

MC250-4T/1CXT

4-port Ethernet to Coax Industrial Media Converter



OVERVIEW

The IFS 4-port Ethernet to Coax/TP Industrial Media Converter is a high-performance module that combines 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.

This module can be used with another MC250-4T/1CXT for telephone or coax cable installations and provides plug-and-play installation. The module can also be used with the MCR200-1T/CX 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.

The IFS 4-port Ethernet to Coax/TP Industrial media Converter can extend Ethernet transmission up to .87 miles (1.4km) on standard telephone (POTS) type cable or 1.49 miles (2.4km) for coaxial cable. Performance is based on bandwidth requirements and quality of the cable used.

STANDARD FEATURES

VDSL2

- Cost-effective VDSL2 CO/CPE bridge solution
- One-box design, CO/CPE selectable via DIP-switch
- Selectable target data rate and target SNR margin
- Discrete Multi-Tone (DMT) line coding

Ethernet

- 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

Installation & Diagnostics

- Plug-and-play installation
- Compact size
- Supports twisted-pair telephone wires (24 AWG or better)
- Supports 50 or 75 ohm coax
- Extensive LED indicators for network diagnostics

Robust Hardened Design

- Slim IP30 metal enclosure
- DIN-rail or wall-mounting
- 12 to 48 VDC, redundant power with reverse-polarity protection
- Alarm relay output for port breakdown and power-failure alert
- Complies with IEC60068-2-xx standards for free-fall, shock and vibration
- Wide operating temperature range of -40° C ~ +75° C

Warranty

- 3-year warranty

*The MC250-4T/1CXT can utilize standard telephone (POTS) type cable for transmission of Ethernet/IP signals. It is not designed for transmitting Ethernet signals on a public switch telephone network (PSTN).

MC250-4T/1CXT

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

4-port Ethernet to Coax
Industrial Media Converter

Specifications

Ethernet	Description
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		(Down stream/Up stream) Symmetric	
	Twstd-Pair	Coax	Twstd-Pair	Coax
Distance				
656 ft. (200m)	99/63 Mbps	99/65 Mbps	91/99 Mbps	95/99 Mbps
1,312 ft. (400m)	91/48 Mbps	99/64 Mbps	74/79 Mbps	92/97 Mbps
1,969 ft. (600m)	71/32 Mbps	97/59 Mbps	54/51 Mbps	81/82 Mbps
2,525 ft. (800m)	53/18 Mbps	94/51 Mbps	38/34 Mbps	71/70 Mbps
3,281 ft. (1000m)	38/8 Mbps	84/45 Mbps	27/21 Mbps	60/57 Mbps
3,937 ft. (1200m)	33/5 Mbps	73/37 Mbps	24/15 Mbps	50/44 Mbps
4,593 ft. (1400m)	28/2 Mbps	62/28 Mbps	21/10 Mbps	42/33 Mbps
5,249 ft. (1600m)		54/20 Mbps		37/27 Mbps
5,906 ft. (1800m)		48/13 Mbps		29/22 Mbps
6,562 ft. (2000m)		38/9 Mbps		23/21 Mbps
7,218 ft. (2200m)		35/6 Mbps		19/17 Mbps
7,874 ft. (2400m)		31/4 Mbps		19/13 Mbps

LED Indicators

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

Electrical & Mechanical

Power	12V DC ~ 48V DC
Enclosure	1P30 rated Metal
Dimensions (H x W x D)	5.3 x 3.5 x 1.26 in. (135 x 87.8 x 32mm)
Weight	1.1 lbs/495g

Environmental

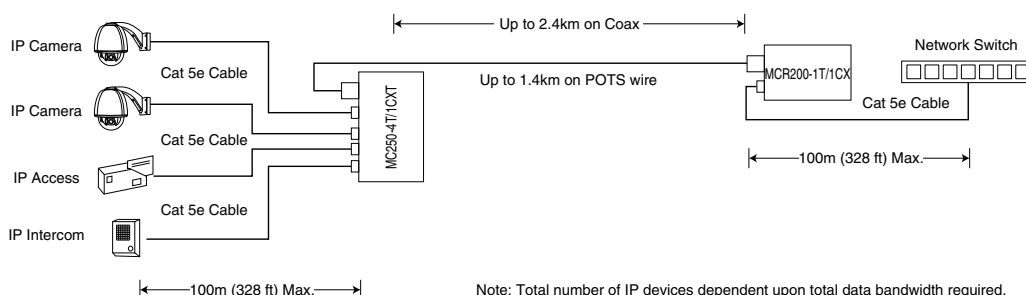
Operating Temperature	-40° ~ +75°C
Storage Temperature	-40° ~ +85°C
Relative Humidity	0% ~ 90% (non-condensing)

Regulatory

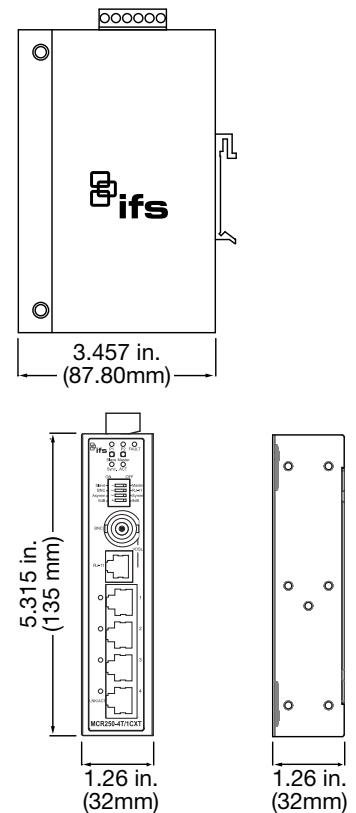
EMI	EN55022 Class A; EN61000-3-2, EN61000-3-3
EMS	EN55024; IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11

*The actual data rate will vary based on the quality of the cable and environmental factors. See instruction manual for a complete listing of data rates at various transmission distances.

Typical Application



Dimensional Diagrams



Agency Compliances

- FCC
- CE



Ordering Information

MC250-4T/1CXT	4-port Ethernet to Coax Industrial Media Converter
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Note: External power supply must be purchased separately. Not compatible with the MCE-COAX.

Accessories

PS12VDC1.5A-U	12VDC 1.5A Wall Mounted Power Supply
HLG-240-48	High Temperature 48VDC Power Supply



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