

# UG87 LoRaWAN Gateway

## Quick Start Guide

Ursalink Technology Co., Ltd.

## Welcome

Thank you for choosing Ursalink UG87 LoRaWAN Gateway.

This guide teaches you how to install the UG87 and how to log in the web GUI to configure the device. Once you complete the installation, refer to the Ursalink UG87 User Guide for instructions on how to perform configurations on the device.

#### **Related Documents**

This Quick Start Guide only explains the installation of Ursalink UG87 LoRaWAN Gateway. For more functionality and advanced settings, please refer to the relevant documents as below.

Document	Description		
Ursalink UG87 Datasheet Datasheet for the Ursalink UG87 LoRaWAN Gateway.			
Urselink UC97 User Cuide	Users can refer to the guide for instruction on how to log in the		
Orsallink OG87 Oser Guide	web GUI, and how to configure all the settings.		

The related documents are available on Ursalink website: <u>http://www.ursalink.com</u>.

#### **Declaration of Conformity**

UG87 is in conformity with the essential requirements and other relevant provisions of the CE, FCC, and RoHS.





For assistance, please contact Ursalink technical support: Email: support@ursalink.com Tel: 86-592-5023060 Fax: 86-592-5023065



## **1. Packing List**

Before you begin to install the UG87 LoRaWAN Gateway, please check the package contents to verify that you have received the items below.

### **1.1 Package Contents**









1 × UG87

2 × Cellular Antennas

1 × LoRa Antenna

1 × GPS Antenna



1 × Wall Mounting Kit



2 × Pole Mounting Kit



screws

(WiFi Version Only)

1 × WiFi Antenna







 $1 \times Warranty Card$ 

1 × Ethernet Cable(Optional)



1 × Power cable (AC/ DC Version Only)





 $1 \times Pole Mount A + 2 \times U-Bolt$ 







 $1 \times Pole Mount B + 2 \times U-Bolt$ 

Screws

If any of the above items is missing or damaged, please contact your Ursalink sales representative.



#### 2. Hardware Introduction

#### 2.1 Overview

A. Front Panel



- ① AUX Cellular Antenna
- ② WLAN Antenna
- ③ LoRa Antenna
- (4) MAIN Cellular Antenna
- 5 Vent Plug

#### B. Rear Panel





- 6 Power Connector
- ⑦ Ethernet Port (PoE)
- 8 LED&SIM Area
- (9) GPS Antenna

#### LED&SIM Area

- 10 PWR: Power Indicator
- ① SYS: System Indicator
- ① SIM Card Slot
- (13 L2: Cellular Indicator
- (14) RST: Reset Button
- 15 L1: LoRa Indicator

C. Top & Bottom View







## 2.2 Dimensions (mm)





## 2.3 LED Indicators

LED	Indication	Status	Description
		On	The power is switched on
PVVR	Power Status	Off	The power is switched off
		Croop Light	Static: Start-up
SYS	System Status	Green Light	Blinking slowly: the system is running properly
		Off	The system goes wrong
11	LoRa Status	Green Light	Package Forwarder mode is running well.
		Off	Package Forwarder mode is running off.
		0"	SIM1 or SIM2 is registering or fails to register (or
12		On	there are no SIM cards inserted)
	Silvi Card Status	Green Light	Static: SIM1 or SIM2 has been registered and dialed
		Green Light	up successfully

## 2.4 Reset Button

Function	Description					
	SYS LED	Action				
Reset	Blinking	Press and hold the reset button for more than 5 seconds.				
	Static Green $\rightarrow$	Release the button and wait.				
	Rapidly Red Blinking					
	Off → Blinking	The gateway resets to factory default.				

## **2.5 Ethernet Port Indicator**

Indicator	Status	Description	
	On	Connected	
Link Indicator (Orange)	Blinking	Transmitting data	
	Off	Disconnected	
Rate	On	1000 Mbps mode	
Indicator (Green)	Off	100 Mbps mode	



#### 3. Hardware Installation

#### **Environmental Requirements**

- Power Input: PoE (IEEE 802.3af standard) (Option: 100-240 VAC/9-48VDC)
- Power Consumption: Max 8.2 W
- Ingress Protection: IP67
- Operating Temperature: -40°C to 70°C (-40°F -158°F)
- Relative Humidity: 0% to 95% (non-condensing) at 25°C/77°F

#### **3.1 SIM Card Installation**

Remove the cover of the SIM card slot with a wrench and insert the sim card. **Note:** Check the triangle icon of the sim card slot.



#### 3.2 Antenna Installation

#### 3.2.1 Remove the protective caps

Remove the protective caps from the antenna connectors. Take cellular connector as an example.





## 3.2.2 Connect the antenna

Connect the antenna to the corresponding antenna connector by holding on the metal part of the antenna and rotating it clockwise.

Note: Each antenna is labeled as cellular (MAIN, AUX), GPS, WLAN or LoRa.



#### **3.3 Power Connection**

#### **3.3.1 PoE Power Supply**

#### 3.3.1.1 Connect UG87 to PoE Switch

Connect UG87 Ethernet port to a PoE switch via Ethernet cable. PoE switch must meet IEEE 802.3 af standard.



## 3.3.1.2 Connect UG87 to PoE Injector

Connect UG87 Ethernet port to a PoE injector via Ethernet cable. PoE injector must meet IEEE 802.3 af standard.





## 3.3.2 AC/DC Power Supply (Optional)

#### 3.3.2.1 Remove the protective caps

Locate the power port marked POWER on the left side of the enclosure and remove the protective cap to find the connection pins.



## 3.3.2.2 Connect the power cable

Connect a power supply cable to the power port, and rotate it clockwise.



Туре	PIN	Color	Description
VAC	1	Brown	L (VIN+)
	2	Black	GND
	3	Blue	N (VIN-)





Туре	PIN	Color	Description
VDC	1	Brown	V+
	2	Black	GND



## 3.4 Mount Gateway

The gateway can be mounted to a wall or a pole.

## 3.4.1 Wall Mounting

Make sure you have mounting bracket, bracket mounting screws, wall plugs, wall mounting screws and other required tools.

1. Before you start, make sure that your SIM card has been inserted, your antennas have been attached and that all cables have been disconnected from your enclosure.

2. Mount the enclosure to the mounting bracket with the bracket mounting screws.



3. Align the mounting bracket horizontally to the desired position on the wall, use a marker pen to mark four mounting holes on the wall, and then remove the mounting bracket from the wall.

**Note:** The connecting lines of adjacent points are at right angles.

4. Drill the four holes with a depth of 32 mm by using your drill with a 6 mm drill bit on the positions you marked previously on the wall.

5. Insert four wall plugs into the holes respectively.

6. Mount the mounting bracket horizontally to the wall by fixing the wall mounting screws into the wall plugs.

Note: Place the power port on the button when installing.





7.Reconnect the cables.

## 3.4.2 Pole Mounting (Hose clamp)

Make sure you have mounting bracket, bracket mounting screws, hose clamp and other required tools.

1. Before you start, make sure that your SIM card has been inserted, your antennas have been attached and that all cables have been disconnected from your enclosure.

2. Mount the enclosure to the mounting bracket with the bracket mounting screws.



3.Loosen the hose clamp by turning the locking mechanism counter-clockwise.



4.Straighten out the hose clamp and slide it through the rectangular holes in the mounting bracket, wrap the hose clamp around the pole.



5.Use a screwdriver to tighten the locking mechanism by turning it clockwise.



6.Reconnect the cables.

## 3.4.3 Pole Mounting (U-bolt)

Note: Pole mounting (U-bolt) is optional.

Make sure you have mounting bracket, bracket mounting screws, hose clamp and other required tools.

1. Before you start, make sure your SIM card has been inserted, your antennas have been attached and that all cables have been disconnected from your enclosure.

2. Mount the enclosure to the mounting bracket with the bracket mounting screws.



3. Wrap the U-bolt around the pole and mount the bracket with the mounting screws.





4.Reconnect the cables.



### **Getting Started**

#### 4. PC Configuration for UG87 Web GUI

PC can obtain an IP address, or you can configure a static IP address manually. The following steps are based on Windows 10 operating system for your reference.



- Click "Search Box" to search "Control Panel" on the Windows 10 taskbar.
- (2) Click "Control Panel" to open it, and then click "View network status and tasks".

Network and Sharing Center		- 🗆	Ethernet Status	×
- 🔿 👻 🛧 🕎 « Network a	nd Internet > Network and Sharing Center v č	Search Control Panel		
Control Panel Home Change adapter satings Change advanced sharing settings	View your basic network information and set up         View your active networks         Yeastar56         Private network:         Identifying	o connections stype: Internet (forup: Ready to create (forup: Ready to create with internet with internet Characteristics Characteristi	General Connection IPv4 Connectivity: No network access IPv6 Connectivity: No network access Media State: Enabled Duration: 00:01:21 Speed: 1.0 Gbps Detals Activity Properties t Properties 210 0	
See also HomeGroup Infrared Internet Options Windows Firewall			Properties Diagnose Close	



same subnet of the gateway.

Ethernet Properties ×	Internet Protocol Version 4 (TCP/IPv4) Properties	Internet Protocol Version 4 (TCP/IPv4) Properties		
Networking Sharing	General Alternate Configuration	General		
Connect using:	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.	You can get IP settings assigned this capability. Otherwise, you no for the appropriate IP settings. 255.255.255.0		
Configure This connection uses the following items:	Obtain an IP address automatically     O Liee the following IP address:	Obtain an IP address autor 192.168.1.1		
	IP address: Subnet mask: Default gateway:	IP address:         192.168.1.20           Subnet mask:         255.255.0           Default gateway:         192.168.1.1		
Internet Protocol Version 4 (TCP/IPv4)           Install         Properties           Description         Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication	Obtain DNS server address automatically     Use the following DNS server addresses:     Preferred DNS server:     Alternate DNS server:	Obtain DNS server address automatically <ul> <li>Use the following DNS server addresses:</li> </ul> Preferred DNS server:       192 . 168 . 1 . 1         Alternate DNS server:       .         102 . 169 . 1 . 1		
across diverse interconnected networks. OK Cancel	Validate settings upon exit Advanced OK Cancel	Validate settings upon exit		
5) Double Click "Internet	6 Method 1: click "Obtain an IP	Method 2: click "Use the		
Protocol Version 4	address automatically";	following IP address" to assign a		
(TCP/IPv4)" to configure IP		static IP manually within the		

(Note: Remember to click "OK" to finish configuration.)

address and DNS server.





This chapter explains how to log in UG87 Web GUI, and connect the gateway to cellular network. Ursalink UG87 provides web-based configuration interface for management. If this is the first time you configure the gateway, please use the default settings below:

IP Address: **192.168.1.1** Username: **admin** Password: **password** 

#### 5.1 Log in the Gateway



A. Start a Web browser on your PC (Chrome and IE are recommended), type in the IP address, and press Enter on your keyboard.

B. Enter the username and password, click "Login".





# If you enter the username or password incorrectly more than 5 times, the login page will be locked for 10 minutes.

C. When you log in with the default username and password, you will be asked to modify the password. It's suggested that you change the password for the sake of security. Click "Cancel" button if you want to modify it later.

Old Password		
New Password		
Confirm New Passwor	d .	



D. After you log in the Web GUI, you can view system information and perform configuration on the gateway.

For your device security, please change the default password									
Status		Overview	LoRa	Cellular	Network	VPN	Host List		
LoRaWAN	•	System Information	ation						
		Model		UG87-L00E	-G-P-EU868				
Network	•	Serial Number		621692497	387				
Puntom		Firmware Versior	ı	80.0.0.21					
System		Hardware Version		V2.0	V2.0				
Maintenance	•	Local Time		2019-09-18	14:34:51				
		Uptime		05:50:29					
APP	•	CPU Load		10%					
		RAM (Capacity/A	vailab <mark>le)</mark>	512MB/323	MB(63.09%)				
		eMMC (Capacity	/Available)	3.0G/2.5G(	85.74%)				

## 5.2 Configure the Cellular Connection

Take inserting SIM card into SIM1 slot as an example; please refer to the following detailed operations.

- A. Click "Network"  $\rightarrow$  "Interface"  $\rightarrow$  "Cellular"  $\rightarrow$  "Cellular Setting" to configure the cellular info.
- B. Enable SIM1.
- C. Choose relevant network type. "Auto", "4G First", "4G Only", "3G First", "3G Only", "2G First" and "2G Only" are optional.
- D. Click "Save" and "Apply" for configuration to take effect.

ÚRSALINK						
Status	Port	WAN	LAN	VLAN Trunk	Cellular	Loopback
LoRaWAN 🕨	Cellular Sett	ing			Z	2 Cellular
			SIM1		SIM2	
Network 🔻	Enable		•		•	
Interface	Network Type		4G	First	▼ Auto	•
Firowall	APN		Aut 4G	o First		
1 Interface	Username		4G 3G	First		
QoS	Password		2G	First Only		
DHCP	Access Numb	er	20			
DDNS	PIN Code		3	"Auto" or others		
	Authentication	Туре	Aut	0	▼ Auto	•
Link Failover	Roaming					
VPN	SMS Center					



				Apply
Status	Port WAN	LAN VLAN Trunk	Cellular	5 Apply
LoRaWAN	Cellular Setting			
		SIM1	SIM2	
Network 🔻	Enable	<b>&gt;</b>	•	
Interface	Network Type	Auto	▼ Auto	v
Firewall	APN			
QoS	Username			
DHCP	Access Number			
DHCP	PIN Code			
DHCP	Authentication Type	Auto	▼ Auto	
DDNS	Roaming			
Link Failover	SMS Center			
	Connection Setting			
VPN	Dual SIM Strategy			
System	Enable NAT	<b>v</b>		
	Restart When Dial-up failed			
Industrial	ICMP Server	8.8.8.8		
	Secondary ICMP Server	114.114.114.114		
Maintenance	PING Times	6		
	Packet Loss Rate	20	%	
APP •	SMS Settings			
	(4) Save	PDU	•	
	- Save			

If you select "Auto", the gateway will obtain ISP information from SIM card to set APN, Username, and Password automatically. This option will take effect when the SIM card is issued from a well-known ISP. If you select "4G First" or "4G Only", you can click "Save" to complete the configuration directly. If you select "3G First", "3G Only", "2G First" or "2G Only", you should manually configure APN, Username, Password, and Access Number.

UG87 have two cellular interfaces, named SIM1 & SIM2. Only one cellular interface is active at one time. If both cellular interfaces are enabled, SIM1 interface takes precedence by default.

## 5.3 Check the Cellular Connection Status

## 5.3.1 Check the Cellular Connection Status by Web GUI of Gateway



Click "Status"  $\rightarrow$  "Cellular" to view the status of the cellular connection. If it shows "Connected", it means SIM1 has dialed up successfully.

URSA	LINK	C				
Status		Overview	LoRa	Cellular	Network	VPN
LoRaWAN	×	Modem				
		Status		Ready		
Network	•	Model		EC25		
System	•	Current SIM		SIM1		
		Signal Level		31asu (-51d	Bm)	
Industrial	•	Register Status		Registered (	Home network)	
		IMEI		8611070323	21490	
Maintenance		IMSI		4601102694	96240	
APP	•	ICCID		8986031724	15923922835	
		ISP		CHN-CT		
		Network Type		LTE		
		PLMN ID		46011		
		LAC		5f02		
		Cell ID		5fb0d34		
		Network				
		Status		Connected	Connect	cted
		IP Address		172.21.143.	187	
		Netmask		255.255.255	5.248	
		Gateway		172.21.143.	188	
		DNS		218.85.152.	99	
		Connection Duration	on	0 days, 00:0	1:39	

## 5.3.2 Check the Cellular Connection Status by Hardware

On the other hand, you can check the status of SIM1 indicator. If it keeps on green light statically, it means SIM1 has dialed up successfully.

#### 5.4 Check if Network Works Properly by Browser on PC

Open your preferred browser on PC, then type any available web address into address bar and see if it is able to visit Internet via UG87.



6. Packet Forwarder Testing

#### **6.1 Node Parameters**

Channel Plan	AS923
Frequency	923.4MHZ, 923.2MHZ
Join Type	ΟΤΑΑ
Device EUI	60C5A8FFFE0003F9
Application EUI	70B3D57ED0007AC2
Арр Кеу	328F2A3F5BA8D0B236459CF06D0512B5

## **6.2 Configure The Things Network**

A. Gateway Configuration

Gateway EUI	24E124FFFEF0132E
Frequency Plan	Asia 920-923MHZ
Server ID	Switch-router (ttn.opennetworkinfrastructure.org)

THE THINGS CONSOLE	Applications Gateways Support OC Christ
Gateways > 🏷 eui-24e124fffef0132e >	Settings
GATEWAY SETTINGS	GENERAL
General	Description
Owner	A human-readable description of the gateway
Location	USRALINK
Privacy	Frequency Plan The <u>frequency plan</u> this gateway will use
Information	Asia 920-923MHz
Collaborators	Router The id of the router your gateway will connect to.
	switch-router o
	<ul> <li>Automatically update gateway         If enabled the gateway will periodically check if updates are available and perform them.         Enabling auto updates may cause your gateway to have unexpected downtime when updating         Beta Updates         Turn this on to receive firmware from the beta release channel.     </li> </ul>
B. Applications Configuration	
THE THINGS CONSOLE	Applications Gateways Support O Christ
Applications	
APPLICATIONS	add application
123454321 USRALINK	switch-handler 70 83 D5 7E D0 80 7A C2



Applications > 😂 123454321 > Devices > 📰 ursalink	
DEVICE OVERVIEW	
Application ID 123454321 Device ID ursalink Description USRALINK	
Activation Method OTAA	
Device EUI < キ 60 C5 A8 FF FE 00 03 F9 留	
Application EUI < キ 70 B3 D5 7E D0 00 7A C2 留	
App Key < 🌣 32 8F 2A 3F 5B A8 D0 B2 36 45 9C F0 6D 05 12 B5	
Device Address 🗘 🌣 26 05 20 48 🖺	
Network Session Key 🗘 🏛 🐵 🖺	

## 6.3 Packet Forwarder Configuration

A. Click "LoRaWAN"  $\rightarrow$  "Packet Forwarder"  $\rightarrow$  "General" to configure the general setting.

Status	General	Radios	Advanced	Custom
LoRaWAN	General Setting	I		
	Enable			
Packet Forwarder	Mode		Packet Forw	arder
Network Server	Gateway EUI		24E124FFFE	F0132D
	Gateway ID		24E124FFFE	EF0132D
Network •	Server Address		ttn.opennetw	orkinfrastructure.or
System	Server Up Port		1700	
	Server Down Por	t	1700	
Industrial >				
	Save & Apply			
Maintenance				

B. Click "Radios" to configure the center frequency and channels.



General	Radios	Advanced	Custom	Traffic			
Radio Channel	Setting						
Supported Frequ	lency			AS923	•		
		Name				Center Frequency/MHz	
		Radio 0				923.6	
		Radio 1				922.6	

Multi Channels Setting

And the second			
Enable	Index	Radio	Frequency/MHz
×	0	Radio 0 🔻	923.2
	1	Radio 0 🔻	923.4
	2	Radio 0 🔻	923.6
	3	Radio 1 🔻	922.2
	4	Radio 1 🔻	922.4
	5	Radio 1	922.6
	6	Radio 1 🔻	922.8
	7	Radio 1	923.0

#### C. Click "Traffic" to view the data communication of UG87

	General	Radios	Advanced	Custom	Traffic				
1	fraffic Settin	g							
Ì	Stop	Clear	i i						
	Rfch	Direction	Time	Ticks	Frequency	Datarate	Coderate	PSSI	SND
		Direction	11110		i requeriej	occounter		11001	
	1	up	(E)	2422567628	922.6	SF7BW125	4/7	-86	-11.5
	1	up	-	2027425380	923.0	SF7BW125	4/6	<mark>-8</mark> 7	-10.8
	1	up	1.00	1906 <mark>1</mark> 52459	922.2	SF7BW125	OFF	-89	-11.8
	0	up	-	1896642603	923.6	SF7BW125	4/6	-89	-12.0
	0	up		1833066556	923.8	SF7BW250	4/5	-86	-12.0
	0	up	-	1793222443	923.4	SF7BW125	4/8	-85	-11.2
	0	up	12	1768923067	923.2	SF7BW125	4/5	-89	-11.8
	1	up	-	1736475188	922.8	SF8BW125	4/8	-86	-14.0
	1	up	151	1504937860	923.0	SF7BW125	4/5	-87	-11.5
				1001005707	000.0	or TOWNER			

## 6.4 Check Data Transmission on The Things Network

A. Click "Gateways", you can check the Gateways status.



IGS CONSOLE	Applications	Gateways	Support	Chris1	~
Gateways					
GATEWAYS		•	register gatewa	IV.	
eui-24e124fffef0132e USRALINK	• 0	onnected	AS_920_923		

B. Click "Applications" and select the Applications, then go to "Data", you can find the data from the Node.

THE THINGS CONSOLE N E T W O R K COMMUNITY EDITION		Applications Gateways Support 闪 Christ 🗸
Applications		
APPLICATIONS		add application
123454321 USRALINK		switch-handler 70 83 D5 7E D0 00 7A C2
THE THINGS CONSOLE		Applications Gateways Support 🗛 Christ 🗸
Applications > 🤤 123454321	Data	
		Overview Devices Payload Formats Integrations Data Settings
APPLICATION DATA		II gause 🗊 clear
Filters uplink downlink	activation ack error	
time counter	0 devid: <u>ursalink</u>	
▲ 14:23:01 <b>3</b>	8 retry devid: <u>ursalink</u> payload	± 53 01 00 00 01 00 00 64
▼ 14:22:57	0 devid: <u>ursalink</u>	
▲ 14:22:55 <b>3</b>	8 retry confirmed devid: <u>ursalink</u> payload	1: 53 01 00 00 01 00 00 64
▼ 14.22.52	0 devid: ursalink	
14/2010	0 metanid doubt method	E 52 01 00 00 01 00 00 (4



## 7. Network Server Testing

Note that only gateway with activated built-in Network Server supports this function.

#### 7.1 Node Parameters

Channel Plan	AS923
Frequency	923.4MHZ, 923.2MHZ
Join Type	ΟΤΑΑ
Device EUI	60C5A8FFFE0003F9
Application EUI	70B3D57ED0007AC2
Арр Кеу	1A98A25536993A882154B81551F18A76

## 7.2 Network Server Configuration

A. Click "LoRaWAN"  $\rightarrow$  "Network Server"  $\rightarrow$  "General" to configure the general setting. **Note** that the channel plan of the nodes and network server need to be the same.

						For your device security, please change the de		
Status		General	Applications	Profiles	Device	Packets		
LoRaWAN	-	General Setting						
Packet Forwarder		Enable						
		Mode	Ne	twork Server				
Network Server		NetID	010	203				
Network	•	Join Delay	5		sec			
		RX1 Delay	1		sec			
ystem	•	Lease Time	744	-0-0	hh-	mm-ss		
ndustrial	•	Log Level	info	0	٣			
		Channel Plan Settin	g					
Maintenance	•							
		Channel Plan	EU	868	٣			
PP	•	Channel Mask						
		Additional Channels						
			Frequency(MHz)			Min Datarate	Max Datarate	Operation
								H

B. Add a new Application.

General	Applications	Profiles	Device	Packets	
Applications					
	ID	Name	Description	Payload Codec	Operation
					œ



#### Ursalink UG87 Quick Start Guide

General	Applications	Profiles	Device	Packets	
Applications					
Name	Si	noke-Sensor-APP			
Description	Si	moke Sensor			
Payload Codec	N	lone	¥		

### Add data transmission information (HTTP/HTTPS/MQTT).

Data Transmission	
Туре	Operation
	•

	Applications	FIGHES	Device	T denets
Applications				
Name	[	Smoke Sensor APP		
Description		Smoke Sensor		
Payload Codec	[	None	¥	
Data Transmission				
Data Transmission Type		MQTT HTTP MQTT HTTPS	•	
Data Transmission Type General		MQTT HTTP MQTT HTTPS	<b>V</b>	
Data Transmission Type General Broker Address		MQTT HTTP MQTT HTTPS		

General	Applications	Profiles Dev	ice Packets		
Applications					
	ID	Name	Description	Payload Codec	Operation
	8	Smoke-Sensor- APP	Smoke Sensor	None	
					æ



#### C. Add Profiles for the device

General	Applications	Profiles	Device	Packets	ŝ		
Device Profiles							
	Name	Max TXPower		Join Type		Class Type	Operation
							8
	General	Applications		Profiles	Device	Packets	
	Device Profiles						
	Name		Smoke-Se	ensor			
	Max TXPower		0		_		
	Join Type		OTAA		•		
	Class Type		Class A		•		
	Auvanced						
	Save	Cancel					
General	Applications	Profiles	Device	Packets	;		
Device Profiles							
	Name	Max TXPower		Join Type		Class Type	Operation
	Smoke-Sensor	0		OTAA		Class A	
							<b>H</b>

#### D. Add device



		General	Applications	Profiles	Device	Packets		
		Device						
		General						
		Device Name	Sor	mke-Sensor				
		Description	Sor	nke Sensor				
		Device EUI	600	SA8FFFE0003F9				
		Device-Profile	Sn	noke-Sensor	•			
		Application			¥			
		Frame-counter Vali	dation 🕑					
		Activate Device(	(AATC					
		Application Key	149	98A25536993A8821	54B815!			
		Device Address						
		Network Session K	ey					
		Application Session	i Key					
		Uplink Frame-count	ter 0					
		Downlink Frame-co	unter 0					
		Save	Cancel					
eneral	Applicati	ons Profi	les Dev	vice Pa	ackets			
			<del>7</del> 7					
vice								
	Device Name	Device EUI	Device-Pro	ofile A	pplication	Last Seen	Actived	Operation
	Somke-Sensor	60c5a8fffe0003f9	Smoke-Ser	nsor Smol	e-Sensor-APP	25%	35.57	2×

## 7.3 Package Forwarder Configuration

Click "LoRaWAN"  $\rightarrow$  "Packet Forwarder"  $\rightarrow$  "Radios" to configure the center frequency and channels **Note** that node frequency needs to be included in the channels frequency.

De



## 

	К								<b>2</b> admin	6	€
Status		General	Radios	Advanced	Custom	Traffic					
LoRaWAN		Radio Channel	I Setting								
Packet Forwarder		Supported Frequ	uency			AS923	•				
Network Server				Name				Center Frequency/MHz			
				Radio 0				923.6			
Network				Radio 1				922.6			
System	۲	Multi Channels	s Setting								
		En	nable	Index		Radio		Frequen	cy/MHz		
Industrial		3		0		Radio 0	•	923.2			
Maintenance				1		Radio 0	•	923.4			
		3		2		Radio 0	۲	923.6			
APP				3		Radio 1	*	922.2			
		1		4		Radio 1	×	922.4			
				5		Radio 1	*	922.6			
			•	6		Radio 1	*	922.8			
				7		Radio 1	۲	923.0			

## 7.4 Check the Packets

Click "LoRaWAN"  $\rightarrow$  "Network Server"  $\rightarrow$  "Packets" to check the packets from the node on network server.

	- 202		For your device security, please change the default password									
Status		General	Applications	Profiles	Device	Packets						
LoRaWAN	-	Send Data To D	evice									
Packet Forwarder			Device EUI		Туре				Payload		Fport	Confirmed
Network Server		00000	0000000000		ASCII •							
		Send										
Network	*											
System	×	Network Server										
		Clear									Search	C
Industrial	•	Devic	e EUI	Frequency	Datarate	SNR	RSSI	Size	Fcnt	Туре	Time	Details
Maintenance	×	11146116	93255998	868500000	SF10BW125	6.2	-112	11	62	UpUnc	2019-09-16T21:31:17+08:00	0
	12	11146116	93255998	868300000	SF10BW125	8.8	-108	11	61	UpUnc	2019-09-16T21:30:17+08:00	0
APP	•	11146116	93255998	868300000	SF10BW125	9.2	-103	11	60	UpUnc	2019-09-16T21:29:17+08:00	0
		11146116	93255998	868100000	SF10BW125	8.8	-113	11	59	UpUnc	2019-09-16T21:28:17+08:00	0
		11146116	93255998	868100000	SF10BW125	12.2	-100	11	58	UpUnc	2019-09-16T21:27:17+08:00	0
		11146116	93255998	868300000	SF10BW125	9.0	-104	11	57	UpUnc	2019-09-16T21:26:17+08:00	0
		11146116	93255998	868100000	SF10BW125	10.8	-106	11	56	UpUnc	2019-09-16T21:25:17+08:00	0
		11146116	93255998	868500000	SF10BW125	8.2	-109	11	55	UpUnc	2019-09-16T21:24:17+08:00	0

[END]