

RAK Hotspot v2

Thank you for choosing **RAK Hotspot v2** in your awesome IoT Project! 🎉 To help you get started, we have provided you with all the necessary documentation for your product.

- [Quick Start Guide](#)
- [Troubleshooting](#)
- [Datasheet](#)
- [ErP Test Report](#) 
- [RAK Hotspot Outdoor Case Assembly Guide](#)

Helium Network Reference Sites

- [Helium Status](#) 
- [Helium Engineering](#) 
- [Helium Discord](#) 

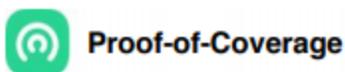
Product Background

Hotspot Details

- Efficient for a new cryptocurrency, **Helium (HNT)**
- Complete set-up in minutes using a smartphone
- **LongFi technology** maximizes range and battery life without Wi-Fi, cellular or Bluetooth
- Low Power – only uses about the same amount as an LED light bulb (5W)
- Easily manage Hotspots and tokens from the mobile app
- LongFi™ Technology



Helium LongFi is a technology architecture that combines leading wireless technology, LoRaWAN, and the Helium Blockchain. LongFi is optimized for miles of range, and long battery life for IoT devices.



RAK Hotspot earns Helium when devices connect, and for validating wireless coverage delivered by peers. Using a system called Proof-of-Coverage, RAK Hotspot earns more Helium when they are in range of other RAK Hotspot, but need to be at least 300 meters apart.

Range depends on the environment. For rural areas, **up to 10 miles or more**, but for more dense areas, **up to a mile**. Single RAK Hotspot earns less as they can only issue Challenges over the internet and cannot participate in Proof-of-Coverage.



- Deliver many square miles of coverage from a single RAK Hotspot
- Based on initial testing, only about 50 to 100 RAK Hotspots are needed to provide complete coverage for an entire city.

 **Connect Anything**

- Create a new global network for billions of devices
- Any IoT device can become Helium-enabled using readily available off-the-shelf hardware components, software, and a reference design that is open source for anyone to improve upon.

Product Features

- Uses the Raspberry Pi 4 computer board
- 2, 4 or 8 GB on-board RAM
- 32 GB SD card
- Based on the LoRa Concentrator Engine: Semtech® SX1302
- Built-in Heat Sink for thermal heat dissipation management
- Supports 5 V / 2.4 A power supply
- IP30 housing
- TX power up to 27 dBm, RX sensitivity down to -139 dBm @SF12, BW 125 KHz
- LoRa Frequency band support: RU864, IN865, EU868, US915, AU915, KR920, AS923.
- 2.4 GHz and 5.0 GHz IEEE 802.11b/g/n/ac wireless LAN, Bluetooth 5.0, BLE

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