

COTX X1 Hotspot

Intelligent IoT Gateway

Brief Introduction



Product description

The next generation Internet of Things Smart Gateway is compatible with the Helium Network. Based on the LORAWAN protocol, it is a complete 8-channel gateway with built-in Ethernet connectivity for easy user configuration. It also supports WiFi-AP mode and LTE-CAT4 uplink connection, facilitating deployment in different scenarios. The terminal data is collected and uploaded to the Internet of Things cloud platform to achieve real-time monitoring.

The X1 gateway is managed and configured based on OpenWRT. It also supports MQTT bridge mode, which is convenient for the actual application deployment and integration environment of gateway.

The X1 is compact and can be used in a variety of deployment environments with mounting accessories.

X1 is easy to use, app configuration is simple, only need to refer to the product manual to complete the gateway configuration in a few minutes.

Package Contents



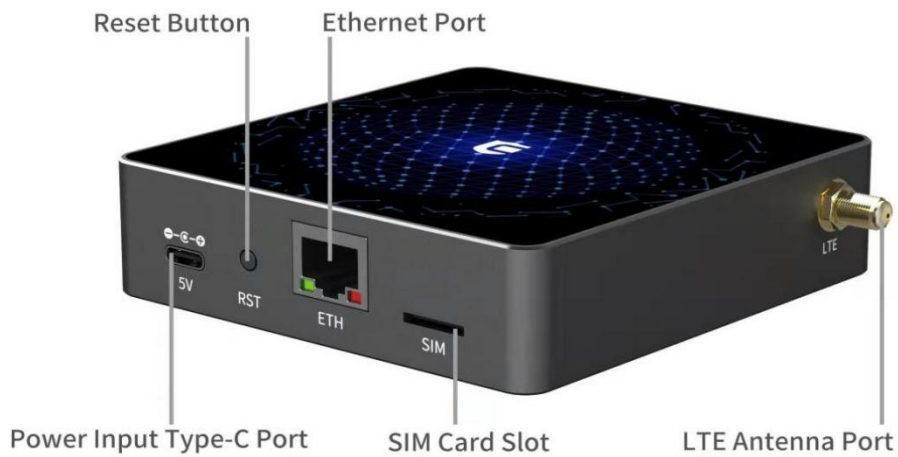
Designation	Number
COTX X1 Hotspot	1pcs
Power Adapter	1pcs
Power Cable	1pcs
LoRa Antenna	1pcs
GPS Antenna	1pcs
WiFi Antenna	1pcs
LTE Antenna(Optional)	1pcs

Size

The MCO (Maximum outline dimension) of COTX-X1 is 93*97*26mm, as shown below:



Interfaces Description





Quick Specifications

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CPU	MT7628NN
Flash	32M Nor Flash
RAM	128M DDR2 RAM
OS	Openwrt(Linux)
System frequency	580MHz
ETH	RJ45(10/100M)
BLE (optional)	BLE 5.0
LTE (optional)	Different regions support band range: European region: LTE FDD: B1/B3/B7/B8/B20/B28 WCDMA: B1/B8 North America: LTE FDD: B2/B4/B5/B12/B13/B14/B66/B71 WCDMA: B2/B4/B5
WIFI	IEEE 802.11b/g/n
GPS(optional)	GPS L1 C/A 1575.42MHz
	BeiDou B1:1561.098MHz
LoRa	SPI-SX1302 Mini Pcie card 8 Channels Frequency:EU433/CN470/EU868/US915/AS923/AU915
Power supply	DC 5V/2A
IP Rating	IP30
Shell Material	Aluminum Case
Product Weight	235g
Operating Temperature	-10℃ to +55℃
Fixing Way	Desktop

Interface introduction	
Type-C	DC-5V
ETH	RJ45(10/100M)
Button	Press and hold the key for 3s to restart the device
Antenna interface	LoRa: RP-SMA Female Connector
	WiFi: RP-SMA Female Connector
	LTE: RP-SMA Female Connector
	GPS: RP-SMA Female Connector
Others	SIM card slot
LED Indicator	
Red	Blink: system mal-function
Green	Constant lighting: system working
	Blink: system boot up

User guide

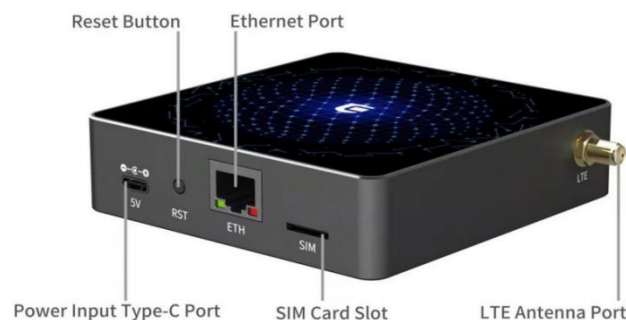
Preparing COTX-X1 Gateway

Step 1: First insert the SMA male connector of the antenna feeder into the LoRa® Antenna port of the device and tighten it.



Step 2: Place your gateway to a suitable location (eg. near a window) to provide the best coverage for devices.

Step 3: If you are using a wired Ethernet connection, connect an Ethernet cable between a router or switch and the Ethernet Port on the gateway, so the gateway can connect to the internet.



Step 4: Finally Insert the power adapter into the 110~220VAC mains socket, connect the power supply into the PWR INPUT on the gateway.
After plugging in the power, If the device indicator is green, the system is running properly.



You can find the IP address of X1 through the router or switch according to the MAC address of the device and access it.

Configuring Gateway by COTX APP

To configure the gateway, please download the COTX APP from Apple APP store or Google Play directly by searching "COTX". Please create a Helium wallet account by using "COTX" APP or "Helium Hotspot" APP first and then continue to the next step shown below:

Step 1: Enter the X1 gateway IP address in the PC browser, log in to the Web Management Dashboard to obtain the QR Code of the Device. The default login user name is **admin**, and the password is the sixth digit after the Device ID on the Device label.

The screenshot displays the COTX Web Management Dashboard. The top right corner shows 'Last Login: - admin'. The dashboard is divided into several sections:

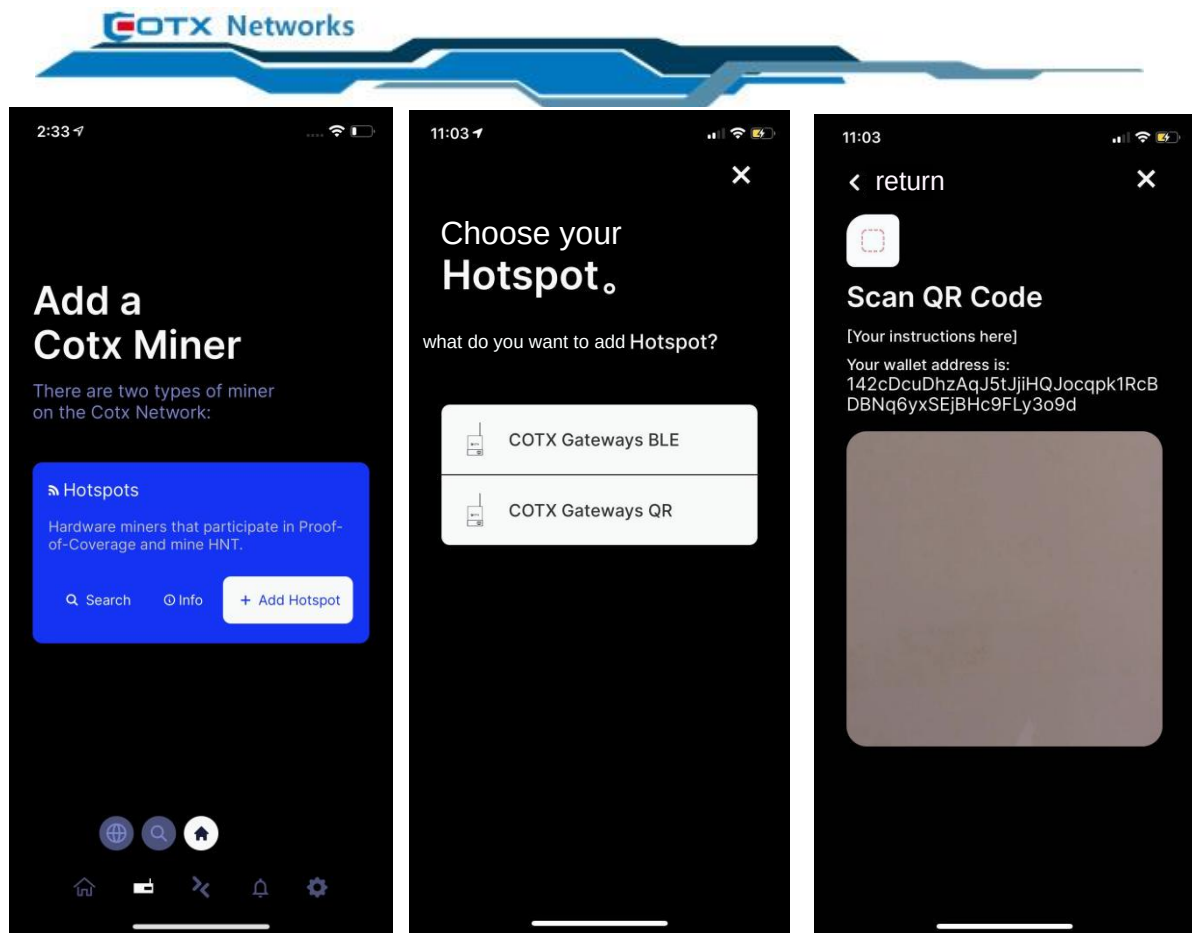
- Disk-Storage:** A progress bar showing 25% usage.
- Memory:** A progress bar showing 83% usage.
- CPU:** A progress bar showing 10% usage.
- Running State:** A table showing system status:

Connection Method:	wired
State:	connected
IP:	192.168.137.166
Mask:	255.255.255.0
Gateway:	192.168.137.1
MAC:	60:fb:00:ec:64:7f
- Working Mode:** Three radio buttons:
☒ AP(The local host serves as the AP server)
☐ CLIENT(This machine acts as the client)
☐ NONE(Current working mode acquisition failed)
- AP Settings:** A form with fields for SSID name (COTX), Encryption (psk), and Secret (masked with asterisks). A blue 'Apply' button is on the right.
- List of wireless network access clients:** A table with columns MAC, IP, and HostName.

	MAC	IP	HostName
1	3C:A9:F4:33:F0:A8	192.168.10.216	virutest

Step 2: Open COTX application and login in with Helium wallet account.

Step 3: Tap "Add a Hotspot" and pick "COTX Gateways QR" from the list.



Step 4: Scan QR Code of The COTX App to Scan the QR Code of the WEB Management Dashboard. The App will obtain device information and register with the Helium network. It will take you approximately 15 minutes to join the Helium network. Then the whole setup process is done.



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.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment .

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.