



# MultiConnect® Conduit™ IP67 Base Station MTCDTIP Installation Guide



## Warning and Caution

Warning and Caution symbols mean potential danger. You are in a situation that could cause bodily injury. Before working on any equipment, be aware of hazards in the installation area and be knowledgeable about electrical circuitry. Be familiar with standard practices for preventing accidents.

For translations of key cautions and warnings, go to <http://www.multitech.net/developer/basestation>.

**WARNING:** Only trained and qualified personnel should install, replace, or service this equipment. Installation must comply with local and national electrical codes.

- When installing or replacing the unit, the ground connection must always be made first and disconnected last.
- Do not work on the system or connect or disconnect cables during periods of lightning activity.
- This device is not designed or approved to be used in any Hazardous Locations. Do not install or operate device if area is known to be an explosive environment.
- Externally ground this equipment using a customer-supplied ground wire before applying power. Contact an electrician if you are uncertain that suitable grounding is available. Refer to *Installing the Ground Wire* instructions.
- All wall mounting installations are subject to the acceptance of local jurisdiction.
- Do not locate antenna near overhead power lines or other electric light or power circuits, or where it can come into contact with such circuits. When installing the antenna, take extreme care not to come into contact with such circuits, because they may cause serious injury or death. For proper installation and grounding of the antenna, please refer to national and local codes.

## CAUTION:

Power over Ethernet (PoE) Certification does not apply or extend to voltages outside of standard PoE range. Any PoE voltages beyond 0Vdc to 60Vdc have not been evaluated by UL or MULTITECH. Nominal PoE voltage is 48Vdc. The end user supplies the PoE cable. This cable must be suitable for outdoor location. This is an 802.3at Type 2 device. Power input is 25W from standard 802.3at PoE input.

Ethernet port is not designed to be connected to a public Telecommunication (PSTN) or any other connection other than IEEE 802.3-2012 power over Ethernet devices.

Do not remove product labels.

## WARNING!

HOT SURFACE DO NOT TOUCH

Note: This symbol is included on the serial label. UL evaluated this device to a safety and outdoor certification temperature of -30c to +85c.

Operating temperature is -30c to +65c.

## MultiConnect Conduit IP67 Base Station

Use the MultiConnect Conduit IP67 Base Station (MTCDTIP) to deploy Conduit gateways in the field.

**CAUTION:** Read installation instructions and safety information before starting Base Station installation. Do not connect power until directed to do so.

If you do not install the accessory kit when you install the Base Station, cover the LoRa connector to ensure it remains dry.

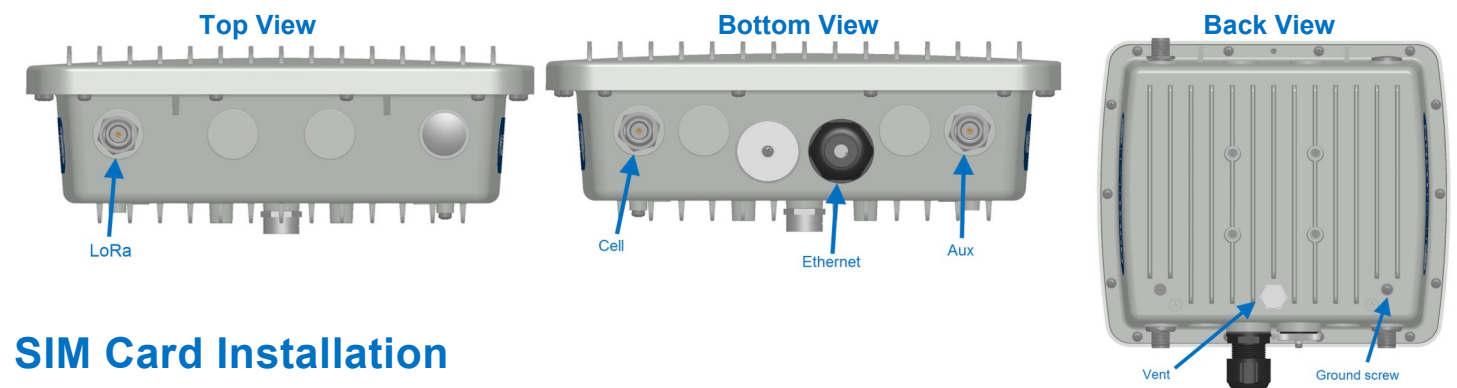
## Package Contents

Item	Description	Quantity
1	MTCDTIP Base Station	1
2	Mounting bracket	1
3	M6 x 15mm screws, washers, and split washers	4 each
4	M5 x 10mm screws, washers, and split washers	4 each

Item	Description	Quantity
5	Hose clamps	2
6	¼ x 1 inch screws and anchors	4 each
7	Installation Guide	1

**Note:** Antennas, cables, and a lightning arrestor are part of a separate accessory kit.

## Connector Locations



## SIM Card Installation

If your SIM card was not pre-installed, follow these steps to install a SIM card in your device:

**WARNING:** If you connected power to the device, disconnect it before continuing.

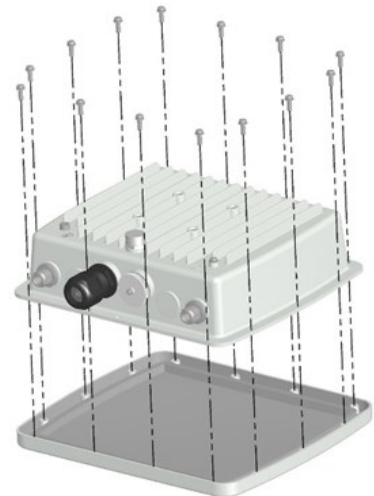
## Requirements

- P2 Philips screwdriver
- Mini SIM Card; MultiTech recommends using an industrial-grade mini SIM card suitable for high temperatures

## Installing SIM Card

1. Remove the cover by removing the 14 screws as shown in Figure 1.
2. Remove the Conduit from the Base Station by removing the 2 screws as shown in Figure 2.
3. At the front of the Conduit housing, remove the screw that secures the nameplate to the Conduit and remove the nameplate as shown in Figure 3.
4. Locate the SIM card holder in the upper right corner of the opening. Gently push the SIM card into holder face up with the cut corner to the right and the SIM contacts facing toward the Conduit's interior as shown in Figure 3.
5. Reattach the MultiTech nameplate to the Conduit using the same screw removed in Step 3.
6. Reattach the Conduit to the Base Station using the 2 screws removed in Step 2.
7. Reattach the cover.
  - a. Finger-tighten the 14 screws removed from the cover in Step 1.
  - b. Tighten all 14 screws in the order shown in Figure 4, starting with number 1. Tighten all screws to a torque specification of 5.20-6.94 lbf-in (6-8 kgf-cm) to ensure the product retains its IP67 rating.

Figure 1



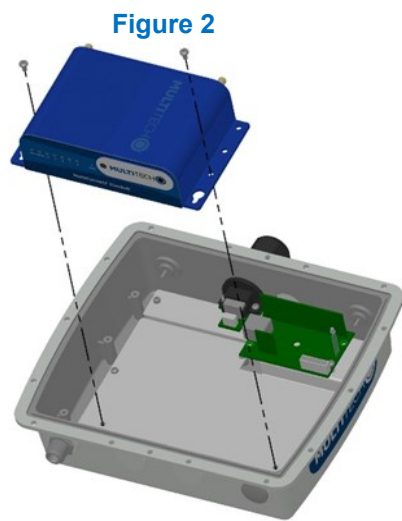


Figure 2

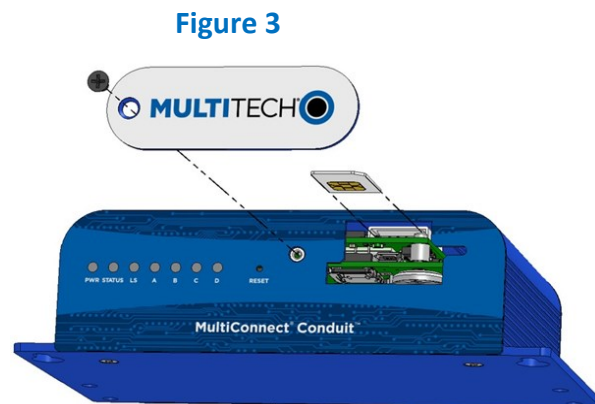


Figure 3

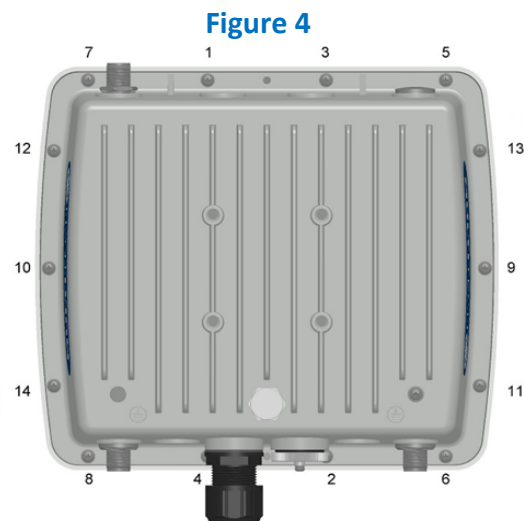


Figure 4

## Attaching the Mounting Bracket

To attach the mounting bracket to the Base Station:

- Attach the bracket to the back of the Base Station using the supplied screws and washers as shown.



## Mounting on a Pole

To attach the Base Station on a pole:

- Attach the Base Station to the pole using the supplied hose clamps.



## Mounting on a Wall

To mount the device on a wall:

- Use the four bracket tabs to attach the Base Station to the wall with the supplied screws and anchors.



## Installing the Ground Wire



Proper grounding of metal enclosure is required to ensure safety. The ground lug is located on the enclosure back as shown in the *Back* image (under *Connector Locations*). Connecting the ground lug to an earth ground is the recommended method. Refer to the National Electric Code or your local codes for additional information or contact a licensed electrician for assistance in grounding an installation.

Ground wire (not provided) must be suitable for outdoor location and meet a minimum wire gauge of 14awg or larger. Use the supplied ground screw to fasten wire.

Ground wire terminal must be closed loop (ring type, see image right) and corrosive free in design. Insert screw through loop terminal and fasten to 15 lbf-in (17.28 kgf-cm).



## Attaching Accessories

If you purchased the accessory kit, attach the lightning arrester to the LoRa connector on the top of the Base Station. Attach antennas and the Ethernet cable to the connectors as labeled.

## Installing the Lightning Arrester

Proper grounding of the lightning arrester is required to ensure proper operation. Connecting the ground lug on the lightning arrester to the earth ground is the recommended method. Please refer to the National Electric Code (or your local codes) for additional information or contact a licensed electrician for assistance.

## Additional Information

For Base Station dimension drawings, MultiConnect Conduit regulatory information and instructions for using the MultiConnect Conduit, go to [www.multitech.net/developer/products/conduit](http://www.multitech.net/developer/products/conduit).

## Regulatory Information

This device complies with Part 15 of the FCC rules and with ICES-003 of Industry Canada for a Class A digital apparatus. Operation of this device is subject to the following conditions: (1) This device may not cause harmful interference and (2) This device must accept any interference that may cause undesired operation.

MultiTech declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. The declaration of conformity may be requested at <https://support.multitech.com>.

## Safety Instructions

For safety and to achieve a good installation, please follow these safety precautions:

- Consider safety and performance when selecting an installation site. Remember electric power lines and phone lines look alike. Assume that any overhead line can kill.
- Call your power company and ask them to look at your proposed installation. This is important if raising a mast or tower.
- When installing the device:
  - Do not use a metal ladder.
  - Do not work on a wet or windy day.
  - Do dress properly—shoes with rubber soles and heels, rubber gloves, long sleeved shirt or jacket.
- If any part of the antenna system comes in contact with a power line, do not touch it or try to remove it yourself. Call your local power company. They will remove it safely. If an accident occurs, call for emergency help immediately.

# MultiConnect<sup>®</sup> Conduit™ IP67 Base Station Accessory Kit

This document illustrates how to connect the lightning arrester, cable, and antennas to the Base Station. Instructions for attaching the mounting bracket and mounting the Base Station are included with the Base Station and are also available at <http://www.multitech.net/developer/basestation>.

**CAUTION:** Read all instructions and safety notices before starting installation. Safety notices are included in the MultiConnect Base Station Installation Guide. Do not connect power to the Base Station until directed to do so.

## Package Contents

Item	Description	Quantity
1	Lightning Arrester	1
2	LoRa Antenna	1
3	4G Antenna	2

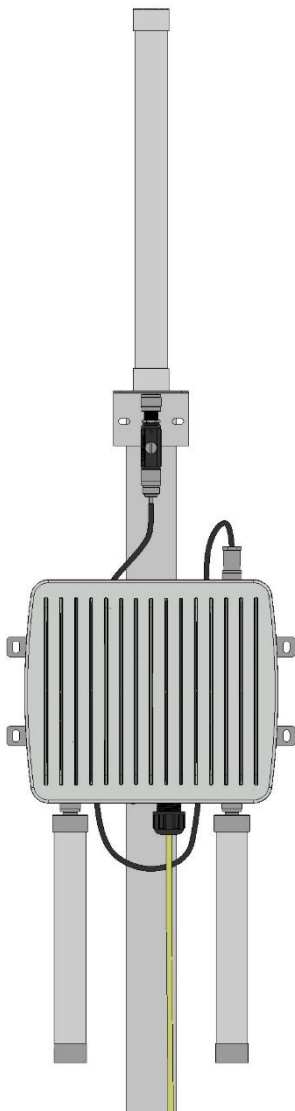
Item	Description	Quantity
4	5 ft Antenna Cable	1
5	Antenna Bracket	1
6	Installation Guide	1

**NOTE:** The lightning arrester comes with a bracket, which is not needed.

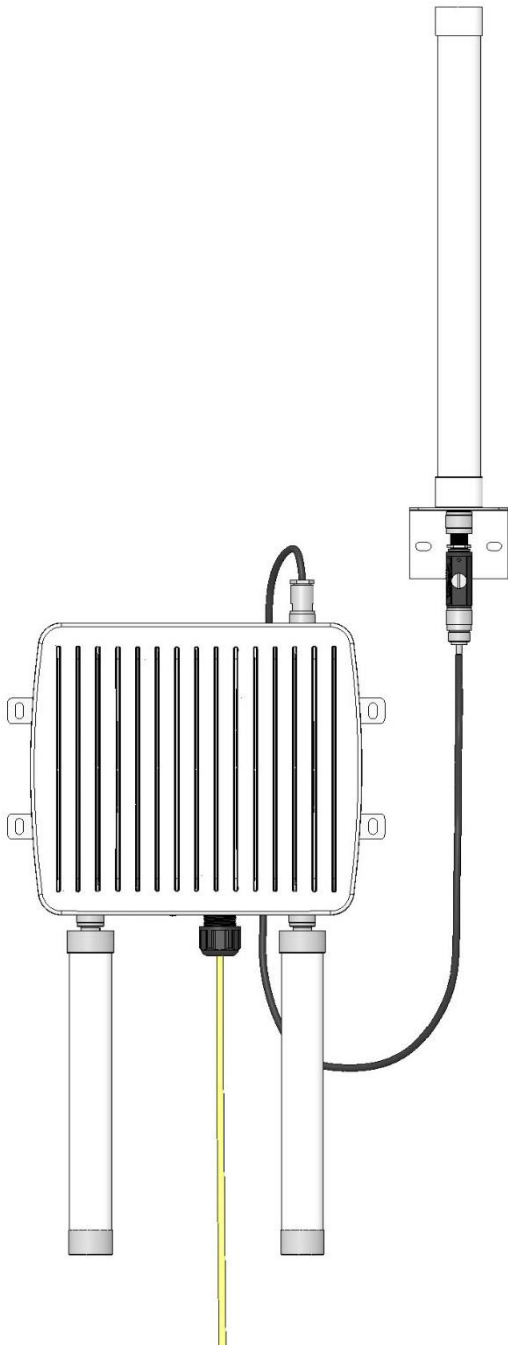
## Attaching Accessories for a Pole Mounted Base Station

After mounting the Base Station on the pole:

1. Attach the antenna mounting bracket to the LoRa antenna.
2. Mount the antenna bracket to the pole so the top of the antenna bracket is at the top of the pole and antenna extends above the pole.
3. Attach the lightning arrester to LoRa antenna.
4. Attach the cable to the lightning arrester.
5. Attach the cable to the LoRa connector at the top of the Base Station.
6. Attach the 4G antennas to the Cell and Aux connectors on the Base Station.
7. Attach the Ethernet cable (not provided) to the device to supply power and Ethernet.



# Attaching Accessories for a Wall Mounted Base Station



After mounting the Base Station on the wall:

1. Attach the antenna mounting bracket to the LoRa antenna.
2. Mount the antenna bracket to the wall.
3. Attach the lightning arrester to LoRa antenna.
4. Attach the antenna cable to the lightning arrester.
5. Attach the cable to the LoRa connector at the top of the Base Station.
6. Attach the 4G antennas to the Cell and Aux connectors on the Base Station.
7. Attach the Ethernet cable (not provided) to the device to supply power and Ethernet.