

# IMC-21GA Series

## Industrial gigabit Ethernet-to-fiber media converters



- > Supports 1000Base-SX/LX with SC connector, or SFP slot
- > Link Fault Pass-through (LFP)
- > 10K jumbo frame
- > Redundant power input
- > -40 to 75°C operating temperature range (T models)
- > Supports Energy Efficient Ethernet (IEEE 802.3az)



### Introduction

The IMC-21GA industrial Gigabit media converters are designed to provide reliable and stable 10/100/1000BaseT(X) to 100/1000Base-SX/LX or selected 100/1000Base SFP module media conversion. The IMC-21GA supports IEEE 802.3az (Energy Efficient Ethernet) and 10K jumbo frames, allowing them to save power and enhance

transmission performance. All IMC-21GA models are subjected to a 100% burn-in test, and are available in models that support a standard operating temperature range of 0 to 60°C, and an extended operating temperature range of -40 to 75°C.

### Specifications

#### Technology

##### Standards:

- IEEE 802.3 for 10BaseT
- IEEE 802.3u for 100BaseT(X) and 100BaseFX
- IEEE 802.3ab for 1000BaseT(X)
- IEEE 802.3z for 1000BaseX
- IEEE 802.3az (Energy Efficient Ethernet)

##### Interface

- RJ45 Ports:** 10/100/1000BaseT(X)
- Fiber Ports:** 100/1000Base-SX/LX or 100/1000BaseSFP slot
- LED Indicators:** PWR1, PWR2, G1 (copper port 10M/100M/1000M), G2 (fiber port 100M/1000M)
- DIP Switches:** Fiber speed 100M/1000M, Link Fault Pass-through, Energy Efficient Ethernet

##### Optical Fiber

- Multi-mode Transmission Distance (IMC-21GA-SX-SC):**  
1000BaseSX: 0 to 500 m, 850 nm (50/125 μm, 400 MHz\*km)
- Single-mode Transmission Distance (IMC-21GA-LX-SC):**  
1000BaseLX: 0 to 10 km, 1310 nm (9/125 μm, 3.5 PS/(nm\*km))

##### Physical Characteristics

- Housing:** Metal, IP30 protection
- Dimensions:** 30 x 125 x 79 mm (1.19 x 4.92 x 3.11 in)
- Weight:** 170 g (0.37 lb)
- Installation:** DIN-rail mounting, wall mounting (with optional kit)

##### Environmental Limits

- Operating Temperature:**  
Standard Models: -10 to 60°C (14 to 140°F)  
Wide Temp. Models: -40 to 75°C (-40 to 167°F)
- Storage Temperature:** -40 to 75°C (-40 to 167°F)
- Ambient Relative Humidity:** 5 to 95% (non-condensing)

#### Power Requirements

- Input Voltage:** 12 to 48 VDC, redundant inputs
- Input Current:** 285 mA @ 12 VDC
- Connection:** Removable terminal block
- Overload Current Protection:** 1.5 A
- Reverse Polarity Protection:** Present

#### Standards and Certifications

- Safety:** UL 60950-1
- EMC:** EN 55032/24
- EMI:** CISPR 32, FCC Part 15B Class A
- EMS:**  
EN 61000-4-2 (ESD): Contact: 6 kV; Air: 8 kV  
EN 61000-4-3 (RS): 80 MHz to 1 GHz: 1 V/m  
EN 61000-4-4 (EFT): Power: 1 kV; Signal: 1 kV  
EN 61000-4-5 (Surge): Power: 1 kV; Signal: 1 kV  
EN 61000-4-6 (CS): 150 kHz to 80 MHz: 3 V/m  
EN 61000-4-8 (PFMF)  
EN 61000-4-11
- Green Product:** RoHS, CRoHS, WEEE
- Shock:** IEC 60068-2-27
- Freefall:** IEC 60068-2-32
- Vibration:** IEC 60068-2-6

#### MTBF (mean time between failures)

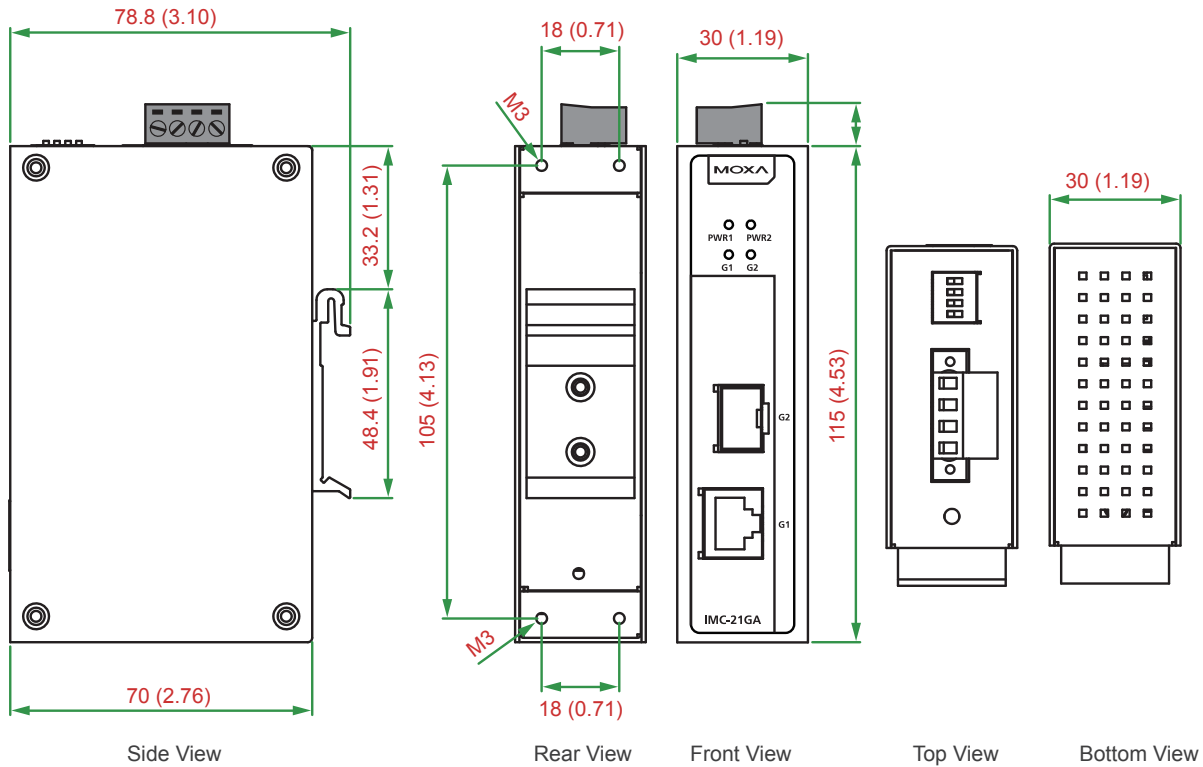
- Time:**  
IMC-21GA: 2,762,058 hrs  
IMC-21GA-LX-SC: 2,573,203 hrs  
IMC-21GA-SX-SC: 2,573,203 hrs
- Standard:** Telcordia (Bellcore), GB

#### Warranty

- Warranty Period:** 5 years
- Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

**Dimensions**

Unit: mm (inch)



**Ordering Information**

**Available Models**

- IMC-21GA:** Industrial 10/100/1000BaseT(X) to 100/1000BaseSFP media converter, -10 to 60°C operating temperature
- IMC-21GA-T:** Industrial 10/100/1000BaseT(X) to 100/1000BaseSFP media converter, -40 to 75°C operating temperature
- IMC-21GA-SX-SC:** Industrial 10/100/1000BaseT(X) to 100/1000BaseSC media converter, 0.5 km, -10 to 60°C operating temperature
- IMC-21GA-SX-SC-T:** Industrial 10/100/1000BaseT(X) to 100/1000BaseSC media converter, 0.5 km, -40 to 75°C operating temperature
- IMC-21GA-LX-SC:** Industrial 10/100/1000BaseT(X) to 100/1000BaseSC media converter, 10 km, -10 to 60°C operating temperature
- IMC-21GA-LX-SC-T:** Industrial 10/100/1000BaseT(X) to 100/1000BaseSC media converter, 10 km, -40 to 75°C operating temperature

**Optional Accessories** (can be purchased separately)

- DR-4524:** 45W/2A DIN-rail 24 VDC power supply, 85 to 264 VAC input
- DR-75-24:** 75W/3.2A DIN-rail 24 VDC power supply, 85 to 264 VAC input
- DR-120-24:** 120W/5A DIN-rail 24 VDC power supply, 88 to 132 VAC or 176 to 264 VAC input by switch
- SFP-1FE Series:** 1-port Fast Ethernet SFP modules
- SFP-1G Series:** 1-port Gigabit Ethernet SFP modules

**Package Checklist**

- 1 IMC-21GA media converter
- Quick installation guide (printed)
- Warranty card

**SFP Module Version Compatibility Table**

Mode	Data Rate	Distance	Part Number	Center Wavelength		
SM	100M	40 km	SFP-1FESLC-T V1.3	1310 nm		
		80 km	SFP-1FELLC-T V1.3	1550 nm		
	1G	10 km	SFP-1G10ALC V1.1	1310/1550 nm		
		10 km	SFP-1G10BLC V1.1			
		10 km	SFP-1GLXLC V1.1	1310 nm		
		10 km	SFP-1GLXLC-T V1.1	1310 nm		
		20 km	SFP-1G20ALC V1.1	1310/1550 nm		
		20 km	SFP-1G20BLC V1.1			
		20 km	SFP-1GLHLC V1.1	1310 nm		
		20 km	SFP-1GLHLC-T V1.1	1310 nm		
		30 km	SFP-1GLHXLC V1.1	1310 nm		
		30 km	SFP-1GLHXLC-T V1.1	1310 nm		
		40 km	SFP-1G40ALC V1.1	1310/1550 nm		
		40 km	SFP-1G40BLC V1.1			
		70 km	SFP-1GZXLC V1.1	1550 nm		
		70 km	SFP-1GZXLC-T V1.1	1550 nm		
		110 km	SFP-1GEZLC V1.1	1550 nm		
		120 km	SFP-1GEZLC-120 V1.1	1550 nm		
		MM	100M	2 km	SFP-1FEMLC-T V1.3	1310 nm
			1G	550 m	SFP-1GSXLC V1.1	850 nm
550 m	SFP-1GSXLC-T V1.1			850 nm		
2 km	SFP-1GLSXLC V1.1			1310 nm		
2 km	SFP-1GLSXLC-T V1.1			1310 nm		