

IMC-21GA Series

Industrial Gigabit Ethernet-to-fiber media converters



Features and Benefits

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

Certifications



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

Specifications

Ethernet Interface

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|---|--------------------------|
| 10/100/1000BaseT(X) Ports (RJ45 connector) | 1 |
| 1000BaseSFP Slots | IMC-21GA models: 1 |
| 1000BaseSX Ports (multi-mode SC connector) | IMC-21GA-SX-SC models: 1 |
| 1000BaseLX Ports (single-mode SC connector) | IMC-21GA-LX-SC models: 1 |
| Magnetic Isolation Protection | 1.5 kV (built-in) |

Optical Fiber

| | 1000BaseSX | 1000BaseLX |
|----------------------|------------|------------|
| Wavelength | 850 nm | 1310 nm |
| Tx Output (dBm) | -3 to -10 | -3 to -9 |
| Rx Sensitivity (dBm) | -3 to -20 | -3 to -21 |
| Link Budget (dBm) | 10 | 12 |
| Typical Distance | 500 m | 10 km |

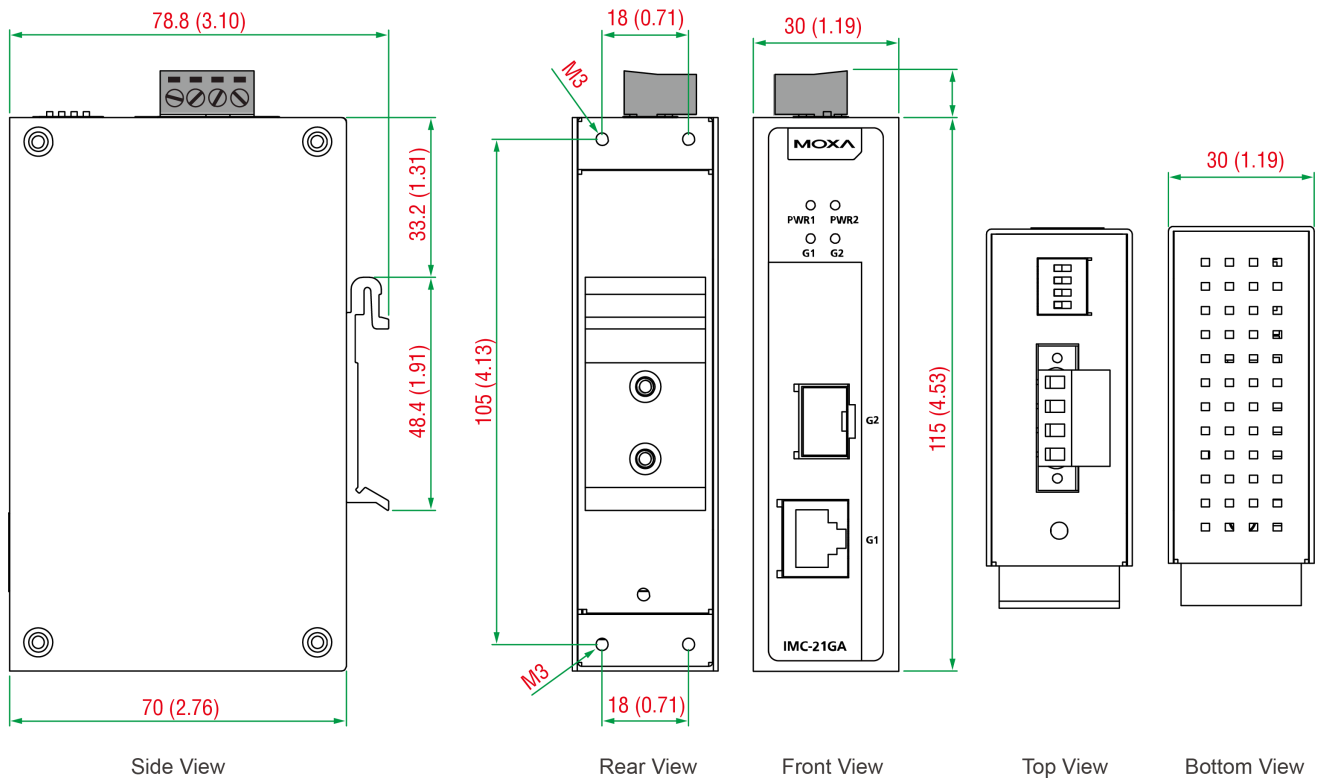
Power Parameters

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|-----------------------------|-----------------|
| Input Current | 285 mA @ 12 VDC |
| Input Voltage | 12 to 48 VDC |
| Overload Current Protection | Supported |

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| Power Connector | Terminal block |
| Power Consumption | 285 mA @ 12 VDC |
| Physical Characteristics | |
| Housing | Metal |
| 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 |
| 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 (package included) | -40 to 75°C (-40 to 167°F) |
| Ambient Relative Humidity | 5 to 95% (non-condensing) |
| Standards and Certifications | |
| EMC | EN 55032/24 |
| 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: 1 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF IEC 61000-4-11 DIPs |
| Environmental Testing | IEC 60068-2-1 IEC 60068-2-2 IEC 60068-2-3 |
| Safety | EN 60950-1, UL 60950-1 |
| Vibration | IEC 60068-2-6 |
| MTBF | |
| Time | 2,762,058 hrs |
| Standards | MIL-HDBK-217F |
| Warranty | |
| Warranty Period | 5 years |
| Details | See www.moxa.com/warranty |
| Package Contents | |
| Device | 1 x IMC-21GA 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-21GA | -10 to 60°C | SFP |
| IMC-21GA-T | -40 to 75°C | SFP |
| IMC-21GA-SX-SC | -10 to 60°C | Multi-mode SC |
| IMC-21GA-SX-SC-T | -40 to 75°C | Multi-mode SC |
| IMC-21GA-LX-SC | -10 to 60°C | Single-mode SC |
| IMC-21GA-LX-SC-T | -40 to 75°C | Single-mode SC |

Accessories (sold separately)

SFP Modules

| | |
|---------------|--|
| SFP-1G10ALC | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature Applicable Models: IMC-21GA |
| SFP-1G10ALC-T | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature Applicable Models: IMC-21GA-T |
| SFP-1G10BLC | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature Applicable Models: IMC-21GA |
| SFP-1G10BLC-T | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature |

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|-----------------|--|
| | <p>Applicable Models: IMC-21GA-T</p> |
| SFP-1G20ALC | <p>WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature</p> <p>Applicable Models: IMC-21GA</p> |
| SFP-1G20ALC-T | <p>WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature</p> <p>Applicable Models: IMC-21GA-T</p> |
| SFP-1G20BLC | <p>WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature</p> <p>Applicable Models: IMC-21GA</p> |
| SFP-1G20BLC-T | <p>WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature</p> <p>Applicable Models: IMC-21GA-T</p> |
| SFP-1G40ALC | <p>WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature</p> <p>Applicable Models: IMC-21GA</p> |
| SFP-1G40ALC-T | <p>WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature</p> <p>Applicable Models: IMC-21GA-T</p> |
| SFP-1G40BLC | <p>WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature</p> <p>Applicable Models: IMC-21GA</p> |
| SFP-1G40BLC-T | <p>WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature</p> <p>Applicable Models: IMC-21GA-T</p> |
| SFP-1GEZXLC | <p>SFP module with 1 1000BaseEZX port with LC connector for 110 km transmission, 0 to 60°C operating temperature</p> <p>Applicable Models: IMC-21GA</p> |
| SFP-1GEZXLC-120 | <p>SFP module with 1 1000BaseEZX port with LC connector for 120 km transmission, 0 to 60°C operating temperature</p> <p>Applicable Models: IMC-21GA</p> |
| SFP-1GLHLC | <p>SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature</p> <p>Applicable Models: IMC-21GA</p> |
| SFP-1GLHLC-T | <p>SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature</p> <p>Applicable Models: IMC-21GA-T</p> |
| SFP-1GLHXLC | <p>SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature</p> <p>Applicable Models: IMC-21GA</p> |

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|---------------|---|
| SFP-1GLHXLC-T | SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature Applicable Models: IMC-21GA-T |
| SFP-1GLSXLC | SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, 0 to 60°C operating temperature Applicable Models: IMC-21GA |
| SFP-1GLSXLC-T | SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, -40 to 85°C operating temperature Applicable Models: IMC-21GA-T |
| SFP-1GLXLC | SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature Applicable Models: IMC-21GA |
| SFP-1GLXLC-T | SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature Applicable Models: IMC-21GA-T |
| SFP-1GZXLC | SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature Applicable Models: IMC-21GA |
| SFP-1GZXLC-T | SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature Applicable Models: IMC-21GA-T |
| SFP-1FELLC-T | SFP module with 1 100Base single-mode with LC connector for 80 km transmission, -40 to 85°C operating temperature Applicable Models: IMC-21GA-T |
| SFP-1FEMLC-T | SFP module with 1 100Base multi-mode with LC connector for 4 km transmission, -40 to 85°C operating temperature Applicable Models: IMC-21GA-T |
| SFP-1FESLC-T | SFP module with 1 100Base single-mode with LC connector for 40 km transmission, -40 to 85°C operating temperature Applicable Models: IMC-21GA-T |

Wall-Mounting Kits

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| WK-30 | Wall-mounting kit, 2 plates, 4 screws, 40 x 30 x 1 mm |
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Power Supplies

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|-----------|---|
| DR-4524 | 45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50°C operating temperature |
| DR-75-24 | 75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature |
| DR-120-24 | 120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature |

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