



# FiberPoE™ **GEN2**

Optical Data Transport  
for Outdoor PoE Devices

Model: F-POE-G2

Reliable Long-Distance Gigabit PoE Runs

Enhanced ESD Protection and EMI Reduction

Dependable 24V/50V Passive PoE Transport

# FiberPoE™ GEN2

## Fiber + Power Solution for Outdoor PoE Devices

Overcome PoE limitations with the next-generation FiberPoE™, model F-POE-G2. The FiberPoE Gen 2 is a low-cost solution for outdoor deployments that require long-distance runs to reach the PoE device. Deployments with the FiberPoE Gen 2 provide significant EMI and ESD protection over typical PoE installations. The FiberPoE Gen 2 also features a durable, weatherproof form factor and enhanced surge protection.

### Separate Data and Power Transport

PoE is ideal for indoor or short-run installations. However, for outdoor, long-distance installations, PoE becomes vulnerable to EMI and is limited to 100 meters with correlated power loss. With the FiberPoE Gen 2, data and power are transported on separate cables to greatly improve data integrity and enable much longer cable runs.

The FiberPoE Gen 2 provides Gigabit bi-directional data transport between twisted-pair Ethernet cable and fiber optic cable, and injects DC power to the Ethernet cable for passive PoE. Use one FiberPoE Gen 2 device as an *Fiber-to-Ethernet Converter*, or a pair of FiberPoE Gen 2 devices to create a *Fiber Bridge*.

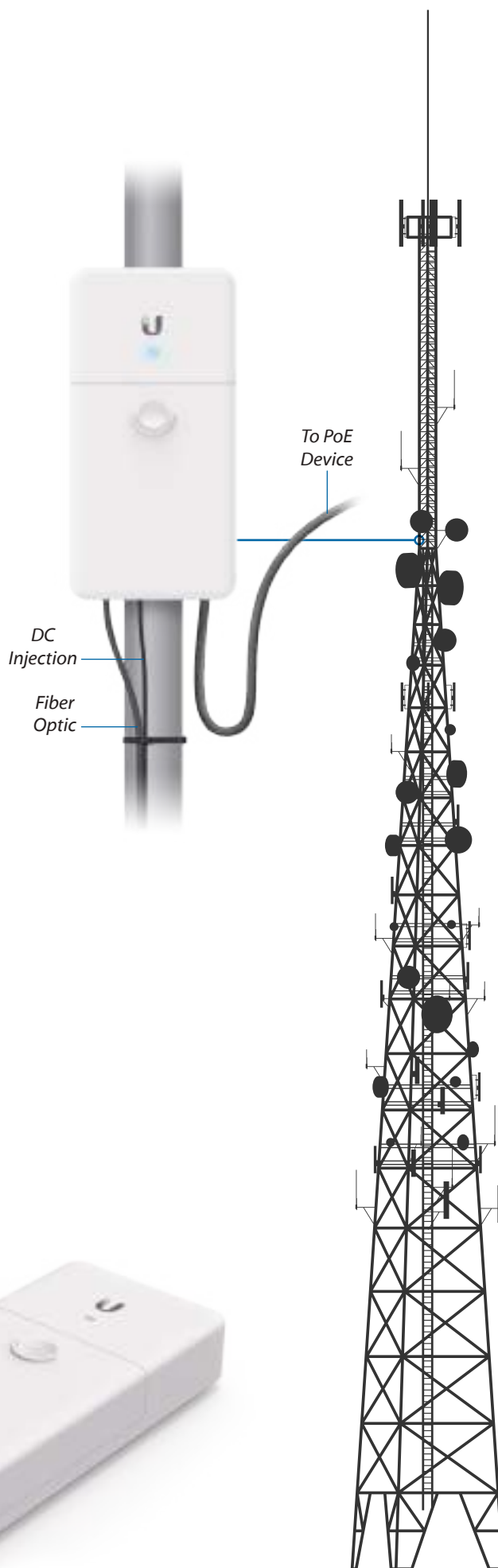
### Enhanced Surge Protection

Featuring a built-in high-current Gas Discharge Tube (GDT) for the DC terminal block and PoE port, the FiberPoE Gen 2 delivers enhanced surge protection. The added GDT support effectively protects against lightning and other power surges.

### Fiber Optic Data Transport

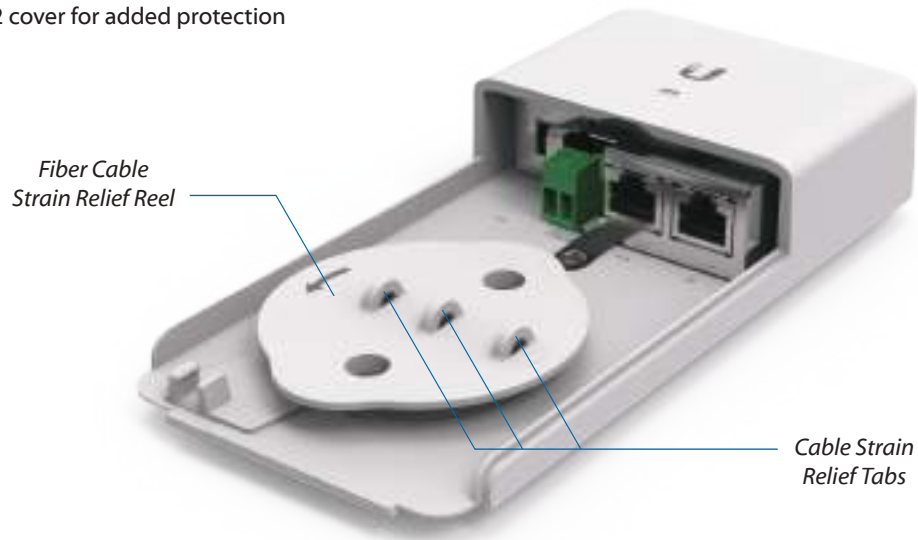
Using fiber optic cable for data transport significantly reduces electrostatic discharge (ESD) failures and electromagnetic interference (EMI). Data integrity is also sustained in runs beyond 100 meters, the limit of Ethernet over twisted-pair cable.

The FiberPoE Gen 2 supports a 1G SFP module and 24V or 50V power from a DC power cable or PoE cable.



## Integrated Fiber Cable Strain Relief

An integrated strain relief system was thoughtfully designed to fit inside the FiberPoE Gen 2 cover for added protection and a cleaner installation.

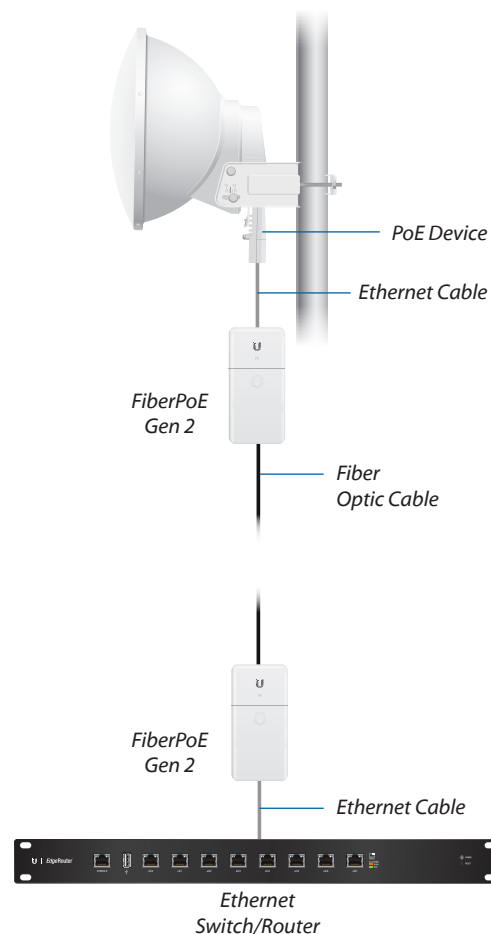
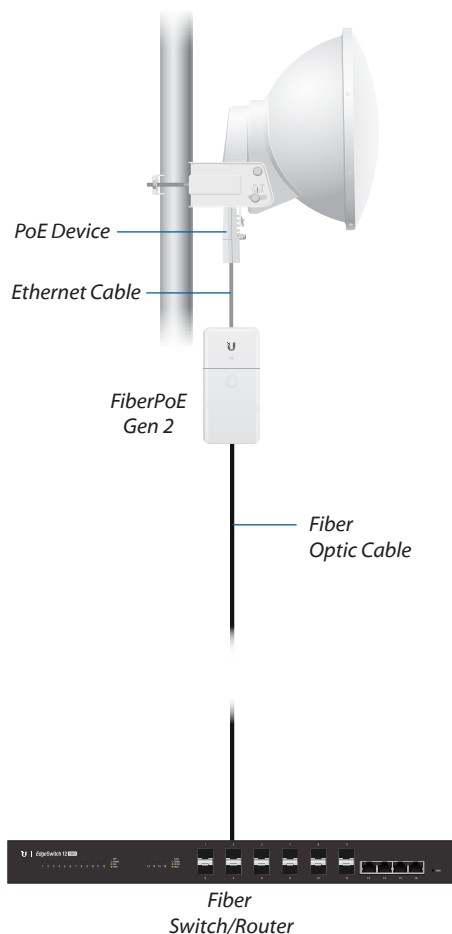


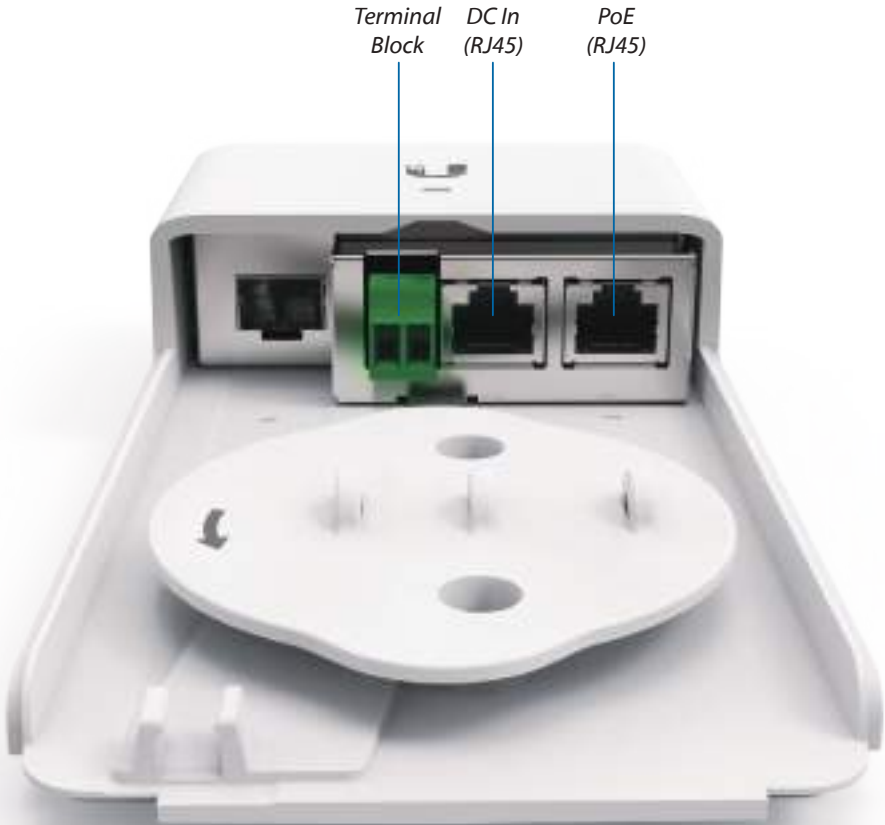
## Application Examples

The following are typical use cases for the FiberPoE Gen 2.

### Data Options

- 1. Fiber-to-Ethernet Converter** One FiberPoE Gen 2 at the top of the tower is used to convert fiber to Ethernet at the radio. At the base of the tower, the fiber optic cable connects directly to a fiber switch or router.
- 2. Fiber Bridge** Two FiberPoE Gen 2 devices, one at the base and one at the top of the tower, are used to provide a fiber optic data link for protection from EMI events that can cause equipment damage or signal integrity issues.



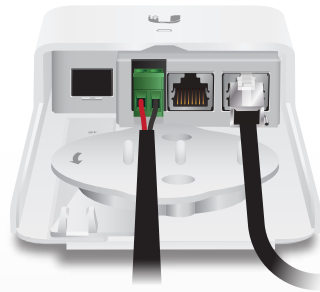


| Power Input Port                    | Input Power                | Output Power                                                |
|-------------------------------------|----------------------------|-------------------------------------------------------------|
| <b>Terminal Block</b><br>(DC Power) | 2-wire DC, 24V             | PoE port, 2-pair (4, 5+; 7, 8-), 24V                        |
|                                     | 2-wire DC, 50V             | PoE port, 4-pair, 50V                                       |
| <b>DC In</b><br>(Power Only)        | 2-pair (4, 5+; 7, 8-), 24V | Terminal Block, 24V<br>PoE port, 24V, 2-pair (4, 5+; 7, 8-) |
|                                     | 4-pair, 24V                | Terminal Block, 24V<br>PoE port, 24V, 4-pair                |
|                                     | 4-pair, 50                 | Terminal Block, 50V<br>PoE port, 50V, 4-pair                |
| <b>PoE</b><br>(Power and Data)      | 2-pair (4, 5+; 7, 8-), 24V | Terminal Block, 24V                                         |
|                                     | 4-pair, 24V                | Terminal Block, 24V                                         |
|                                     | 4-pair, 50V                | Terminal Block, 50V                                         |

## Power Input/Output Examples

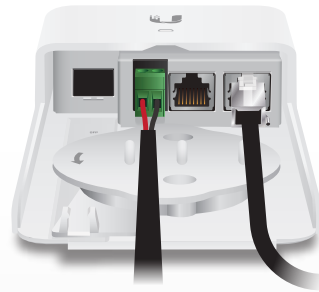
### Terminal Block Input

Top of Tower  
Near the PoE Device



24VDC Input

24V (2-Pair)  
Power and Data  
to PoE Device



50VDC Input

50V (4-Pair)  
Power and Data  
to PoE Device

### DC In (RJ45) Input

Top of Tower  
Near the PoE Device



24V (2-Pair)  
DC Input

24V (2-Pair)  
Power and Data  
to PoE Device



24V (4-Pair)  
DC Input

24V (4-Pair)  
Power and Data  
to PoE Device



50V (4-Pair)  
DC Input

50V (4-Pair)  
Power and Data  
to PoE Device



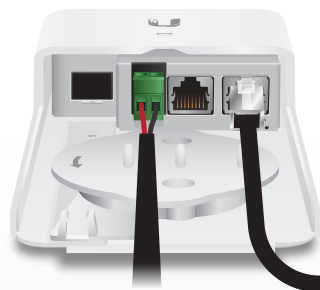
24/50V  
DC Output

24/50V  
DC Input

24/50V  
Power and Data  
to PoE Device

### PoE (RJ45) Input

Bottom of Tower



24/50V  
DC Output

24/50V Power and Data  
from PoE Adapter or PoE Switch

# Specifications

| F-POE-G2                  |                                                                                                                                                                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions                | 196.4 x 93.5 x 32.4 mm<br>( 7.73 x 3.68 x 1.28")                                                                                                                                                                                                              |
| Weight                    | 288 g<br>(10.2 oz)                                                                                                                                                                                                                                            |
| Enclosure                 | White Polycarbonate                                                                                                                                                                                                                                           |
| Interface Connections     | (1) 1 Gbps SFP Port<br>(1) DC Terminal Block<br>(1) DC RJ45 Port DC Injection<br>(1) 1000 Mbps Ethernet PoE Port <sup>1</sup>                                                                                                                                 |
| Typical Power Consumption | 1.5W                                                                                                                                                                                                                                                          |
| Power Method              | DC Terminal Block, 2-Wire, 24VDC or 50VDC<br>DC In RJ45 Port, 2-Pair (4, 5+; 7, 8-) (24VDC Input), or<br>4-Pair (24VDC or 50VDC Input) Passthrough<br>PoE RJ45 Port, 2-Pair (4, 5+; 7, 8-) (24VDC Input), or<br>4-Pair (24VDC or 50VDC Input) PoE Passthrough |
| PoE Output                | PoE RJ45 Port, 2-Pair (4, 5+; 7, 8-) (24VDC), or<br>4-Pair (24VDC or 50VDC) PoE                                                                                                                                                                               |
| DC Output                 | Terminal Block, 2-Wire (24VDC or 50VDC)                                                                                                                                                                                                                       |
| Input DC Voltage          | 16 to 57V                                                                                                                                                                                                                                                     |
| Surge Protection          | Built-In High-Current Gas Discharge Tube<br>for DC Terminal Block and PoE Port                                                                                                                                                                                |
| LED                       | White: Power On<br>Blue: Connected<br>Blue (Flashing): Activity                                                                                                                                                                                               |
| Operating Temperature     | -40 to 60° C <sup>2</sup><br>(-40 to 140° F)                                                                                                                                                                                                                  |
| Operating Humidity        | 10 to 95% Noncondensing                                                                                                                                                                                                                                       |
| ESD/EMP Protection        | ± 24kV Contact / Air for Ethernet                                                                                                                                                                                                                             |
| Certifications            | CE, FCC, IC                                                                                                                                                                                                                                                   |

<sup>1</sup> 10/100 Mbps Ethernet not supported.

<sup>2</sup> May be further restricted by the operating temperature range of the SFP module being used.

