

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

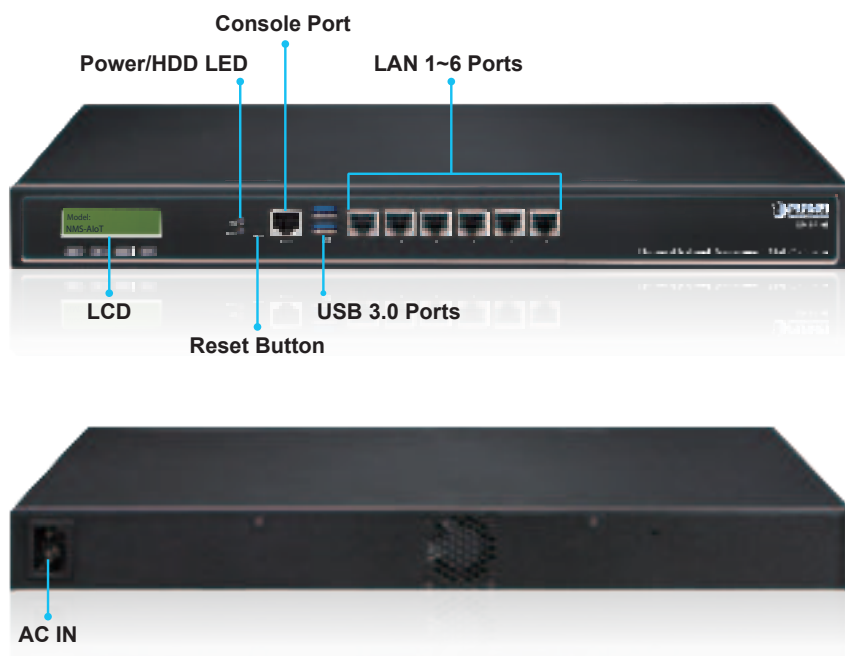
- NMS-AIoT Controller x 1
- Quick Installation Guide x 1
- Power Cord x 1
- Console Cable x 1
- Installation Kit x 1

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

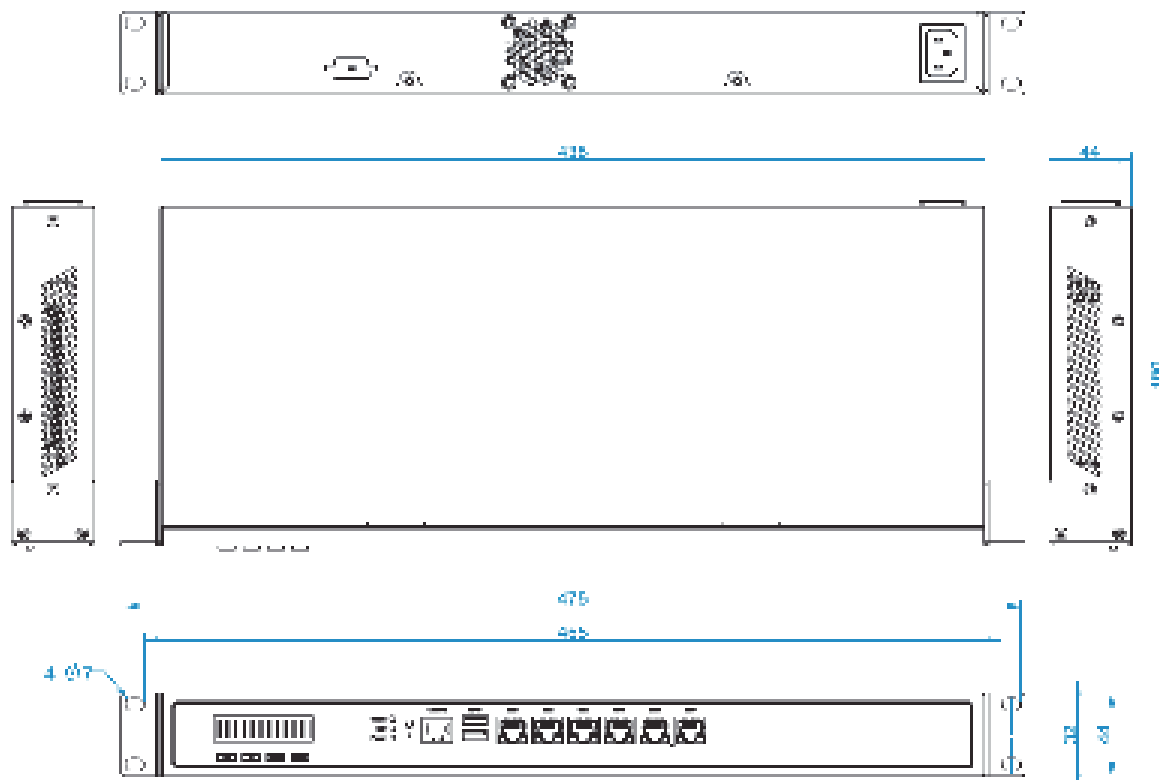
2. Hardware Description

2.1 Overview

2.2 Mechanical Drawing



2.2 Mechanical Drawing



2.3 Hardware Specifications

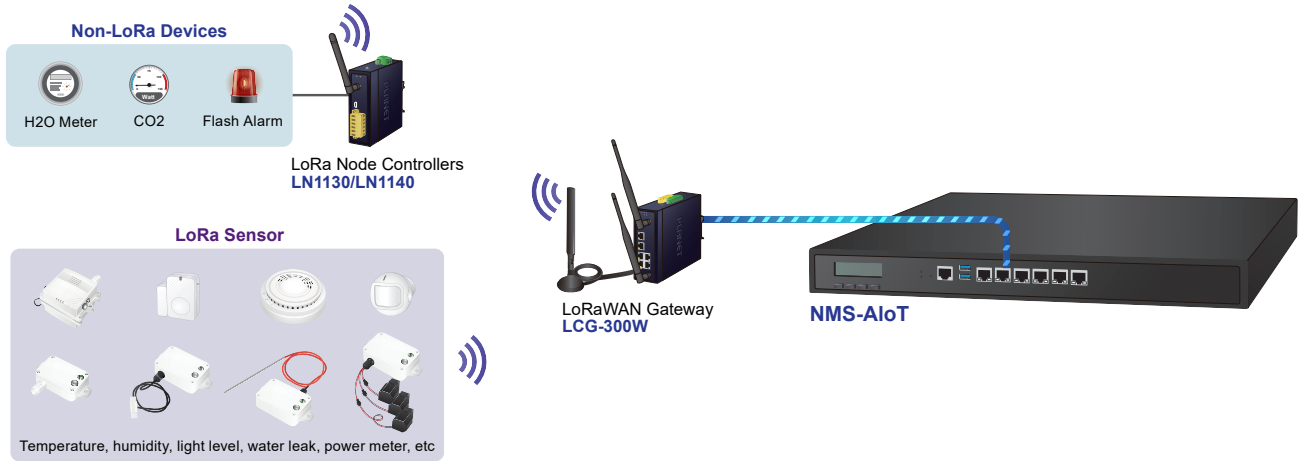
Product	NMS-AIoT
	Universal Network Management AIoT Application Server with LCD & 6 10/100/1000T LAN Ports
Physical Specifications	
I/O Interface	6 10/100/1000BASE-T Gigabit Ethernet RJ45 ports
	2 USB 3.0 ports (They cannot be used at the same time.)
	1 Factory default button (GPIO)
	1 RJ45 console port
	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.

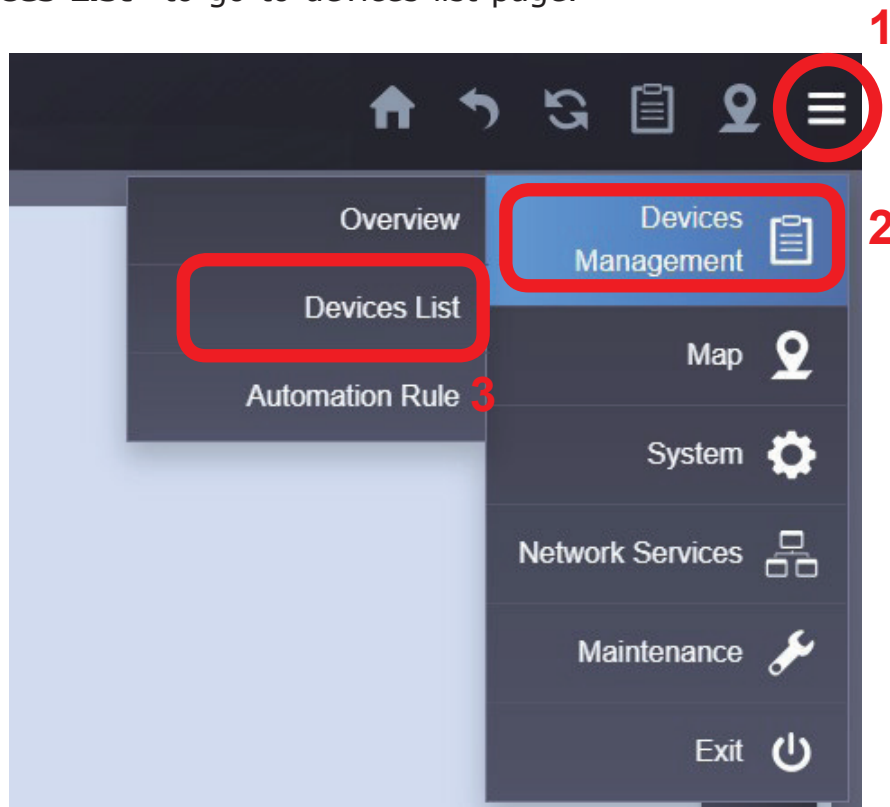
Follow the steps below to set up the NMS-AIoT server and LoRaWAN devices.

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

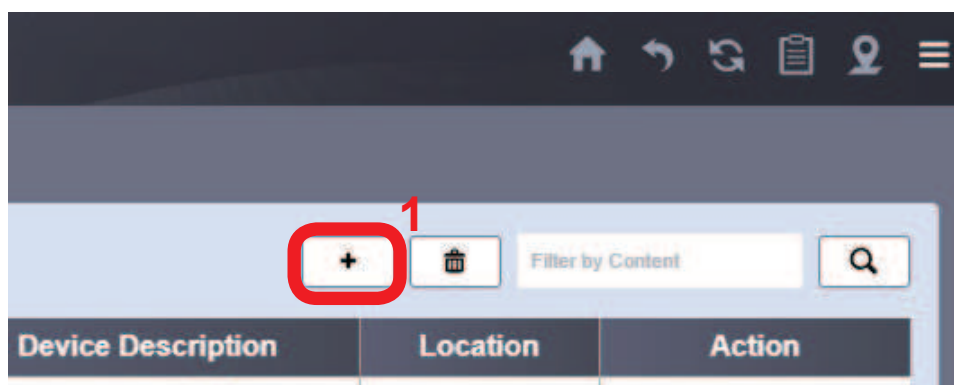


Step 2: Add a new LoRaWAN gateway to the NMS-AIoT system, such as the LCG-300, LCG-300W, or LCG-300-NR.

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.



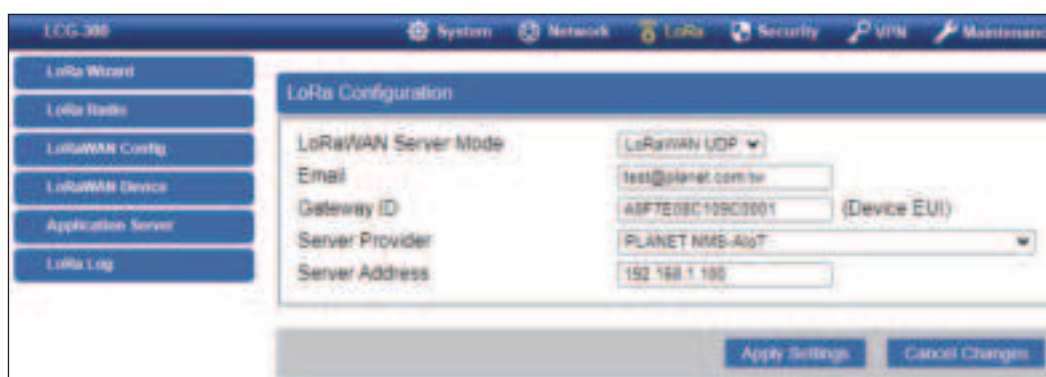
3. **Add a new LoRaWAN gateway on the NMS-AIoT**

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.

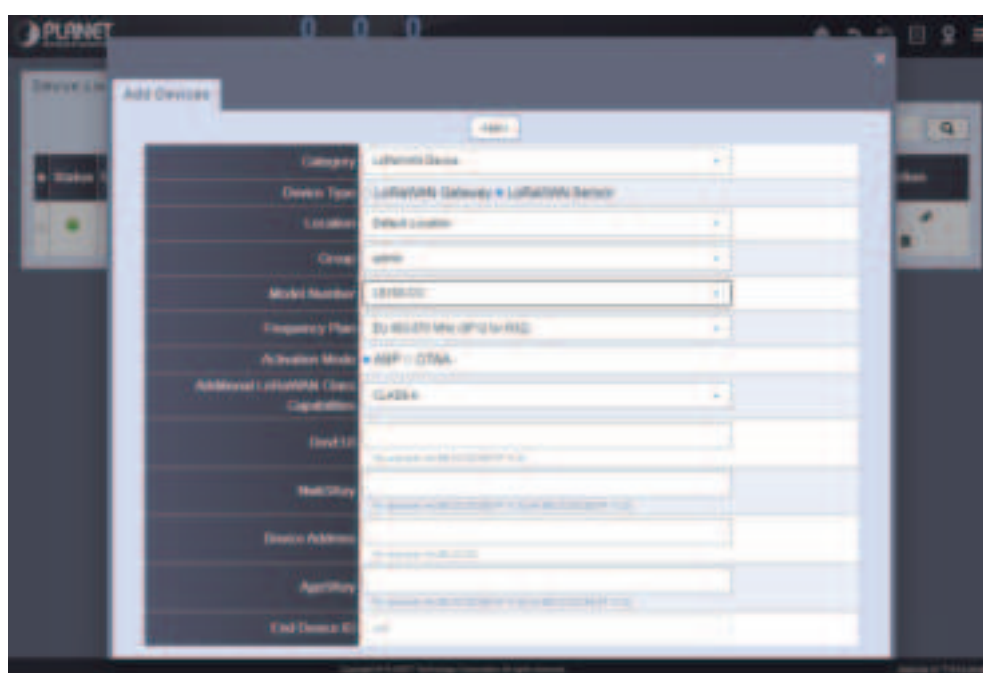


Step 3: Add new LoRaWAN sensors to the NMS-AIoT system.

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)

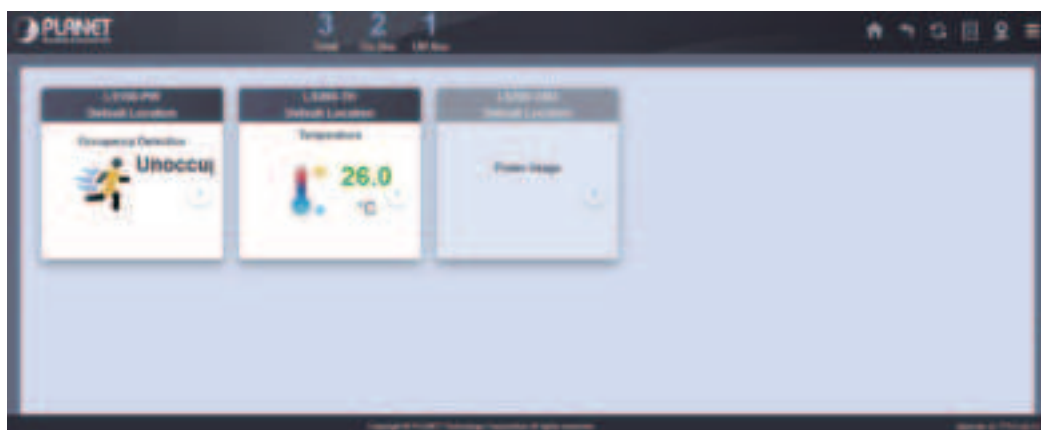
The screenshot shows the 'Add Devices' form in the PLANET NMS-AIoT WEB UI. The form is titled 'Add Devices' and has a 'NEW' button. The fields are as follows:

Field	Value
Category	Lufkin/AM Gateway
Device Type	Lufkin/AM Gateway
Location	Default Location
Group	AMG
Model Number	L1100-01
Frequency Plan	EU 863-875 MHz (GSM-R)
Activation Mode	OTAA
Additional Lufkin/AM Data	OTAA
Device ID	
Device ID	
Device ID	
Device ID	

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

The screenshot shows the 'Device List' table in the PLANET NMS-AIoT WEB UI. The table has the following columns: Status, Group, Device Type, Model Number, Max Name, Device ID, Device Description, Location, and Action.

Status	Group	Device Type	Model Number	Max Name	Device ID	Device Description	Location	Action
Online	AMG	Lufkin/AM Gateway	L1100-01	L1100-01	0000000000000000	Lufkin/AM Gateway	Default Location	[Edit] [Delete] [Refresh]
Online	AMG	Lufkin/AM Gateway	L1100-01	L1100-01	0000000000000000	Lufkin/AM Gateway	Default Location	[Edit] [Delete] [Refresh]
Online	AMG	Lufkin/AM Gateway	L1100-01	L1100-01	0000000000000000	Lufkin/AM Gateway	Default Location	[Edit] [Delete] [Refresh]
Online	AMG	Lufkin/AM Gateway	L1100-01	L1100-01	0000000000000000	Lufkin/AM Gateway	Default Location	[Edit] [Delete] [Refresh]



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

The screenshot shows the PUMPNET dashboard with a table of automatic rules. The table has columns for Name, Rule Name, Status, Condition, Action, and Priority. The rules are listed in the table below.

Name	Rule Name	Status	Condition	Action	Priority
Rule 01 (00000001)	00000001	Active	sensor status is 1	sensor status is 1	1
Rule 02 (00000002)	00000002	Active	sensor status is 2	sensor status is 2	2
Rule 03 (00000003)	00000003	Active	sensor status is 3	sensor status is 3	3
Rule 04 (00000004)	00000004	Active	sensor status is 4	sensor status is 4	4
Rule 05 (00000005)	00000005	Active	sensor status is 5	sensor status is 5	5
Rule 06 (00000006)	00000006	Active	sensor status is 6	sensor status is 6	6
Rule 07 (00000007)	00000007	Active	sensor status is 7	sensor status is 7	7
Rule 08 (00000008)	00000008	Active	sensor status is 8	sensor status is 8	8
Rule 09 (00000009)	00000009	Active	sensor status is 9	sensor status is 9	9
Rule 10 (00000010)	00000010	Active	sensor status is 10	sensor status is 10	10

Event and Log: Event triggers or system event history records

The screenshot displays the J-PURVIS Event Log interface. At the top, there is a header bar with the J-PURVIS logo, a date/time display (30/03/2020 14:00), and navigation icons. Below the header, a search bar is visible. The main area contains a table with the following columns: ID, Type, Time, Location, Status, and Information. The table lists various system events, including user logins, system status changes, and security alerts. A context menu is open over the table, showing options like 'View Details', 'Export', and 'Delete'.

ID	Type	Time	Location	Status	Information
1	System	30/03/2020	System (M0000000)	OK	System start up
2	System	30/03/2020	System (M0000000) (OFFLINE, Emergency)	Offline	
3	System	30/03/2020	System (M0000000)	OK	System start up
4	System	30/03/2020	System (M0000000) (OFFLINE, Emergency)	Offline	
5	System	30/03/2020	System (M0000000)	OK	System start up
6	System	30/03/2020	System (M0000000) (OFFLINE, Emergency)	Offline	
7	System	30/03/2020	System (M0000000)	OK	System start up
8	System	30/03/2020	System (M0000000) (OFFLINE, Emergency)	Offline	
9	System	30/03/2020	System (M0000000)	OK	System start up
10	System	30/03/2020	System (M0000000) (OFFLINE, Emergency)	Offline	
11	System	30/03/2020	System (M0000000)	OK	System start up
12	System	30/03/2020	System (M0000000) (OFFLINE, Emergency)	Offline	
13	System	30/03/2020	System (M0000000)	OK	System start up
14	System	30/03/2020	System (M0000000) (OFFLINE, Emergency)	Offline	
15	System	30/03/2020	System (M0000000)	OK	System start up
16	System	30/03/2020	System (M0000000) (OFFLINE, Emergency)	Offline	
17	System	30/03/2020	System (M0000000)	OK	System start up
18	System	30/03/2020	System (M0000000) (OFFLINE, Emergency)	Offline	
19	System	30/03/2020	System (M0000000)	OK	System start up
20	System	30/03/2020	System (M0000000) (OFFLINE, Emergency)	Offline	

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.)

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