COTX-X5 Outdoor Gateway

Intelligent IOT Gateway

Quick Start Guide

Package Contents

Your COTX-X5 Outdoor Gateway comes with the following items:

- 1 COTX-X5 outdoor gateway
- 3 installation kit
- 4 fixing screws (including accessories)
- 2 long connecting rod screws (including nuts)
- 1 ground screw
- 1 waterproof and breathable valve
- 1 waterproof interface
- 1 waterproof plug (Type N)
- 3 external antennas
- 2 stirrups
- 1 power cord
- 1 POE module

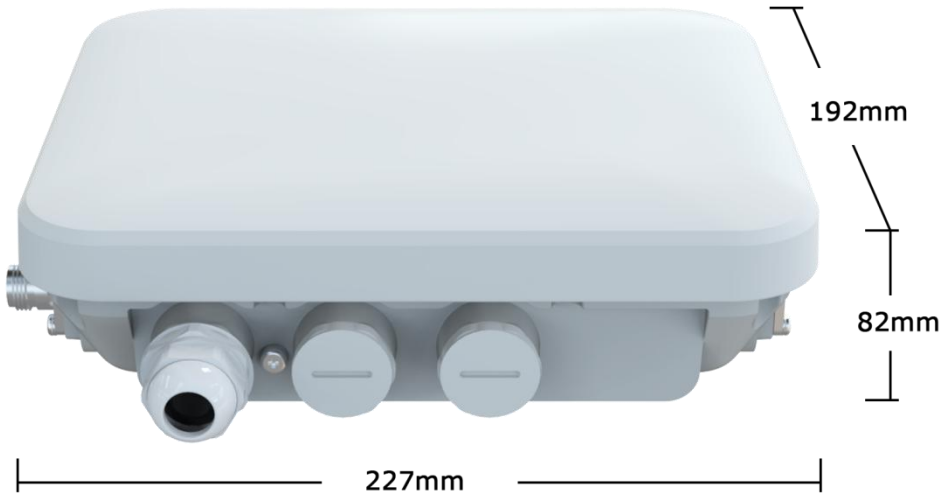
Warnings

Pay attention to these important warnings when using your Outdoor Gateway:

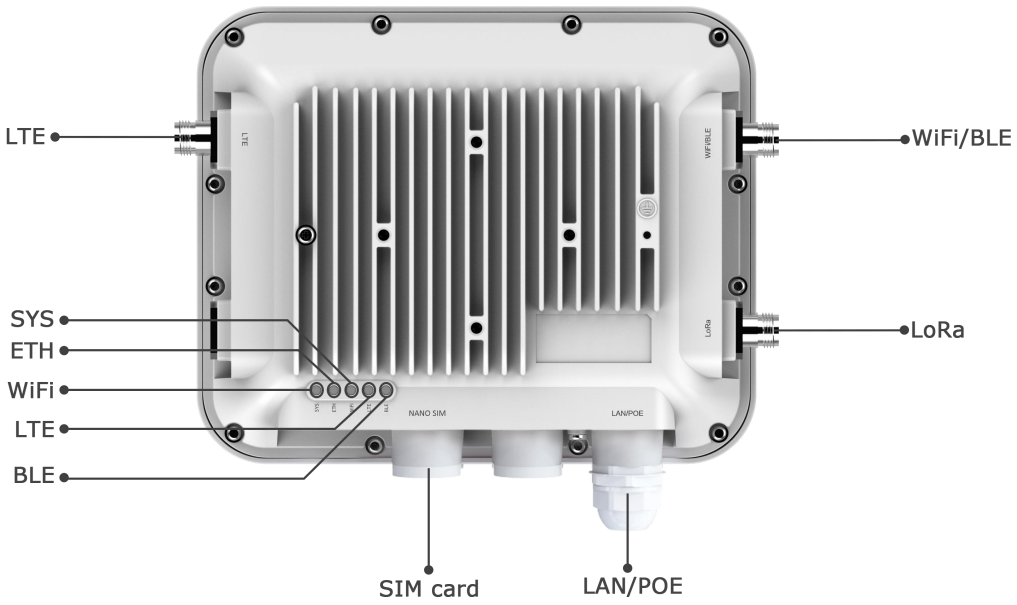
- **Never power up the Outdoor Gateway without the LoRa antenna connected as this may damage the device.**
- Before outdoor installation, make sure you tighten all connectors and the case itself very well to avoid any unintended water ingress.

Structure size

The outer dimension of COTX-X5 is 227 x 82 x 192 mm, as shown below:



Interface description



Quick Specifications

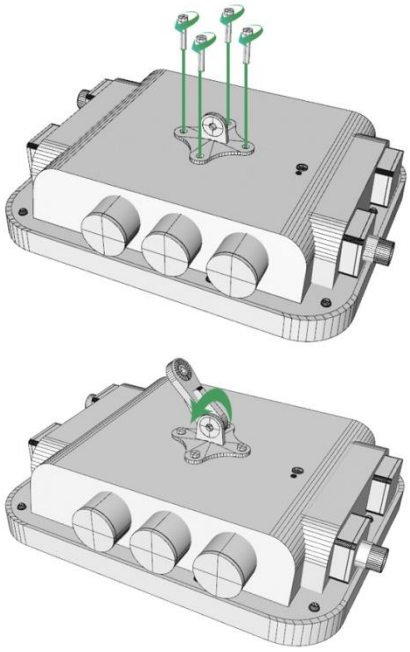
General Specification	
Weight	1.7Kg
Material	Alluminum Case + Plastic Cover
Installation	On the Pole/ Wall
Operating Temperature	-40~55℃
Power Consumption	
Method	POE (802.3at)
Max Power	＜25.5W
LoRa Performance	
Max Emitting Power	902.3~914.9MHz 20dBm 923.3~927.5MHz 27dBm
Frequency	US915, AS923, AS920, AU915,EU868, IN865, KR920
Channel	500 kHz LoRa reception with 8 x 8 channels LoRa® packet detectors, 8 x SF5-SF12 LoRa® demodulators,8 x SF5-SF10 LoRa® demodulators

Platform Spec	
RAM	2GB LPDDR4-3200 SDRAM (4G/8G Optional)
CPU	Broadcom BCM2711, Quad core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
OS	Ubuntu20.04
Main-board	Raspberry Pi 4B
Interfaces	
Internet	1*10/100/1000M Ethernet interface(RJ-45)
WiFi	2.4 GHz and 5.0 GHz IEEE 802.11ac
4G	Universal Channel, Cat1 Rate
Bluetooth	Bluetooth 5.0, BLE
SD Card	1*Micro SD card
LoRa Antenna	N-Male*1,860~930MHz, Gain:3.5dBi
4G Antenna	N-Male*1 860~960MHz,1710~2700MHz, Gain:3dBi
WiFi/BT Antenna	N-Male*1,2.4GHz/5GHz, Gain:6dBi
LED Indicator	
System Indicator	Green*1
Internet Indicator	Green*1
WiFi Indicator	Green*1
LTE Indicator	Green*1
BLE/LoRa Indicator	Green*1

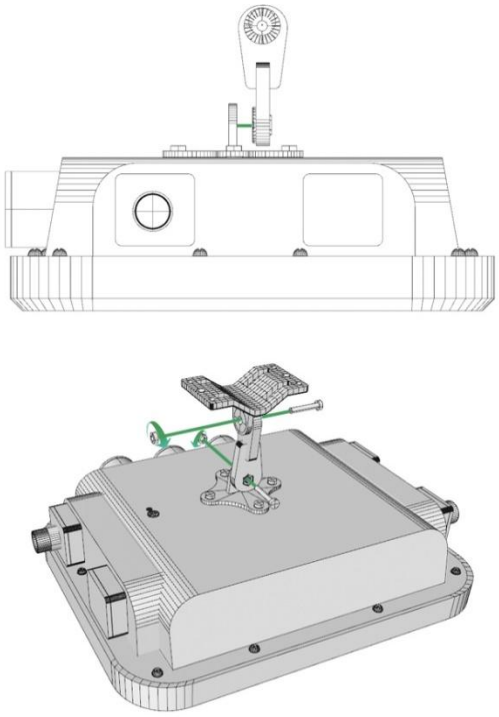
Quick Installation Guide

Pole Mounting

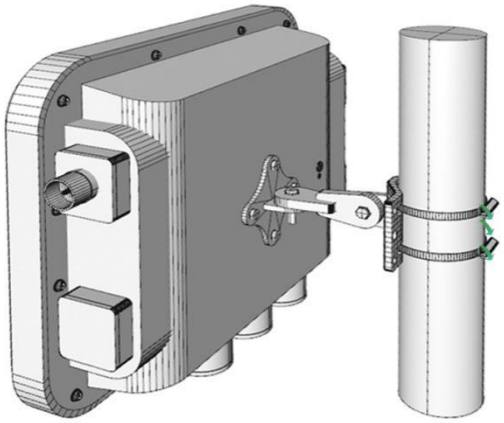
Step1 Place the base bracket on the back of the device with four M6*4 screws as shown below:



Step2 Attach the 3-Axis brackets on the back of the device with two number 7 screws as shown below:

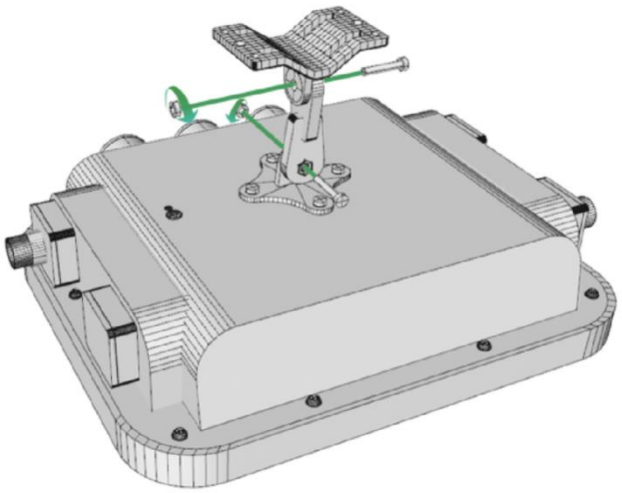


Step3 Insert the steel band clamps through the four holes on the mount kit, wrap the band clamps around the mounting pole, lock and tighten the clamps using a screwdriver.

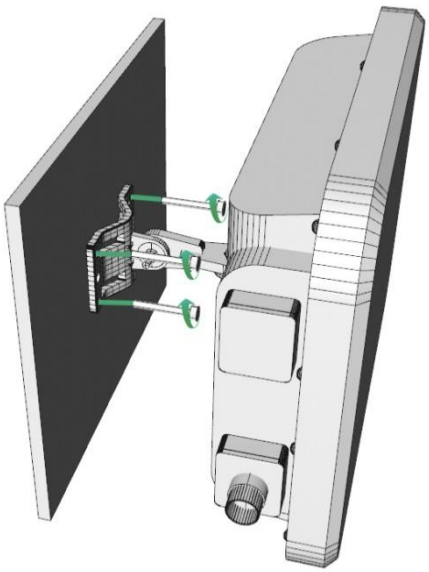


Wall Mounting

Step1 Fix the axis brackets on the bottom of the device like pole mounting:



Step2 Use Ø5mm drill head, drill 4 holes on the wall according to the position of wall mounting bracket, plug the screw anchors to the wall, and fix the device to the wall as shown below;



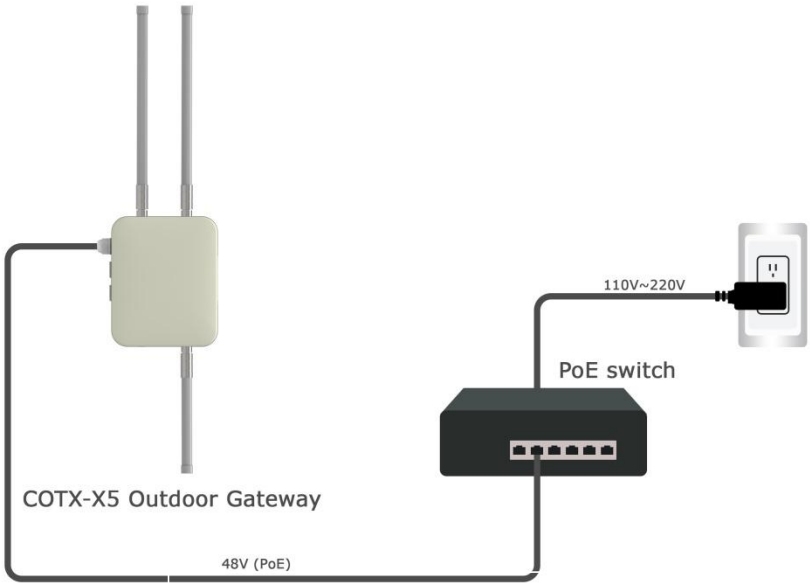
Preparing Your Outdoor Gateway

Step 1: First, carefully connect the LoRa® antenna to the "Lora" port of the gateway , the Wi-Fi antenna to the "WiFi/BLE" port and the LTE antenna to the "LTE" port.

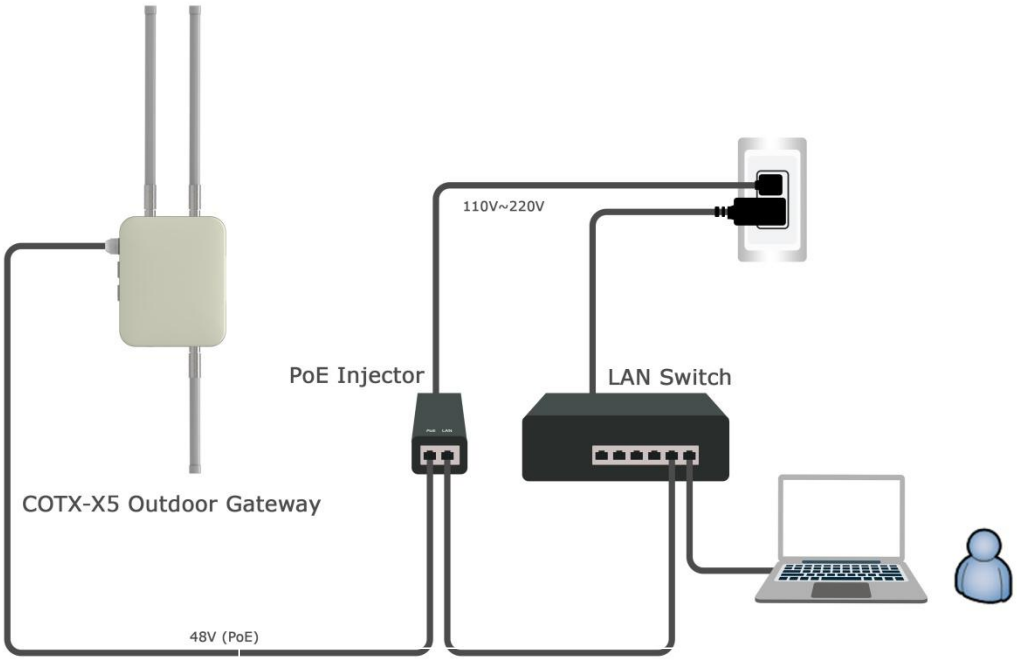
Step 2: Next find a suitable location for your gateway to be positioned. Make sure it will provide the best coverage.

Step 3: To integrate Ethernet network, use a network cable and connect the gateway to the switch or router

Step 4: The default setting is Power over Ethernet (PoE). Connect the Ethernet port of the gateway to a switch with PoE function (PoE - IEEE 802.3af or IEEE 802.3at). If unavailable, use a PoE injector and power up.



Power on by PoE Switch



Power on by PoE Injector

Now System LED lights up. When the system gets ready, that light will turn green.

Configuring Your Outdoor Gateway

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

Step 1: Turn on COTX Gateway, so the Helium APP can detect the gateway to further configuration.

Step 2: Open the Helium application and login.

Step 3: Click "Add a Hotspot" and choose "COTX Gateways" from the list.

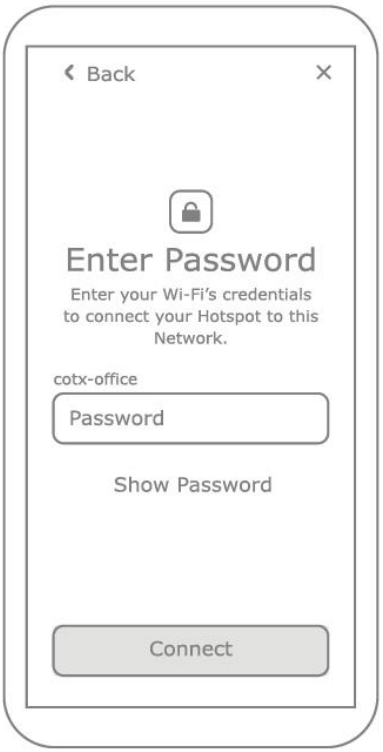
Step 4: Follow the steps on the App and get to the "Bluetooth" page. Gateway Bluetooth is automatically turned on after the COTX outdoor de*vice* is powered up. Simply click "Scan for my Hotspot" to pair up.

Step 5: Click the entry for your gateway in the app. You can check if it is the correct by matching the last 4 characters shown in the application with the last 4 characters of the mac address printed on the label.

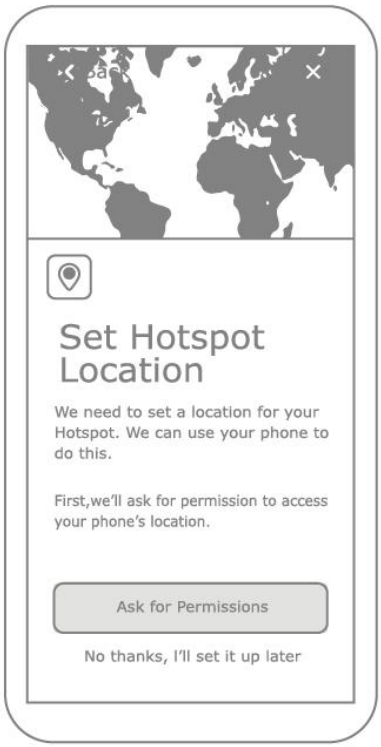
Step 6: On the app it will show the available Wi-Fi networks within the range of your Gateway.

If you are using Ethernet, tap Use Ethernet Instead and skip to Step 7.

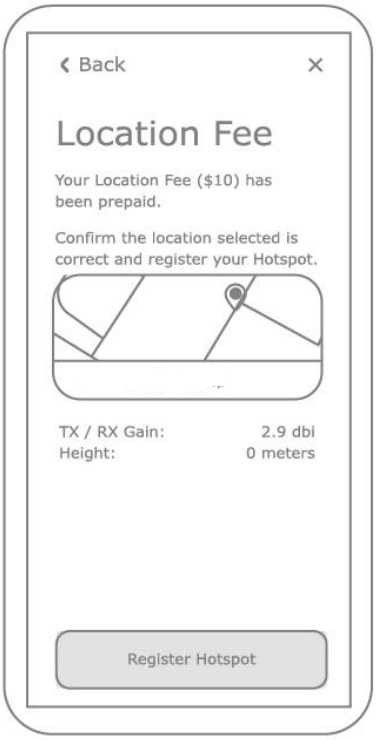
If using Wi-Fi, tap on the name of your Wi-Fi network on the app which will bring you to the following screen. Type in your Wi-Fi's network password then tap Connect and it will connect to your Wi-Fi network.



Step 7: The app will then ask for you to set your gateway's location and you can confirm the location of your gateway. A Helium wallet account should be created first so you can continue to the next step.



Step 8: Register the gateway to the Helium Network to provide IOT services for related devices. the setup is now complete. It'll submit the details of the COTX Gateway to the Helium network. In approximately 15 minutes, will confirm it's added to the Helium network.


Back
Location Fee
Your Location Fee ($10) has been prepaid.
Confirm the location selected is correct and register your Hotspot.
TX / RX Gain: 2.9 dbi
Height: 0 meters
Register Hotspot


REGISTERING HOTSPOT
Go to Wallet

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.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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 25cm between the radiator & your body.

ISEDC RSS warning

This device complies with Innovation, Science and Economic Development Canada Compliance licence-exempt RSS standard (s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

ISEDC Radiation Exposure Statement:

This equipment complies with ISEDC RF 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 25cm between the radiator & your body.

IC exposition aux radiations:

Cet équipement est conforme avec ISEDC les limites d'exposition aux rayonnements définies pour un contrôlé environnement.

Cet émetteur ne doit pas être co-localisés ou fonctionner en conjonction avec une autre antenne ou émetteur.

Lors de l'installation et du fonctionnement de cet équipement, la distance minimale entre le radiateur et le corps doit être de 25 cm.