



## Package content



LTU-Rocket



GPS antenna support



External GPS antenna



metal strip



Flanges (qty: 2)



Universal support

IP67 upgrade kit  
(vent and gasket)Gigabit PoE (24V, 1A) with  
Mounting bracket

Power cord

## Antenna compatibility

The LTU-Rocket is designed for use with the following Ubiquiti® airMAX® Sector antenna models\* for Point-to-Multipoint (PtMP) mode:

- AM-5AC21-60
  - AM-5AC22-45
-



- AM-5G16-120
- AM-5G17-90
- AM-5G19-120
- AM-5G20-90
- AP-5AC-90-HD

*\* Requires the universal mount (included).*

### installation requirements

- Clear line of sight between LTU™ AP and stations
- It must be installed without obstacles in the upper part, for the correct operation of the GPS
- Vertical Mounting Orientation
- mounting point:
  - At least 1 m below the highest point of the structure
  - For installation on towers, at least 3 meters below the top of the tower
- Ground wire: minimum 10 AWG (5 mm<sup>2</sup>) and maximum length of: 1 m. As a precaution, connect the LTU radio to an earth ground, pole, tower or ground bar.

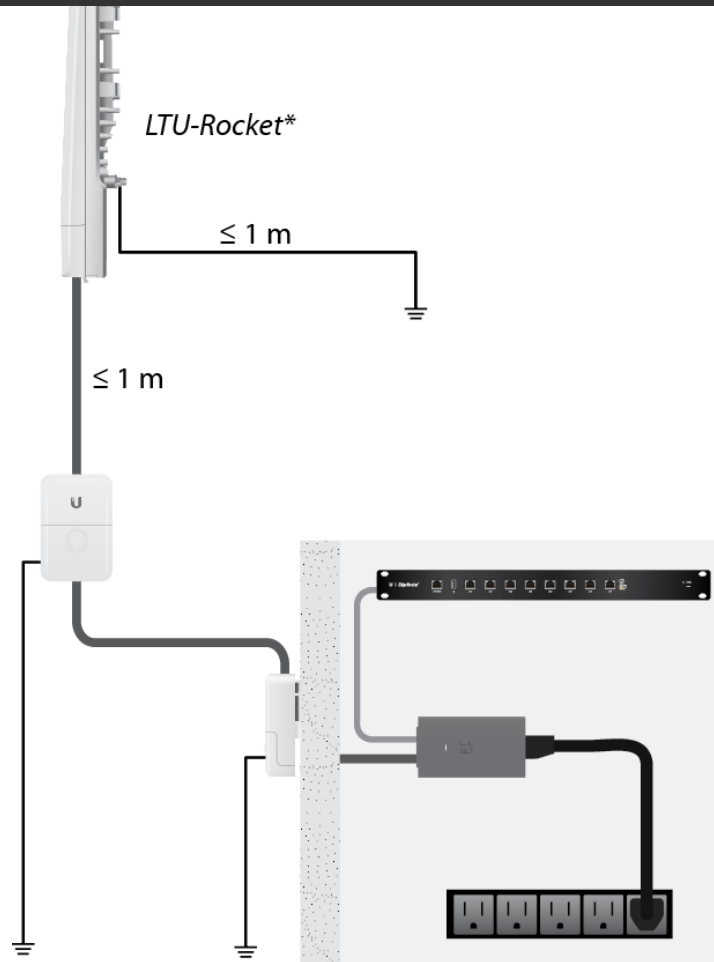


**WARNING:** Improper connection will void your warranty.

- Category 6 (or higher) shielded cabling and RJ45 shielded connectors are required for all Ethernet cable connections.
- Surge protection must be used on all outdoor installations. We recommend that you use two Ethernet surge protectors (model ETH-SP-G2), one near the device and the other at the building entry point. The ETH-SP-G2 will absorb surge voltages and safely discharge them to the ground.



**Note:** For guidelines on grounding and lightning protection, follow local electrical regulation codes.

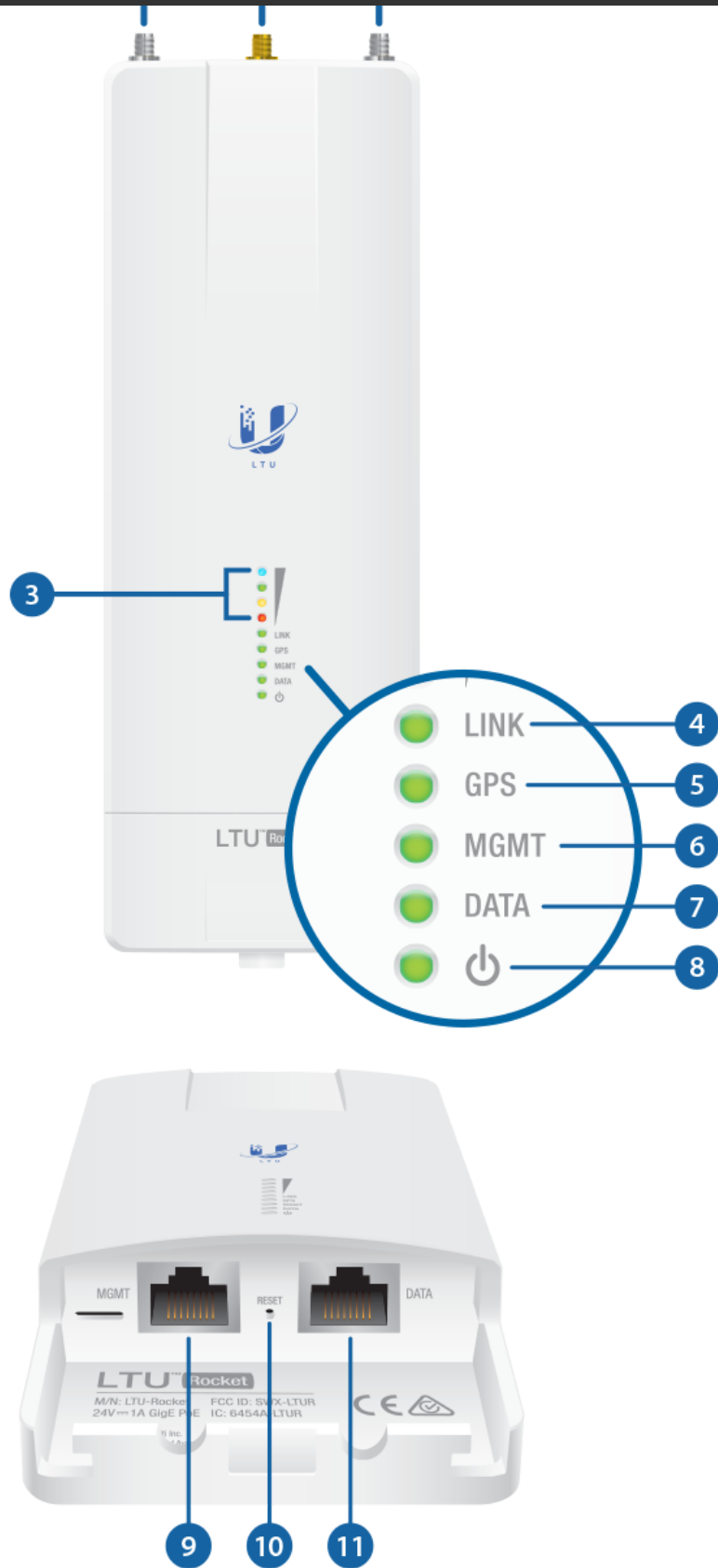


*\* Shown without antenna.*

## Device Overview



# LTU-Rocket Quick Start Guide



## 1 LTU antenna connectors





Used to connect RF antenna cables (not included).




Used to connect the GPS antenna.




### 3 LED signal indicators

Each LED will light when the wireless signal strength is equal to or greater than the threshold value set for the LED corresponding to the current channel width setting. The default threshold values for each channel width are listed below:


10 MHz	20 MHz	30 MHz	40 MHz	50 MHz	
-62 dBm	-59 dBm	-57 dBm	-55 dBm	-51 dBm	
-69 dBm	-66 dBm	-64 dBm	-61 dBm	-56 dBm	
-73 dBm	-70 dBm	-68 dBm	-68 dBm	-65 dBm	
-80 dBm	-78 dBm	-76 dBm	-73 dBm	-72 dBm	



### 4 Link LEDs

disabled	RF off
	Synchronization
	Signaling
	Record
Switched on	operational

### 5 GPS LEDs

disabled	No GPS sync
	Not operational (weak signal)
Switched on	Operational (strong signal)

### 6 MGMT LEDs



<b>7</b> data LEDs	
disabled	no ethernet link
Switched on	Ethernet link established
random blinking	ethernet activity
<b>8</b> Power LEDs	
disabled	no power
Switched on	Switched on
<b>9</b> management port	
Unused port.	
<b>10</b> Reset button	
To restore factory defaults, press and hold the Reset button for more than 10 seconds while the device is powered on.	
<b>11</b> data port	
Gigabit PoE port to manage user traffic and power the device. Default IP address: 192.168.1.20	

## Installation Overview

We recommend configuring the LTU-Rocket radio prior to installation. The following sections provide detailed installation instructions. Follow these instructions in the order listed.

### Power over Ethernet connection

- 1.



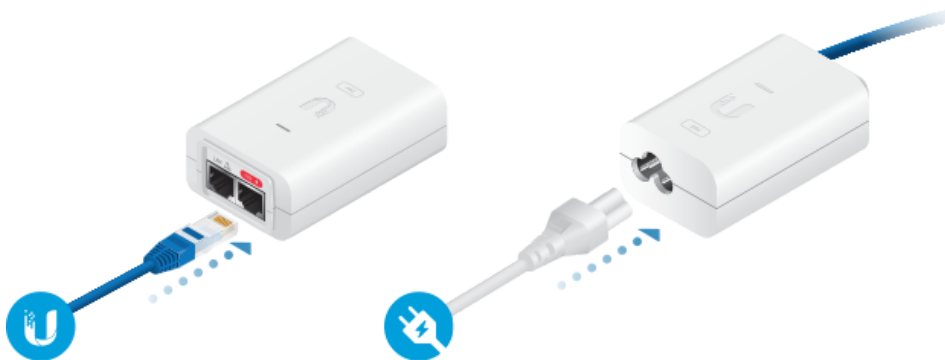
# LTU-Rocket Quick Start Guide



2.



3.



**WARNING:** Use only the included adapter, model POE-24V-5X-HD. Failure to do so may damage the unit and void the product warranty.



## LTU setting

Enter the LTU configuration interface to configure. By default, Access Point mode is already enabled for the LTU-Rocket. You can choose to configure settings such as Link Name, Duty Cycle, Channel Bandwidth, and Frequency.

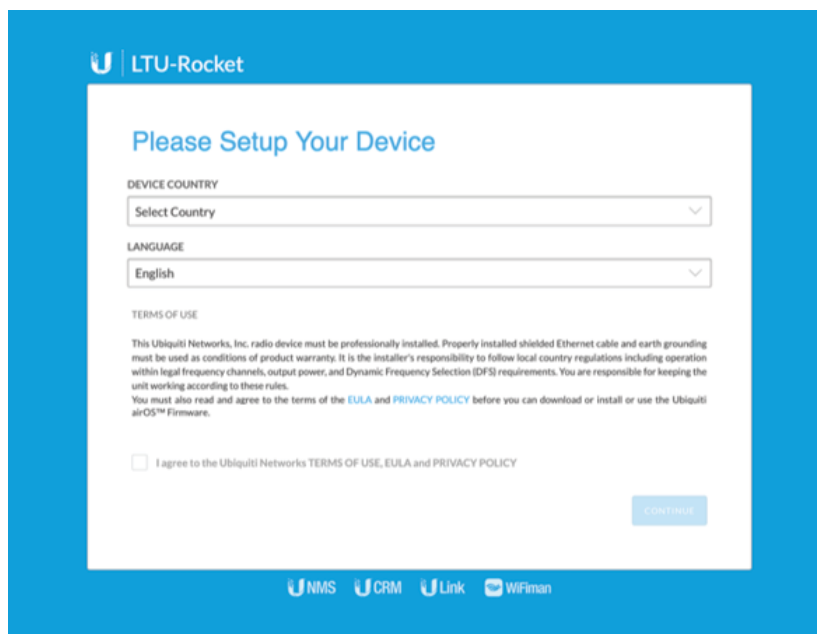
PTMP stations will scan and find the LTU-Rocket without having to set any kind of frequency as long as the same channel bandwidth and link name have been set.


## Configuration via browser-based interface

1. Configure the Ethernet adapter on your host system with a static IP address on the 192.168.1.x subnet.
2. Launch the web browser. In the address field, type: `http://192.168.1.20` Press Enter (PC) or Return (Mac).



3. Select your language and country. You must agree to the Terms of Use, EULA and Privacy Policy to use the product. Click Continue.



4. Click on the icon. 
5. Set the following options:





## LTU-Rocket Quick Start Guide

Antenna Gain, and Max TX Modulation. The channel bandwidth must be the same for all devices on the PtMP link.

- b. In the Security Key field, enter a combination of alphanumeric characters (0-9, AZ, or az).



**Note:**The key is an alphanumeric password between 8 and 63 characters.



6. Click Save Changes.

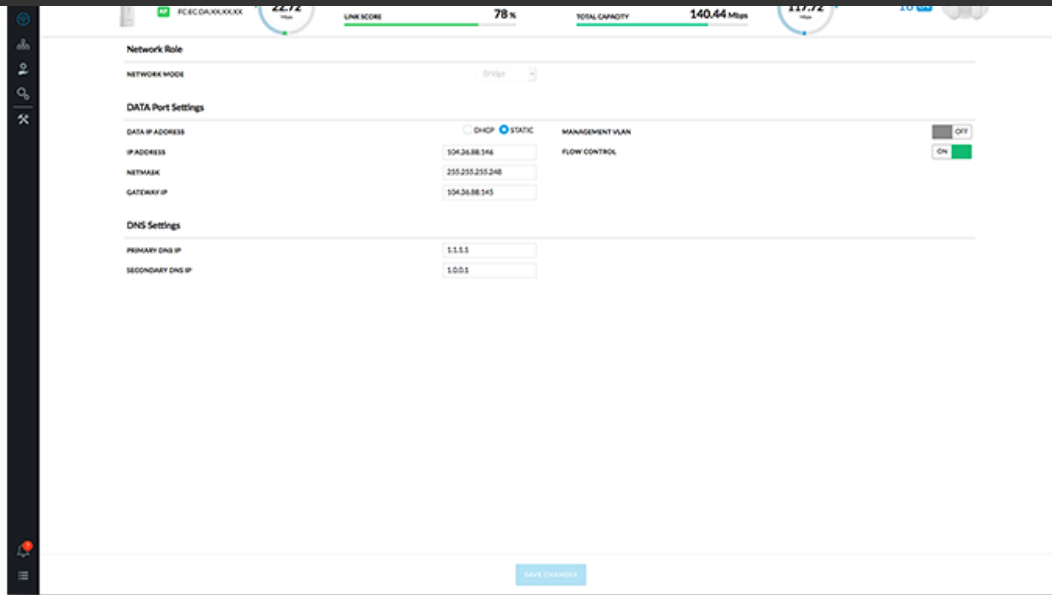
7. Configure a unique IP address for the Data port:

to. Click on the icon . 

b. For the Data IP Address option:

- **DHCP** Have your router use a DHCP reservation to assign a unique IP address.
- **static** (Static) Change the IP Address, Netmask, and other options to make them compatible with your network.

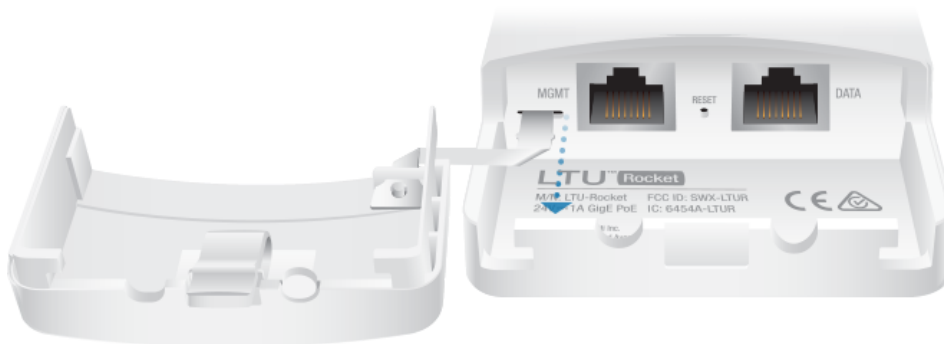
c. Click Save Changes.



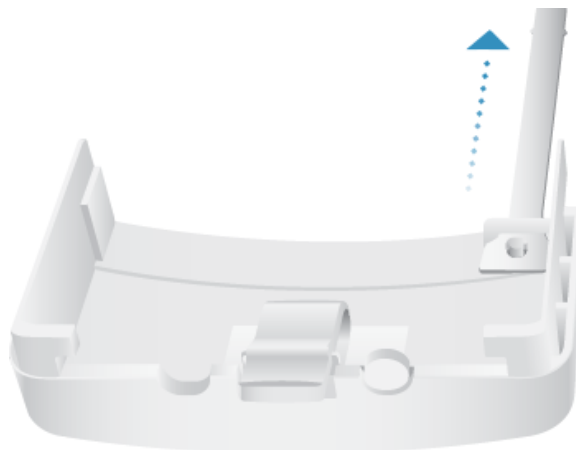
## Update for IP67 compatibility

To protect the LTU-Rocket and prevent water, dust or insects from entering, we recommend installing the IP67 upgrade kit (included):

1.



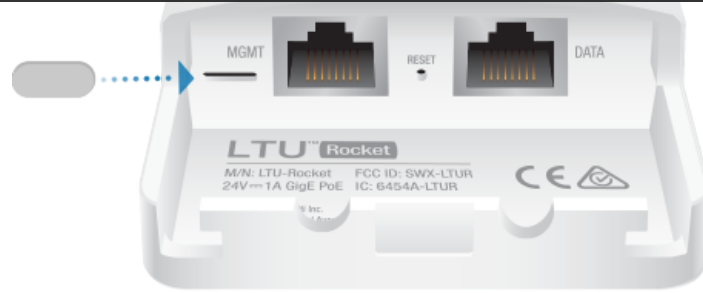
2.



**Note:** Do not damage or remove the port cover post.



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4.



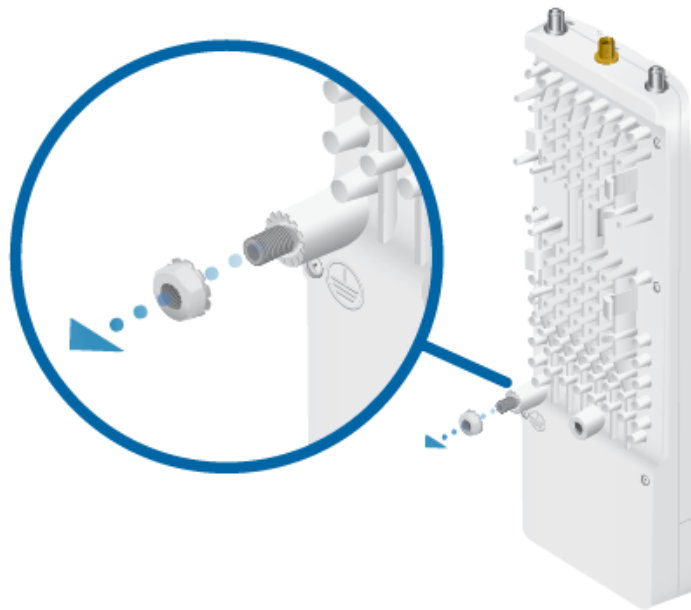
5.



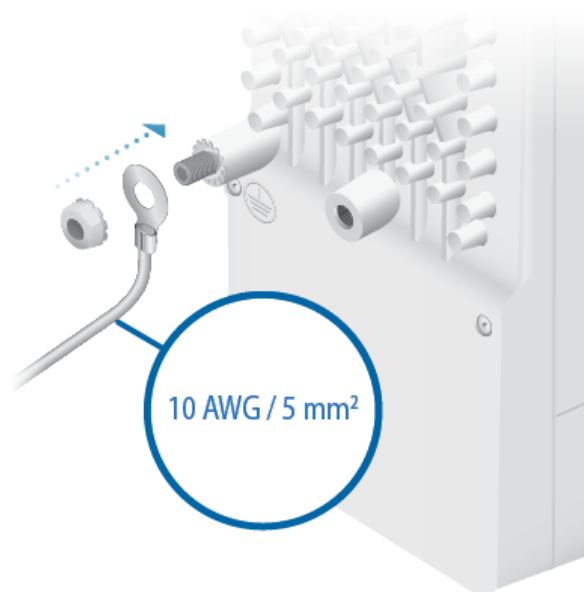


## Installation of a ground wire

1.



2.



3. At the installation site, secure the other end of the ground wire to an earth ground, pole, or ground bar.



**WARNING:** Improper connection will void your warranty.

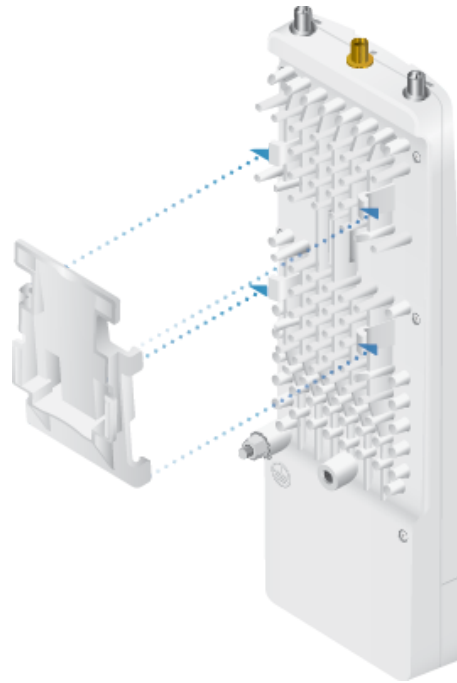


**Note:** The ground wire should be as short as possible and no longer than one meter.



The LTU-Rocket is designed to mount directly to the Ubiquiti antennas listed in the section [Antenna Compatibility](#) . The airMAX Sector AM-5AC21-60 antenna is shown in this section:

1.



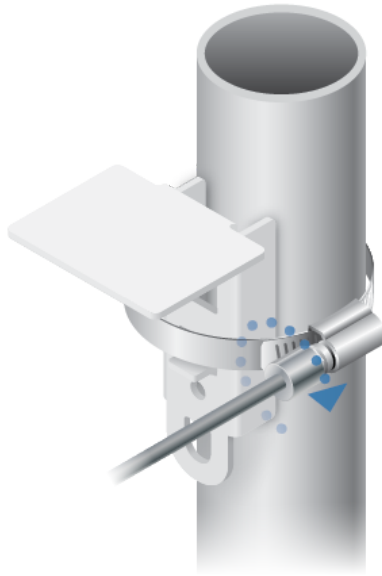
2.



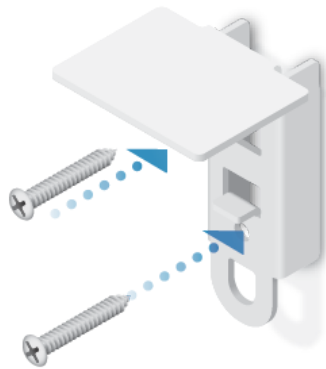
Mounting to an external GPS antenna



1.



EITHER



2.



3.



## Power over Ethernet connection

1.



2.





**Note:** If the IP67 upgrade kit is installed, first apply dielectric grease to the cable connector and port.

3.



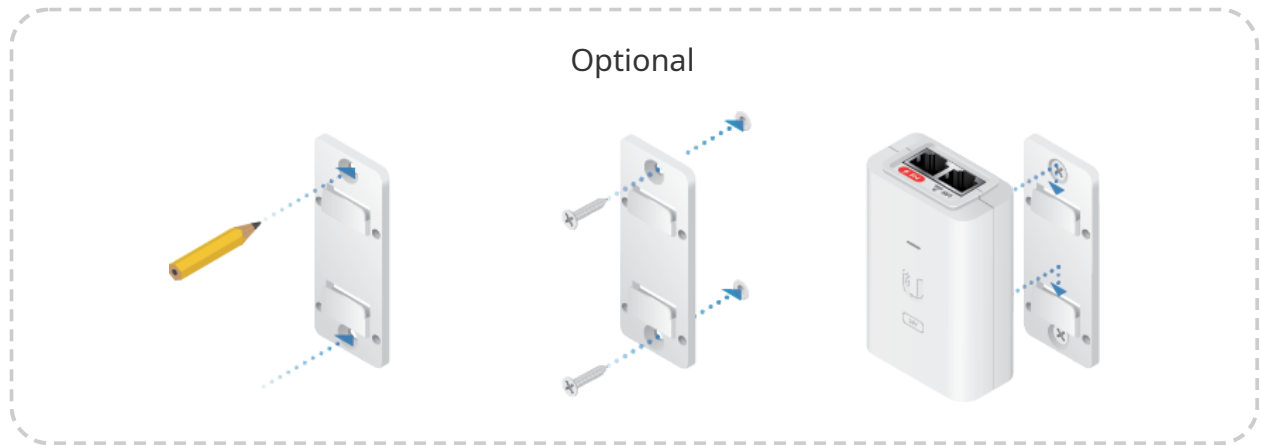
**WARNING:** The LTU-Rocket must receive 15 W minimum. Make sure the voltage range of the PoE source is within these limits:

- 4-pair operation: 18-54 V 2-pair
- operation: 30-54 V





**WARNING:** Use only the included adapter, model POE-24V-5X-HD. Failure to do so may damage the unit and void the product warranty.



## Installer Compliance Responsibility

Devices must be professionally installed and it is the responsibility of the professional installer to ensure that the device is operational in accordance with country specific regulatory requirements.



## Antenna

Select your antenna from the list. If the option to calculate EIRP is enabled, the transmission output power is automatically adjusted to comply with the applicable country regulations. In a custom antenna setup, the antenna gain is entered manually. Please note the antenna types and requirements listed below.

## Cable loss (if applicable)

Enter the cable loss in dB. The output power is adjusted to compensate for the losses between the radio and the antenna.

## Certified types of antenna

This radio transmitter FCC ID: SWX-LTUR/IC: 6545A-LTUR is approved by the FCC and ISED Canada to operate with the antenna types listed below with the maximum allowable gain indicated for each antenna type. Antenna types not included in this list or having a gain greater than the maximum gain indicated for that type are strictly prohibited for use with this device.

Antenna	Frequency	Revenue
Sector	5GHz	22 dBi

## Specifications



Dimensions	244 x 82 x 48mm (9.61 x 3.23 x 1.89")
Weight	0.468kg (1.03lb)
Radio frequency connectors	(2) RP-SMA Waterproof (CH0, CH1) (1) SMA Waterproof (GPS)
gps antenna	magnetic external base
Power supply	24 VDC, 1A Gigabit, 4-pair Passive PoE (included)
feeding method	Own passive power supply via Ethernet Pins 1, 2; 4, 5+ and pins 7, 8; 3, 6-
Supported voltage range	Between +18 and +54 VDC <sub>1</sub> (either or both RJ45 ports for redundancy)
maximum power consumption	15W
network interface	
data port	(1) 10/100/1000 Ethernet port Bluetooth v4.0
management port	(1) 10/100/1000 Ethernet port (Reserved for future use)
Mounting	Integrated pole mount (included) Rocket mount compatible GPS pole mount (included)
Operating temperature	-40 to 55°C (-40 to 131°F)
waterproofing	IP67 <sub>2</sub>
Certifications	FCC Part 15.407 CE EN 302502 v1.2.1, EN 301 893 v1.7.1

*<sup>1</sup>The full range depends on the length of the Ethernet cable.*

*<sup>2</sup>After installation of the IP67 upgrade kit (included).*

System	
peak performance 50MHz capability	675.84Mbps <sub>1</sub>
maximum range	more than 100km
packets per second	2,000,000
encryption	WPA2-PSK (AES)
Forwarding bug fix	LDPC
link relationship ascending/descending	25/75, 33/67, 50/50
YOU	airOS LTU



wireless modes	Access point	
Radio		
Maximum transmit power	23dBm <sub>2</sub>	
frequency accuracy	<2ppm	
Channel Bandwidth	10/20/30/40/50 MHz selectable Duty Cycles with uplinks and programmable descenders	
Operating frequency (MHz)		
All over the world	4800 - 6200 <sub>2</sub>	
USA/CA	U-NII-1	5150 - 5250
	U-NII-2A	5250 - 5350
	U-NII-2C	5470 - 5725
	U-NII-3	5725 - 5850

*1It may vary depending on the surrounding conditions.*

*2It depends on the regulations of the region.*

Radio Management (MHz)	
All over the world	2400 - 2483.5

## safety instructions

1. Read, follow and save these instructions.
2. Pay attention to all warnings.
3. Only use the devices or accessories indicated by the manufacturer.



**WARNING:** Do not use this product in a place where it may be submerged in water.



**WARNING:** Avoid using this product during a lightning storm. There is a remote possibility of an electrical discharge caused by lightning.

## electrical safety information

1. It is mandatory to comply with the current, frequency and voltage requirements indicated on the manufacturer's label. Connection to a power source other than those specified may result in malfunction, equipment damage, or fire hazard if limitations are not followed.



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3. This equipment is supplied with a detachable power cord that has an integral safety ground wire designed to be connected to a safety ground.
  - to. Do not substitute the power cord with one other than the approved type provided. Never use an adapter plug to connect to a two-wire outlet, as it will break the continuity of the ground wire.
  - b. The equipment requires the use of the ground wire as part of the safety certification. Modification or misuse can create a shock hazard, which could cause serious injury or death.
  - c. If you have any questions about the installation, contact a qualified electrician or the manufacturer before connecting the equipment.
  - d. The indicated AC adapter provides a safety ground. For installation in a building, adequate short-circuit back-up protection must be provided.
  
- and. A protective connection must be installed in accordance with national wiring rules and regulations.

## limited warranty

[ui.com/support/warranty](http://ui.com/support/warranty)

The limited warranty requires arbitration to resolve disputes on a case-by-case basis and, where appropriate, specifying arbitration instead of jury trials or class actions.

## Compliance

### FCC / CAN ICES-3(A)/NMB-3(A)

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules and ISED Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions.

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device. These limits are designed to provide acceptable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

## IMPORTANT NOTE

### Radiation Exposure Statement:

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- This equipment should be installed and used with a minimum distance of 130 cm between the radiator and your body.
- This transmitter must not be co-located or used in conjunction with any other antenna or transmitter.

## Australia and New Zealand



Warning: This equipment is compliant with Class A of CISPR 32. In a residential environment, this equipment may cause radio interference.

## Brazil



Note: This equipment is not intended for protection against harmful interference and may not cause interference in duly authorized systems.

## CE marking

The CE marking of this product indicates that the product complies with all applicable directives.



country list



AT	BE	B.G.	CY	C.Z.	OF	DK	EE	HE	IS	IF	FR	HR	HU	
IE	IT	EM	FV	LT	MO	MT	NL	PL	PT	RO	HE	YEA	HSK	UK

Members with broadband fixed wireless access are highlighted in blue



Note: This device complies with the maximum transmit power limit per ETSI regulations.

The following shall apply to products operating in the 5 GHz frequency range:



Note: This device is only suitable for indoor use when operating in the frequency range of 5150 - 5350 MHz in all member states.



Note: All countries indicated can operate at 30 dBm. Member states with broadband fixed wireless access can operate at 36 dBm.



Note: Operation in the 5.8 GHz frequency band is prohibited in member states with fixed broadband wireless access. The rest of the listed countries can use the 5.8 GHz frequency band.



## Declaration of conformity

### online resources

