



WAPD-246ACN LoRa Gateway User Manual

Version : 1.0.2

Release History

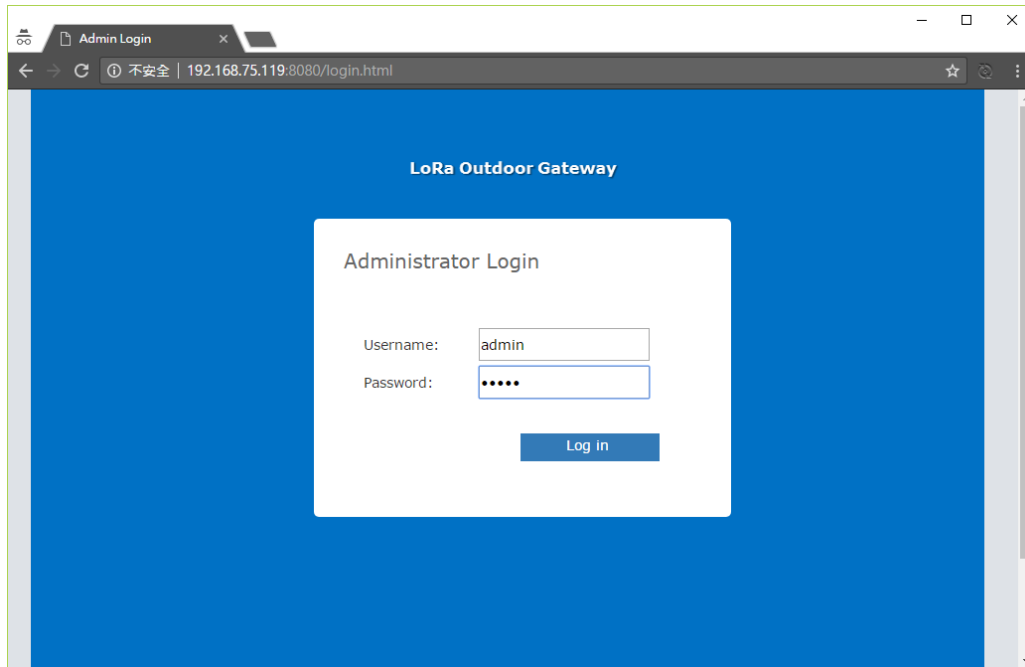
Release Data	Release Version	Description	Author
2017/08/04	1.0.1	Initial release	William Huang
2017/10/13	1.0.2	Add FW update instruction	William Huang

Gateway Configuration

Access gateway Administration Web GUI at :8080 port

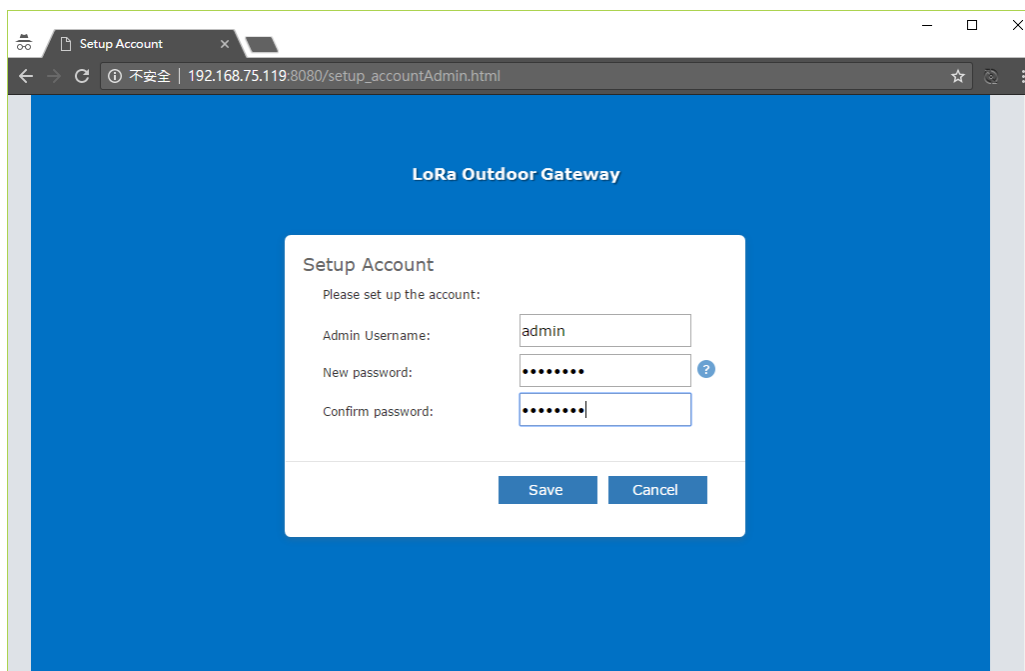
http://x.x.x.x:8080/

Default Username/Password : admin/admin



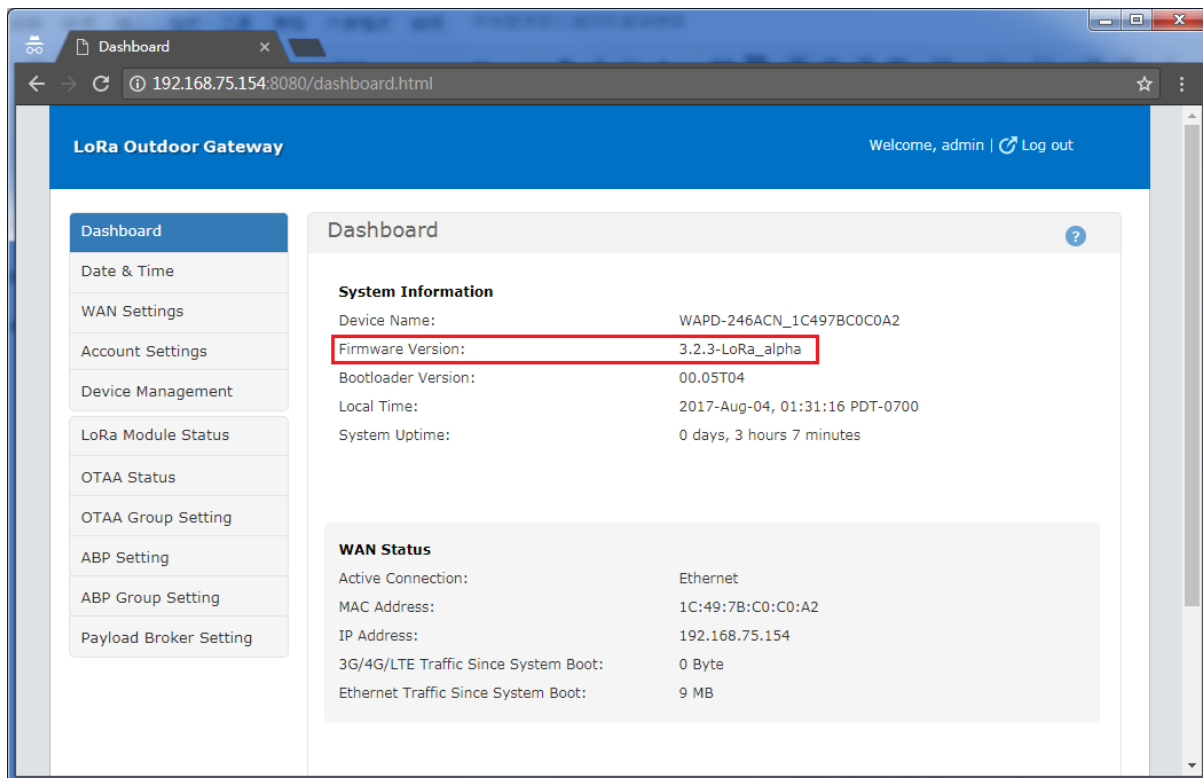
If it is the first login, it will ask you to update the default account

You may configure the account as admin/Admin123



After login, Dashboard page shows System Info. Firmware Version can

be checked at here.



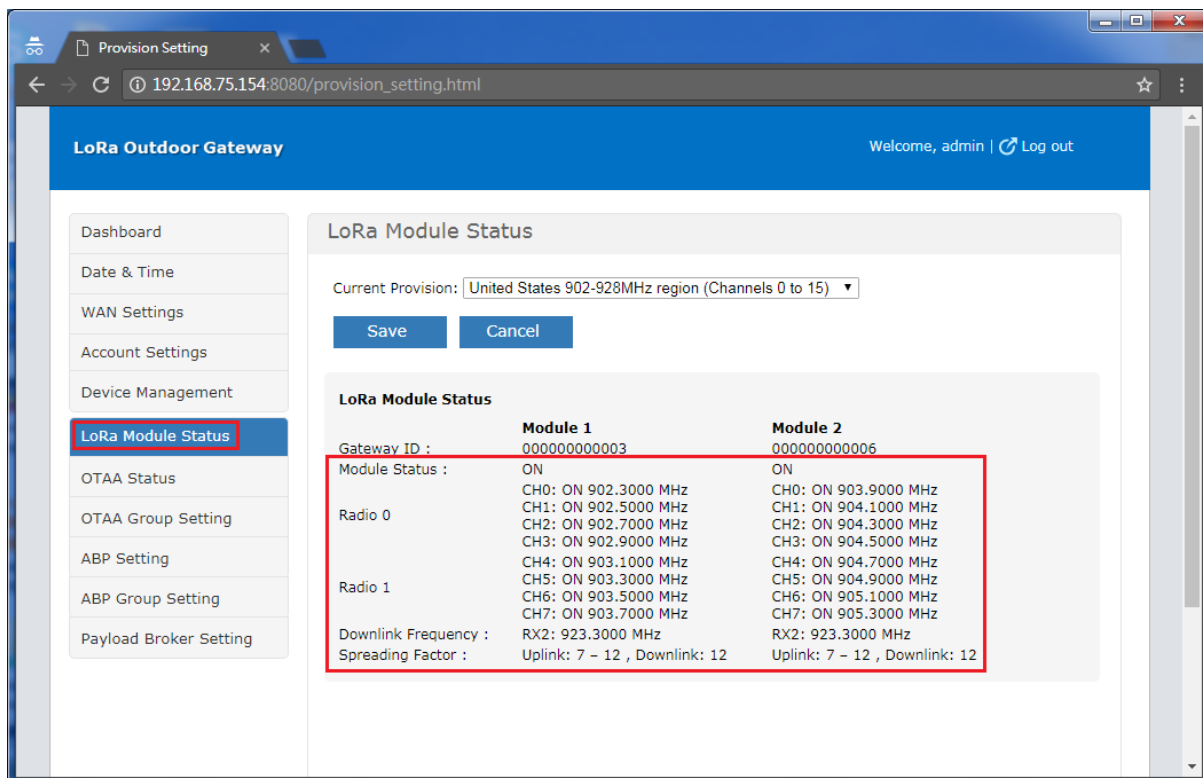
The screenshot shows the 'Dashboard' page of the 'LoRa Outdoor Gateway' web interface. The left sidebar contains a menu with options: Dashboard, Date & Time, WAN Settings, Account Settings, Device Management, LoRa Module Status, OTAA Status, OTAA Group Setting, ABP Setting, ABP Group Setting, and Payload Broker Setting. The main content area displays 'System Information' with the following details:

System Information	
Device Name:	WAPD-246ACN_1C497BC0C0A2
Firmware Version:	3.2.3-LoRa_alpha
Bootloader Version:	00.05T04
Local Time:	2017-Aug-04, 01:31:16 PDT-0700
System Uptime:	0 days, 3 hours 7 minutes

Below the system information, there is a 'WAN Status' section:

WAN Status	
Active Connection:	Ethernet
MAC Address:	1C:49:7B:C0:C0:A2
IP Address:	192.168.75.154
3G/4G/LTE Traffic Since System Boot:	0 Byte
Ethernet Traffic Since System Boot:	9 MB

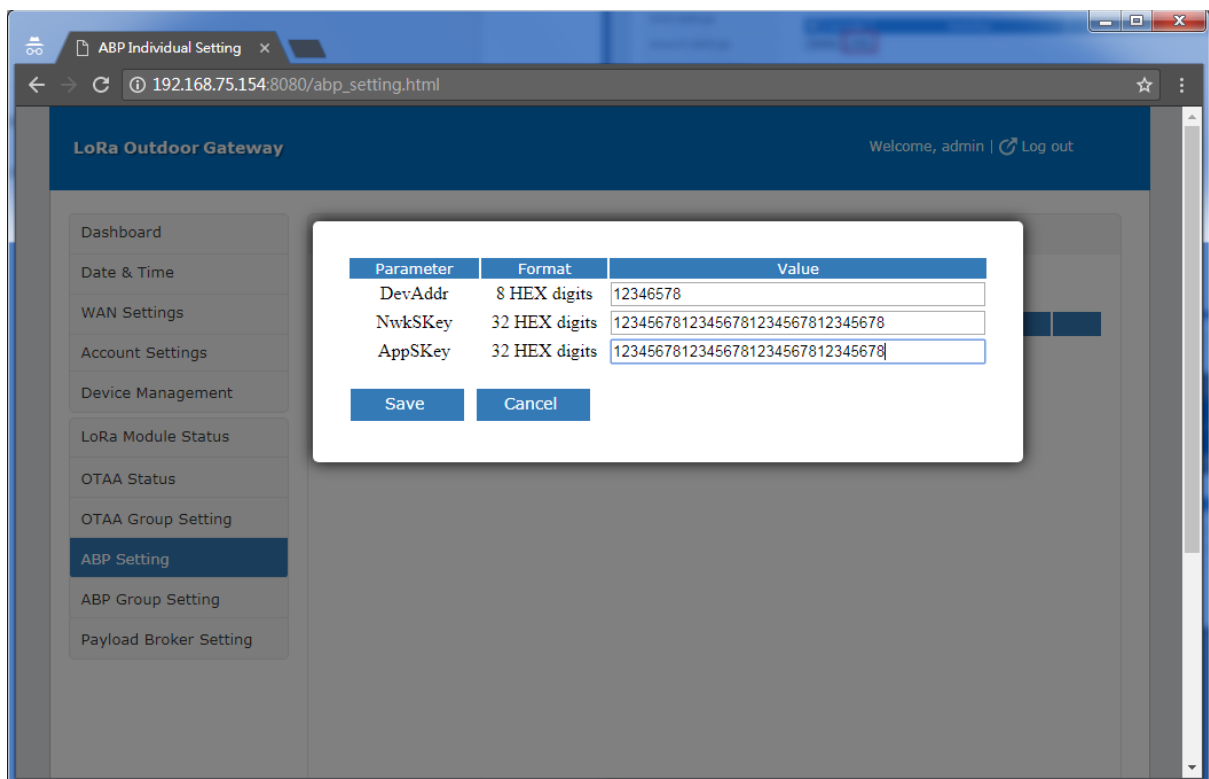
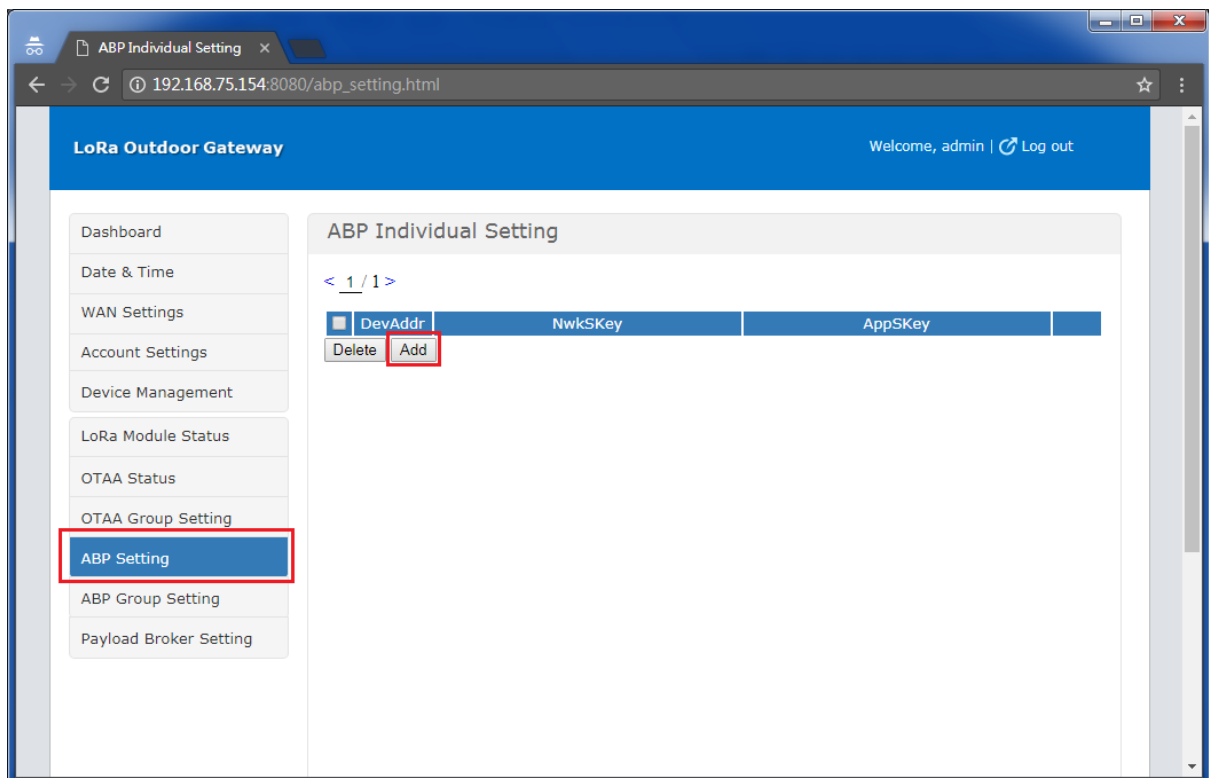
Go to “LoRa Module Status” to check band setting



The screenshot shows the 'Provision Setting' page of the 'LoRa Outdoor Gateway' web interface. The left sidebar is the same as the dashboard. The main content area displays 'LoRa Module Status' with a dropdown menu for 'Current Provision' set to 'United States 902-928MHz region (Channels 0 to 15)'. Below this are 'Save' and 'Cancel' buttons. The 'LoRa Module Status' section contains a table with the following data:

LoRa Module Status		
	Module 1	Module 2
Gateway ID :	000000000003	000000000006
Module Status :	ON	ON
Radio 0	CH0: ON 902.3000 MHz CH1: ON 902.5000 MHz CH2: ON 902.7000 MHz CH3: ON 902.9000 MHz CH4: ON 903.1000 MHz CH5: ON 903.3000 MHz CH6: ON 903.5000 MHz CH7: ON 903.7000 MHz	CH0: ON 903.9000 MHz CH1: ON 904.1000 MHz CH2: ON 904.3000 MHz CH3: ON 904.5000 MHz CH4: ON 904.7000 MHz CH5: ON 904.9000 MHz CH6: ON 905.1000 MHz CH7: ON 905.3000 MHz
Downlink Frequency :	RX2: 923.3000 MHz	RX2: 923.3000 MHz
Spreading Factor :	Uplink: 7 - 12 , Downlink: 12	Uplink: 7 - 12 , Downlink: 12

Go to “ABP Setting” page to configure ABP setting



(ex. 12345678 / 12345678123456781234567812345678 /
12345678123456781234567812345678)

Go to “Payload Broker Setting” page to check MQTT related settings

The screenshot displays the 'Payload Broker Setting' interface of a LoRa Outdoor Gateway. The browser address bar shows '192.168.75.154:8080/ns_setting.html'. The page title is 'LoRa Outdoor Gateway' with a 'Welcome, admin | Log out' link. A sidebar on the left lists various settings: Dashboard, Date & Time, WAN Settings, Account Settings, Device Management, LoRa Module Status, OTAA Status, OTAA Group Setting, ABP Setting, ABP Group Setting, and Payload Broker Setting (which is currently selected). The main content area is titled 'Payload Broker (MQTT)' and contains the following fields:

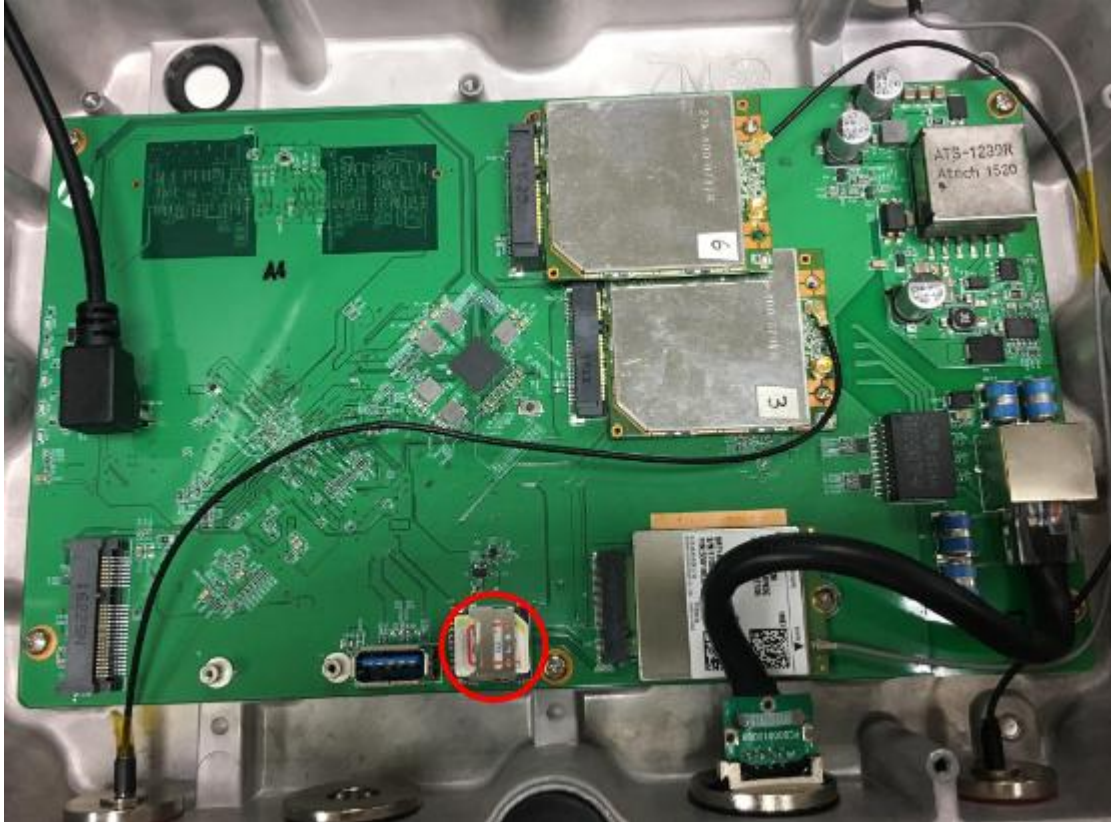
- Hostname: 127.0.0.1
- Port: 1883
- Subscribe(UL) Topic Prefix: **GIOT-GW/UL/** (highlighted with a red box)
- Publish(DL) Topic Prefix: GIoT-GW/DL/ + 0000000000000003 (GW ID) / 0000000000000006
- Downlink ACK Prefix: GIoT-GW/DL-report/

At the bottom of the form are 'Save' and 'Cancel' buttons.

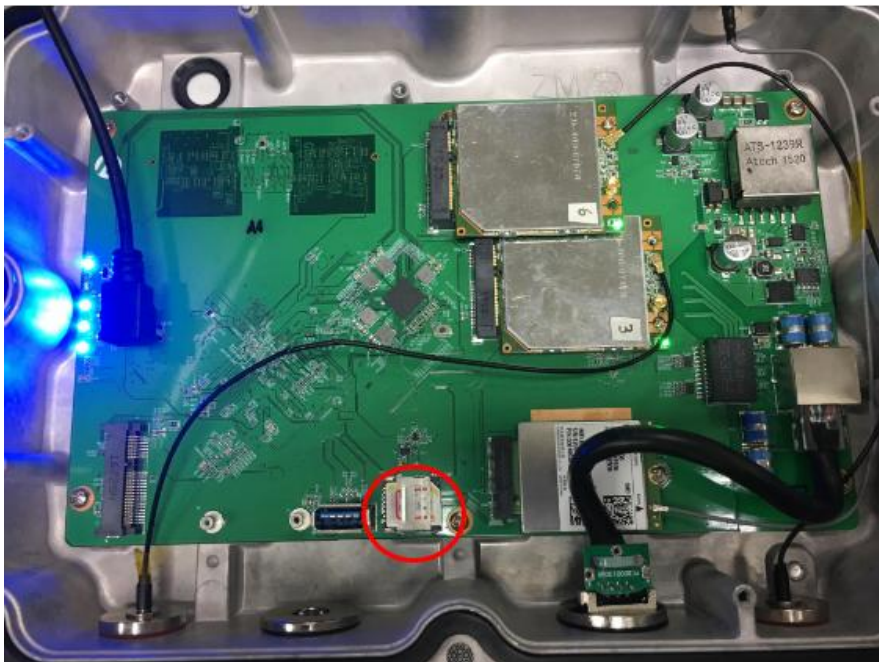
User can use “GIOT-GW/UL/+” to subscribe all the uplink data.

LTE setting

Power-off and insert SIM card



Power-on and Enable LTE function via Admin GUI



After login, go to WAN setting to enable LTE (input PIN code if needed) and press “SAVE”

LoRa Outdoor Gateway

Welcome, admin | Log out

Dashboard

Date & Time

WAN Settings

Account Settings

Device Management

LoRa Module Status

OTAA Status

OTAA Group Setting

ABP Setting

ABP Group Setting

Payload Broker Setting

WAN Settings

Ethernet Settings

IP Address Assignment: DHCP Client

MTU: Auto Manual

MTU Value: 1500 bytes(Range:576~1500,Default:1500)

DNS Server Source: Get dynamically from ISP

DNS Server1: 192.168.75.1

DNS Server2:

MAC Address Source: Use default MAC address

MAC Address: 1C:49:7B:C0:C0:A2

3G/4G/LTE Settings

3G/4G/LTE: OFF ON

If the 3G/4G/LTE is turned off, the device can only access Internet through ethernet.

Save Cancel

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LoRa Outdoor Gateway

Welcome, admin | Log out

Dashboard

Date & Time

WAN Settings

Account Settings

Device Management

LoRa Module Status

OTAA Status

OTAA Group Setting

ABP Setting

ABP Group Setting

Payload Broker Setting

WAN Settings

Ethernet Settings

IP Address Assignment: DHCP Client

MTU: Auto Manual

MTU Value: 1500 bytes(Range:576~1500,Default:1500)

DNS Server Source: Get dynamically from ISP

DNS Server1: 192.168.75.1

DNS Server2:

MAC Address Source: Use default MAC address

MAC Address: 1C:49:7B:C0:C0:A2

3G/4G/LTE Settings

3G/4G/LTE: OFF ON

If the 3G/4G/LTE is turned off, the device can only access Internet through ethernet.

PIN Code:

Carrier:

APN Settings: Auto Manual

MCC:

MNC:

APN:

Server:

Username:

Password:

Proxy:

Port:

MMSC:

MMS Proxy:

MMS Port:

Type:

Save Cancel

Unplug PoE Adapter's "DATA IN" port to let device switch from ethernet to LTE

##

By default, device use ethernet to connect to internet. Unless PoE Adapter's "DATA IN" port is unplugged, device will switch to use LTE.

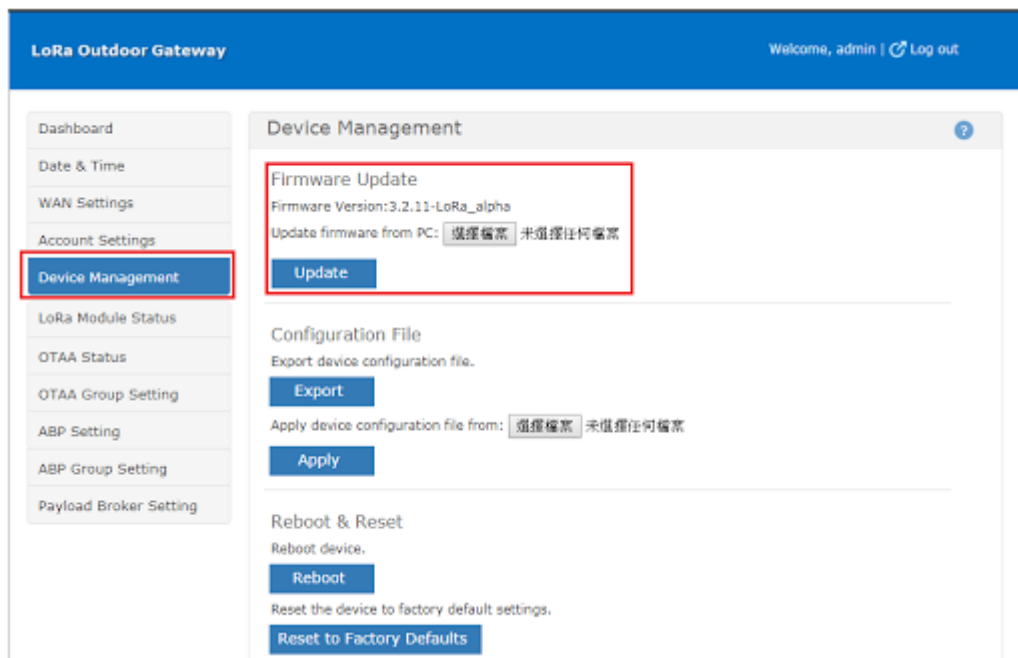


Firmware Update

Go to "Device Management"

Select the Firmware file's location

And press Update.



Installation procedure

Please follow the below process and suggestion when install the device

For POE input cable: please use cable type CL3, CL3P, CL3R, CL3X, marked "SUNLIGHT RESISTANT", "SUN. RES.", or "SR." and "water resistant" or "W".

For LAN cable: please use cable type as described in Article 800 of ANSI/NFPA 70, "National Electrical Code" (NEC).

Step 1.



Step 2.



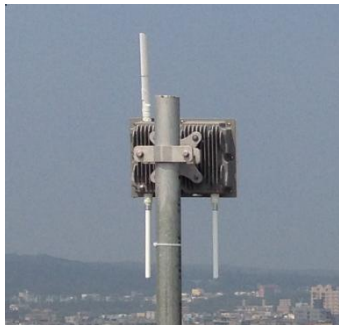
Step 3.



Step 4.



Step 5. Install the device on a pole.



Please follow below picture's direction, when install the device.



Federal Communication Commission Interference Statement

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 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 Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

IMPORTANT NOTE:

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance **23cm** between the radiator & your body.

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

Country Code selection feature to be disabled for products marketed to the US/CANADA.

Professional installation instruction

Please be advised that due to the unique function supplied by this product, the device is intended for use with our interactive entertainment software and licensed third-party only. The product will be distributed through controlled distribution channel and installed by trained professional and will not be sold directly to the general public through retail store.

1. Installation personal

This product is designed for specific application and needs to be installed by a qualified personal who has RF and related rule knowledge. The general user shall not attempt to install or change the setting.

2. Installation location

The product shall be installed at a location where the radiating antenna can be kept 23cm from nearby person in normal operation condition to meet regulatory RF exposure requirement.

3. External antenna

Use only the antennas which have been approved by the applicant. The non-approved antenna(s) may produce unwanted spurious or excessive RF transmitting power which may lead to the violation of FCC/IC limit and is prohibited.

4. Installation procedure

Please refer to user's manual for the detail.

5. Warning

Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in relevant rules. The violation of the rule could lead to serious federal penalty.