

# FiberPlex™ Industrial Gigabit Miniature SFP Media Converter with PoE+ Injector

## Model FP101EM/AT



*Plenty of power in a small package. Our industrial Gigabit media converter has a modular SFP interface for Gigabit fiber connectivity and a built-in 30-watt PoE injector for PoE/PoE+ applications.*

### Extended Operating Temperature

-40 to 167°F (-40 to 75°C) ambient temperature range

### Flexible Mounting Options

Wall mount, DIN rail, or desktop

### Rugged

Meets tough EN60068 standards for Free Fall, Shock, and Vibration

### Link Fault Pass-Through (LFP)

If the copper signal is lost or disconnected, the fiber signal will turn off, if the fiber signal is lost or disconnected, the copper port will turn off

### Plug and Play

Auto sensing network speeds and PoE compliant power negotiation makes this product incredibly easy to use

### TAA Compliant

Top-notch quality and reliability with local support

Patton's FP101EM/AT converts singlemode or multimode fiber to a copper Ethernet signal. With the built-in PoE+ (Power over Ethernet) injector and a local power source, you can easily and reliably extend both power (30 watts/PoE+) and 10/100/1000 Mbps Gigabit Ethernet to a PoE/PoE+ end-points such as IP security cameras, IP speakers, VoIP phones, wireless access points, POS kiosks, BACs, PLCs and more.

Because Ethernet over Cat 5e/6 cables is limited to only 328 feet (100 meters), using fiber as a backhaul allows for a massive increase in distances. SFP options for multimode can reach up to 1.24 miles (2 km) and singlemode options can range as far as 74 miles (120 km). In addition to the reach, you get fiber's superior immunity to noise and, harmful transients (surges).

The FP101EM/AT is housed in an IP30-rated, DIN-rail or wall-mount enabled enclosure, and has a wide operating temperature of -40 to 167°F (-40 to 75°C). Its rugged design and wide temperature range makes it an ideal media converter for industrial or harsh environments. Its small size even allows you to put it directly into the enclosures of your primary devices.

The Fiberplex 101EM/AT is very simple to use, completely plug and play. LEDs make it clear when power is detected on the power inputs and when PoE is being delivered. This is a PoE compliant device so the amount of power is negotiated automatically by the injector. Should the device you are connecting to not be PoE enabled, the FP101EM/AT will detect this and not pass power to the connected device.

Visit [patton.com](http://patton.com) to view our huge selection of network connectivity products, SFPs, and more.

DIN Rail Mount



Panel Mount



PoE IP Camera

Power PoE+ Output  
(10/100/1000 Ethernet +  
up to 30 watts of power)

48-56 VDC power input



100/1000 Ethernet over Fiber  
(multimode or singlemode)

SFP Multimode: SFP-MC24XC-3131-2  
SFP Singlemode: SFP-SC24XC-3131-B  
(For more choices, visit [patton.com/sfp-oc/](http://patton.com/sfp-oc/))

FP101EM/AT application

# FP101EM/AT Industrial Gigabit Miniature SFP Media Converter with PoE+ Injector

## Specifications\*

### Ethernet Interfaces

- 1x100/1000Mbps SFP Port
- 1xRJ-45 10/100/1000BaseT(X) PoE+ Output (PSE)
- Auto MDI-X / MDI crossover
- Auto Negotiation, 10/100/1000 Mbps
- Auto-Negotiation, Full or Half Duplex

### Networking

- IEEE 802.3x Flow Control and Back Pressure
- Converter Mode: Port speeds are the same
- Switch Mode/Store and Forward: Port speeds
- Back-plane (switching fabric): 4 Gbps
- Jumbo Frame: 16Kb
- MAC Address Table Size: 1K
- Packet Buffer Size: 512Kb

### IEEE Standards

- IEEE 802.3 10Base-T Ethernet
- IEEE 802.3u 100Base-TX Fast Ethernet
- IEEE 802.3z 1000Base-X Gigabit Ethernet

- IEEE 802.3ab 1000Base-T Gigabit Ethernet
- IEEE802.3af for PoE
- IEEE802.3at for PoE+

### Management

- Plug and Play operation
- LEDs:
  - Power
  - Copper TX Link & Activity
  - PoE
  - Fiber (SFP) Link & Activity
- DIP Switch Functions
  - Link Fault Pass Through On or Off
  - SFP Speed 100 Mbps or 1 Gbps

### PoE Pin Assignment

Pin 1 (V+), 2 (V+), 3 (V-), 6 (V-)

### Power Input

- 3-pin terminal block 48–56 VDC input
- Relay switch for alarm

### Power Input Connector

- Removable 3-pin terminal block
- Wire range: 0.34 to 2.5 mm<sup>2</sup>
- Solid wire (AWG): 12–24/14–22

- Stranded wire (AWG): 12–24/14–22
- Torque: 5lb-In/0.5Nm/0.56Nm
- Wire Strip length: 7–8 mm

### Power Consumption

1.92 watts @ 48 VDC full load without PoE

### Max PoE Power

30 watts max. with PoE at 56VDC

### Regulatory Approvals

- Safety: LVD (EN62368-1)
- EMC: CE, FCC, EN55032/24
- EMI: CISPR 32, FCC Part 15B Class A
- EMS
  - IEC 61000-4-2 ESD: Contact: 6KV; Air: 8KV
  - IEC 61000-4-4 EFT: Power: 2KV; Signal: 2KV
  - IEC 61000-4-5 Surge: Power: 2KV; Signal: 2KV
- Free Fall: EN60068-2-32
- Shock: EN60068-2-27
- Vibration: EN60068-2-6



### Environmental Ambient Temperature

- Operating: -40 to 167°F (-40 to 75°C)
- Storage: -40 to 185°F (-40 to 85°C)

### Relative Humidity

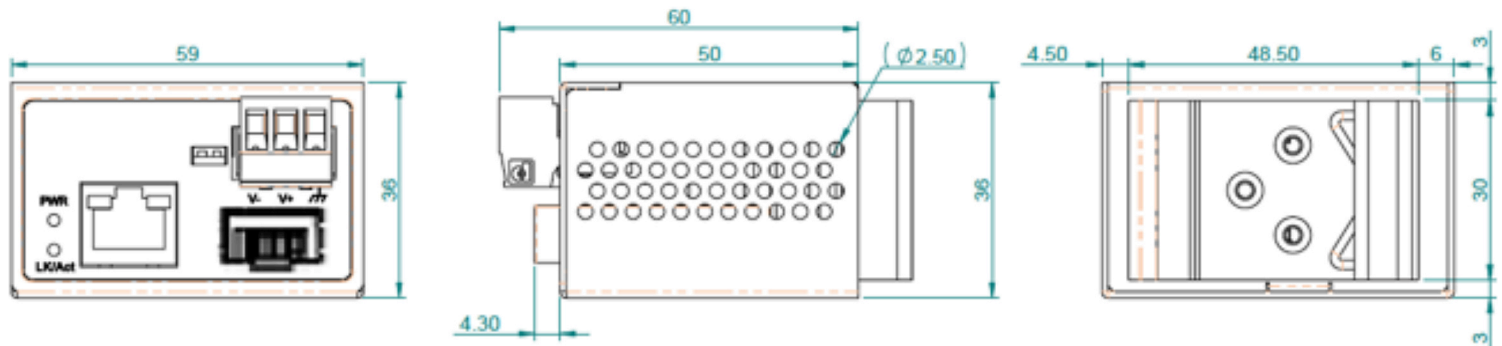
5 to 95% non-condensing

### Protection Class

IP30

### Physical

- 2.32L x 1.42W x 1.93D in. (59L x 36W x 49D mm)
- Unit Weight: 3.2 oz (91g)
- Shipping Weight: 8 oz (227g)



Specifications subject to change without notice



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