Product Data Sheet

MC250-4T/2S
4-Port Ethernet to SFP Industrial Media Converter

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

- 4 RJ-45 Ports 10/100Base-TX
- Auto MDI/MDI-X
- Auto-negotiation
- 2 SFP Ports - Drop-and-Repeat
- 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
- 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
- Complies with IEC60068-2-xx standards for free-fall, shock and vibration
- Wide operating temperature range of -40ºC ~ +75ºC

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Specifications

RJ45 Ports
- 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/BX/LX
- # of SFP Ports: 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: 1.2Gbps / non-blocking
- Throughput (Packet per second): 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: 12 ~ 48VDC
- Power Consumption (Full load): 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): 1.26 x 3.46 x 5.31 in (32 x 87.6 x 135 mm)
- Weight (lbs./kg): 0.97 lbs./0.442kg

Environmental
- MTBF: > 100,000 Hrs @ 25°C
- Operating Temperature: -40°C ~ 75°C
- Storage Temperature: -40°C ~ 85°C
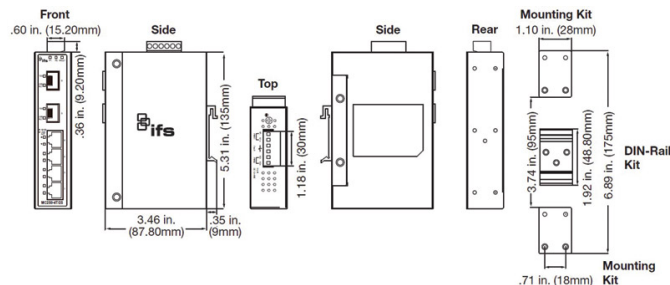- Relative Humidity: 0% ~ 90% (non-condensing)

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

Accessories
- SFP: S20 Series
- SFP: S25 Series (wide-temp)
- 613P-EU: 100-240V AC Input 13.5V DC 1.3Amp Output Power Supply Brick model EU plug (for use with MC250- 4T/2S)
- 613P-UK: 100-240V AC Input 13.5V DC 1.3Amp Output Power Supply Brick model UK plug (for use with MC250- 4T/2S)
- 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

Diagram

Ordering Information

MC250-4T/2S
4-Port Ethernet to SFP Industrial Media Converter

UTC Fire & Security
A United Technologies Company