



## Product Data Sheet

# MC250-4T/1FM

## 4-Port Ethernet to Fiber Industrial Media Converter

### Overview

IFS Ethernet to Fiber Industrial Media Converters offer four 10/100Mbps Ethernet ports and 100Base-FX transmission on either multi-mode or single mode optical fiber for optimum bandwidth usage. 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 its 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. Available in multi-mode or single-mode configurations, the converters deliver distances of up to 2km or 15km respectively.

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. IFS also provides a multi-mode dual-fiber version for drop and repeat network topologies.



### Standard Features

- 4 RJ-45 Ports 10/100Base-TX
- Auto MDI/MDI-X
- Auto-negotiation
- 1 Fiber Port 100Base-FX MM or SM Fiber
- Complies with the IEEE 802.3, IEEE 802.3u, Fast Ethernet standard
- 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)
- Robust Hardened Design
- Provides either DIN-rail or wall-mounting
- 12 ~ 48VDC, redundant power with reverse-polarity protection
- Voltage/surge-suppression
- Complies with IEC60068-2-xx standards for free-fall, shock and vibration
- Wide operating temperature range of up to -40°C ~ +75°C

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## 4-Port Ethernet to Fiber Industrial Media Converter

### Specifications

#### RJ45 Ports

- 10/100Base-TX Connectors: RJ-45 (4); Auto-negotiate and Auto MDI/MDI-X support
- Throughput (packet per second): 148,800pps
- Switch Architecture: Store-and-forward
- Max Packet Size: 1522 Bytes
- Electro Static Discharge (ESD) Protection: 6KVDC

#### Fiber Ports

- 100Base-FX SC Connectors: 1
- Optical Fiber Type: Multi-mode (62.5/125microm or 50/125um)
- Optical Distance: 2km

#### Optical

- Optical Wavelength: 1300nm
- TX Launch Power (dBm): Max: -14, Min: -20
- Receiver Sensitivity (dBm): 32
- Maximum Input Power (dBm): 0

#### Switch Performance

- Switch Architecture: Store-and-Forward
- Switch Fabric: 1Gbps / non-blocking
- Throughput (Packet per second): 0.744Mpps@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

#### Electrical & Mechanical

- Supply Voltage: 12~48VDC, Redundant power with polarity-reverse protection function
- Power Consumption: 9.1Watts / 31BTU 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/cm) (W x D x H): 5.31 x 3.42 x 1.26 in. (13.5 x 8.7 x 3.2cm)
- Weight (lbs/kg): 0.965 lbs/0.437kg

#### Environmental

- MTBF: > 100,000 Hrs @ 25°C
- Operating Temperature: -40°C ~
- Storage Temperature: -40°C ~ 85°C
- Relative Humidity: 0% ~ 90% (non-condensing)

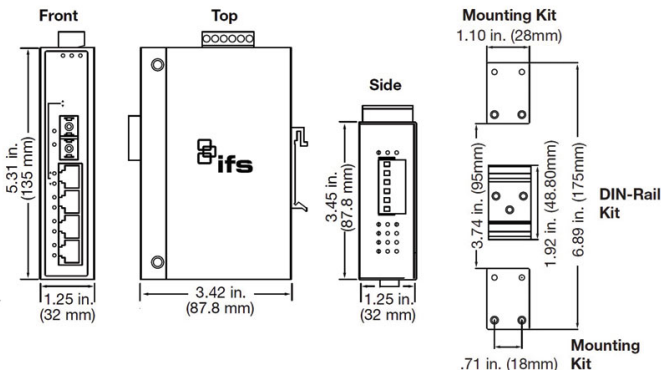
#### Accessories

- 613P-EU: 100-240V AC Input 13.5V DC 1.3Amp Output Power Supply Brick model EU plug
- 613P-UK: 100-240V AC Input 13.5V DC 1.3Amp Output Power Supply Brick model UK plug
- PS48VDC240W-EU: 100-240V AC Input 48V DC 5A Output Power Supply Hardened Brick model with EU plug
- PS48VDC240W-UK: 100-240V AC Input 48V DC 5A Output Power Supply Hardened Brick model with UK plug

#### Standards Compliance

- IEEE Standards: IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX /100Base-FX, IEEE 802.3x Flow Control and Back pressure
- 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

### Diagram



### Ordering Information

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4-Port Ethernet to Fiber Industrial Media Converter

