



# MC100FX-TX-POE

## 100Base-FX To 10/100Base-TX Media Converter + PoE Injector - Stand-alone or Wall Mount

### Overview

The Carrier Fire & Security MC100FX-TX-PoE series integrates two remote network technologies in a single product—100Base-FX to 10/100Base-TX Media Conversion with Power Sourcing Equipment and a PoE Injector—for wireless access points, IP-based surveillance cameras or IP phones.

With an IEEE 802.3af PoE Injector, the MC100FX-TX-PoE provides DC 48V voltage over Ethernet cables to optimize power management of network devices. A twisted pair of cables between the MC100FX-TXPoE and IEEE 802.3af compliant PD or PoE Splitter transfers data and power simultaneously.

The maximum distance from the PoE PSE to PD is 100 meters, but a fiber interface can extend the deployment range. The MC100FX-TXPoE PoE Media Converter can change an optical Ethernet signal to an electrical Ethernet signal, or a 10/100Base-TX signal to a 100Base-FX signal, to meet different network applications. The maximum networking distance can then extend as far as two kilometers and still sustain the transmission performance as high as 100Mbps. The high performance Store-and-Forward mechanism prevents packet loss with IEEE 802.3x Flow Control (Full-Duplex). In addition, the LFP (Link Fault Pass-through) function, (LLCF / LLR) and DIP switch design will immediately alert administrators about link media problems and provide an efficient solution to monitor the net. The DIP switch can disable or enable this LFP function.

With data, long-reach fiber capability and PoE from one unit, the MC100FX-TX-PoE requires fewer cables and eliminates the need for dedicated electrical outlets. Plus, power and data switching are delivered over a single cable to prevent additional AC wiring costs and reduce installation time.

With the data, long-reach fiber capability and PoE from one unit, the MC100FX-TX-PoE will reduce cables and eliminate the need for dedicated electrical outlets on the wall, ceiling or any unreachable place. It frees the Security IP Camera and wireless AP deployment from restrictions due to power outlet locations. Power and data switching are integrated into one unit and delivered over a single cable, eliminating costs for additional AC wiring and reducing installation time.



### Details

- Slim-type metal case
- Operating temperature from 0°~+50°
- Stand-alone and wall-mount design
- 48V/0.4A DC power supply
- Complies with IEEE 802.3, IEEE 802.3u • 10/100Base-TX, 100Base-FX, IEEE 802.3af Power Over Ethernet standard
- Auto-negotiation for 10/100Base-TX half-duplex or 10/100Base-full-duplex
- Compact size allows for easy installation
- 100Base-FX interface for up to 2km (multi-mode fiber 50µm/125µm) on MC100FX-TX-PoE
- LED indicators offer simple network diagnosis
- IEEE 802.3x full-duplex flow control, back pressure in half-duplex eliminate packet loss
- Supports maximum frame size to 1600bytes
- Supports auto MDI/MDI-X function
- Store-and-Forward mechanism
- Auto Loop Back Test function
- Side DIP switch: LFP (Link Fault Pass-through) mode selection

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### Technical specifications

#### General

Category	Commercial
Type	Ethernet to Fixed Optics

#### Connections

No. of ports	1
Port speed	Fast
Port type	10/100
Fiber port	1
Fiber port type	Multi Mode
Fiber port speed	100Base FX
Fiber distance	2 km
Fiber connector	SC
Wavelength	1300 nm

#### Electrical

Power supply type	48 VDC
Power consumption	20 W
PoE	Yes
PoE/PoE+	1 port PoE (802.3af)

#### Physical

Physical dimensions	97 x 70 x 26 mm
Net weight	200 g
Mounting type	Standalone, Wall mount

#### Environmental

Operating temperature	0 to +50°C
Storage temperature	-20 to +70°C
Relative humidity	5 to 90% noncondensing (Operating / Storage)

#### Hardware Specifications

	1x 10/100Base-TX RJ-45 TP interface with PoE injector function Auto-negotiation, Auto MDI/MDI-X
	1-Port 100Base-FX Multi-mode: 50/125 µm or 62.5/125 µm optic fiber
Launch Power (dBm)	Max:-14 / Min: -19
Receive Sensitivity (dBm)	-34.5
Maximum Input Power (dBm)	-14
Enclosure	Slim-type metal case
Power requirement	48 VDC, 0.38 A External AC-to-DC adapter

#### Power over Ethernet

PoE Standard	IEEE 802.3af Power over Ethernet
PoE Power Supply Type	End-Span/Type A
Power PIN Assignment	1/2(+), 3/6(-)
Power Output	PoE 48 VDC, Max. 15.4 W, 350 mA
Number of devices that can be powered	1

#### Switch Specification

Switch Architecture	Store-and-Forward
Switch Throughput	148810 pps @ 64 Bytes
LFP mode	Enable: Either TP port or FX port is broken, shut down the other port, Disable: Link LED indicators still on if connection of the other end is broken
Share Data Buffer	1 Mbit on-chip frame buffer
LED	System: Power, Status FX/LNK: Data Active, Fiber Link TX/LNK: 10/100 Link/Active, PoE in Use: Detect PSE Device
Flow Control	Back pressure for Half-Duplex, IEEE 802.3x PAUSE Frame for Full-Duplex

#### Standards Conformance

Standards Compliance	IEEE 802.3 10Base-T
Standards Compliance	IEEE 802.3u 100Base-TX
Standards Compliance	IEEE 802.3x Flow Control and Back pressure
Standards Compliance	IEEE 802.3af Power over Ethernet
Regulation Compliance	FCC Part 15 Class A, CE
Network cables: 10/100Base-TX	TIA-EIA-568, CAT 5/5e UTP cable
Network cables: 100Base-FX	Multi-mode: 50/125 µm or 62.5/125 µm optic fiber (2km, max.).

#### Compatible products

Category	Reference	Description
Power Supplies	PS48VDC.38A-EU	48 VDC @ 380 mA, plugs directly into wall outlets, compatible with VDA plugs used in Europe and part of South America



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