Universal Network Management
AIoT Application Server with LCD

NMS-AIoT

Quick Installation Guide

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1. Package Contents

Thank you for purchasing PLANET Universal Network Management AIoT Application Server. PLANET NMS-AIoT is described below:

NMS-AIoT	Universal Network Management AIoT Application Server with LCD

Open the box of the **NMS-AIoT** and carefully unpack it. The box should contain the following items:

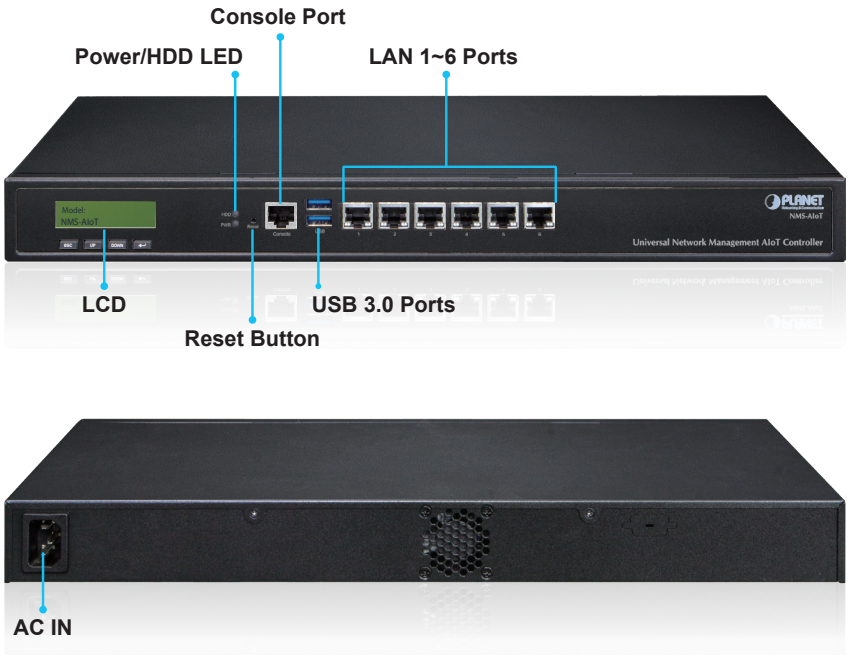
- NMS-AIoT Controller x 1
- Quick Installation Guide x 1
- Power Cord x 1
- Console Cable x 1
- Installation Kit x 1

If any item is found missing or damaged, contact your local reseller for replacement.

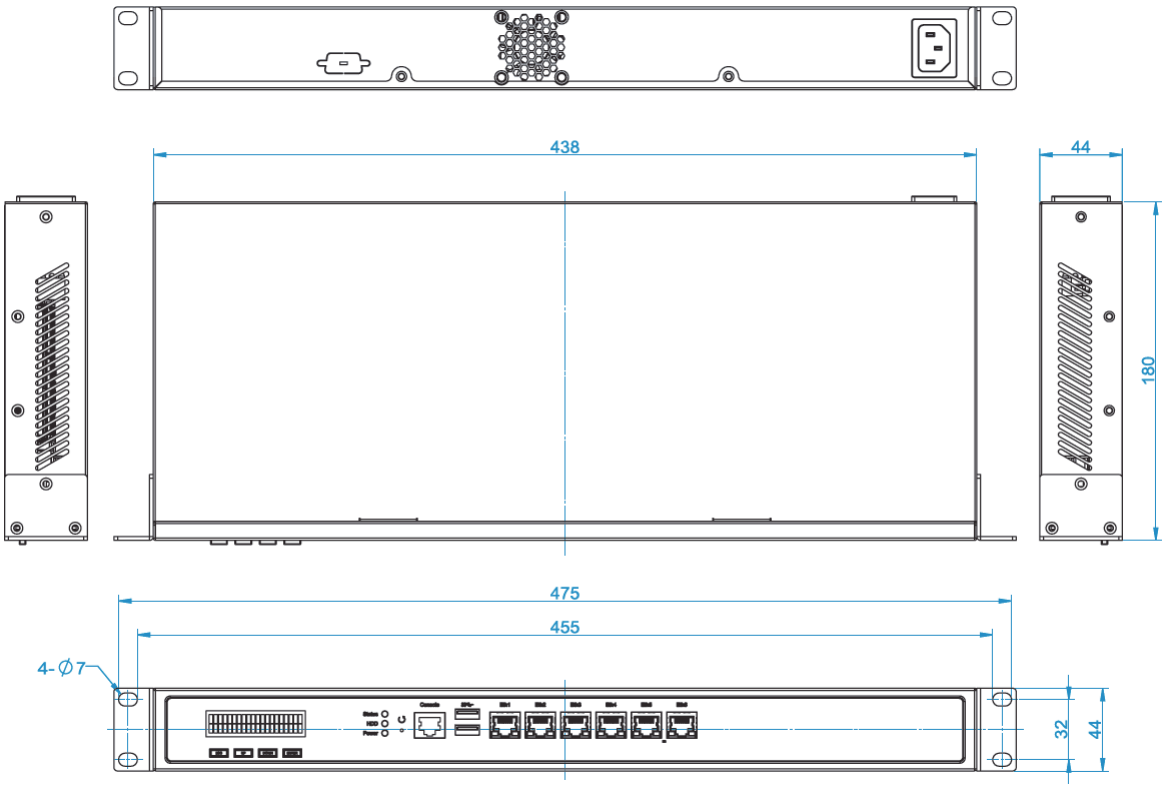
2. Hardware Description

2.1 Overview

2.2 Mechanical Drawing



2.2 Mechanical Drawing



2.3 Hardware Specifications

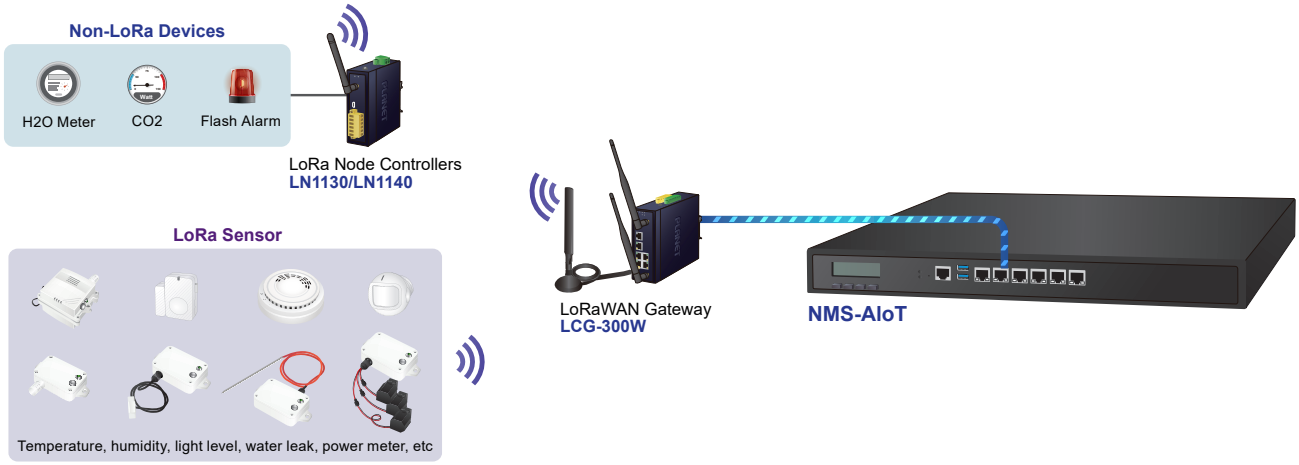
Product	NMS-AIoT
	Universal Network Management AIoT Application Server with LCD & 6 10/100/1000T LAN Ports
Physical Specifications	
I/O Interface	6 10/100/1000BASE-T Gigabit Ethernet RJ45 ports
	2 USB 3.0 ports (They cannot be used at the same time.)
	1 Factory default button (GPIO)
	1 RJ45 console port
	2 DB-9 COM1,COM2 (reserved)
Storage	2.5” 64G SATA HDD
LED	2 LED (Power/HDD)
LCM Size (Active Area)	49.45 (W) x 9.58 mm (H)
LCM Button	4 touch buttons for enter, exit, up and down
Dimensions (W x D x H)	438 (W) x 180 (D) x 44 mm (H) 17.24” (W) x 7.09” (D) x 1.73” (H)
Weight	3 kg (6.62 lbs)
Form Factor	1U 19-inch rack-mount
Enclosure	Metal
Power Requirements	3-pin AC power input socket AC 100~240V, 65W
Environment & Certification	
Temperature	Operating: 0 ~ 50 degrees C Storage: -20 ~ 70 degrees C
Humidity	5 ~ 90% relative humidity (non-condensing)
MTBF (Hours)	100,000

3. Product Features

Network Management		
Dashboard		Providing the at-a-glance view of center system, events summary, monitored record of each sensor and real-time alarm status
Device List		Manages all sensors and devices in the NMS-AIoT
Detailed Information		Displays monitoring and history records, the latest 10 event list, and current information for sensors.
User Management		Privilege Level Configuration
Event Reports		The alarm event of each sensor can be reported based on customized rules or system updates/changes.
Alarm System		Email alerts for the administrator via the SMTP server
Automatic Rules		Create one or more customized automatic rules for each sensor
Maximum Scalability		3,000 nodes
Network Services		
Maintenance	Backup	System backup and restore to local or USB HDD
	Reboot	Provides system reboot manually or automatically per power schedule
Standards Conformance		
Regulatory Compliance		CE, FCC
Standards Compliance		IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab Gigabit 1000BASE-T

4. Network Configuration

Set up the NMS-AIoT Controller with Ethernet connection for the first-time configuration by following the steps below.



Default IP Address: 192.168.1.100
Default Management Port: 8888
Default Username: admin
Default Password: admin

Launch the Web browser (Google Chrome is recommended.) and enter the default IP address **"https://192.168.1.100:8888"**. Then, enter the default username and password shown above to log on to the system.

The secure login with SSL (HTTPs) prefix is required.

After logging on, connect the NMS-AIoT Controller to the network to centrally control PLANET managed devices.

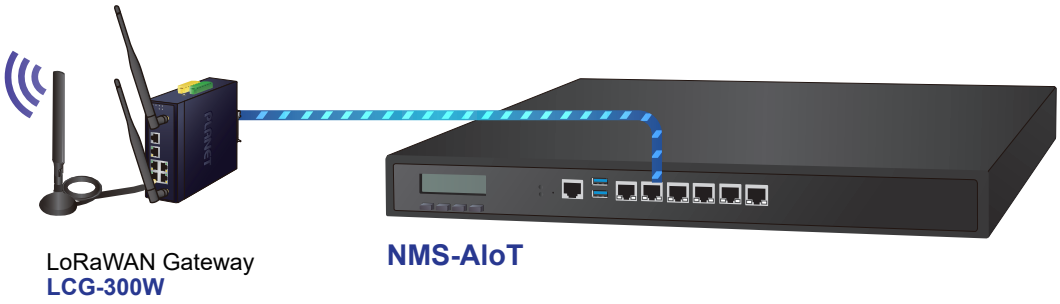
5. Bound IoT Devices Monitored via NMS-AIoT Controller

The NMS-AIoT can monitor all bound wired and wireless IoT devices, including managed gateways (LCG series), LoRaWAN sensors (LS-100/LS-200 series), and LoRa node controllers, all compliant with the LoRaWAN protocol.

Please regularly check PLANET website for the latest compatibility list of managed devices.

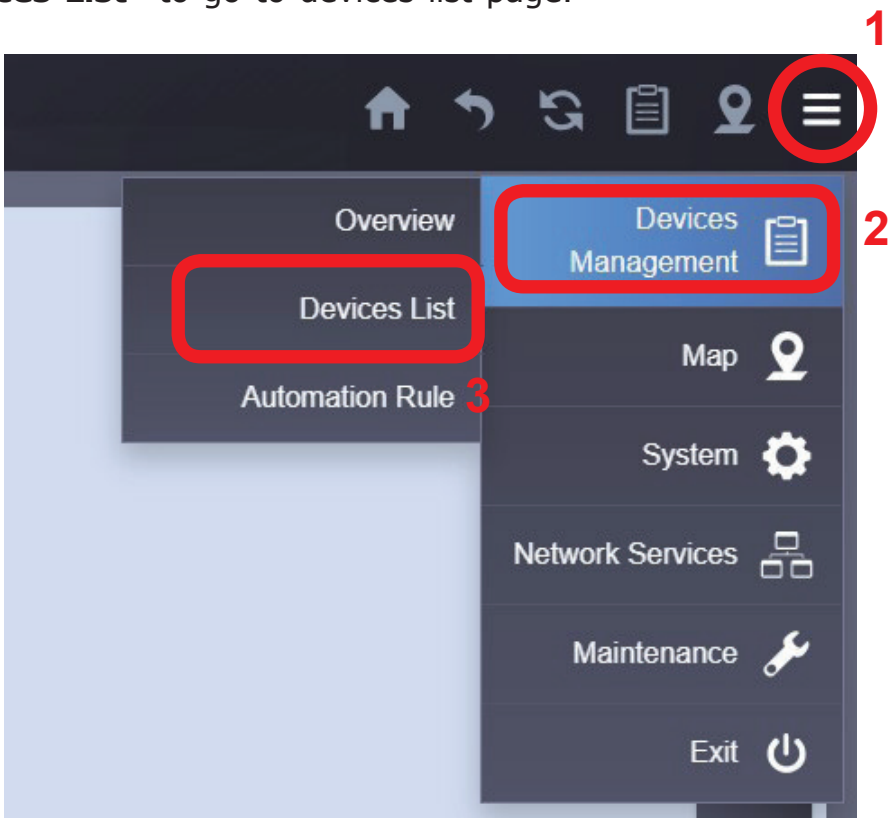
Follow the steps below to set up the NMS-AIoT server and LoRaWAN devices.

Step 1: Connect the devices, NMS-AIoT Controller, LoRaWAN gateway and your computer to the same network.

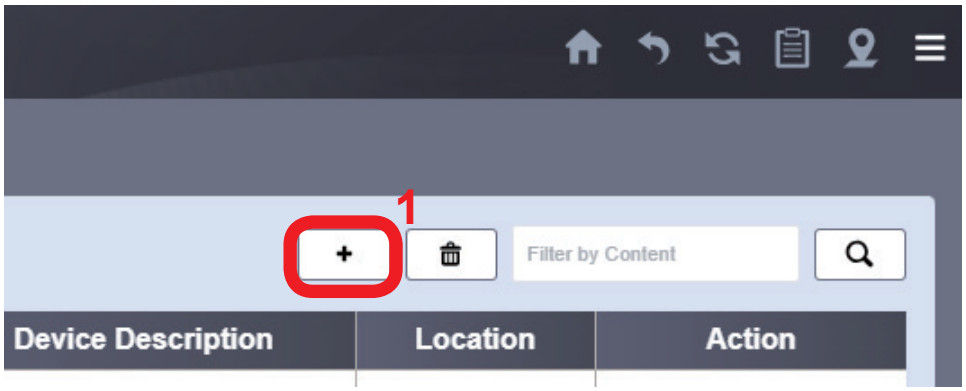


Step 2: Add a new LoRaWAN gateway to the NMS-AIoT system, such as the LCG-300, LCG-300W, or LCG-300-NR.

1. In NMS-AIoT, press the **"Menu"** icon ☰. Then click **"Devices Management"** and **"Devices List"** to go to devices list page.

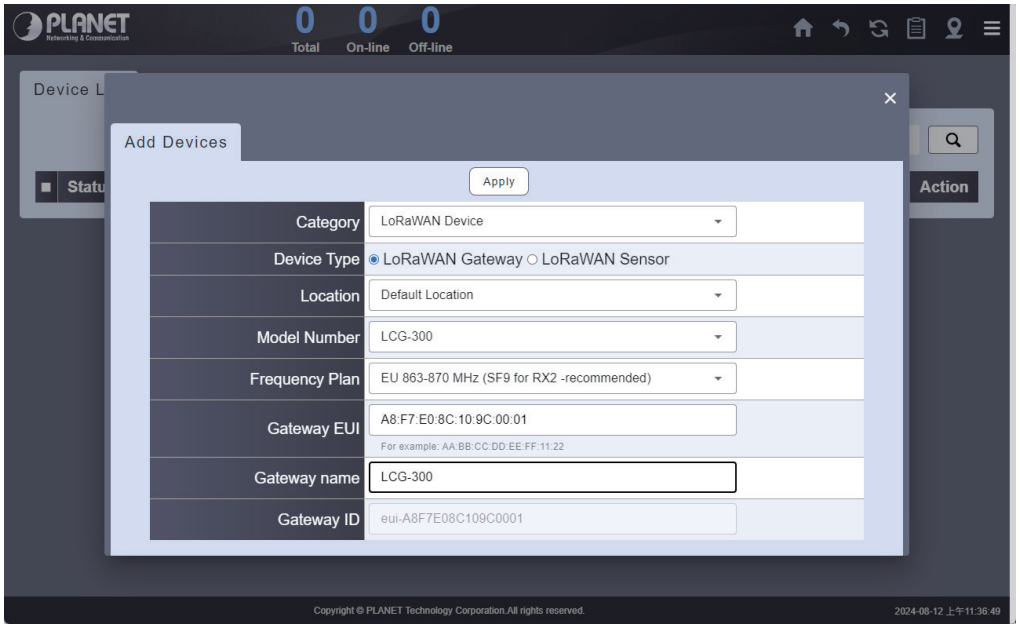


2. Press the "**plus**" icon + to open table to add new device.



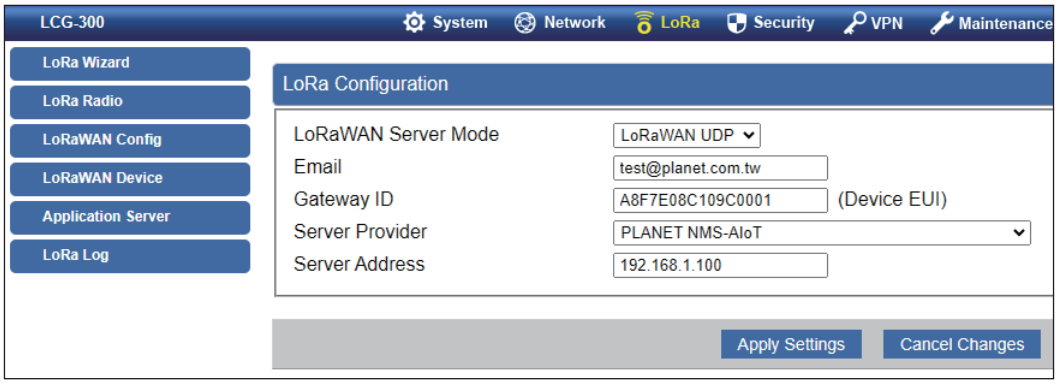
3. **Add a new LoRaWAN gateway on the NMS-AIoT**

   Enter the relevant data for the LoRaWAN gateway.

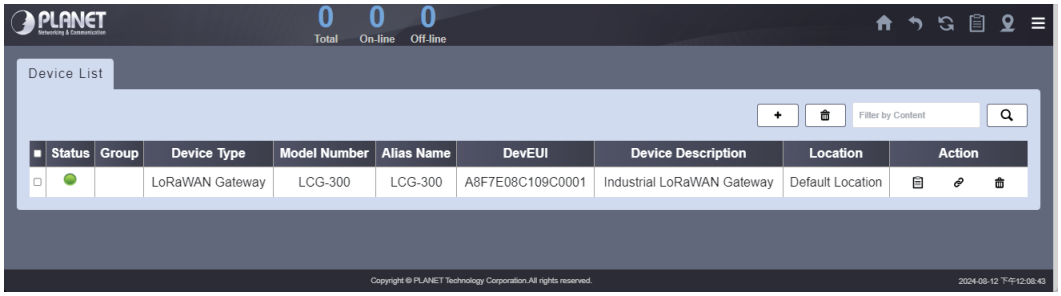


4. **Set up the LoRaWAN gateway on the LCG-300 device.**

   Select **PLANET NMS-AIoT** as the application server. Then, enter the IP address of NMS-AIoT and apply the settings.



After adding sensor(s), it will be show in device list in WEB UI of NMS-AIoT.

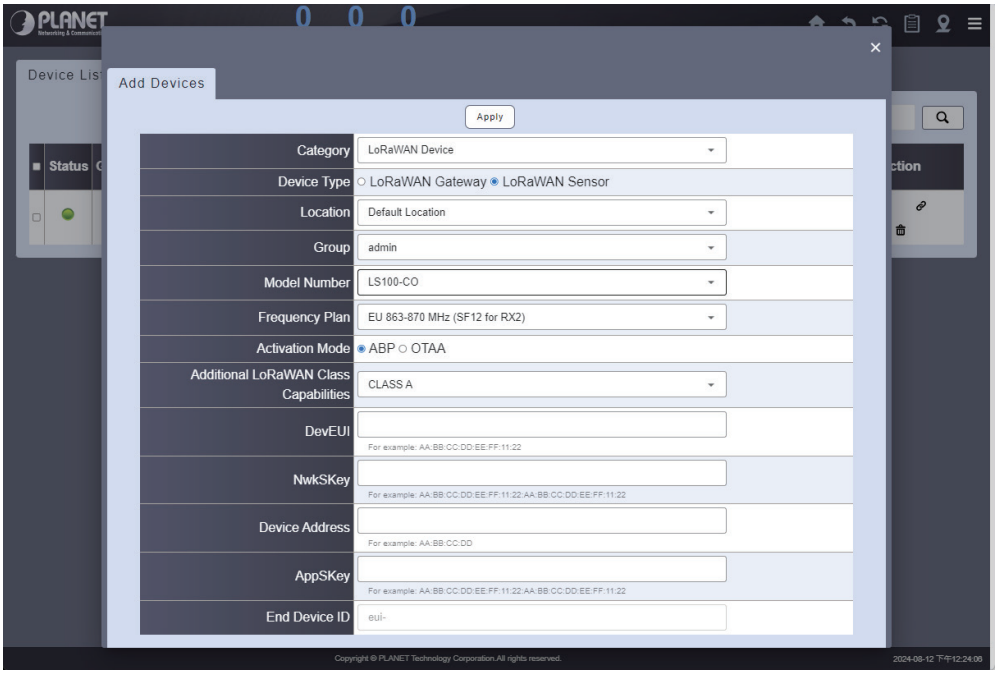


Step 3: Add new LoRaWAN sensors to the NMS-AIoT system.

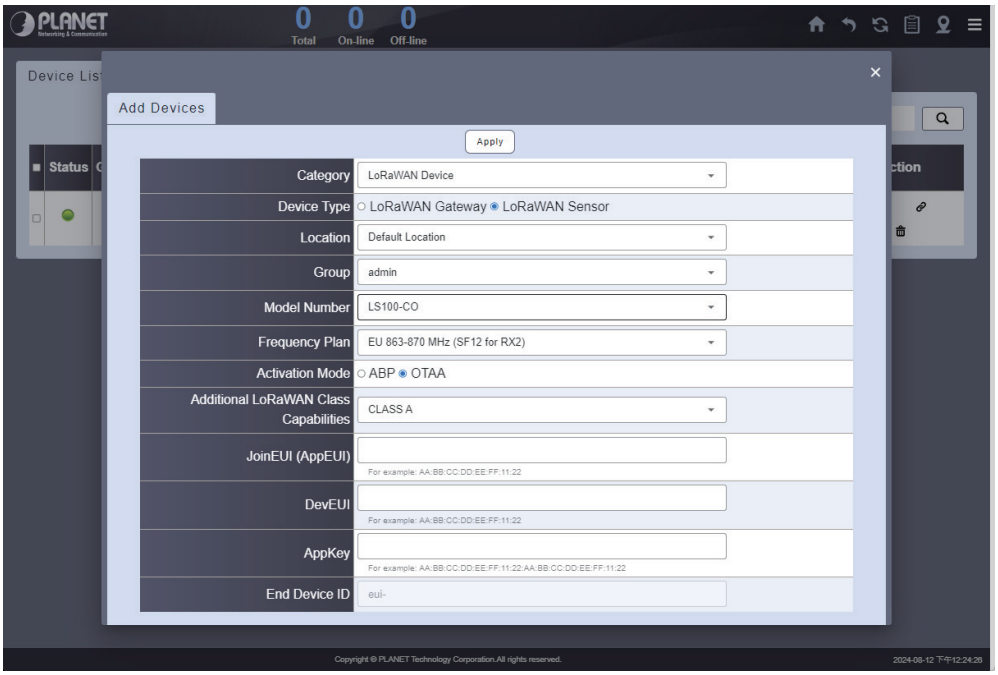
Add a new LoRaWAN sensor

Enter the relevant information for the LoRaWAN sensor so that NMS-AIoT can parse the sensor data. If you're unsure of the sensor information, please check the label on the sensor or its packaging, or contact the provider.

Activation Mode: ABP (Authentication By Personalisation)



Activation Mode: OTAA (Over-The-Air-Activation)



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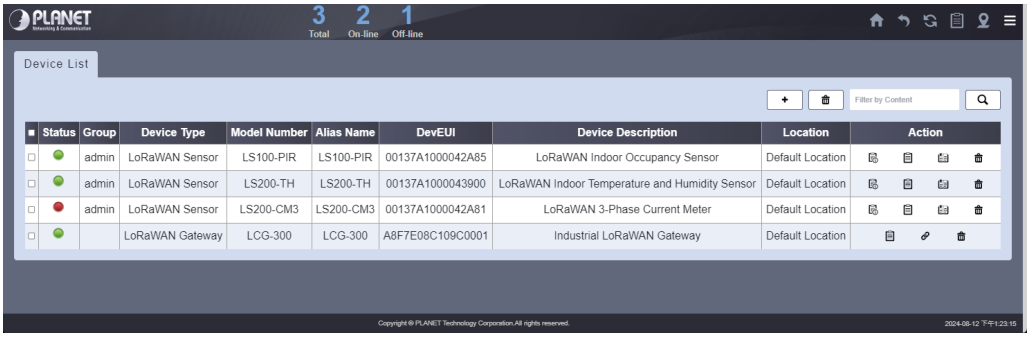

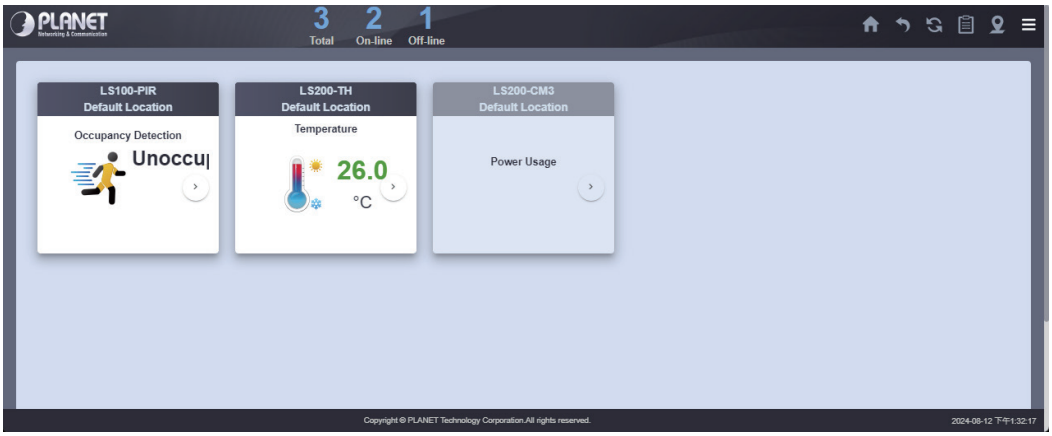

Step 4: Web User Interface

Dashboard View: Real-time alarms and individual sensor chart records

Overview of Sensors: Current monitoring of data for each sensor

Automatic Rule: Customize rule for each sensor

Name	Event		Action		
Rule Name	Device	Condition	Device	Action	
rule of LS100-WL	LS100-WL	detected Water leak	ENM-AIOT	Send Email	
rule of LS100-PIR	6FLAB_Entrance	detected temperature is > 28.00 °C detected Occupied	ENM-AIOT	Send Email	
rule of LS100-DW	LS100_DW	detected door Open	ENM-AIOT	Send Email	
rule of LS200-TH	Office-T/H	detected temperature is > 28.00 °C detected humidity is > 65.00 %	ENM-AIOT	Send Email	
rule of LS200-PT	LS200-PT_B1-Temp.	detected temperature is > 79.00 °C	ENM-AIOT	Send Email	
rule of LS200-TC	Chamber4-Temp.	detected temperature is > 79.00 °C	ENM-AIOT	Send Email	
rule of LS200-LG	Office-ill.	detected illuminance is > 5000.00 Lux	ENM-AIOT	Send Email	
rule of LS200-CM3	Chamber213-CM3	detected current 1 is > 11000.00 mA detected current 2 is > 11000.00 mA detected current 3 is > 11000.00 mA the grand total is > 4000 kWh this month	ENM-AIOT	Send Email	
rule of LS200-VOC	6FLAB-AirQ	detected TVOC is > 150.00 ppb detected temperature is > 28.00 °C detected humidity is > 65.00 %	ENM-AIOT	Send Email	
rule of LS200-PM25	LS200-PM25	detected PM25 is > 100.00 μg/m³ detected temperature is > 28.00 °C detected humidity is > 60.00 %	ENM-AIOT	Send Email	

Event and Log: Event triggers or system event history records

ID	Type	Time	Source	Status	Information
1	System	19:18:16	System (NMS-AIoT)	Info	success to send mail
2	Alarm	19:18:15	00137A1000042A84 (6FLAB_Entrance)	NoAlarm	U
3	System	19:14:59	System (NMS-AIoT)	Info	succes
4	Alarm	19:14:58	00137A1000042A80 (Chamber213-CM3)	Alarm	Low
5	System	19:12:48	System (NMS-AIoT)	Info	succes
6	Alarm	19:12:47	00137A1000042A84 (6FLAB_Entrance)	Alarm	C
7	System	19:12:13	System (NMS-AIoT)	Info	succes
8	Alarm	19:12:11	00137A1000042A7D (Office-T/H)	NoAlarm	Temperature is 25.72 °C
9	Device	19:12:11	00137A1000042A7D (Office-T/H)	Edit	LS200-TH(Office-T/H) @6F_Office edited
10	System	19:11:58	System (NMS-AIoT)	Info	success to send mail
11	Alarm	19:11:57	00137A1000042A7D (Office-T/H)	Alarm	Temperature is > 25 °C
12	Device	19:11:57	00137A1000042A7D (Office-T/H)	Edit	LS200-TH(Office-T/H) @6F_Office edited
13	System	19:08:47	System (NMS-AIoT)	Info	success to send mail
14	Alarm	19:08:45	00137A10000438F4 (LS200-CM)	Alarm	LS200-CM(LS200-CM) @B1 disconnected
15	System	19:06:54	System (nmsaiot)	Info	nmsaiot successfully login

6. Further Information:

The above steps introduce the simple installations and configurations of the NMS-AIoT Application Server. For further configurations of PLANET NMS-AIoT, please refer to the user manual, which can be downloaded from the website.

Thank you for purchasing PLANET products. You can browse our online FAQ resource and User's Manual on PLANET Web site first to check if it could solve your issue. If you need more support information, please contact PLANET support team

PLANET online FAQs:
https://www.planet.com.tw/en/support/faq

Support team mail address:
support@planet.com.tw

User's Manual:
https://www.planet.com.tw/en/product/NMS-AIoT

(Please select the suitable user's manual from the list.)