

# IMC-P21A-G2 Series

## PoE+ Fast Ethernet-to-fiber media converters



### Features and Benefits

- 10/100BaseT(X) auto-negotiation and auto-MDI/MDI-X
- IEEE 802.3af (PoE) and IEEE 802.3at (PoE+) standard compliance
- Up to 36 W output on the PoE+ port
- Supports store-and-forward mode and pass-through mode
- -10 to 60°C operating temperature range
- Redundant dual DC power inputs

### Certifications



## Introduction

IMC-P21A-G2 PoE+ Fast Ethernet-to-fiber media converters are designed to provide reliable and stable 10/100BaseT(X)-to-100Base-FX media conversion. These converters are classified as power source equipment (PSE) and are used to directly power up powered devices (PDs), eliminating the need for additional wiring.

The IMC-P21A-G2 PoE+ Fast Ethernet-to-fiber media converters provide up to 30 watts of power for PoE+ port in standard mode and allow highpower output of up to 36 watts for heavy-duty industrial PoE devices, such as weather-proof IP surveillance cameras with wipers/heaters, highperformance wireless access points, and IP phones. The IMC-P21A-G2 media converters are highly versatile and with SC or ST fiber ports, can transmit data with high EMI immunity for up to 40 km from the device to the control center.

The PoE+ Fast Ethernet-to-fiber media converters support a variety of useful functions, as well as PoE diagnostics, Link Fault Pass-through, storeand- forward mode, and pass-through mode. The IMC-P21A-G2 converters support IEEE 802.3/802.3u/802.3x with 10/100M and MDI/MDI-X autosensing, providing a complete solution for your industrial Ethernet networks.

## Specifications

### Ethernet Interface

100BaseFX Ports (multi-mode SC connector)	IMC-P21A-G2-M-SC models: 1
100BaseFX Ports (multi-mode ST connector)	IMC-P21A-G2-M-ST models: 1
100BaseFX Ports (single-mode SC connector)	IMC-P21A-G2-S-SC models: 1
PoE Ports (10/100BaseT(X), RJ45 connector)	1

### Optical Fiber

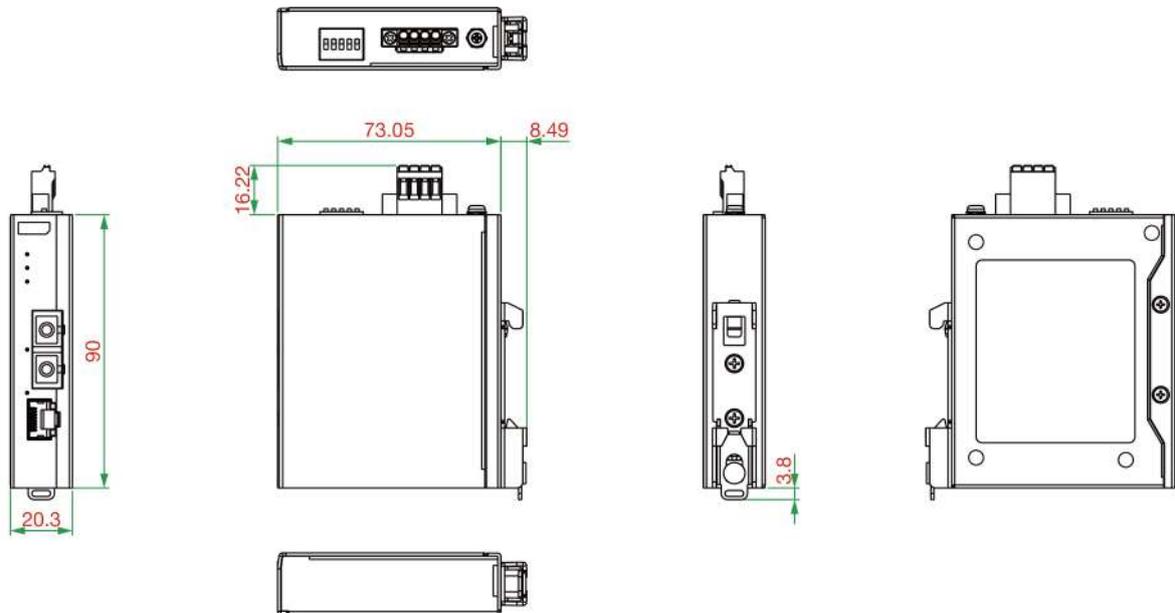
Fiber Module Optical Interface		Multi-mode	Single-mode
Fiber Data Rate		100Base-FX	
Fiber Cable Requirements		62.5/125 μm	9/125 μm
		OM1	OS2 (G.652)
Typical Distance		2 km	40 km
Wavelength	Typical (nm)	1310	
	TX Range (nm)	1260 to 1360	1280 to 1340
	RX Range (nm)	1100 to 1600	1100 to 1600
Optical Power	TX Range (dbm)	-10 to -20	0 to -5

	Fiber Module Optical Interface	Multi-mode	Single-mode	
	Fiber Data Rate	100Base-FX		
	Fiber Cable Requirements	62.5/125 $\mu\text{m}$	50/125 $\mu\text{m}$	9/125 $\mu\text{m}$
		OM1	OM2/OM3/OM4	OS2 (G.652)
	RX Range (dbm)	-3 to -32	-3 to -34	
	Link Budget (dB)	12	29	
	Dispersion Penalty (dB)	3	1	
<p>Note:</p> <ol style="list-style-type: none"> <li>When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.</li> <li>Compute the "Typical Distance" of a specific fiber transceiver as follows: Link budget (dB) &gt; dispersion penalty (dB) + total link loss (dB).</li> <li>An OS1 cable can be used for single-mode models. However, an OS2 cable is required to achieve a transmission distance of 40 km.</li> </ol>				
Magnetic Isolation Protection	1.5 kV (built-in)			
<b>Power Parameters</b>				
Input Voltage	44 to 57 VDC PoE+ output: > 52 VDC recommended PoE output: > 44 VDC recommended			
Power Consumption	Max 828 mA			
Overload Current Protection	Supported			
<b>Physical Characteristics</b>				
Housing	Metal			
IP Rating	IP40 (with I/O modules attached)			
Dimensions	90 x 73 x 20.3 mm (3.54 x 2.87 x 0.79 in)			
Weight	Product Only: 212 g (0.47 lb)			
Installation	DIN-rail mounting			
<b>Environmental Limits</b>				
Operating Temperature	-10 to 60°C (14 to 140°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: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz; Signal: 10 V IEC 61000-4-8 PFMF			
Shock	IEC 60068-2-27			

Vibration	IEC 60068-2-6 IEC 60068-2-64
Freefall	ISTA 1A
<b>MTBF</b>	
Time	6,708,861 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-P21A-G2 Series converter
Documentation	1 x quick installation guide 1 x warranty card

## Dimensions

Unit: mm



## Ordering Information

Model Name	Operating Temperature	Fiber Module Type
IMC-P21A-G2-M-ST	-10 to 60°C	Multi-mode ST
IMC-P21A-G2-M-SC	-10 to 60°C	Multi-mode SC
IMC-P21A-G2-S-SC	-10 to 60°C	Single-mode SC

## Accessories (sold separately)

### Wall-Mounting Kits

WK-20-02	Wall-mounting kit, 3 screws, 20 x 140 x 2 mm
----------	--

© Moxa Inc. All rights reserved. Updated Jan 14, 2025.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.