

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. The converters come with a relay output warning alarm to help prevent damage and loss, and 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
- 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:** 284.7 mA @ 12 VDC; 156.0 mA @ 24 VDC
- Connection:** Removable terminal block
- Overload Current Protection:** 1.5 A
- Reverse Polarity Protection:** Present

Standards and Certifications

- Safety:** UL 60950-1
- EMC:** CE, FCC
- EMI:** FCC Part 15 Subpart B Class A, EN 55022 Class A
- EMS:**
 - EN 61000-4-2 (ESD) Level 3
 - EN 61000-4-3 (RS) Level 3
 - EN 61000-4-4 (EFT) Level 3
 - EN 61000-4-5 (Surge) Level 3
 - EN 61000-4-6 (CS) Level 3
 - EN 61000-4-8
 - 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)

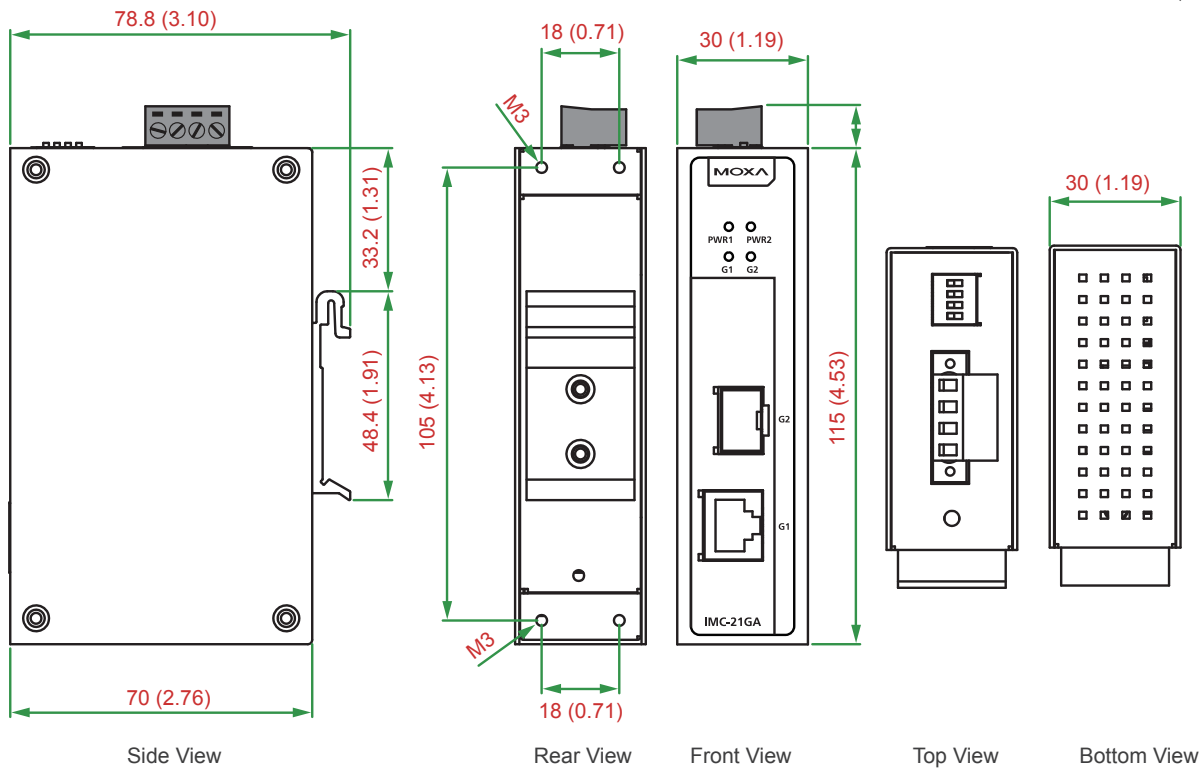
- Time:**
 - IMC-21GA: 2,762,058 hrs
 - IMC-21GA-LX-SC: 2,573,203 hrs
 - IMC-21GA-SX-SC: 2,573,203 hrs
- Database:** Telcordia (Bellcore), GB

Warranty

- Warranty Period:** 5 years
- Details:** See 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 100/1000Base SC media converter, 0.5 km, -10 to 60°C operating temperature

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

IMC-21GA-LX-SC: Industrial 10/100/1000BaseT(X) to 100/1000Base SC media converter, 10 km, -10 to 60°C operating temperature

IMC-21GA-LX-SC-T: Industrial 10/100/1000BaseT(X) to 100/1000Base SC 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 nm / 1550 nm		
		10 km	SFP-1G10BLC V1.1			
		10 km	SFP-1GLXLC V1.1	1310 nm		
		10 km	SFP-1GLXLC-T V1.1	1310nm		
		20 km	SFP-1G20ALC V1.1	1310 nm / 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-1GLHXL V1.1	1310 nm		
		30 km	SFP-1GLHXL-T V1.1	1310nm		
		40 km	SFP-1G40ALC V1.1	1310 nm / 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
				550 m	SFP-1GSXLC V1.1	850 nm
1G	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		