



Network Transmission 4-port Industrial Ethernet to Fiber Media Converters

Overview

GE's 4-port Industrial Ethernet to Fiber Media Converters are now IFS. Industrial Ethernet to Fiber Media Converters offer four 10/100Mbps Ethernet ports and 100BaseFX transmission on either multi-mode or single mode optical fiber provides 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 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 insert network topologies.

Standard Features

RJ-45 Ports

- 4-Port 10/100Base-TX
- Auto MDI/MDI-X
- Auto-negotiation

Fiber Ports

- 1-Port 100Base-FX multi-mode fiber (MC-4TX1FXMM-2Km)
- 1-Port 100Base-FX single-mode fiber (MC-4TX1FXSM-15Km)
- 2-Port 100Base-FX multi-mode fiber (MC-4TX2FX)

High Performance Architecture

- Complies with the IEEE 802.3, IEEE 802.3u, Fast Ethernet standard
- Store-and-Forward switching architecture and mode 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

Robust Hardened Design

- Slim IP-30 metal case for protection
- Provides either DIN-rail or wall-mounting
- Operating temperature from -10°~60°
- 12 to 48 VDC, 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 -10° C ~ +60° C

Warranty

- 3-year limited warranty

MC-4TX Series 4-port Industrial Ethernet to Fiber Media Converters



MC-4TX1FXMM-2Km

MC-4TX1FXSM-15Km

MC-4TX2FX

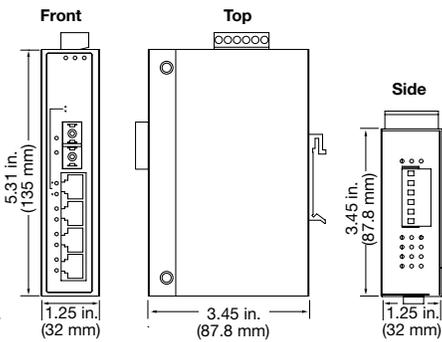
4-port Industrial Ethernet to Fiber Media Converter Specifications

Part No.	MC-4TX1FXMM-2Km	MC-4TX1FXSM-15Km	MC-4TX2FX	
Description				
RJ45 Ports	10/100Base-TX Connectors	RJ-45 (4)		
	Port Configuration	Auto MDI/MDI-X		
	Port Speed	Auto-negotiate		
	Electro Static Discharge (ESD) Protection	6KV DC		
Fiber Ports	100Base-FX SC Connectors	1	1	2
	Optical Fiber Type	Multi-mode (62.5/125µm or 50/125µm)	Single-mode (9/125µm)	Multi-mode (62.5/125µm or 50/125µm)
	Optical Distance	2km	15km	2km
Optical	Optical Wavelength	1300nm	1310nm	1300nm
	TX Launch Power (dBm)	Max:-14 Min: -19.0	Max:-7 Min: -20	Max:-14 Min: -19.0
	Receiver Sensitivity (dBm)	-34.5	-28	-34.5
	Maximum Input Power (dBm)	-14	-8	-14
Switch Performance	Switch Architecture	Store-and-Forward		
	Switch Fabric	1Gbps / non-blocking	1Gbps / non-blocking	1.2Gbps / non-blocking
	Throughput (Packet per second)	0.744Mpps@64bytes	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		
Electrical & Mechanical	Supply Voltage	12~48 VDC, Redundant power with polarity-reverse protection function		
	Power Consumption	9.1Watts / 31BTU max.	9.1Watts / 31BTU max.	11.6Watts / 40BTU max.
	Electrical Fast Transient (EFT) Protection	6KV DC		
	Power and Alarm Fault Connector	6-pin removable screw terminal		
	Alarm Fault Relay	24VDC – 1A max.		
	Enclosure	IP-30 slim-type metal case		
	Mounting	DIN-rail kit and wall-mount ear		
	Dimensions (in/cm) (W x D x H)	5.31 x 3.42 x 1.26 inch / 13.5 x 8.7 x 3.2cm		
	Weight (lbs./kg)	0.965 lbs./.437kg	0.965 lbs./.437kg	0.977 lbs./.437kg

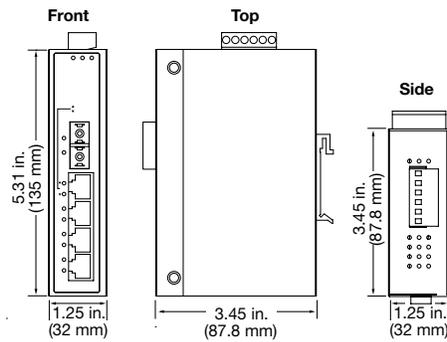
4-port Industrial Ethernet to Fiber Media Converter Specifications cont.

Part No.	MC-4TX1FXMM-2Km	MC-4TX1FXSM-15Km	MC-4TX2FX	
Description				
Environmental	MTBF	> 100,000 Hrs @ 25°C		
	Operating Temperature	-10°C~60°C	-10°C~60°C	-10°C~60°C
	Storage Temperature	-40°C~85°C	-40°C~85°C	-40°C~85°C
	Relative Humidity	5%~95% (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		
	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		
	Safety	UL, cUL		

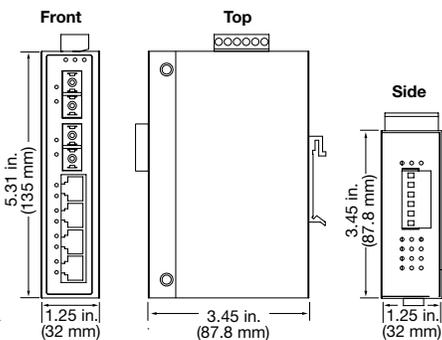
Dimensional Diagrams



MC-4TX1FXMM-2Km



MC-4TX1FXSM-15Km



MC-4TX2FX

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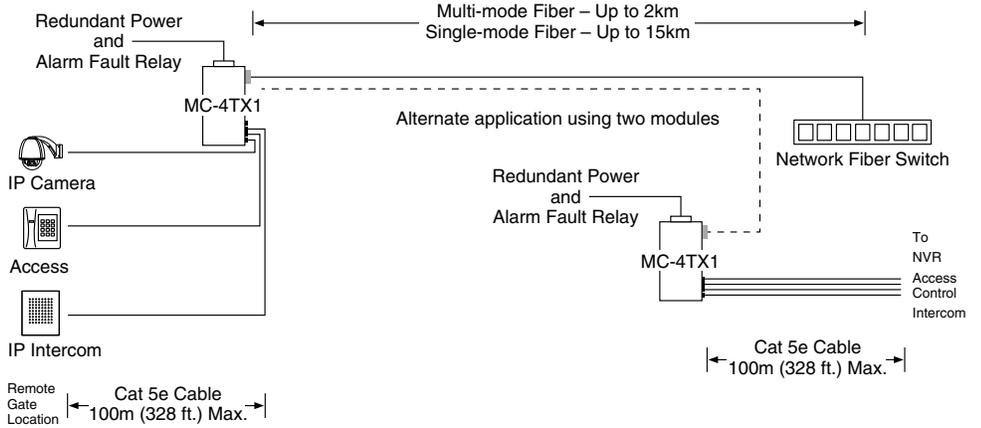
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Ordering Information

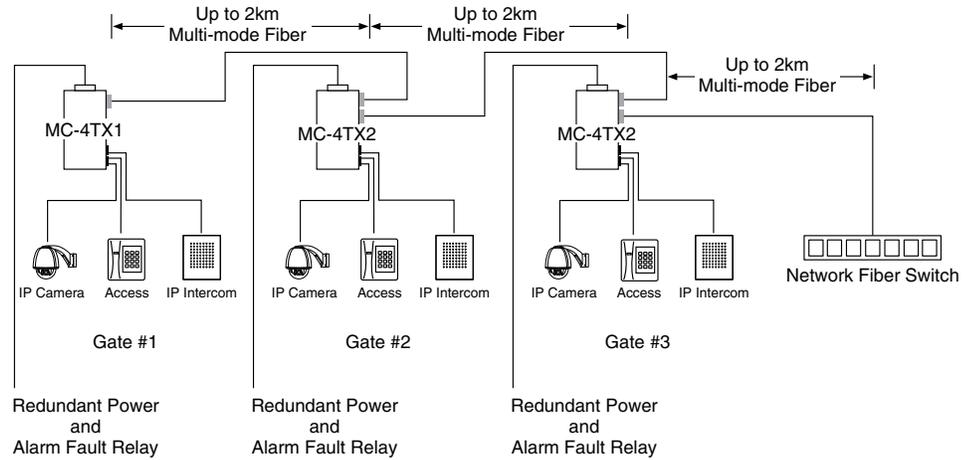
MC-4TX1FXMM-2Km	4-port Fast Ethernet to 1 Fiber Port
MC-4TX1FXSM-15Km	4-port Fast Ethernet to 1 Fiber Port
MC-4TX2FX	4-port Fast Ethernet Drop-and-Repeat 2 Fiber Ports

Typical Applications

Point-to-Point Application



Drop-and-Repeat Application



Security Products by GE are now part of the UTC Fire & Security family



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