

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	50/125 μm	9/125 μm
		OM1	OM2/OM3/OM4	OS2 (G.652)
Typical Distance		2 km	5 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 μm	50/125 μm	9/125 μm
			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
	Note: 1. When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power. 2. Compute the “Typical Distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB). 3. An OS1 cable can be used for single-mode models. However, an OS2 cable is required to achieve a transmission distance of 40 km.				

Magnetic Isolation Protection	1.5 kV (built-in)
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Power Parameters	
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

Physical Characteristics	
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

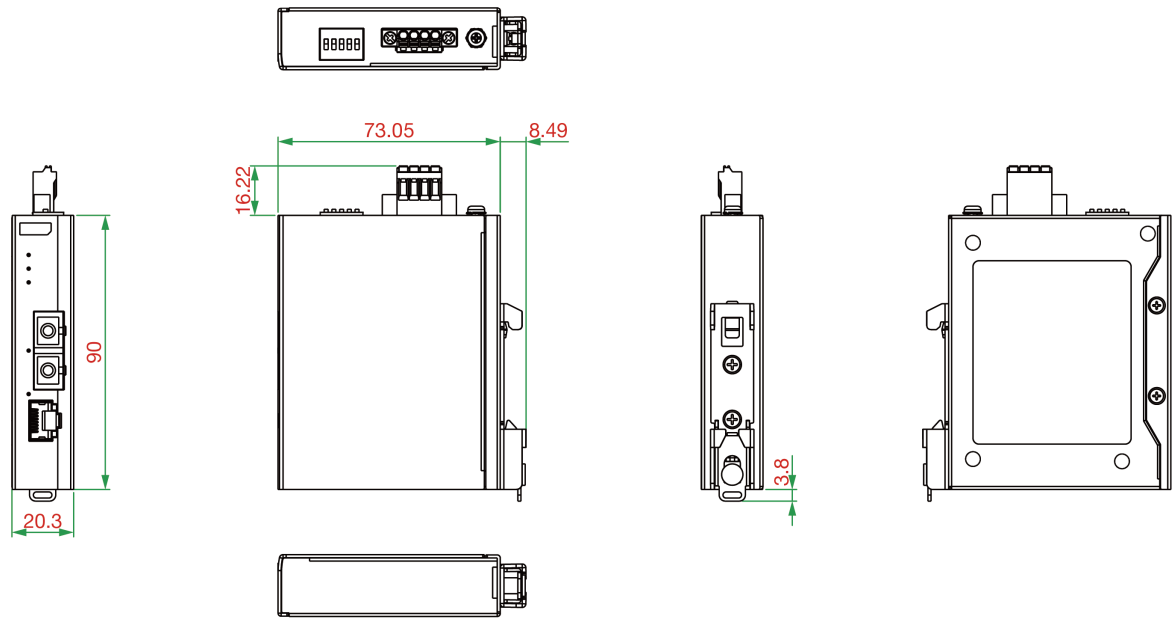
Environmental Limits	
Operating Temperature	-10 to 60°C (14 to 140°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications	
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
MTBF	
Time	6,708,861 hrs
Standards	Telcordia SR332
Warranty	
Warranty Period	5 years
Details	See www.moxa.com/warranty
Package Contents	
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
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