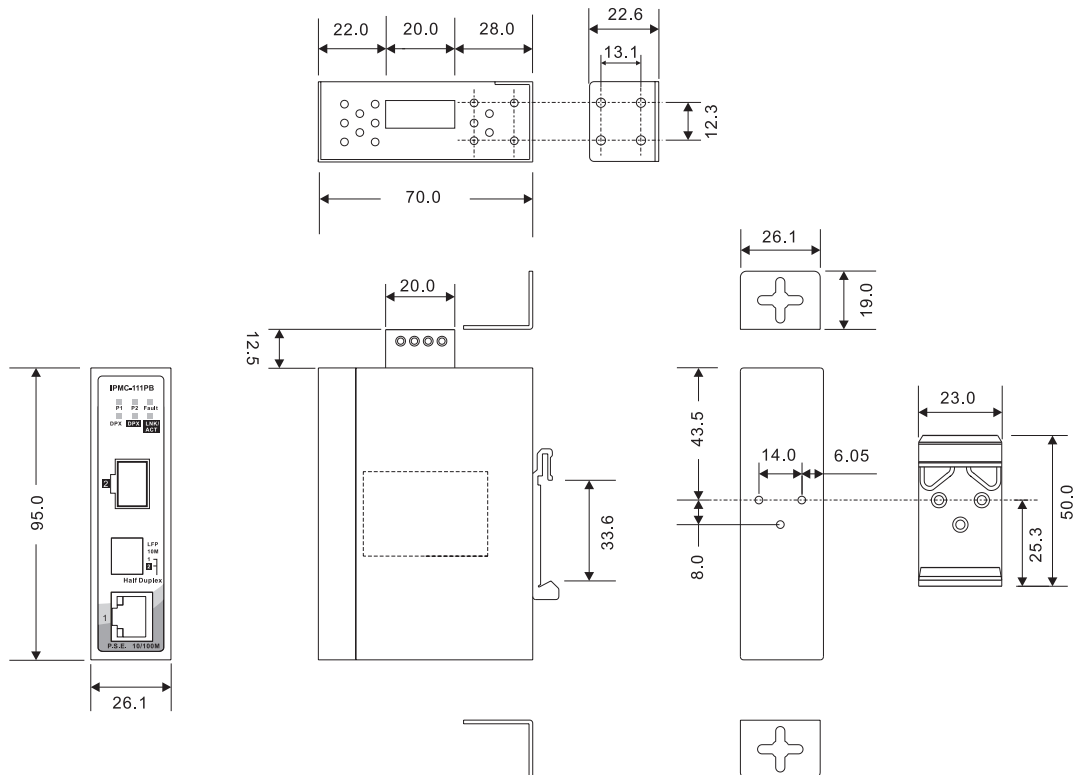
Connections of the LFP function

## Practical Operation



Connections of the media converters

## Dimensions



(Unit=mm)

## Connector and Pin Definition

RJ-45 Output (Data and Power)		
Pin	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
<b>Physical Ports</b>	
10/100Base-T(X) Ports in RJ45 Auto MDI/MDIX	1
<b>Technology</b>	
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
<b>LED Indicators</b>	
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
<b>Power</b>	
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
<b>Physical Characteristics</b>	
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
<b>Environmental</b>	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-40 to 70°C (-40 to 158°F)
Operating Humidity	5% to 95% Non-condensing

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
<b>Option</b>	- <b>1</b> : 1 port	- <b>1</b> : 1 port	- <b>P</b> : 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, <b>Art. No. 126144</b>
<b>Packing List</b>		<b>Optional Accessories (Can be purchased separately)</b>
<ul style="list-style-type: none"> <li>• IPMC-111PB</li> <li>• DIN-Rail Kit</li> <li>• Wall-Mount Kit</li> <li>• Quick Installation Guide</li> </ul>		<ul style="list-style-type: none"> <li>• DR-75-48 : 75 Watts power supply</li> <li>• DR-120-48 : 120 Watts power supply</li> <li>• SDR-240-48, 240W DIN-Rail power supply</li> <li>• SDR-480-48, 480W DIN-Rail power supply</li> <li>• FPC series : Fiber Patch cord</li> <li>• SFP100 series : 100Mbps SFP optical transceiver</li> </ul>