

MC251-4P/1S

MC250-4T/2S

4-Port Ethernet to SFP Industrial Media Converters



MC251-4P/1S
PoE Support

MC250-4T/2S
Non-PoE

OVERVIEW

IFS Ethernet to SFP Industrial Media Converters offer four 10/100Mbps Ethernet ports and 100Base-FX transmission on either multi-mode or single mode optical utilizing SFP technology. Specifically designed for stable and reliable operation in electrically harsh and climatically demanding environments, the module's slim, IP-30 standard metal case accommodates DIN-rail or wall mounting for efficient installation in multiple applications.

These converters are engineered with a high-performance switch architecture capable of providing a non-blocking switch fabric and wire-speed throughput as high as 1Gbps or 1.2Gbps. With the 2K MAC address table, these media converters offer wire-speed packet transfer performance without the risk of packet loss. The Flow Control function allows these modules to deliver fast and reliable data transfer. The MC251-4P/1S model provides full IEEE802.3-af (15.4w) on each individual 4 ports, while the MC250-4T/2S model is a non-PoE unit designed for drop-and-repeat applications.

Providing extended distance Ethernet transmission, these units are well suited for remotely deployed edge devices such as IP cameras, access control, VoIP and wireless access points.

STANDARD FEATURES

RJ-45 Ports

- 4-Port 10/100Base-TX (MC250-4T/2S)
- 4-Port 10/100Base-TX w/PoE (MC251-4P/1S)
- Auto MDI/MDI-X
- Auto-negotiation

SFP Ports

- 1 SFP Port (MC251-4P/1S)
- 2 SFP Ports - Drop-and-Repeat (MC250-4T/2S)

High Performance Architecture

- Store-and-Forward switching architecture with wire-speed filtering and forwarding rates
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x PAUSE frame-flow control (full-duplex)
- Integrated address-lookup engine supports 2K absolute MAC addresses
- CSMA/CD Protocol
- Automatic source-address learning and aging
- Support to handle up to 1522 bytes packet size

Power over Ethernet (PoE) (MC251-4P/1S only)

- Up to 4 IEEE 802.3af devices powered
- Complies with IEEE 802.3af Power over Ethernet End-Span PSE
- Supports up to 15.4 watts for each PoE port
- Auto detect powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 328 ft. (100m)

Robust Hardened Design

- Slim IP-30 metal enclosure for protection
- Provides either DIN-rail or wall-mounting
- 24 ~ 48VDC or 24VAC Operation (MC251-4P/1S)
- 12 ~ 48VDC Operation (MC250-4T/2S)
- Redundant power with reverse-polarity protection
- Removable terminal block for master and slave power
- Alarm relay output for power-failure alert
- Voltage/surge-suppression
 - EFT 6000VDC protection for power lines
 - ESD 6000VDC protection for Ethernet
- Complies with IEC60068-2-xx standards for free-fall, shock and vibration
- Wide operating temperature range of -40°C ~ +75°C

Warranty

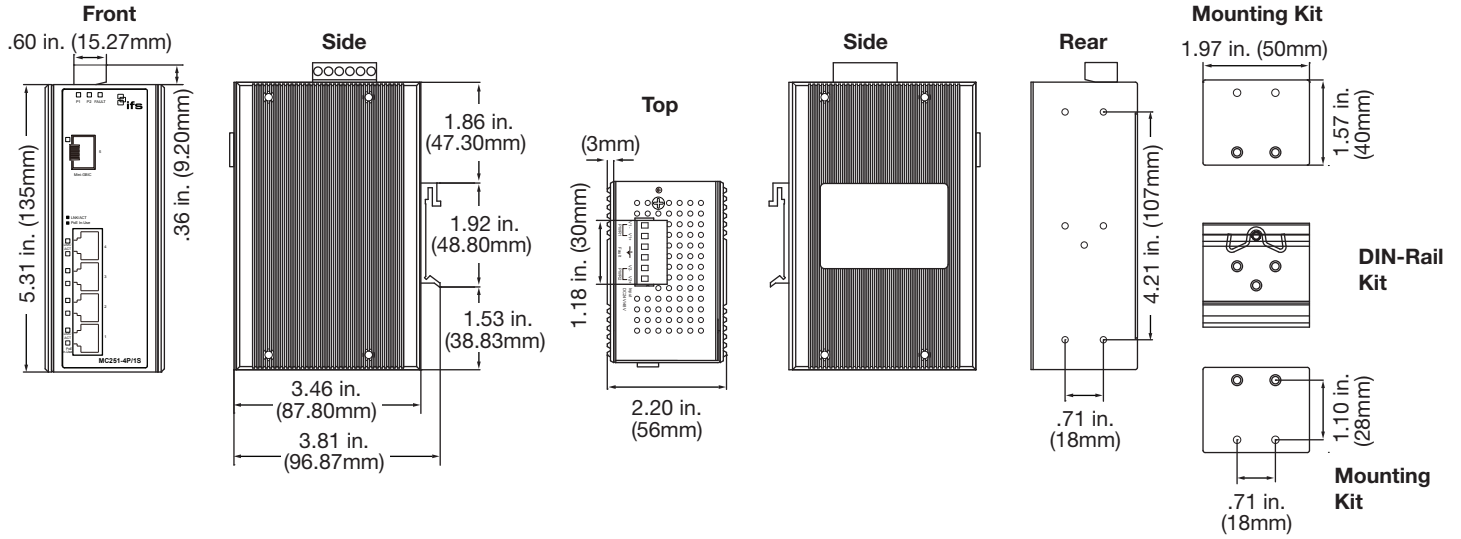
- 3-year limited warranty

Specifications

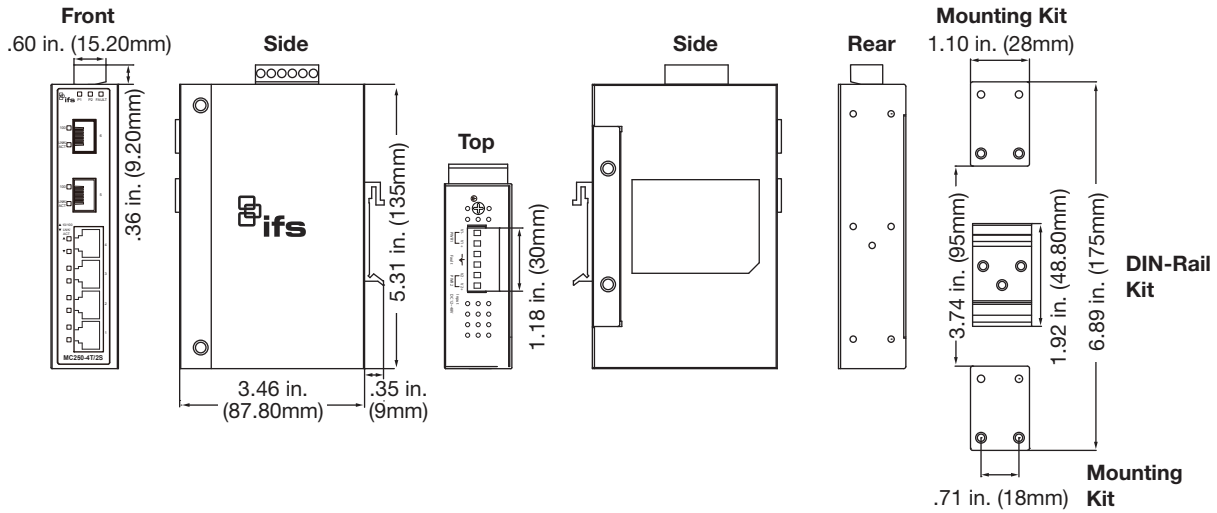
| RJ45 Ports | MC251-4P/1S | MC250-4T/2S |
|--|--|--|
| 10/100Base-TX Connectors | RJ-45 (4) | |
| Port Configuration | Auto MDI/MDI-X | |
| Port Speed | Auto-negotiate | |
| Electro Static Discharge (ESD) Protection | 6KVDC | |
| SFP Ports | | |
| Data Rate | 100Base-FX | |
| # of SFP Ports | 1 | 2 |
| Optical Fiber Type | Varies by SFP | |
| Optical Distance | Varies by SFP | |
| PoE (MC251-4P/1S only) | | |
| PoE Standard | IEEE 802.3af Power over Ethernet / PSE | |
| PoE Power Supply Type | End-Span | |
| PoE Power Output | Per Port 48VDC, 350mA. Max. 15.4Watts | |
| Power Pin Assignment | 1/2(+), 3/6(-) | |
| Switch Performance | | |
| Switch Architecture | Store-and-Forward | |
| Switch Fabric | 1Gbps / non-blocking | 1.2Gbps / non-blocking |
| Throughput (Packet per second) | 0.744Mpps@64bytes | 0.892Mpps@64bytes |
| Address Table | 2K entries | |
| Shared Data Buffer | 1Mbit on-chip frame buffer | |
| Maximum Frame Size | 1522 Bytes packet | |
| Flow Control | Back pressure for Half-Duplex, IEEE 802.3x PAUSE Frame for Full-Duplex | |
| LED Indicators | | |
| Power | Power input 1 – Green; Power input 2 – Green | |
| Power Fault | Proper Operation – Off; Fault –Green | |
| RJ-45 (10/100Mbps) | 100Mbps Activity – Green; 10Mbps Activity – Off | |
| Fiber (100Base-FX) | Connected to network – Green | |
| Optical Link | Link established – Steady Green; TX/RX Activity – blinking green | |
| PoE (MC251-4P/1S only) | PoE in use – Amber | - |
| Electrical & Mechanical | | |
| Supply Voltage | 24 ~ 48VDC or 24VAC | 12 ~ 48VDC |
| Power Consumption (Full load) | 77Watts Max. | 16Watts Max. |
| Electrical Fast Transient (EFT) Protection | 6KVDC | |
| Power and Alarm Fault Connector | 6-pin removable screw terminal | |
| Alarm Fault Relay | Provides one relay output for power failure notification; 24VDC – 1A max. | |
| Enclosure | IP-30 slim-type metal enclosure | |
| Mounting | DIN-rail kit and wall-mount ears | |
| Dimensions (in/mm) (W x D x H) | 2.20 x 3.46 x 5.31 in (56 x 87.6 x 135 mm) | 1.26 x 3.46 x 5.31 in (32 x 87.6 x 135 mm) |
| Weight (lbs./kg) | 1.86 lbs./0.842kg | 0.97 lbs./0.442kg |
| Environmental | | |
| MTBF | > 100,000 Hrs @ 25°C | |
| Operating Temperature | -40°C ~ 75°C | |
| Storage Temperature | -40°C ~ 85°C | |
| Relative Humidity | 0% ~ 90% (non-condensing) | |
| Standards Compliance | | |
| IEEE Standards | IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX /100Base-FX IEEE 802.3x Flow Control and Back pressure IEEE802.3-af PoE (15.4w) – MC251-4P/1S only | |
| IEC Standards | IEC60068-2-32 (Free fall) IEC60068-2-27 (Shock) IEC60068-2-6 (Vibration) | |
| EIA/TIA-568 Standards | 2-Pair UTP Cat. 3, 4, 5 (100meters, max.) EIA/TIA-568 100-ohm STP (100meters, max.) | |
| Regulation | FCC Part 15 Class A, CE | |

Dimensional Diagrams

MC251-4P/1S



MC250-4T/2S



MC251-4P/1S MC250-4T/2S

4-Port Ethernet to SFP Industrial Media Converters

North America
T 855-286-8889

Asia
T 852-2907-8108

Australia
T 61-3-9239-1200

Europe
T 32-2-725-11-20

Latin America
T 561-998-6114

Ordering Information

| | |
|----------------------|--|
| MC251-4P/1S | 4-Port Fast Ethernet/PoE-AF to 1-Port SFP Fiber Industrial Media Converter |
| MC250-4T/2S | 4-Port Fast Ethernet to 2-Port SFP Fiber Industrial Media Converter |
| Included Accessories | User's Manual, DIN Rail Kit, Wall Mount Kit |

Note: These units require a Small Form-factor Pluggable (SFP) for operation. IFS SFPs are available for multi-mode, single mode, 1 or 2 fibers for various transmission distances over optical fiber. Please refer to the IFS SFP data sheet to select the appropriate SFP for your particular application needs. This unit uses Fast Ethernet SFPs only.

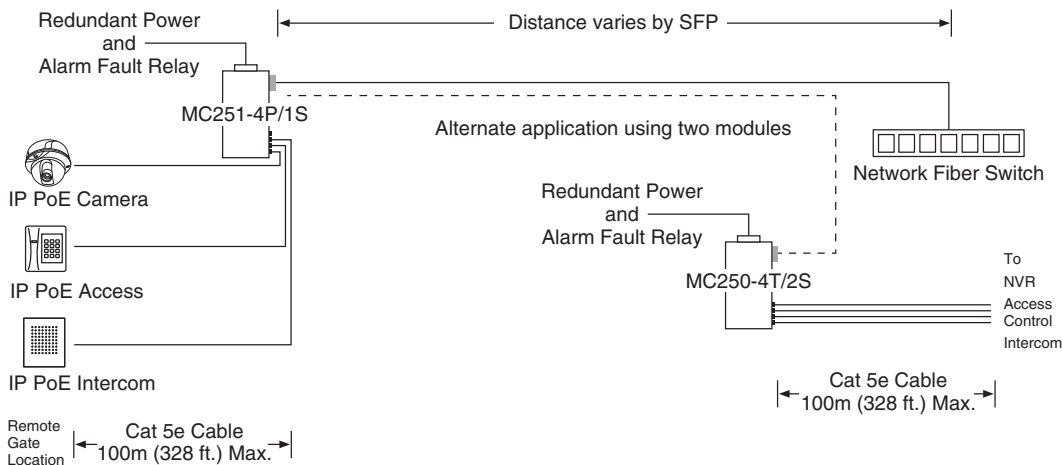
Note: External power supply must be ordered separately.

Accessories

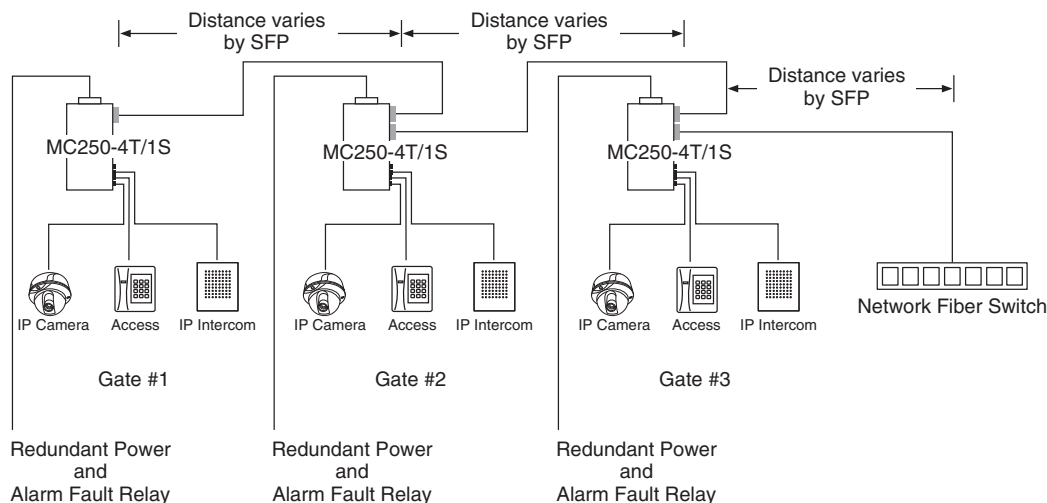
| | |
|-----------------|---|
| SFP | S20 Series |
| SFP | S25 Series (wide-temp) |
| PS12VDC1.5A-U | 12VDC@1.5A External Power Supply (for use with MC250-4T/2S only) |
| HLG-240-48 | 48VDC High Temperature Industrial Power Supply |
| PS48VDC100W-DIN | 48VDC@2A (100W) DIN-Rail Mount Hardened Power Supply (100~240VAC) |

Typical Applications

Point-to-Point Application



Drop-and-Repeat Application



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Specifications subject to change without notice.

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