



OmniPoint

Omnipoint Gateway Hardware Guide



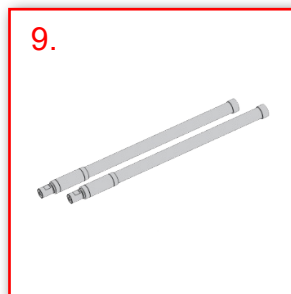
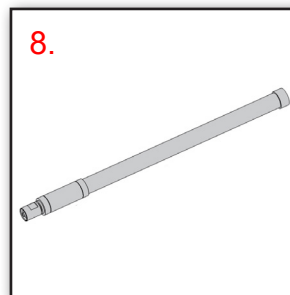
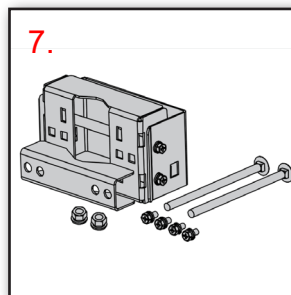
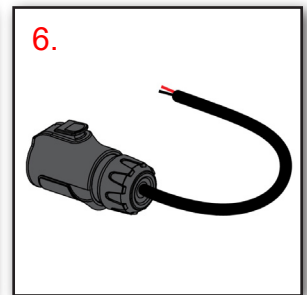
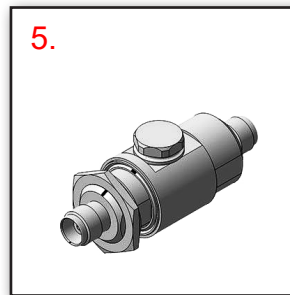
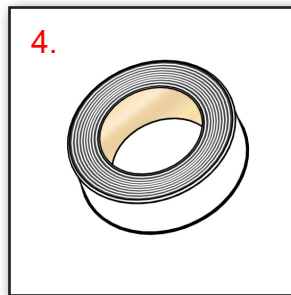
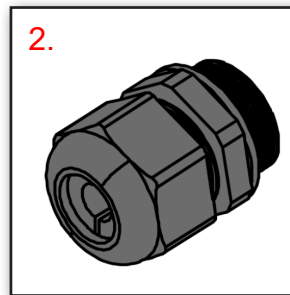
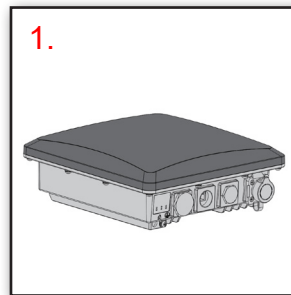
Scan for installation video



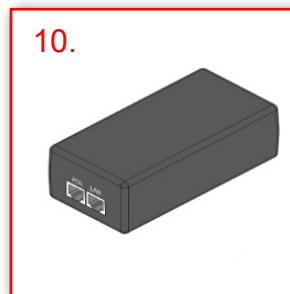
Contents of Kit

The items below should all be included in your Omnipoint kit.

1. Gateway Device (x1)
2. Cable Gland (x1)
3. Power Supply/Cord (x1)
4. Waterproof (Rubber) Tape (x1)
5. Lightning Arrester (x1)
6. 12 volt DC Cable (x1)
7. Installation Bracket Kit (x1)
 - Mounting Device Bracket (x1)
 - Mounting Pole Bracket (x1)
 - Mounting Pole Clamp(x1)
 - Bolt M6x1.0x11MM (x6)
 - Bolt M8x1.25x140MM (x2)
 - Washer 6MM (x6)
 - Washer 8MM (x2)
 - Lock Washer 6MM (x6)
 - Lock Washer 8MM (x2)
 - Nut 8MMx1.25 (x2)
8. LoRa Antenna (x1)
9. LTE Antenna (x2)
(Cellular Only)
10. PoE Injector (x1)
(Ethernet Only)



(Cellular Only)



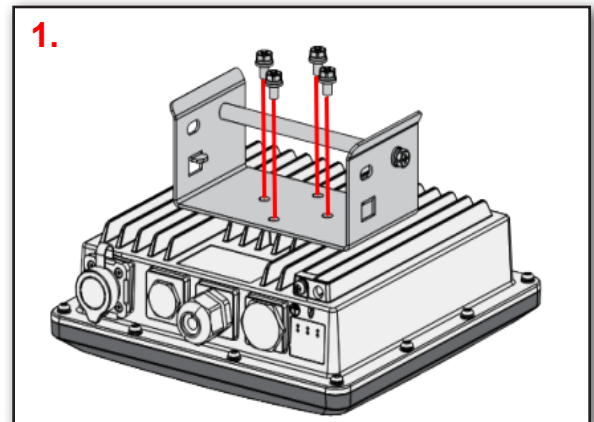
(Ethernet Only)



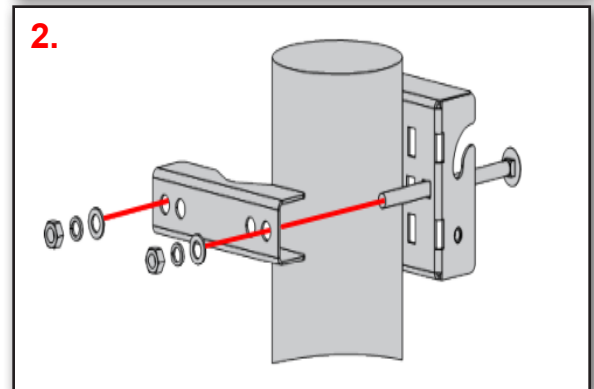
Mount and Secure Kit

To mount and secure the kit to the enclosure and pole, follow the steps below.

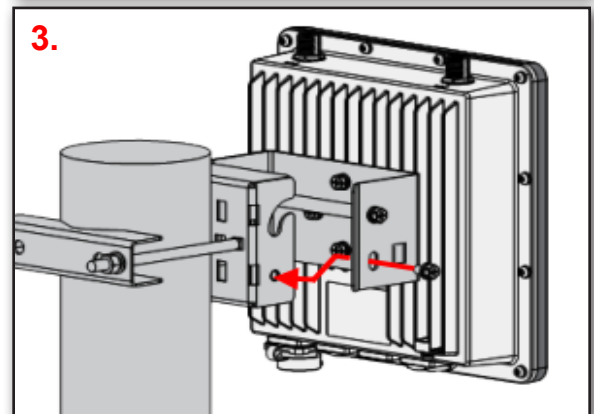
1. Fix the cross bracket on the bottom of the enclosure with Four M6x1.0x11MM bolts.



2. Place 2 pieces of the clamp around the pole and tighten them with M8x1.25x140MM bolts, washers, and nuts.



3. Hang up the enclosure and fasten it with Two M6x1.0x11MM bolts.



All antennas must be connected to the Gateway **before** powering up.



Lightning Arrester

The lightning arrester arrives with protective blue caps. Remove these caps before you attach it to your Gateway device. Attach it to the LoRa connector, as shown in the images below:

Ethernet (Internet Mode)



Cellular



Lightning Arrester



Once the lightning arrester is attached to the gateway, you can install the antenna. The antenna attaches to the other end of the lightning arrester. It is used to attempt to protect any equipment connected to the gateway. This is not a guarantee that it will protect anything in the case of a lightning strike. Lightning strikes are not covered under warranty.



You **must** use the lightning arrester on your Gateway. If you do not, your property may be damaged by lightning. The arrester will not protect the gateway from a strike, but may help to prevent further damage to other equipment down the line from the strike.



Attach Antennas

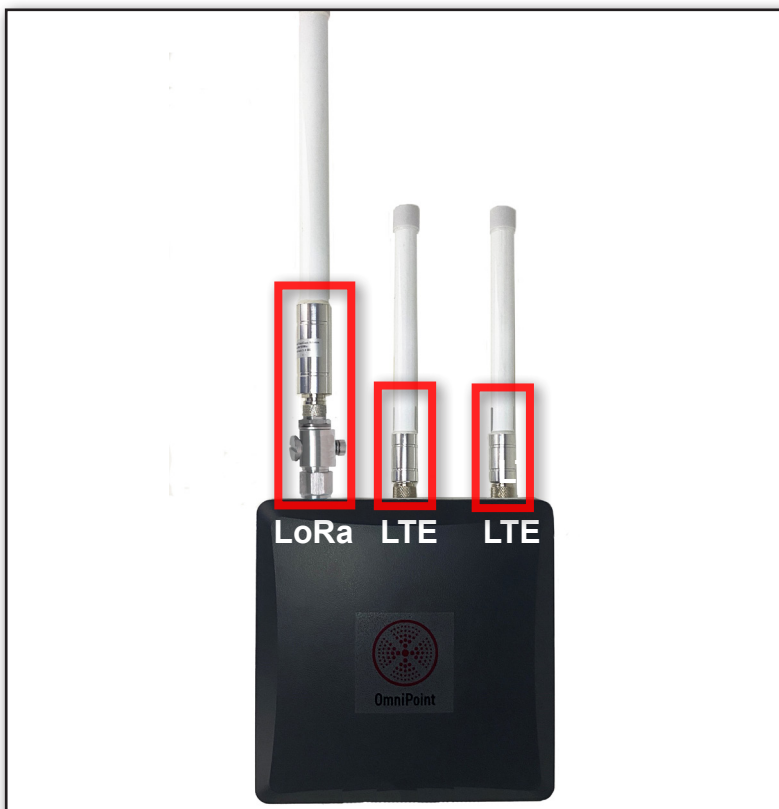
Ethernet (Internet Mode):

For the Ethernet device, the only antenna needed is the main LoRa antenna.



Cellular:

For the cellular device, you must attach two LTE antennas in addition to the LoRa antenna.



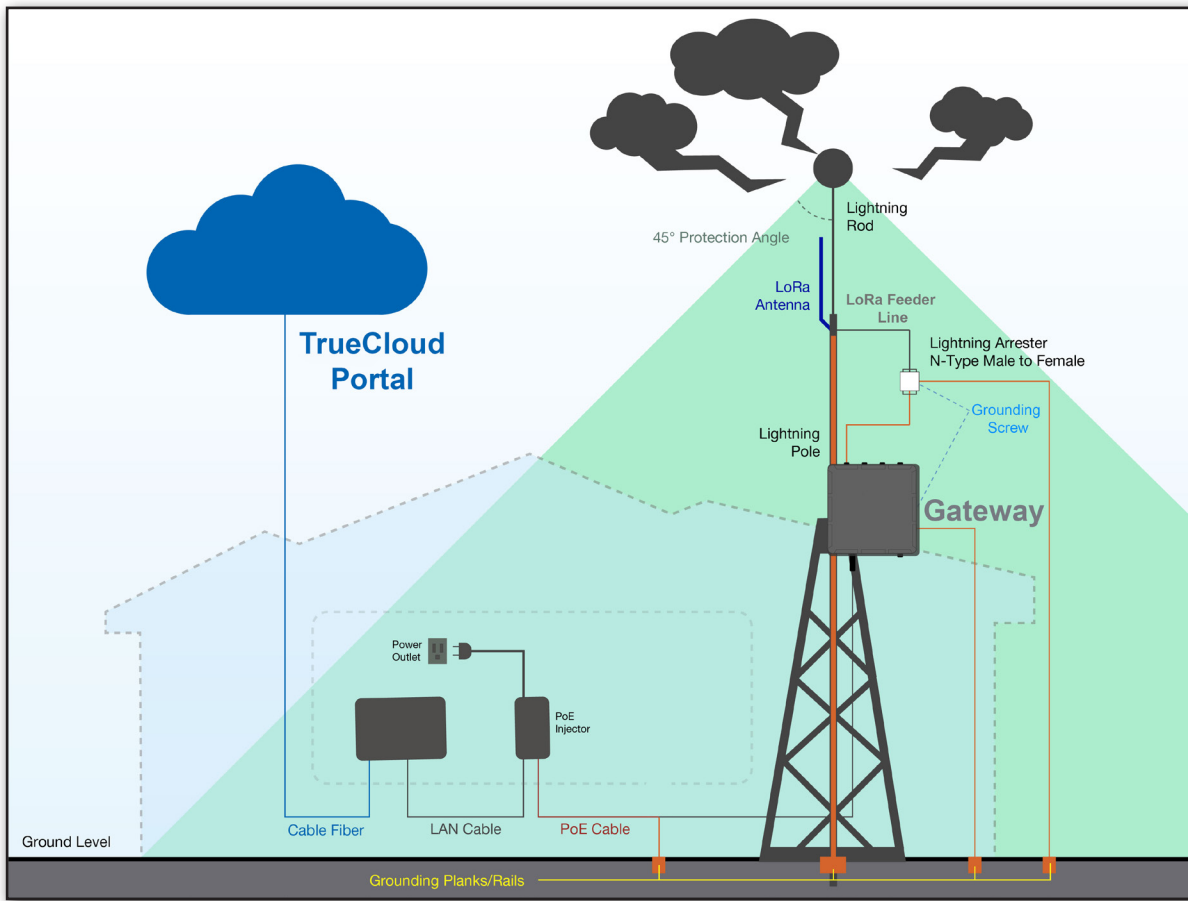
NOTE:

The LTE antennas **DO NOT**
come with lightning arrestors.
The only antenna that
requires one is the LoRa.



Device Protection

Indoor and outdoor systems require lightning surge protection. See below:



Antenna Grounding

We recommend installing a lightning arrester on the LoRa N-Type terminal. Use 10 AWG or greater grounding wire to connect the arrester to the tower-mounted LoRa antenna. The arresters must be Female to Male to fit the antenna and housing connectors. Use a 10 AWG or greater wire to connect the arresters' terminals to the grounding plank/rail on the building.

Gateway Grounding

We recommend using a separate 10 AWG or greater grounding wire to connect the screw terminal (on the bottom right of Gateway casing) to the grounding rail or bar.



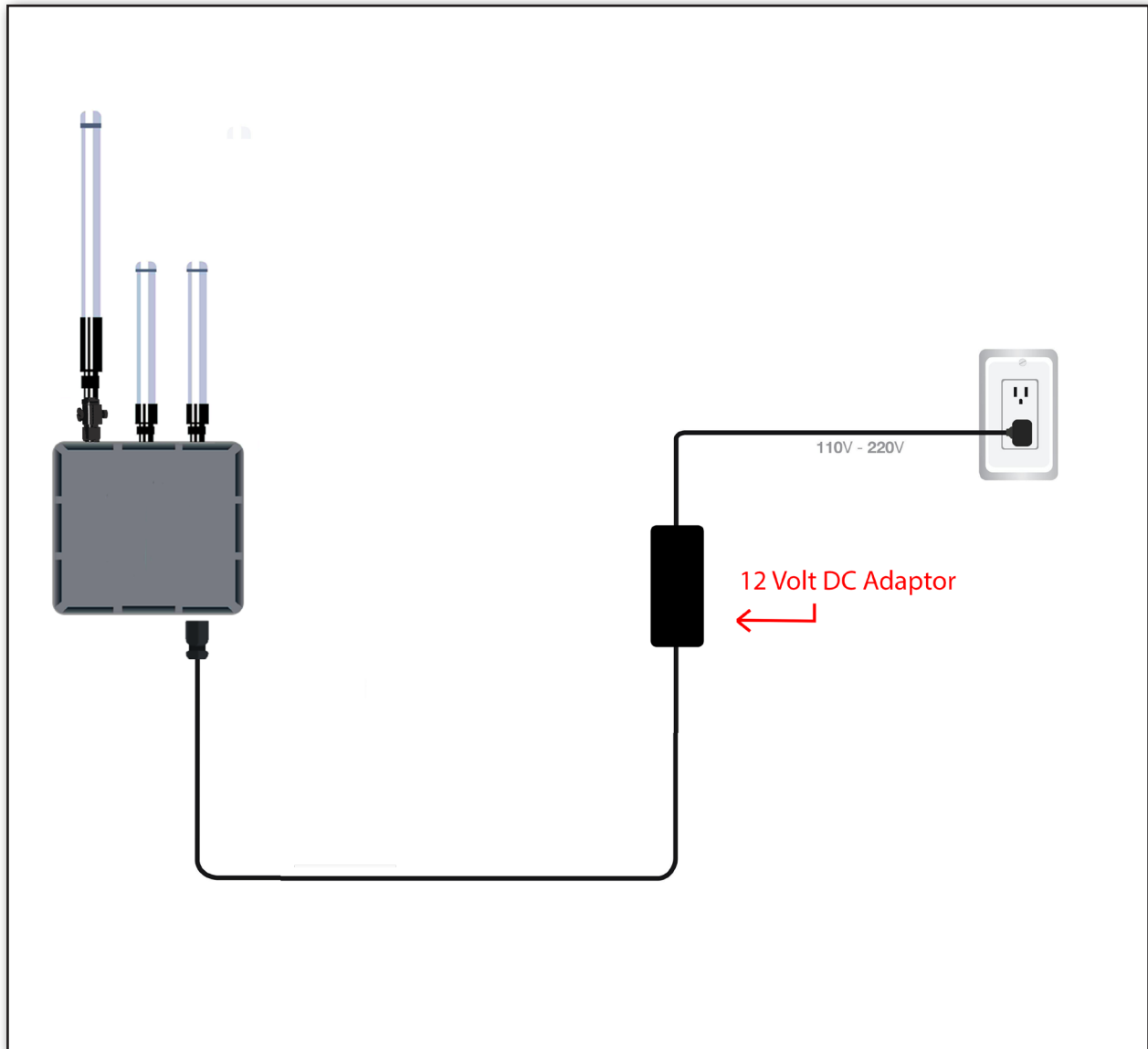
We carry no responsibility for damage your equipment incurs due to a lightning strike.



Powering up the device

The Gateway comes in two versions, the Ethernet and the Cellular version. First, we will go over the installation of a cellular device. Below is a basic diagram of the installation. Ensure you are using the 12 volt DC power supply that was provided in the kit.

Cellular Installation





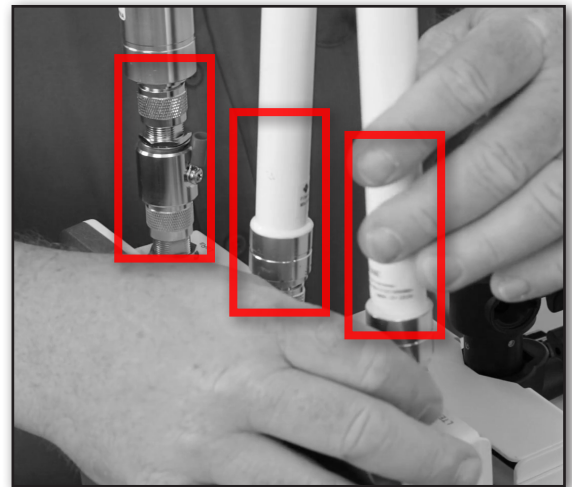
Powering up the device

For a cellular installation, three antennas are required. There is one LoRa antenna, and two LTE/Cellular antennas. Please follow the instructions provided below.

Cellular Installation

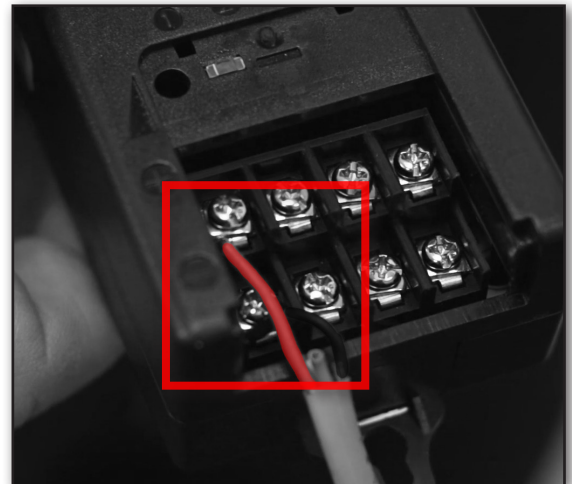
1. Screw on all three antennas. There are two cellular antennas and one LoRa. They must all be connected. Make sure the LoRa antenna has the lightning arrester as shown.

1.



2. To power a cellular system, you will simply need to wire your power connector wires to a 12 volt DC power supply.

2.



NOTE:

*Keep in mind polarity is important, and make sure to wire the positive **(RED) +** wire to the **Positive +** terminal on the power supply. Wire the negative **(BLACK) -** to the **Negative -** terminal on the power supply.*



Power Connection

You must unplug the protective cap on the **MAIN POWER** plug before making your connection to the adaptor plug.

3. Line up the 4 holes on the adaptor plug with the 4 prongs on the gateway plug:

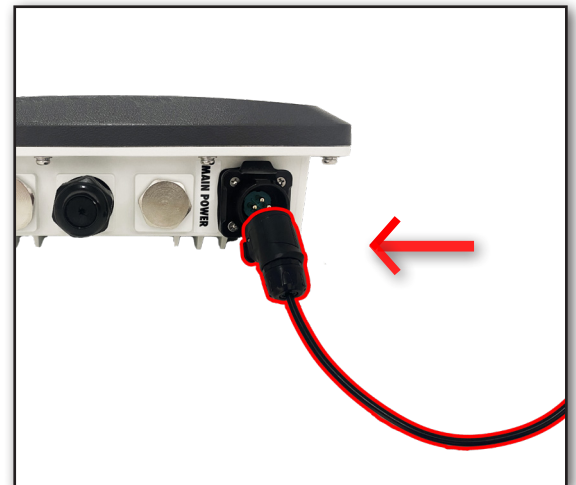
NOTE:

This step is not needed for the Ethernet Installation. The PoE Injector will provide the power for Ethernet devices.

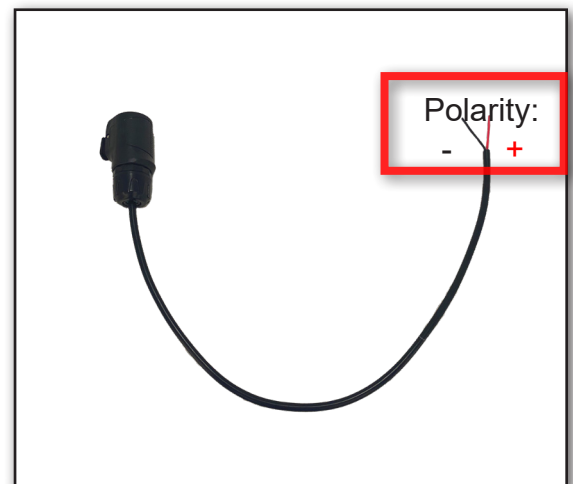
4. Pay attention to the polarity when wiring the adaptor plug to your 12 volt DC power supply. **Red to Red** and **Black to Black**:



3.



4.

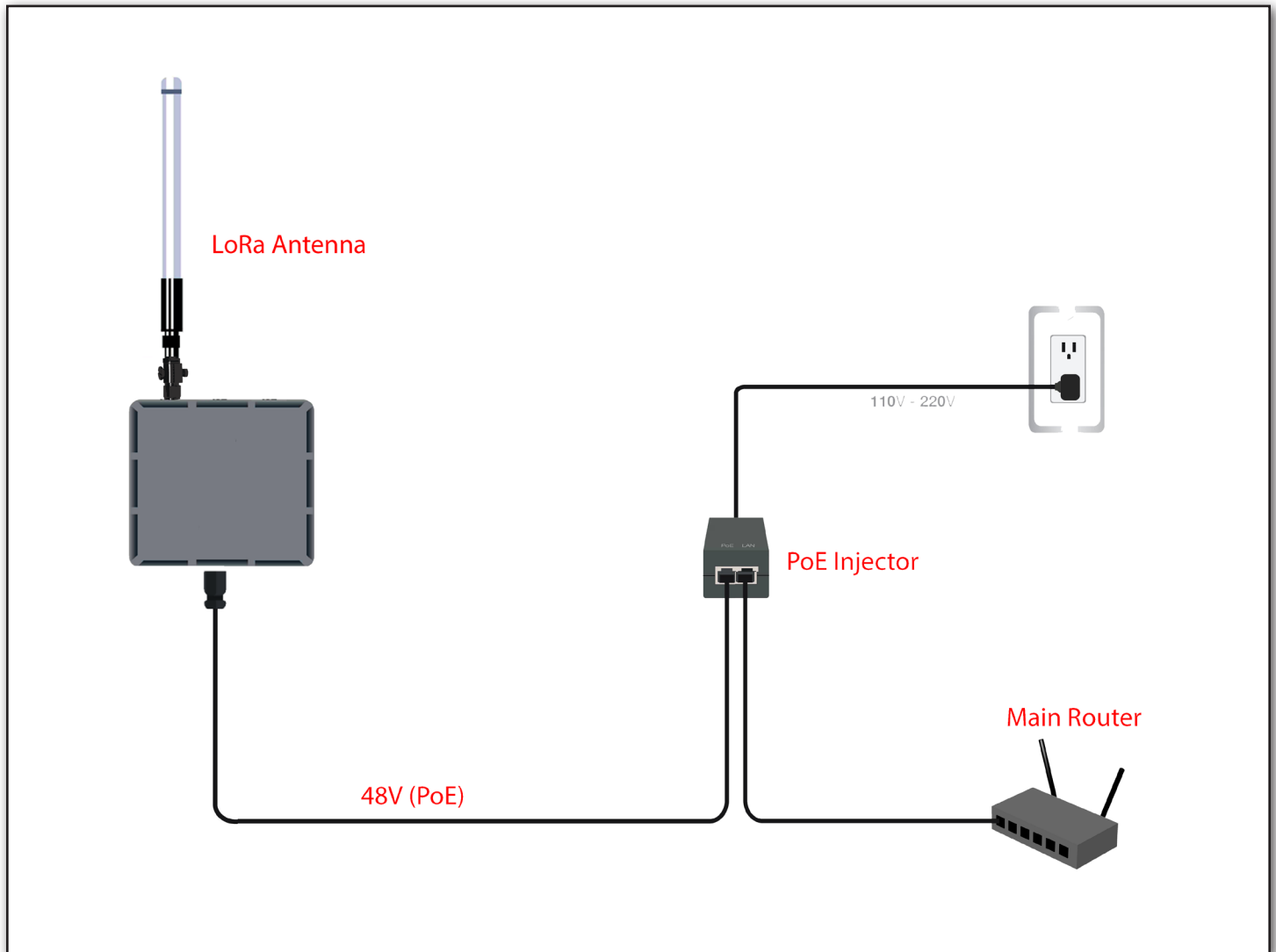




Powering up the device

Now we will go over the installation of an Ethernet Gateway with a Power over Ethernet (PoE) Injector. Familiarize yourself with the internet service on site, utilizing IT staff if needed.

Ethernet Installation (PoE)





Powering up the device

If the router on-site is already a PoE device, the PoE Injector is **not necessary**. You can plug the cable directly into the router.

Ethernet Installation (PoE)

1. Screw on the antenna(s). For a PoE install, the only antenna needed is the LoRa antenna. Ensure you use the lightning arrester on the antenna.



All antennas must be connected to the Gateway **before** powering up.

1.



2. Unscrew the Ethernet cable gland on the bottom of the Gateway.

2.





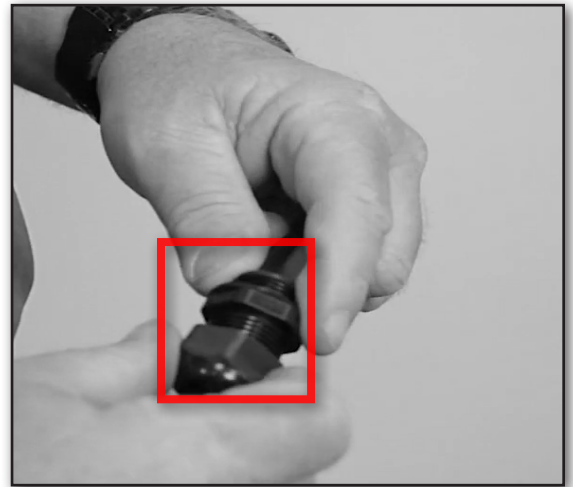
Powering up the device

In this section we will be making the Ethernet cable fit into the cable gland so it can be held in place on the bottom of the Gateway.

Ethernet Installation (PoE)

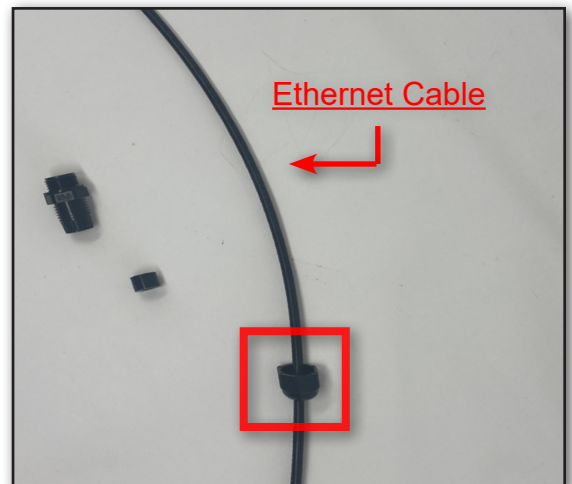
3. Take apart the cable gland by unscrewing the main two pieces. Now remove the rubber "C" shaped enclosure from the larger plastic piece of the cable gland.

3.



4. Now you have the 3 components of the cable gland. Thread your Ethernet cable through the plastic housing that is furthest from the Gateway. It will be the smaller plastic piece as shown.

4.





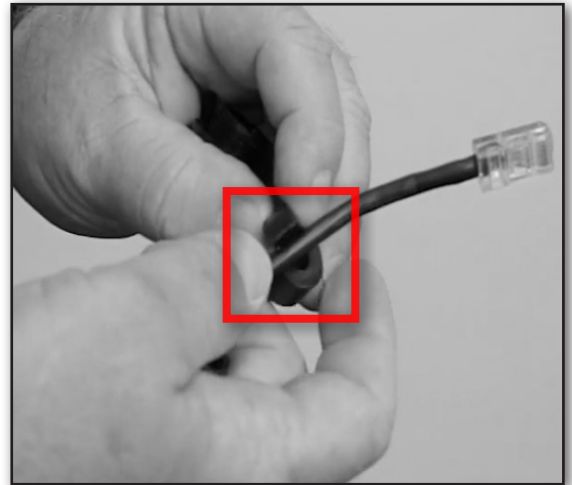
Powering up the device

In this section we will be making the Ethernet cable fit into the cable gland so it can be held in place on the bottom of the Gateway.

Ethernet Installation (PoE)

5. Remove the rubber "C" shaped enclosure from the cable gland to wrap it around the Ethernet cable.

5.



6. Now thread the Ethernet cable through the last piece as shown.

6.





Powering up the device

In this section, we will handle connecting the Ethernet jack into the device.

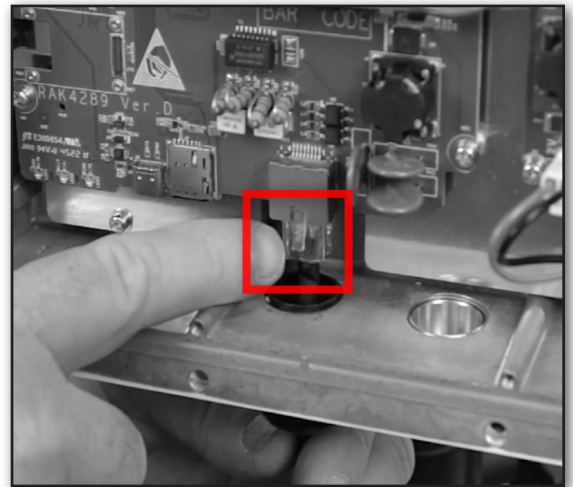
Ethernet Installation (PoE)

7. Plug the Ethernet cable into the bottom of the Gateway.

NOTE:

The cover is removed in the image to show where the internal Ethernet plug is. You should not need to remove the cover for installation.

7.



8. Now screw the top piece of the cable gland back into the gateway as shown.

8.





Powering up the device

In this section we will make sure the cable gland connection is snug and holding tightly to the bottom of the Gateway.

Ethernet Installation (PoE)

9. Push the middle rubber piece back into the housing that has been screwed onto the bottom of the Gateway.

9.



10. Now screw the bottom piece of the cable gland onto the rest of the housing as shown. Be sure to screw it on tightly.

10.





Powering up the device

In this section, we will be connecting the Ethernet cable into the PoE Injector, and then connecting the PoE injector into the main Router on site..

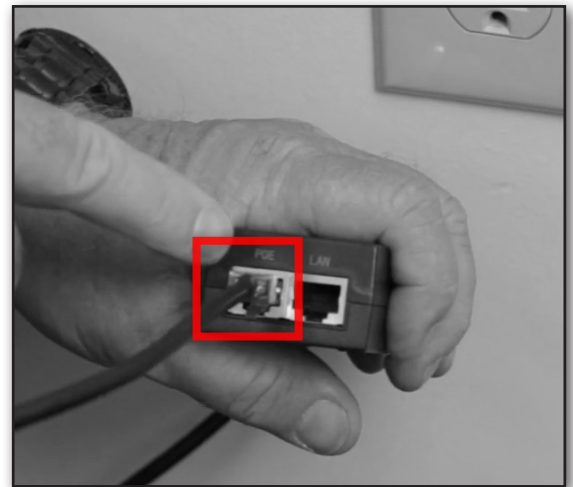
Ethernet Installation (PoE)

11. Plug the other end of the Ethernet cable into the jack labeled “PoE” on the PoE Injector.

NOTE:

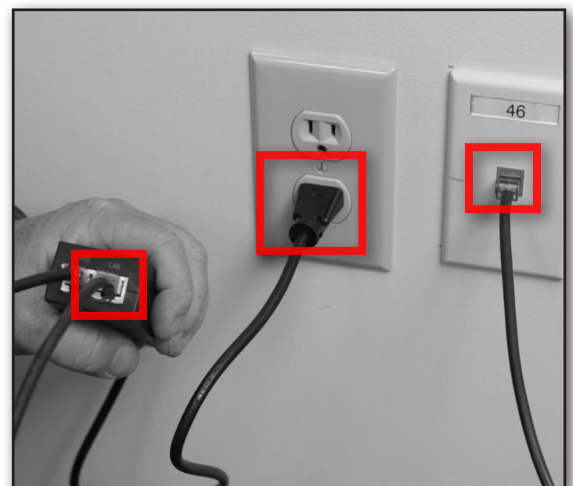
If the router on-site is already a PoE device, the PoE Injector is **not necessary**. You can plug the cable directly into the router.

11.



12. Use a second Ethernet cable to connect the jack labeled “LAN” on the PoE injector to one of the LAN ports on the main router that is providing internet. Then plug the power into an outlet.

12.

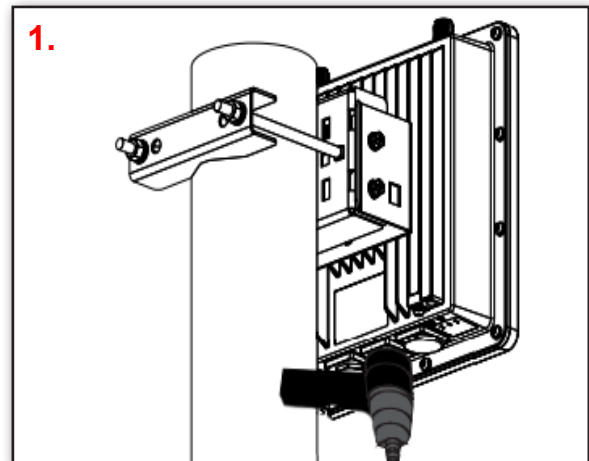




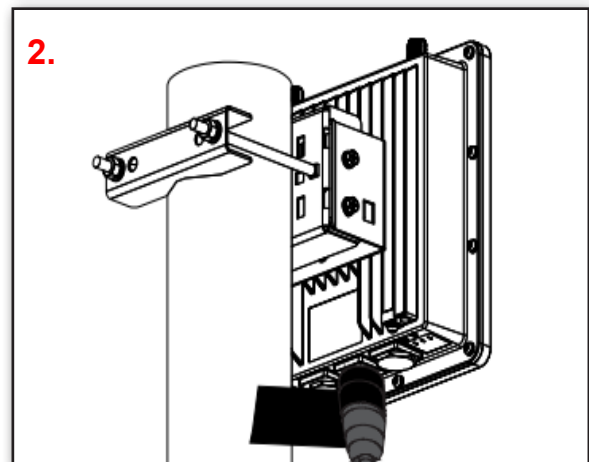
Weather Protection

Devices may be network-connected (via internet) or cellular-connected. For VPN device, protect the Ethernet cable with the provided Rubber tape. **DO NOT** use regular electrical tape.

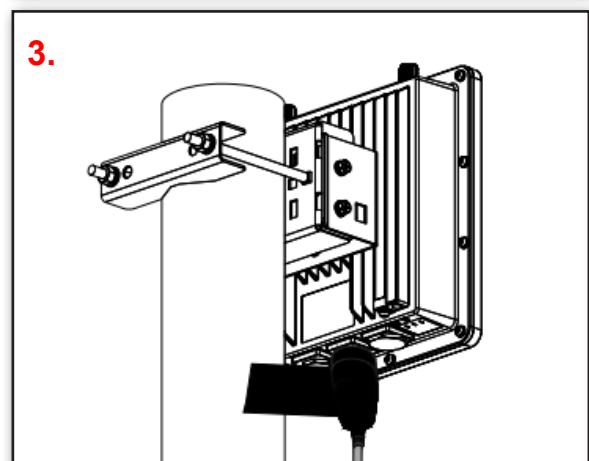
1. Clean the surface area of the connector that will be wrapped. Wrap a layer of the provided Rubber tape with a 50% overlap according to the rotation direction of the connector. Continue wrapping the Rubber tape to about 10 mm below the end of the connector.



2. Cut off about 50 cm waterproof tape. Stretch it to double the length. Wrap three layers around the connector with a 50% overlap. Hold the tape in place with your hand for a few seconds.



3. Wrap three additional layers with Rubber tape with natural uncoiling force and a 50% overlap. Make sure to cover the head and the tail of the connector.





OmniPoint

Wireless Multi-Point
Access Control

Total Property Wireless Access

by  cellgate

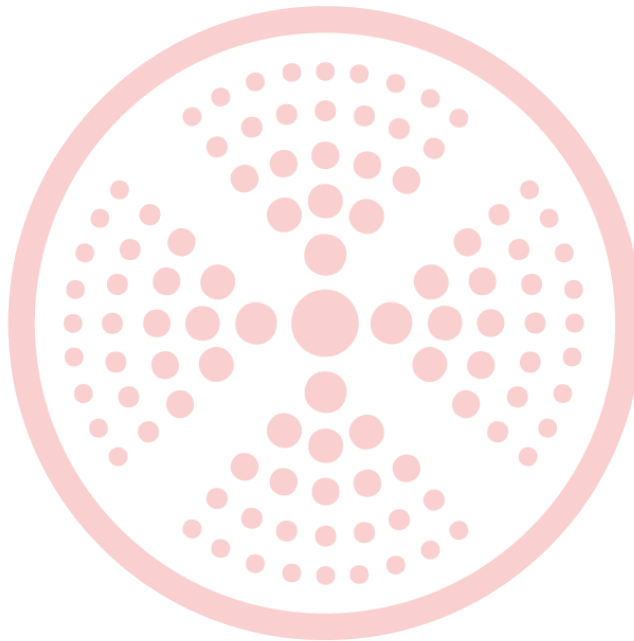
Gateway Status

To use the Omnipoint successfully, verify the Gateway is online.



Do not power on the Gateway until the antenna has been installed.

When you log in, you can see whether the Gateway is online or offline.



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.