

# IMC-P101 Series

## PoE Ethernet-to-fiber media converters



### Features and Benefits

- 10/100BaseT(X) auto-negotiation and auto-MDI/MDI-X
- IEEE 802.3af and PoE standard compliance
- IEEE 802.3at and PoE+ standard compliance (HW Rev. 1.1.0 and later<sup>1</sup>)
- Power failure alarm by relay output
- Supports store-and-forward mode and pass-through mode
- -40 to 75°C operating temperature range (-T model)
- Redundant dual DC power inputs

### Certifications



## Introduction

IMC-P101 Ethernet-to-fiber media converters provide Ethernet media conversion from 10/100BaseT(X) to 100BaseFX (with SC or ST connectors). These converters are classified as power source equipment (PSE), and when used in this way, they provide up to 30 Watts to powered devices (PDs), eliminating the need for additional wiring. The IMC-P101 converters support IEEE 802.3/802.3u/802.3x with 10/100M, full/half-duplex, and MDI/MDI-X auto-sensing, providing a complete solution for your industrial Ethernet network.

## Specifications

### Ethernet Interface

100BaseFX Ports (multi-mode SC connector)	IMC-P101-M-SC Series: 1
100BaseFX Ports (multi-mode ST connector)	IMC-P101-M-ST Series: 1
100BaseFX Ports (single-mode SC connector)	IMC-P101-S-SC Series: 1
100BaseFX Ports (single-mode ST connector)	IMC-P101-S-ST Series: 1

### Optical Fiber

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type	OM1	50/125 μm	G.652	
		800 MHz x km		
Typical Distance		4 km	5 km	40 km
Wavelength	Typical (nm)	1300		1310
	TX Range (nm)	1260 to 1360		1280 to 1340
	RX Range (nm)	1100 to 1600		1100 to 1600
Optical Power	TX Range (dBm)	-10 to -20		0 to -5
	RX Range (dBm)	-3 to -32		-3 to -34
	Link Budget (dB)	12		29

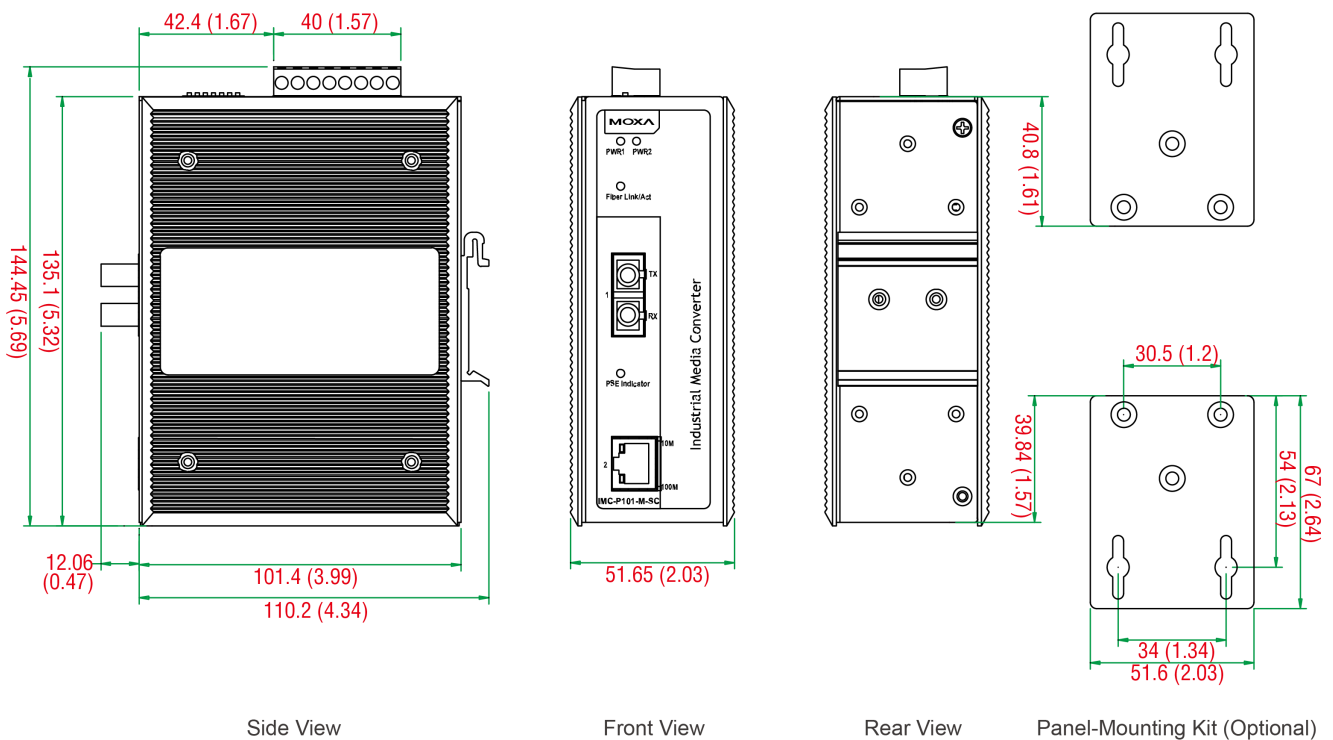
1. HW Rev, 1.1.0 complies with 802.23at (PoE Plus) and Rev. 1.0.1 802.23af (PoE)

	100BaseFX		
	Multi-Mode		Single-Mode
	Fiber Cable Type	OM1	50/125 μm
			800 MHz x km
	Dispersion Penalty (dB)	3	1
<p>Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.</p> <p>Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) &gt; dispersion penalty (dB) + total link loss (dB).</p>			
Magnetic Isolation Protection	1.5 kV (built-in)		
PoE Ports (10/100BaseT(X), RJ45 connector)	1		
<b>Power Parameters</b>			
Input Current	360 mA @ 12 to 57 VDC (HW Rev. 1.1.0 and later) 430 mA @ 46 to 57 VAC (HW Rev. 1.0.1 and prior)		
Input Voltage	12 to 57 VDC (HW Rev. 1.1.0 and later) 46 to 57 VDC (HW Rev. 1.0.1 and prior)		
Overload Current Protection	Supported		
<b>Physical Characteristics</b>			
Housing	Metal		
Dimensions	144.5 x 122.3 x 51.65 mm (5.69 x 4.81 x 2.03 in)		
Weight	Product only: 532 g (1.17 lb) Packaged: 701 g (1.55 lb)		
Installation	DIN-rail mounting		
<b>Environmental Limits</b>			
Operating Temperature	Standard Models: 0 to 60°C (32 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)		
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)		
Ambient Relative Humidity	5 to 95% (non-condensing)		
<b>Standards and Certifications</b>			
EMC	EN 55032/35		
EMI	CISPR 32, FCC Part 15B Class A		
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 150 KHz to 80 MHz: 3 to 1 V IEC 61000-4-8 PFMF		
Environmental Testing	IEC 60068-2-2 IEC 60068-2-3		

Safety	UL 508 EN 62368-1
Vibration	IEC 60068-2-6
<b>MTBF</b>	
Time	2,892,595 hrs
Standards	Telcordia SR332
<b>Warranty</b>	
Warranty Period	5 years
Details	See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>
<b>Package Contents</b>	
Device	1 x IMC-P101 Series converter
Documentation	1 x quick installation guide 1 x warranty card

## Dimensions

Unit: mm (inch)



## Ordering Information

Model Name	Operating Temp.	Fiber Module Type
IMC-P101-M-SC	0 to 60°C	Multi-mode SC
IMC-P101-M-ST	0 to 60°C	Multi-mode ST
IMC-P101-S-SC	0 to 60°C	Single-mode SC
IMC-P101-S-ST	0 to 60°C	Single-mode ST
IMC-P101-M-SC-T	-40 to 75°C	Multi-mode SC

Model Name	Operating Temp.	Fiber Module Type
IMC-P101-M-ST-T	-40 to 75°C	Multi-mode ST
IMC-P101-S-SC-T	-40 to 75°C	Single-mode SC
IMC-P101-S-ST-T	-40 to 75°C	Single-mode ST

## Accessories (sold separately)

### Wall-Mounting Kits

WK-46	Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm
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### Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit
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