COTX X3-US915

COTX Indoor Full Helium Hotspot COTX-X3 US915 User Manual

Model: X3-US915

1. PRODUCT OVERVIEW

The COTX-X3 is a versatile indoor device designed to function as a Full Helium Hotspot, a LoRaWAN Gateway, and a FlexiMining compatible unit. It enables users to participate in decentralized networks, contributing to and earning from various blockchain and Web3.0 services.

Key features include:

- Helium Full Hotspot for HNT crypto mining with low power consumption (approximately 10W).
- Standard LoRaWAN IoT Gateway supporting various frequency plans (US915, EU868, CN470, AS923-1/2/3/4, IN865, KR920, AU915).
- COTX FlexiMining compatibility, allowing installation of multiple mining applications for diverse crypto rewards.
- Integration with Home Assistant for smart home automation.
- Remote management of FlexiMining applications via COTX Hotspot Cloud Service.
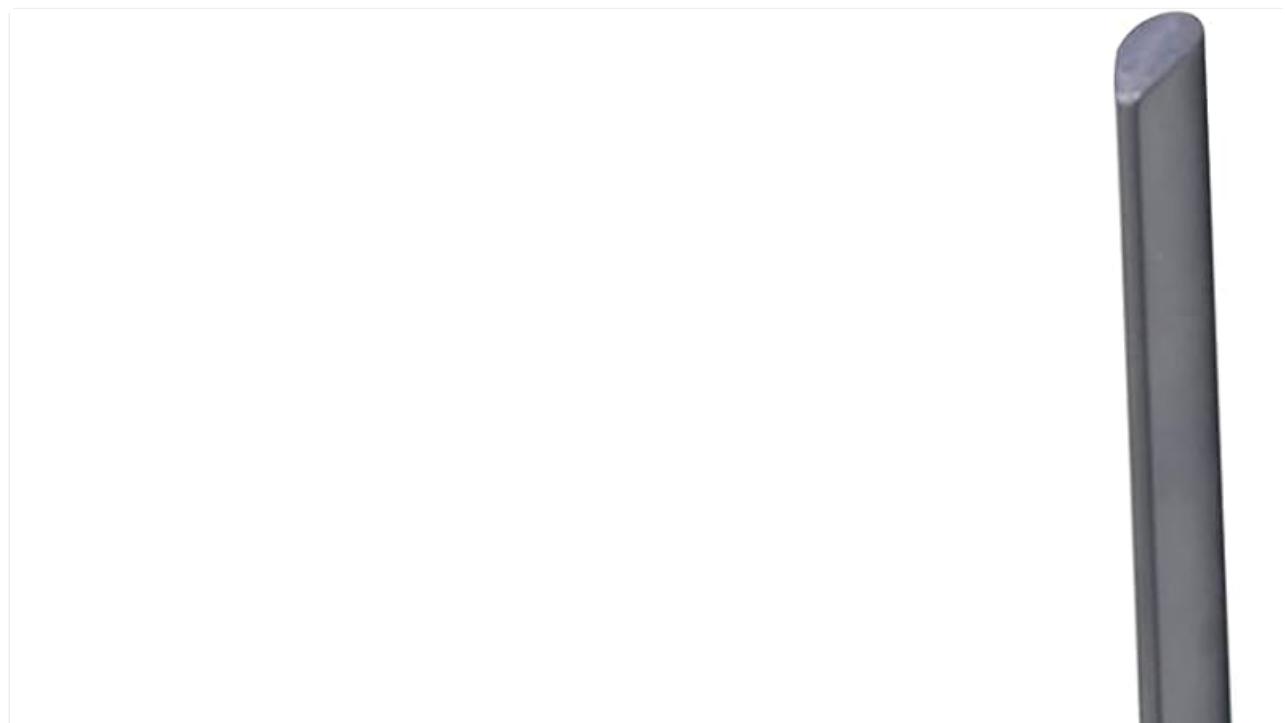
Figure 1: Front view of the COTX-X3 Indoor Full Helium Hotspot with its external LoRa antenna.

2. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- 1 x COTX X3 Hotspot Device
- 1 x External 3.5dBi LoRa Antenna (SMA interface)
- 1 x Power Adapter

- Ethernet Cable (may vary by region/package)

Figure 2: Included accessories: LoRa antenna, power adapter, and Ethernet cables.

3. PHYSICAL COMPONENTS AND PORTS

3.1 Front Panel

Figure 3: Detailed view of the COTX-X3 front panel.

- **CAMERA:** Reserved port.
- **PWR INPUT:** Power input port (5V AC).

- **AUDIO:** Reserved audio port.
- **BT BUTTON:** Press and hold for 5 seconds to activate Bluetooth.
- **TF FLASH:** Micro SD card slot.
- **LED Display Screen:** Displays IP address and status of BLE, Internet, Ethernet, and Wi-Fi.
- **System LED:** Indicates device status (OFF: Non Power, Blinking: System Bootup, On: Operating).

3.2 Rear Panel

Figure 4: Rear view of the COTX-X3 showing connectivity options.

- **LoRa Antenna Ports:** Connect the external LoRa antenna here.
- **USB1** / **USB2:** USB ports for peripheral connections.
- **LAN:** 10/100/1000M Ethernet interface (RJ-45) for wired network connection.

4. SETUP GUIDE

1. **Insert Micro SD Card:** Ensure the 32GB Micro SD card (standard configuration) is properly inserted into the TF FLASH slot on the front panel.

2. **Attach LoRa Antenna:** Carefully screw the external 3.5dBi LoRa antenna into the designated SMA interface port on the rear panel. Ensure it is securely fastened but do not overtighten.

3. **Connect to Network:**
   - **Wired Connection:** Connect an Ethernet cable from your router or network switch to the LAN port on the rear panel of the COTX-X3.
   - **Wireless Connection:** The device supports 2.4 / 5GHz 802.11AC Wi-Fi. Initial setup may require a

wired connection for configuration, or you can use the Bluetooth pairing process.

4. **Connect Power:** Plug the power adapter into the PWR INPUT port on the front panel, then connect the adapter to a power outlet.

5. **Initial Boot-up:** The System LED will blink during boot-up. Once the device is operating, the LED will remain solid. The LED Display Screen will show the IP address and network status.

5. OPERATING INSTRUCTIONS

5.1 Helium Miner Operation

The COTX-X3 functions as a Helium Full Hotspot, participating in the Helium network to provide LoRaWAN coverage and earn HNT cryptocurrency. Once connected to the internet and powered on, the device will begin its operation as a Helium miner. Specific Helium network configurations and wallet setup are typically managed through the Helium application or associated tools.

5.2 LoRaWAN Gateway Functionality

As a standard LoRaWAN IoT Gateway, the COTX-X3 facilitates communication for LoRaWAN-enabled devices. It supports various global frequency plans, which can be adjusted online:

- US915
- EU868
- CN470
- AS923-1, AS923-2, AS923-3, AS923-4
- IN865
- KR920
- AU915

Refer to the COTX Knowledge Base for detailed instructions on changing frequency plans.

5.3 FlexiMining Applications

The COTX-X3 is FlexiMining compatible, allowing users to install and run multiple decentralized applications to earn various crypto rewards. Supported FlexiMining applications include:

- computecoin
- Mysterium
- EarnApp
- storj
- ScPrime
- PreSearch
- honeygain
- Peer2Profit
- IPRoyal
- Meson Network
- TRAFFMONETIZER

All FlexiMining applications can be managed remotely through the COTX Hotspot Cloud Service (cotx-sg.io). The device includes a 1-year FlexiMining Package Service for installation of these apps without extra charge.
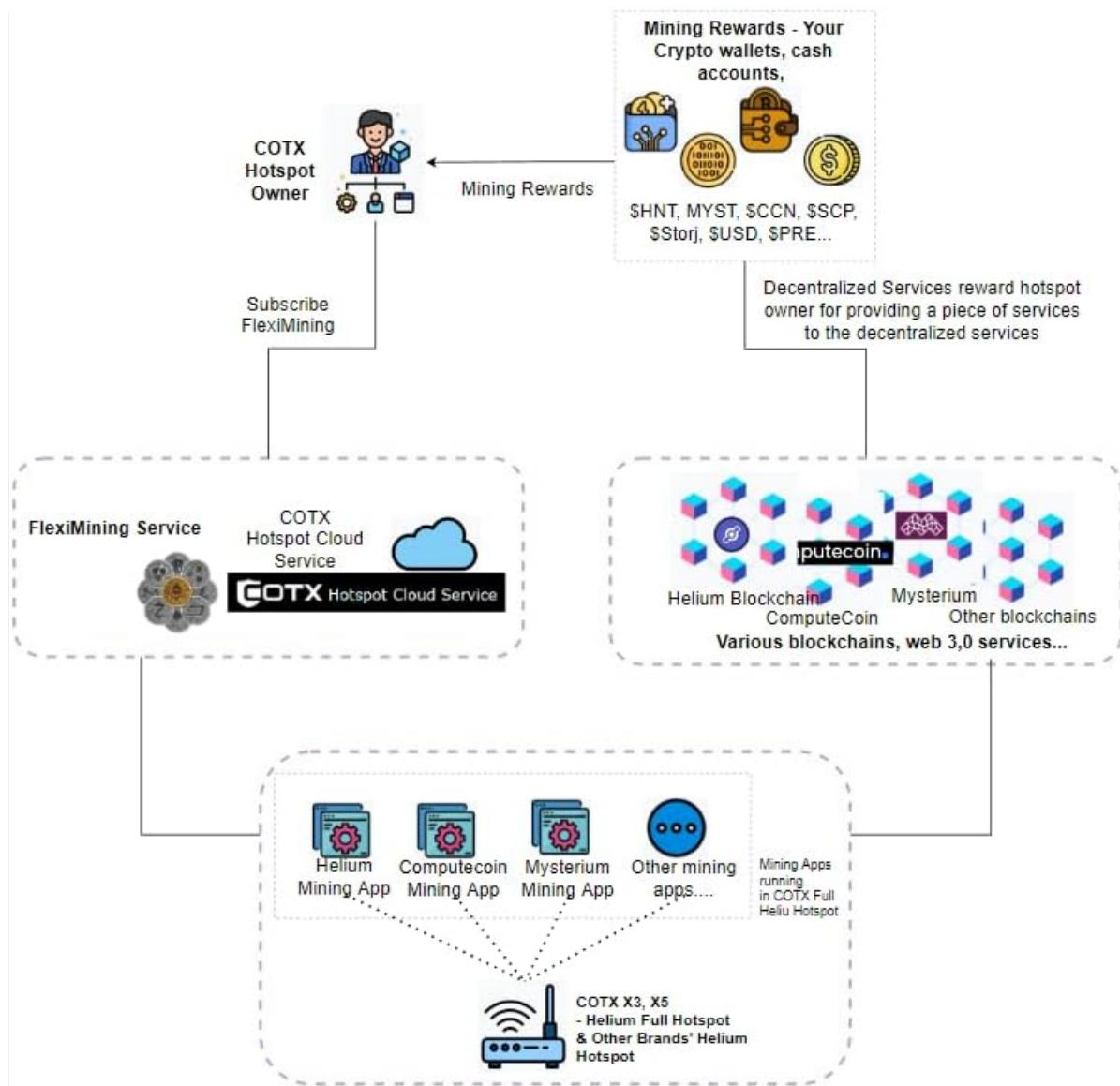
Figure 5: Overview of the FlexiMining ecosystem and reward flow.

5.4 Bluetooth Functionality

To activate Bluetooth 5.0 on the COTX-X3, press and hold the "BT BUTTON" on the front panel for 5 seconds. This can be used for initial setup or pairing with compatible devices.

5.5 System LED and Display Screen

Monitor the status of your device using the System LED and the integrated LED Display Screen:

- **System LED:**
  - **OFF:** Device is not powered.
  - **Blinking:** System is booting up.
  - **On (Solid):** Device is operating normally.

- **LED Display Screen:** Provides real-time information including the device's IP address and the current status of Bluetooth (BLE), Internet connectivity, Ethernet connection, and Wi-Fi connection.

6. MAINTENANCE

To ensure optimal performance and longevity of your COTX-X3, follow these maintenance guidelines:

- **Placement:** Place the device in a well-ventilated area, away from direct sunlight, excessive heat, and

moisture.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Do not use liquid cleaners or aerosols.
- **Software Updates:** Regularly check for and apply software updates. The device runs on Ubuntu 20.04, and updates are crucial for security, performance, and new features. Refer to the COTX Knowledge Base for update procedures.
- **Micro SD Card:** While the device comes with a 32GB Micro SD card, ensure it is not removed during operation. If replacement is necessary, use a high-quality card and follow official COTX instructions for imaging.
- **Antenna Connection:** Periodically check that the LoRa antenna is securely connected. A loose connection can impact performance.

7. TROUBLESHOOTING

This section provides solutions to common issues. For more detailed troubleshooting or complex problems, please refer to the COTX Knowledge Base or contact customer support.

Problem	Possible Cause	Solution
Device does not power on (System LED OFF)	No power supply; faulty power adapter or cable.	Check power connection to the device and wall outlet. Ensure the power adapter is functioning correctly.
No network connectivity (Ethernet/Wi-Fi status on LED screen shows error)	Ethernet cable disconnected; Wi-Fi not configured or out of range; router issue.	Verify Ethernet cable connection. For Wi-Fi, ensure correct credentials and signal strength. Restart your router.
System LED blinking continuously, device not operating	Device stuck in boot-up; corrupted Micro SD card.	Power cycle the device. If issue persists, the Micro SD card may need re-imaging or replacement. Consult COTX support.
LoRaWAN or Helium mining performance issues	Antenna not properly connected; incorrect frequency plan; network congestion.	Ensure antenna is securely attached. Verify the correct frequency plan is selected for your region. Check network conditions.

8. SPECIFICATIONS

Feature	Description
Design	Aluminum Alloy + Plastic
CPU	Quad-core Cortex-A72 @1.5GHz
RAM	4GB LPDDR4-3200 SDRAM
Main-board	Raspberry Pi 4B
Operating System	Ubuntu 20.04
Micro SD Card Slot	1* Micro SD card (32G capacity as standard configuration)
Ethernet	1* 10/100/1000M interface (RJ-45)
Wi-Fi	2.4 / 5GHz 802.11AC

Feature	Description
Bluetooth	1* Bluetooth 5.0
LoRa Antenna	1* External 3.5dBi LoRa antenna, SMA interface
System LED	OFF (Non Power) / Blinking (System Bootup) / On (Operating)
LED Display Screen	IP address & the status of BLE, Internet, Ethernet, and Wi-Fi
Supported Frequency Plans	US915, EU868, CN470, AS923-1, AS923-2, AS923-3, AS923-4, IN865, KR920, AU915
Power Consumption	Approximately 10W
Item Weight	2.2 pounds
Color	Black
Voltage	5 Volts (AC)

9. SUPPORT AND CONTACT INFORMATION

For further assistance, technical support, or inquiries, please use the following resources:

- **Customer Service Email:** services@cotxnetworks.com
- **COTX Knowledge Base:** support.cotxnetworks.com/support/solutions
- **Discord Community:** discord.gg/cotxnetworks
- **Official Website:** cotx-store.com

Please have your product model number (X3-US915) and any relevant error messages ready when contacting support.