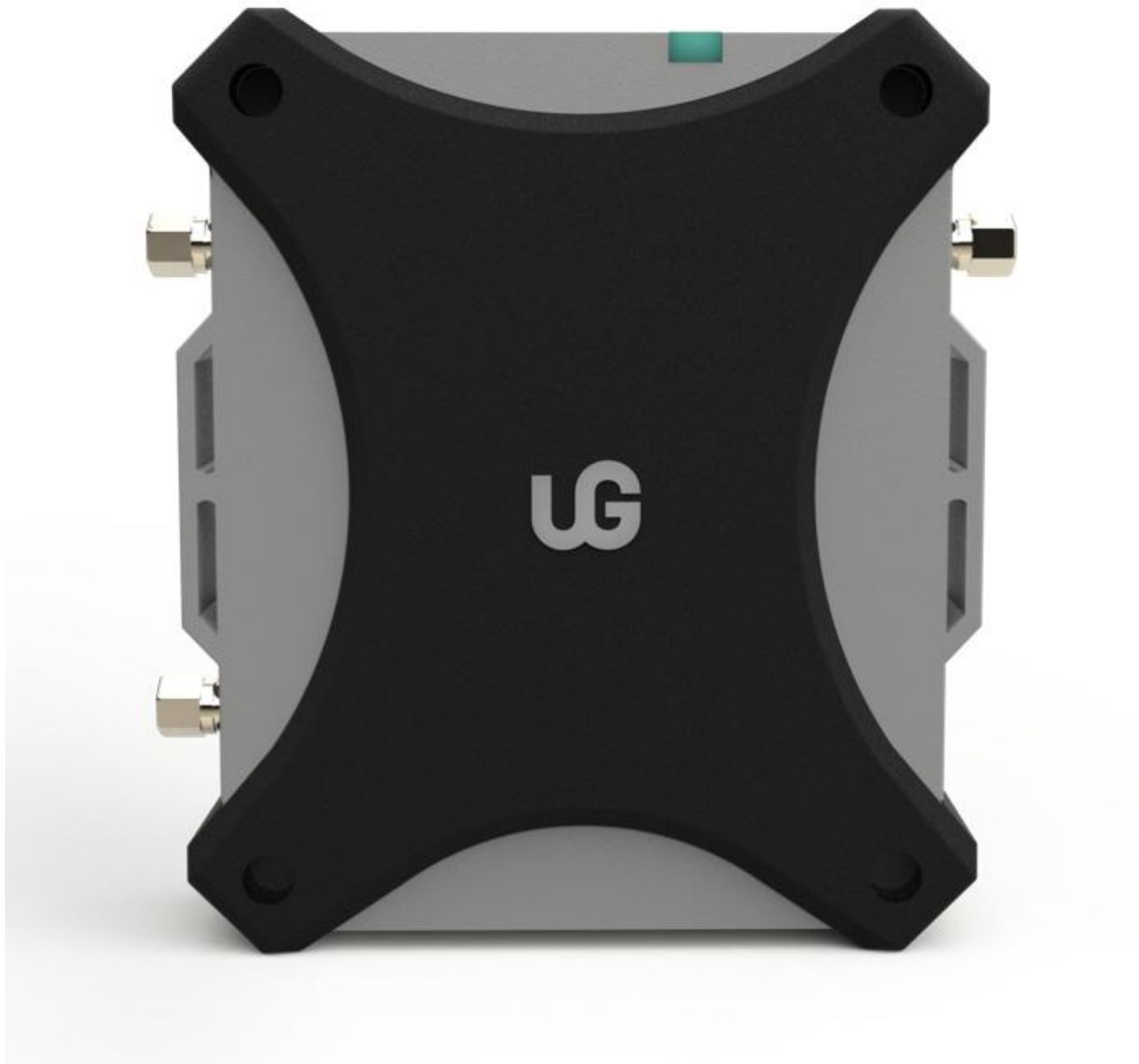


uGW800 USER MANUAL



1. Introduction

uGW800 is an IoT hotspot, designed by Amber-Link, supporting LoRaWAN, LongFi and Helium block-chain protocol, compatible with all standard LoRaWAN devices. Its runtime power consumption $< 5W$, but the signal coverage is more than 10 miles. One hotspot can connect with thousands IoT devices and support real-time data transactions.

2. Network

uGW800 integrates the Helium Miner firmware and LoRaWAN packet forward module.

The hotspot sends the received packet to cloud or block-chain by either Ethernet or Wi-Fi network.

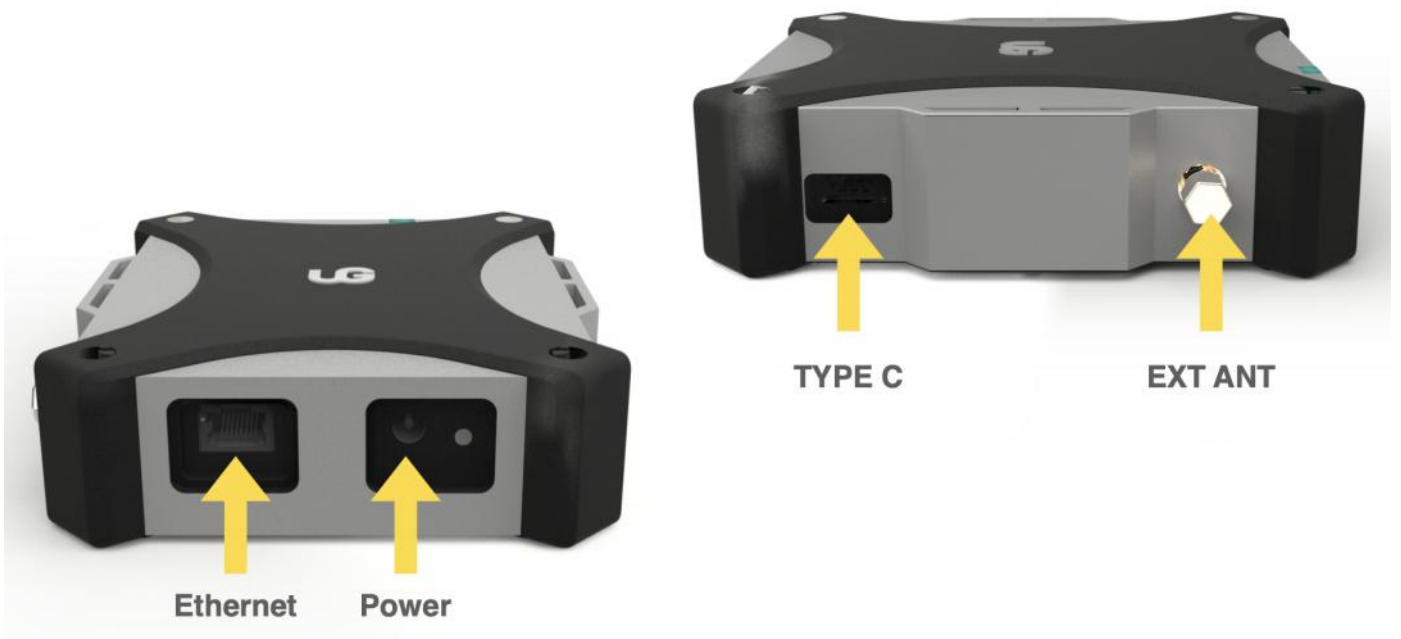
3. Specifications

Item	Description
CPU	Quad core Cortex-A35 64-bits CPU@1.5GHz
RAM	2GB DDR3
FLASH	64GB eMMC
Wi-Fi	IEEE 802.11b/g/n 2.4G
Ethernet	10/100M
Security	ATECC608
LoRa Baseband	SX1303 + SX1250x2 (8+1 channels)
LoRa Bands	US915, 923
GNSS	GPS/Beidou
Antenna Port	RP-SMA x3 (SubGHz LoRa, GNSS, Ext.)
Power Supply	Type-C, DC-12V
LED	Colorful LED x1 for system status (power on, configure, network, etc.)
Casing	nylon & fiberglass, IP65
Size (mm)	146 * 123 * 40
Enclosure(Optional)	FRP antenna (700mm), wall installation kit

4. Structure size



5. Interface



6. LED Indicator

Color	Indicator status
Red	Hotspot power-on and doing initialization
Yellow	Hotspot is running at data synchronizing
Green	Hotspot is ready for radio receive and uplink
Blue	Hotspot is in configurate mode
---	Turned off

7. Package Content



8. User guide

- Download the mobile App
 - iPhone users search "uGWAN Hotspot" APP in Apple store and follow the guide for APP installation.
 - Android users download and install the APPs by either uGWAN.io website or from Google Play store.
- Hotspot assembly
 - Open the package, take out the device, power adapter and antenna

- Insert the RP-SMA connector of the antenna feeder
 - Connect ethernet cable if needed
 - Connect to 12V-DC power adapter (in packet) or power the device by USB Type-C adapter (not in the packet).
- Configure network and connect App with hotspot
 - Open the uGWAN Hotspot App in your phone, register to enter, and select "Add Hotspot".
 - Select uGW800-serier hotspot, you can read the network configuration instructions first, or select "Skip" to operate step by step according to the prompts on the page.
 - Power on hotspot and insert a pin into the configuration hole (at the bottom of the device), press and hold the button for 5 seconds, the hotspot's LED turn to blue (may flickering).



- If you use Wi-Fi connection, select the Wi-Fi network in APP and enter password, then APP will send the configuration to the device.
- If you use Ethernet connection, select "Use Ethernet", make sure the network cable has connected with the device. Please note that the Ethernet connection currently only supports automatic IP acquisition.
- Enable 'remote control' feature if user wants to check hotspot's status and control it remotely.
- At this step, the network configuration is completed, LED changes from blue to either yellow or green.

9. Installation guide

uGW800 hotspot support both indoor and outdoor installation:

- Indoor:
 - Place the hotspot on desk
 - Connect antenna or antenna extension cable to the hotspot, place the antenna close to window as near as possible.
 - Ethernet cable is needed.
 - Connect 12V-DC power supply or USB Type-C cable
- Wall-mounted (outdoor):
 - Check with uGWAN sales to get the wall-mount kit (not in the packet)
 - Follow the guide to fix both hotspot and FRP antenna solidly.
 - Power the hotspot by either 12V-DC or Ethernet PoE (with PoE converter)

Caution:

- Hotspot designed as IP65, DO NOT drop the device in water.
- The product installation MUST be safety and carefully, the wall should be solid enough to avoid collisions and drops.
- Place it close to the window or balcony as near as possible, outdoor is better, the hotspot can receive GPS signals, and the Sub-GHz antenna has a wide coverage.

10. FCC Caution

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.

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

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.

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.

-- Amber-Link Network Technology Co., Ltd. --