## **Nebra HNT Indoor Hotspot Miner (ROCK Pi Version)**



**SKU** NBR-0063

Please Note: This miner is a replacement for the <u>Nebra HNT Hotspot Miner</u> <u>Raspberry Pi</u>.

Estimated shipping: new orders for ROCK Pi miners will ship 12 to 16 weeks after order is placed.

# Introducing the Nebra HNT Indoor Hotspot Miner (ROCK Pi Version)

Earn HNT cryptocurrency by mining Helium and building coverage for The People's Network using the Nebra HNT Indoor Hotspot Miner (ROCK Pi Version). Anyone can join The People's Network and provide hundreds of square miles of wireless network coverage while mining HNT on the Helium Blockchain just as hotspot miners do.

- Efficient miner for a new cryptocurrency, Helium (HNT)
- Complete set-up in minutes using a smartphone
- Low Power uses as much power as a broadband router (15W)
- Easily manage Hotspots and tokens from the mobile app

#### Benefits of the ROCK Pi miner



## **Frequency Selection**

The Nebra HNT Indoor Hotspot Miner (ROCK Pi Version) comes in three different frequency variants:

- 470 MHz (CN470) this is suitable for China.
- **868 MHz** (EU868, IN865, RU864) this is suitable for EU, India, Russia and a variety of other countries.
- **915** MHz (US915, AU915, KR920, AS923-1/2/3) this is suitable for USA, Australia, New Zealand and lots of countries in South America and Asia.

If you are unsure which frequency you need to order you can take a look at our <u>Helium Region</u> tool.

In the Nebra HNT hotspot miners, the frequency plan for the LoRa concentrator (for example US915 or AU915) is determined automatically based on the location that you choose for the "location assert". This means that within the frequency variants (470 MHz, 868 MHz, 915 MHz) you can move it to a new location with a different frequency plan and it will auto-update. This only works within a single frequency - for example you can change from a US915 to AU915 location. But you can't change from a US915 location to EU868 or CN470 without changing the concentrator module.

#### **Proof of Coverage**

The Nebra HNT Indoor Hotspot Miner earns HNT Helium tokens when devices connect, and for validating wireless coverage delivered by peers. Using a system called Proof-of-Coverage, Hotspot Miners earn more HNT when they're in range of other miners, but need to be at least 300 metres apart.

The range depends on the environment:

- Rural areas: ~10 miles or more.
- Dense areas: ~ 1 mile.

Single HNT Hotspot Miners earn less as they can only issue Challenges over the internet, and can't participate in Proof-of-Coverage.

#### How much does this miner earn?

Compared to other cryptocurrencies there isn't a constant amount of HNT earned per day by the units due to the variations on a setup to setup basis.

Take a look at this <u>coverage map</u> to see what others in your region are earning.

#### This kit comes with:

- Nebra HNT Indoor Hotspot Miner (ROCK Pi Version)
- 1 x 3dBi Plastic LoRa Antenna
- 1 x WiFi Antenna
- 12V 2.5A USB-C Charger (Worldwide)
- 1 x Ethernet Cable
- Nebra ECC Key for securely storing your swarm key.
- Hotspot \$40 onboarding fee
- First \$10 location assert
- \*Any change of location after are covered by the user at a cost of \$10 USD / 1,000,000 DC.

## **Hotspot Management**

The Nebra hotspot miners come with two options for managing your hotspot remotely.

You can sign up for the hotspot management platform here.

#### Basic (free)

This includes built-in auto-update functionality (via an auto updater-script) for the life of the device at no extra charge.

#### **Advanced (paid)**

The advanced plan includes a management dashboard allowing you to remotely manage your fleet of miners, check device stats, hotspot performance and more. You can <u>view pricing here</u>.

#### **Specifications**

- Maximum TX Power: 24-27 dBm
- WAN Connectivity (Ethernet Port or WiFi)
- High Endurance Storage: 32GB eMMC
- RAM: 2GB
- CPU Specification: Dual-core cortex A72 1.8GHz and quad-core a53 1.4GHz with onboard WiFi 4 and Bluetooth 4.
- Network Connectivity: 1GB Ethernet, 2.4 802 a/g/n WiFi
- Provides 100mbps Ethernet to the Compute Module
- Power via 12V 2.5A USB-C Charger
- Base SOM: ROCK Pi RK3399 Processor
- Antenna connector: RP-SMA Female Connector
- Dimensions: 94mm x 70mm x 53mm
- Weight: 353g

#### **User Guides**

- Follow this link to discover the getting started guides
- FAQs

#### **Indoor vs Outdoor Miner**

The biggest difference is the outdoor unit comes in a case that is suitable to be used outside in mixed environments and has a few extra features. To help you decide we've created this handy guide.

Feature	Nebra Indoor Hotspot	Nebra Outdoor Hotspot
Price	£550 ex VAT	£650 ex VAT
Case	Plastic (ABS)	Aluminium
Ingress Protection	IP40	IP67
Ethernet	<b>②</b>	<b>②</b>
Wi-Fi	<b>Ø</b>	<b>Ø</b>
Bluetooth	<b>Ø</b>	•
Optional 4G Module	$\Theta$	<b>Ø</b>
Power Over Ethernet	⊝٠	<b>Ø</b>
Power Adaptor Included	<b>Ø</b>	Θ

#### Why earn HNT & use Helium?

Millions of compatible devices can use The People's Network and each device requires Data Credits (DC) in order to send data to the Internet. Fixed in value, DC is created by 'burning' HNT, reducing the total supply to achieve a Burn and Mint Equilibrium. The more devices using DC, the more HNT will be burned.

Helium's wireless network based on LoRaWAN is best suited for low-power scenarios like sending data to and from sensors using low-cost radio waves, eliminating reliance on more costly networks like cellular and WiFi. It's fully peer to peer and leverages a robust network of hotspots connected to the network. With just 100 to 200 hotspots, the network can usually cover most cities. In return for hosting hotspots, hosts can earn \$HNT for providing access to the LongFi network.

#### How are Tokens Earned?

Hotspots earn HNT for building and securing network infrastructure and transferring device data. The amount of HNT distributed to Hotspots depends on the type of "work" they perform based on the value to the network. This validation of network contribution is accomplished by a new work algorithm called Proof-of-Coverage (PoC).

To participate in PoC there must be multiple Hotspots at least 300 meters apart in an area, but still within range of each other (up to many miles depending on environment). Single Hotspots earn less as they can only issue Challenges over the internet, and can't participate in Proof-of-Coverage. After the first year, distribution amounts adjust.

## How do I change HNT to normal currency or vice versa?

We recommend using <u>Binance.us</u> which allows HNT/USD trades or you can use <u>Binance.com</u> to exchange HNT into Bitcoin and then from Bitcoin into GBP, EUR or other currencies. However other exchanges are also available.

## Are there any fees when setting up my Nebra Hotspot?

When setting up any Helium Hotspot Miner there is a \$40 activation fee and a \$10 fee when setting the hotspot's location.

As part of your purchase price, we cover the \$40 activation fee and the first location assert fee of \$10 (worth \$50 in total).

However, every time you move your hotspot to a new location you will need to pay the \$10 location assert fee again.

The full list of Helium transaction fees can be found in the Helium documentation.

## **Supporting Helium**

We're happy to announce that for every Helium hotspot miner sold we're committing to giving \$1 per device as a donation to <u>DeWi</u>.

# Certifications

- <u>CE</u>
- <u>FCC</u>
- <u>UKCA</u>