

Indoor Hotspot User' s Manual

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Box Contents

Your Indoor Hotspot comes with the following items:



Figure 1: TL201 Indoor Hotspot Included

Parts List:

- The TL201 Indoor Hotspot
- RP-SMA LoRa Antenna
- RP-SMA GPS Active Antenna
- Worldwide 12V 2A Power Adapter (With UK, US, EU and Aus plug heads)

Please note the above image is for illustrative purposes only, colours of some parts may change.

Warnings

Please remember to follow these important warnings when using your Indoor Hotspot:

- Never power on the Indoor hotspot without it's antenna connected as this may damage the unit.
- Do not place in direct sunlight or on hot surfaces(e.g a heater).
- The Indoor unit's case is designed to be used indoors, and is not suitable for use outdoor usage.
- Do not block the heat dissipation hole, so as not to affect

the heat dissipation.

Note: If you want place your miner outside, please consider our IP67 rated weatherproof outdoor hotspot miner.

Preparing Indoor Hotspot

Please perform the following steps Before you use this hotspot:

- Step 1: First screw in the included antenna into the connector on the back of the hotspot.



Figure 2: Install LoRa and GPS Antennas

- Step 2: Next find a suitable location for your Hotspot to be positioned, to provide the best coverage we recommend placing it near a window just out of direct sunlight. You'll need to be near a mains power source too.
- Step 3: Connect the LAN interface of the hotspot to the Ethernet router or switch through a network cable.



Figure 3: Install the net cable

- Step 4: Select an appropriate connector according to the power

plug standard you are using, install the connector on the power adapter, and plug into a power socket to switch on the power.



Figure 4: Select an appropriate adapter

- Step 5: Finally, connect the DC plug of the power adapter to the DC socket of the Hotspot.



Figure 5: Connect the DC plug

- Step 6: You should see the RUN indicator light up on the front of the hotspot, which will now take about 6 minutes to configure for its first startup.



Figure 6: Observe the RUN Indicator

Configuring Indoor Hotspot

To configure your Hotspot, you will require the Helium Network application installed on a Mobile Phone, and for you to have gone through the account setup process to continue.

Prerequisites:

- Ready to connect the hotspot
- Helium application with account

Operating Steps:

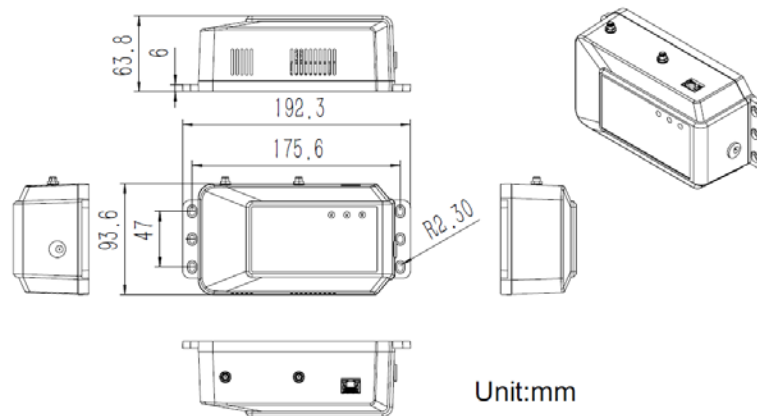
- Step 1: Open the Helium application and login, then press + Add a Hotspot.
- Step 2: Next click Set up Hotspot, from here you will want to select Indoor Hotspot.
- Step 3: Place your hotspot in appropriate location, please refer Ideal Hotspot Placement.
- Step 4: Accept diagnostics permission , This will allow HangZhou ShuLian Ltd to identify issues with your Hotspot in a secure way.
- Step 5: Power Up the hotspot, and please note that never power on the Indoor hotspot without it's antenna connected as this may damage the unit. .
- Step 6: Turn on your phone's Bluetooth and pair the hotspot.
- Step 7: Select your hotspot in the app, you can check it is the correct one by matching the last 6 characters shown in the application with the last 6 characters of the mac address printed on the sticker on the bottom of the hotspot.
- Step 8: Next you need to submit antenna height and power details.
- Step 9: Provide location permission: The helium application use phone location to assert location to the device.
- Step 10: Finally, you can confirm the location of your hotspot. Click continue and you should be presented with a map to then place where your hotspot is on the app. This requires \$10 and it's already paid by ShuLian LTD.
- Step 11: The setup should now be complete, it'll submit the details of the Hotspot to the Helium network and then in approximately 15 minutes confirm it's added to the network.

Attention: You can move device to another location, However every time you move your hotspot to a new location you will need to pay the \$10 location assert fee again.

Parameter Specification

Parameter	Symbol	Conditions	Min	Typical	Max	Units
AC power adapter						
Input Voltage	ACin		100		240	VAC
Input Frequency	F _{in}		47		63	Hz
Output Voltage	VDCout			12		VDC
Rated Output Load	IDCout				2	ADC
BLE						
Frequency	F _{ble}		2402		2480	MHz
Output Power	P _{ble}				-5.44	dBm
LoRa						
Frequency1	F _{lora1}	Lora-FHSS, 125KHz	902.3		914.9	MHz
Output Power1	P _{lora1}				23.19	dBm
Frequency2	F _{lora2}	Lora-DTS, 500KHz	923.3		927.5	MHz
Output Power1	P _{lora2}				27.33	dBm

Dimension Figure



FCC Statement

Any 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. 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.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Note : This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.