



## Product Data Sheet

# MC251-4P/1CXT

## 4-Port Ethernet to Coax Industrial Media Converter

### OVERVIEW

These IFS 4-Port Ethernet to Coax/TP Industrial Media Converters are high-performance modules that combine two well-proven technologies—Ethernet and VDSL2— providing a cost-effective solution for utilizing an existing telephone cable\* or coax cable infrastructure when migrating from analog to an Ethernet/IP system. The MC251-4P/1CXT model provides full IEEE802.3-af (15.4w) on each individual 4 RJ45 ports and serves as a PSE device.

These modules provide plug-and-play installation and can be used in combination for either telephone cable or coax cable installations. These modules can also be used with the MCR200-1T/CX over coax only for rack mount installations at the head-end.

The one box design allows for easy set-up as either a client-side (CPE) or central-side (CO) operating device. The module is IEEE 802.3 compliant and supports multiple network protocols. In addition, the module provides on-board feature-rich diagnostic LEDs.

These IFS 4-Port Ethernet/PoE-af to Coax/TP Industrial Media Converters can extend Ethernet transmission up to .87 miles (1.4km) on standard telephone (POTS) type cable or 1.49 miles (2.4km) on coaxial cable. Performance is based on bandwidth requirements and quality of the cable used.



### Standard Features

- Cost-effective VDSL2 CO/CPE bridge solution
- Selectable target data rate and target SNR margin
- 10/100Mbps Ethernet
- Auto-negotiation and auto-MDI/MDI-X
- Half-duplex back pressure and IEEE802.3x full-duplex pause-frame flow control
- Supports up to 1536 bytes packet size
- 802.1Q VLAN tag transparent
- Plug-and-play installation
- Supports twisted-pair telephone wires (24 AWG or better)
- Supports 50 or 75 ohm coax
- Extensive LED indicators for network diagnostics
- Slim IP30 metal enclosure
- 24 ~ 48VDC or 24VAC Operation
- Alarm relay output for port breakdown and power-failure alert
- Wide operating temperature range of -40° C ~ +75° C
- Power over Ethernet
- Inserts 48VDC (15.4w) power on Category network cable
- Protects non-PoE devices if accidentally connected
- Complies with IEEE 802.3af

# MC251-4P/1CXT

## 4-Port Ethernet to Coax Industrial Media Converter

### Specifications

#### Ethernet

- Data Rate: 10/100Base-TX with Auto-negotiate and Auto-MDI/MDI-X
- Connectors: 4 - RJ-45
- Cable: 10Base-T (Cat 3, 4, 5) / 100Base-T (Cat 5, 5e, 6) — 328 ft. (100m)

#### VDSL2

- VDSL2 Transmission Mode: CO/CPE Mode; Channel; Rate Limit; SNR
- VDSL2-DMT Encoding: ITU-T G.993.1 VDSL; ITU-T G.997.1; ITU-T G.993.2 VDSL2 (Profile 17a support)
- Telephone cable: 24 AWG or better
- Phone line connector: 1 - RJ-11 female
- Coaxial Cable: 50 or 75 ohm coax
- Coax Connector: 1 - BNC female

#### VDSL2 Distance> Data Rate\* (Down stream/Up stream) Asymmetric

- 656 ft. (200m): Twstd-Pair: 99/63 Mbps - Coax: 99/65 Mbps
- 1,312 ft. (400m): Twstd-Pair: 91/48 Mbps - Coax: 99/64 Mbps
- 1,969 ft. (600m): Twstd-Pair: 71/32 Mbps - Coax: 97/59 Mbps
- 2,525 ft. (800m): Twstd-Pair: 53/18 Mbps - Coax: 94/51 Mbps
- 3,281 ft. (1000m): Twstd-Pair: 38/8 Mbps - Coax: 84/45 Mbps
- 3,937 ft. (1200m): Twstd-Pair: 33/5 Mbps - Coax: 73/37 Mbps
- 4,593 ft. (1400m): Twstd-Pair: 28/2 Mbps - Coax: 62/28 Mbps

#### VDSL2 Distance> Data Rate\* (Down stream/Up stream) Symmetric

- 656 ft. (200m): Twstd-Pair: 91/99 Mbps - Coax: 95/99 Mbps
- 1,312 ft. (400m): Twstd-Pair: 74/79 Mbps - Coax: 92/97 Mbps
- 1,969 ft. (600m): Twstd-Pair: 54/51 Mbps - Coax: 81/82 Mbps
- 2,525 ft. (800m): Twstd-Pair: 38/34 Mbps - Coax: 71/70 Mbps
- 3,281 ft. (1000m): Twstd-Pair: 27/21 Mbps - Coax: 60/57 Mbps
- 3,937 ft. (1200m): Twstd-Pair: 24/15 Mbps - Coax: 50/44 Mbps
- 4,593 ft. (1400m): Twstd-Pair: 21/10 Mbps - Coax: 42/33 Mbps
- 5,249 ft. (1600m): Coax: 37/27 Mbps
- 5,906 ft. (1800m): Coax: 29/22 Mbps
- 6,562 ft. (2000m): Coax: 23/21 Mbps
- 7,218 ft. (2200m): Coax: 19/17 Mbps
- 7,874 ft. (2400m): Coax: 19/13 Mbps

#### LED Indicators

- Power: P1: On - Green; P2: On - Green
- 10/100 Base-TX Port: LNK/ACT; 100Mbps - Green; PoE - Amber
- VDSL2 Port: LNK/ACT; CO Mode; CPE Mode - Green; Sync. (Green)

#### Electrical & Mechanical

- Power: 24 ~ 48VDC or 24VAC
- Enclosure: IP30 rated Metal
- Dimensions (H x W x D): 5.3 x 3.5 x 1.96 in. (135 x 87.8 x 50mm)

- Weight: 1.40lbs/631g

#### Environmental

- Operating Temperature: -40° ~ +75°C
- Storage Temperature: -40° ~ +85°C
- Relative Humidity: 0% ~ 90% (non-condensing)

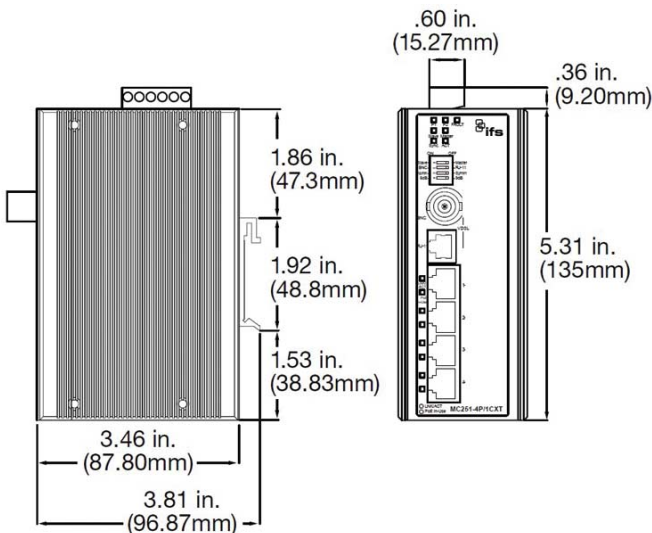
#### Regulatory

- EMI: EN55022 Class A; EN61000-3-2, EN61000-3-3
- EMS: "EN55024; IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11"

#### Power over Ethernet (PoE) Injector

- PoE Standard: IEEE 802.3af; Power over Ethernet / PSE; End-Span
- Power PIN Assignment: (+) Pins 1 & 2; (-) Pins 3 & 6
- Power Output (per port) PoE: 48VDC, Max. 15.4 watts, 350mA

### Diagram



### Ordering Information

MC251-4P/1CXT

4-Port Ethernet to Coax Industrial Media Converter

