

# Outdoor LoRaWAN<sup>®</sup> Gateway UG67

Quick Start Guide



#### **Safety Precautions**

Milesight will not shoulder responsibility for any loss or damage resulting from not following the instructions of this operating guide.

- The device must not be modeled in any way.
- Do not place the device close to objects with naked flames.
- Do not place the device where the temperature is below/above the operating range.
- Do not power on the device or connect it to other electrical device when installing.
- Check lightning and water protection when used outdoors.
- Do not connect or power the equipment using cables that have been damaged.

## **Related Documents**

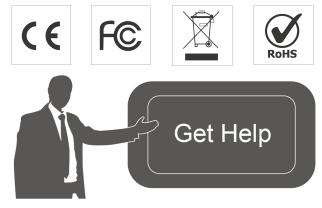
This Quick Start Guide only explains the installation of Milesight UG67 LoRaWAN<sup>®</sup> Gateway. For more functionality and advanced settings, please refer to the relevant documents as below.

Document	Description
UG67 Datasheet	Datasheet for UG67 LoRaWAN® Gateway.
UG67 User Guide	Users can refer to the guide for instruction on how to log in the web GUI, and how to configure all the settings.

The related documents are available on Milesight website: https://www.milesight-iot.com

## **Declaration of Conformity**

UG67 is in conformity with the essential requirements and other relevant provisions of the CE, FCC, and RoHS.



For assistance, please contact Milesight technical support: Email: <u>iot.support@milesight.com</u> Support Portal: <u>support.milesight-iot.com</u> Tel: 86-592-5085280 Fax: 86-592-5023065 Address: Building C09, Software Park III, Xiamen 361024, China

# **Revision History**

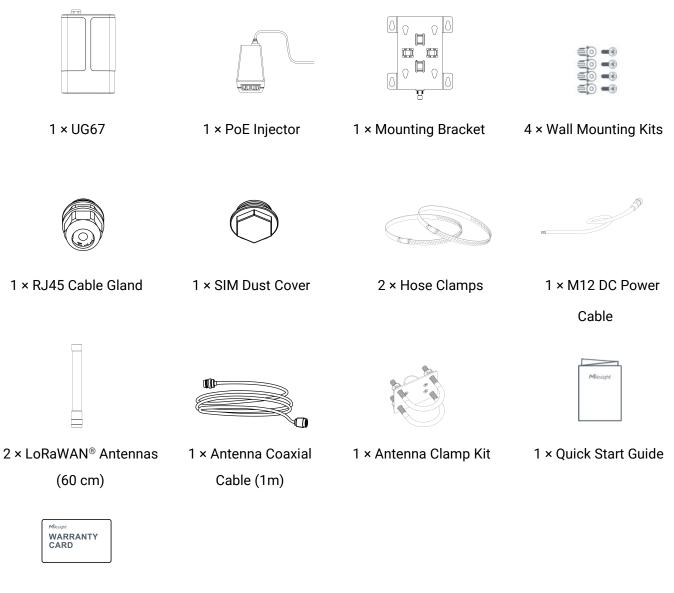
Date	Doc Version	Description
October 30, 2020	V1.0	Initial version
May 6, 2021	V1.1	Delete optional mark of LoRa antennas, add DC pinouts
July 29, 2021	V1.2	Add antenna accessories and installation method
Oct 21 2022	V 1.3	1. Delete Ethernet cable
Oct. 31, 2022	V 1.3	2. Web GUI pictures update

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# 1. Packing List

Before you begin to install the UG67 LoRaWAN<sup>®</sup> Gateway, please check the package contents to verify that you have received the items below.



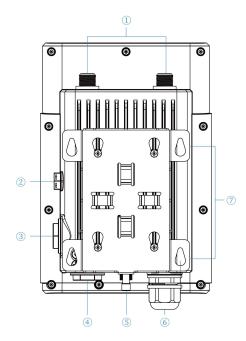
1 × Warranty Card



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

# 2. Hardware Introduction

## 2.1 Overview

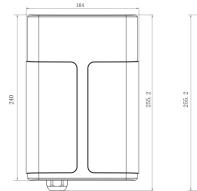


- 1 LoRaWAN® Antenna Connector
- ② Vent Plug
- ③ SIM Slot
- ④ LED Area & Type-C Port & Reset Button

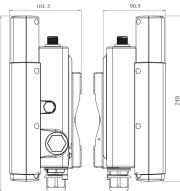
SYS: System Indicator

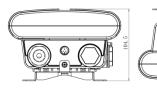
LoRa: LoRa Indicator

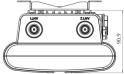
- LTE: Cellular Indicator
- **5** DC Power Connector (Solar Connector)
- 6 Ethernet Port (PoE)
- ⑦ Mounting Bracket



2.2 Dimensions (mm)







## 2.3 LED Indicators

LED	Indication	Status	Description		
SYS	System Status	Green Light	Static: the system is running properly		
313	System Status	Red Light	The system goes wrong		
	Packet	Off	Packet Forwarder mode is running off		
LoRa	Forwarder Status	Green Light	Packet Forwarder mode is running well		
		Off	SIM card is registering or fails to register		
LTE	Cellular Status	OII	(or there are no SIM cards inserted)		
		Green Light	Blinking slowly: SIM card has been registered and		

is ready for dial-up
Blinking rapidly: SIM card has been registered and
is dialing up now
Static: SIM card has been registered and dialed up
successfully

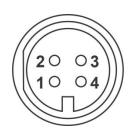
## 2.4 Reset Button

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

## **2.5 DC Power Connector**

UG67 supports 12 VDC or solar supply via M12 connector.

Pin	Color	Description				
1	Black	GND				
2	White	Reserved				
3	Yellow	Reserved				
4	Red	+12V				



# 3. Hardware Installation

## 3.1 SIM Card Installation

A. Insert the SIM card into the device according to the direction icon on the device. If you need to take out the SIM card, press into the SIM card and it will pop up automatically.

B. Tighten the SIM dust cover with wrench to prevent water into the device.



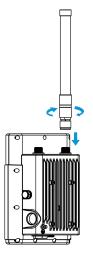
#### 3.2 Antenna Installation

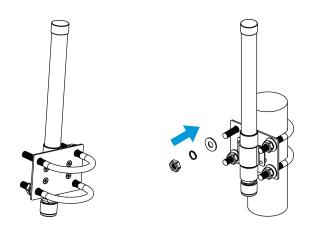
UG67 supports multiple LoRaWAN<sup>®</sup> antenna types. After installation, please select the corresponding installation type in web GUI.

Internal Antenna Mode: keep gateway positive outwards to ensure good signal.

**Single or Double Antenna Mode:** pass one LoRaWAN<sup>®</sup> antenna through the antenna clamp and fix it with 4 screws, then wrap the U-bolt around a pole and fix the clamp with nuts and other accessories. After installation, connect this antenna to gateway antenna **ANT1** connector via the coaxial cable. For double antenna mode, please connect another antenna to ANT2 connector directly.

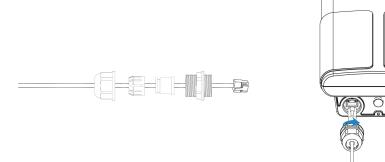
Note: do not install this antenna to gateway directly if there is strong wind on the scene.



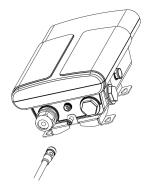


## 3.3 Ethernet Cable & Power Cable Installation

Pass the Ethernet cable through the cable gland and rotate the cable gland to gateway, then tighten the cable gland with wrench.

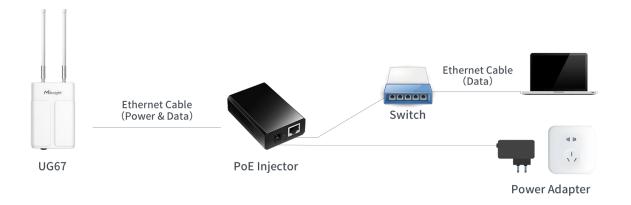


For DC or solar power supply, remove the protective cap of power connector and rotate the DC power cable into the power connector.



## 3.4 Power Supply

UG67 can be powered by 802.3af standard PoE or 12VDC. Please follow the picture to provide power supply via PoE injector:



## 3.5 Gateway Installation

UG67 can be mounted to a wall or a pole. Before you start, make sure that your SIM card has been inserted, your antennas have been attached and all cables have been installed.

Note: Do not connect device to power supply or other devices when installing.

#### 3.5.1 Wall Mounting

**Preparation:** mounting bracket (with a screw), wall plugs, wall mounting screws and other required tools.

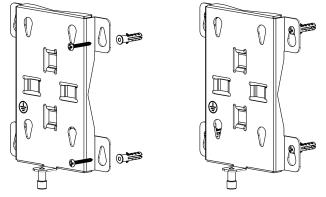
A. Align the mounting bracket horizontally to the desired position on the wall, use a marker pen to mark four mounting holes on the wall, and then remove the mounting bracket from the wall.

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

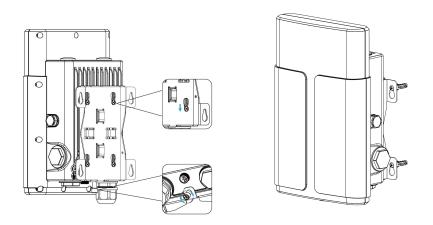
B. Drill four holes with a depth of 32 mm by using your drill with a 6 mm drill bit on the positions you marked previously on the wall.

C. Insert four wall plugs into the holes respectively.

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



E. Hang the device to the mounting bracket via bracket mounting screws on the back of device, then screw the bracket screw to the bottom of the device.



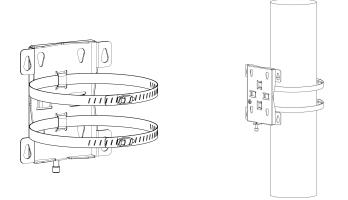
#### 3.5.2 Pole Mounting

**Preparation:** mounting bracket (with a screw), hose clamp and other required tools.

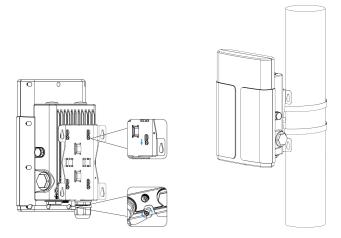
A. Loosen the hose clamp by turning the locking mechanism counter-clockwise.

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

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



D. Hang the device to the mounting bracket via bracket mounting screws on the back of device, then screw the bracket screw to the bottom of the device.



## 4. Login the Web GUI

UG67 provides web-based configuration interface for management. If this is the first time you configure the gateway, please use the default settings below:

Username: **admin** 

Password: password

## 4.1 Wireless Access

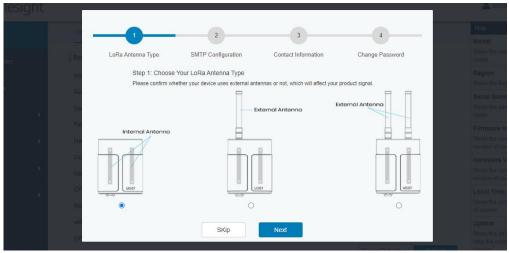
A. Enable Wireless Network Connection on your computer and search for access point "Gateway\_\*\*\*\*\*\*" to connect it.

B. Open a Web browser on your PC (Chrome is recommended) and type in the IP address **192.168.1.1** to access the web GUI, enter the username and password, click "Login".

	the second second	Language English 🗸
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	Ð	
	Login	

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

D. After logging the web GUI, follow the guide to complete the basic configurations. It's suggested that you change the password for the sake of security.



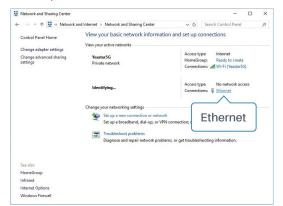
E. You can view system information and perform configuration of the gateway.

			F	or your device security.	please change the d	lefault password			
Status		Overview	Packet Forward	Cellular	Network	WLAN	VPN	Host List	Help
otatuo									Model
Packet Forwarder		System Informa	ation						Show the model name of router.
		Model		UG67-L00E-470M					Region
Network Server		Region		CN470					Show the Region of router.
		2		CI4470					Serial Number
Network		Serial Number		6222A3243835					Show the serial number of router
		Firmware Version	ı	60.0. <mark>0</mark> .23					Firmware Version
System	►	Hardware Version	n	V1.0					Show the current firmware version of router.
		Local Time		2020-12-14 17:05:05	5 Monday				Hardware Version
Maintenance	<b>•</b>	Uptime		4days,05:52:48					Show the current hardware version of router.
APP		CPU Load		2%					Local Time
АРР		RAM (Capacity/A	vailable)	512MB/77MB(15.04	%)				Show the current local time of system.
		eMMC (Capacity	/Available)	3.0G/2.7G(89.74%)					Uptime
		GPS		-			Manual R	efresh 🗸 Refresh	Show the information on how long the router has been running.

#### 4.2 Wired Access

Connect PC to UG67 ETH port through PoE injector. The following steps are based on Windows 10 operating system for your reference.

A. Go to "Control Panel"  $\rightarrow$  "Network and Internet"  $\rightarrow$  "Network and Sharing Center", then click "Ethernet" (May have different names).



B. Go to "Properties"  $\rightarrow$  "Internet Protocol Version 4(TCP/IPv4) "and select "Use the following IP address", then assign a static IP manually within the same subnet of the gateway.

nternet Protocol Version 4 (TC	P/IPV4) Properties	1
General		
	ed automatically if your network support need to ask your network administrator	3
O Obtain an IP address auto	omatically	
• Use the following IP addre	ess:	
IP address:	192 . 168 . 23 . 200	
Subnet mask:	255 . 255 . 255 . 0	
Default gateway:	192 . 168 . 23 . 150	
Obtain DNS server addres	ss automatically	
• • • • • • • • • • • • • • • • • • •	ver addresses:	
Preferred DNS server:	8.8.8.8	
<u>A</u> lternative DNS server:		
Validate settings upon ex	kit Ad <u>v</u> anced	0
	OK Cano	el

Milesight

C. Open a Web browser on your PC (Chrome is recommended) and type in the IP address 192.168.23.1 50 to access the web GUI, 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.

E. After logging the web GUI, follow the guide to complete the basic configurations. You can also skip the instructions. It's suggested that you change the password for the sake of security.

		2	3	1		
			Ċ			
Sy: LoRa An	tenna Type SI	MTP Configuration	Contact Information	Change Pa	assword	
Mo	Step 1: Choose Your Lo	Ra Antenna Type				
	Please confirm whether you	ir device uses external anter	nas or not, which will affec	t your product signal.		
Re		F			8 8	
Se		Ext	ernal Antenna	External Antenna		
Fin	ernal Antenna				88	
Ha	$\neg$		_			
Up						
	87				UG67	
- (k-1)		6.9	_	_	<u>en</u>	
RA		0			0	
вM						
		SKip	Next			
GP		· · · · · · · · · · · · · · · · · · ·				

F. After guide complete, you can view system information and perform configuration of the gateway.

Milesi	ght								💄 admin 🛛 🔁
			Fo	r your device security	please change the d	efault password			
Status	1	Overview	Packet Forward	Cellular	Network	WLAN	VPN	Host List	Help —
Packet Forwarder		System Inform	ation						Model Show the model name of router.
Network Server		Model		UG67-L00E-470M					Region Show the Region of router.
Network	•	Region Serial Number		CN470 6222A3243835					Serial Number Show the serial number of router.
System	×	Firmware Version Hardware Version		60.0.0.23 V1.0					Firmware Version Show the current firmware version of router.
Maintenance	۲	Local Time Uptime		2020-12-14 17:05:0 4days,05:52:48	95 Monday				Hardware Version Show the current hardware version of router.
APP	۲	CPU Load RAM (Capacity/A	Available)	2% 512MB/77MB(15.04	4%)				Local Time Show the current local time of system.
		eMMC (Capacity GPS	/Available)	3.0G/2.7G(89.74%) -	)		Manual R	efresh 🗸 Refresh	Uptime Show the information on how long the router has been running.

## 5. Network Connection

This section explains how to connect the gateway to network via WAN connection, Wi-Fi or cellular.

#### 5.1 Configure the Ethernet Connection

A. Go to "Network"  $\rightarrow$  "Interface"  $\rightarrow$  "Port" page to select the connection type and configure Ethernet port information, click "Save & Apply" for changes to take effect.

Port	eth 0		
Connection Type	Static IP 🗸		
IP Address	192.168.22.112		
Netmask	255.255.255.0		
Gateway	192.168.22.1		
мти	1500		
Primary DNS Server	8.8.8.8		
Secondary DNS Server	114.114.114.114		
Enable NAT			
Multiple IP Address			
IP A	Address	Netmask	Operati

- B. Connect Ethernet port of gateway to devices like router or modem.
- C. Log in the web GUI via the newly assigned Ethernet port IP address and check network connection.

Overview	Packet	t Forward		Network	WLAN	VPN	Host List		
WAN									
Port	Status	Туре	IP Address	Netmas	sk	Gateway		DNS	Duration
eth 0	up	Static	192.168.22.112	255.255.2	55.0	192.168.22.	1	8.8.8.8	1days,02h 34m 22s

## 5.2 Configure the Wi-Fi Connection

A. Go to "Network"  $\rightarrow$  "Interface"  $\rightarrow$  "WLAN" and select "Client" mode.

B. Click "Scan" to search for Wi-Fi access point. Select the available one and click "Join Network".

Note: please do use <u>wired access</u> method to access the web GUI, or you will fail to configure Wi-Fi setting.

Port	WLAN		Cellular	Loo	pback			
< GoBack								
SSID		Channel	Signal	Cipher	BSSID	Security	Frequency	
AAA		Auto	-61dBm	AES	24:e1:24:f0:c4:13	WPA-PSK/WPA2-PSK	2412MHz	Join Network

C. Type the key of Wi-Fi.

Port	WLAN	Cellular L	oopback	
WLAN				
Enable				
Work Mode		Client	~	Scan
SSID		AAA		
BSSID		24:e1:24:f0:c4:1	3	
Encryption M	ode	WPA-PSK/WPA	A2-PSK V	
C <mark>iphe</mark> r		AES	~	
Key		•••••		
P Setting				
Protocol		DHCP Client	~	

D. Go to "Status"  $\rightarrow$  "WLAN" to check Wi-Fi status. If it shows "Connected", it means gateway connects to Wi-Fi successfully.

Overview	Packet Forward	Cellular	Network	WLAN
WLAN Status				
Wireless Status		Enabled		
MAC Address		24:e1:24:f0:de:14		
Interface Type		Client		
SSID		AAA		
Channel		Auto		
Encryption Type		WPA-PSK/WPA2-PSK	ĸ	
Cipher		AES		
Status		Connected		
IP Address		192.168 <mark>.1.14</mark> 5		
Netmask		255.255.255.0		
Connection Duratio	n	0 days, 02:44:45		

E. Go to "Network"  $\rightarrow$  "Failover"  $\rightarrow$  "WAN Failover" to switch the wlan0 as main interface, then gateway can use the Wi-Fi to access the Internet.

NETWORK SCIVEI	SLA	Track	WAN Failover				
Network	WAN Failo	ver					
Interface	Main Int	terface Backu	p Interface Startup	Delay(s) Up Dela	ay(s) Down Delay(s)	Track ID	Operation
Firewall	wlan0	✓ eth 0	✔ 30	0	0	1 ~	
DHCP							H
DDNS	Save						
Link Failover							

## 5.3 Configure the Cellular Connection

A. Go to "Network"  $\rightarrow$  "Interface"  $\rightarrow$  "Cellular"  $\rightarrow$  "Cellular Setting" page to enable cellular settings.

B. Choose relevant network type and fill in SIM card information like APN or PIN code, click "Save" and "Apply" for changes to take effect.

Port	WLAN	Cellular	Loopback
Cellular S	etting		
Enable			
Network Ty	уре	Auto	~
APN			
Username			
Password			
Access Nu	mber		
PIN Code			
Authentica	tion Type	Auto	~
Roaming			
SMS Cent	er	A12	
Connectio	on Setting		
Enable NA	Л		

D. Go to "Status"  $\rightarrow$  "Cellular" page to view the status of the cellular connection. If it shows "Connected", it means the SIM has dialed up successfully. On the other hand, you can check the status of LTE indicator. If it keeps on light statically, it means SIM has dialed up successfully.

Overview	Packet Forward	Cellular	Network	WLAN
Modem				
Status		Ready		
Model		EC25		
Version		EC25ECGAR06A07M1	G	
Signal Level		23asu (-67dBm)		
Register Status		Registered (Home netw	vork)	
IMEI		860425047368939		
IMSI		460019425301842		
ICCID		8986011783800993412	20	
ISP		CHN-UNICOM		
Network Type		LTE		
PLMN ID				
LAC		5922		
Cell ID		340db83		
Network				
Status		Connected		
IP Address		10.132.132.59		
Netmask		255.255.255.240		
Gateway		10.132.132.60		

## 6. Packet Forwarder Configuration

UG67 has installed multiple packet forwarders including Semtech, Chirpstack-Generic MQTT broker, etc. This section explains how to connect the gateway to network servers.

## A Make sure the gateway connects to the network as shown in <u>Section 5</u>.

A. Go to "Packet Forwarder"  $\rightarrow$  "General" page and click + to add a network server.

Status		General	Radios	Advanced	Custom	Traffic		
Packet Forwarder		General Setting						
Network Server		Gateway EUI Gateway ID	24E124FFI 24E124FI					
Network	۲	Frequency-Sync	Disabled	1	~			
System	•	Multi-Destination						
Maintenance		ID	Enable	)	Туре	Server Address	Connect Status	Operation
Maintenance		0	Enable	d Emb	edded NS	localhost	Connected	
APP	۲							<b>H</b>
		Save & Apply						

B. Fill in the server information and enable this server.

Гуре	Semtech ~
erver Address	eu1.cloud.thethings.network 💌
Port Up	1700
ort Down	1700

C. Go to "Packet Forwarder"  $\rightarrow$  "Radio" page to configure antenna type, center frequency and channels. The channels of the gateway and network server need to be the same.

	General	Radios	Advanced	Custom	Trat	ffic	
	Antenna Type						
		Internal Antenna UG97	1	External A	ntenn	a	External Antenna
Region			U	IS915			<b>~</b>
		Name				Cent	er Frequency/MHz
		Radio 0				904.3	
		Radio 1				905.0	
Multi Cl	hannels Setting						
	Enable	Index		Radio			Frequency/MHz
		0	Radio	0	~		903.9
		1	Radio	0	~		904.1
		2	Radio	0	~		904.3
		3	Radio	0	~		904.5
		4	Radio	1	~		904.7
		5	Radio	1	~		904.9
		6	Radio	1	~		905.1
		7	Radio	1	~		905.3

D. Add the gateway on network server page. For more details about the network server connection please refer to <u>Milesight IoT Support portal</u>.

E. Go to "Traffic" page to view the data communication of UG67.

General Traffic Set	Radios	s Adv	vanced	Custom	Traffic			
Stop		ar						
Rfch	Direction	Time	Ticks	Frequency	Datarate	Coderate	RSSI	SNR
1	up	11:52:38	317882157 1	865.985	SF7BW125	4/5	-91	5.0
1	up	<u>11:52:22</u>	316226269 2	866.585	SF7BW125	4/7	-108	-11.8
0	down	÷	311888813 1	865.0 <mark>6</mark> 25	SF7BW125	4/5	100	æ
0	up	11:51:37	311788813 1	865.0625	SF7BW125	4/5	-95	-0.8

# 7. Network Server Configuration

UG67 can work as network server and transmit data to Milesight IoT Cloud or other platform via MQTT/HTTP/HTTPS.

## 7.1 Connect UG67 to Milesight IoT Cloud

A. Go to "Packet Forwarder"  $\rightarrow$  "General" page to enable the embedded network server.

Status		General	Radios	Advanced	Custom	Traffic		
Packet Forwarder		General Setting						
		Gateway EUI	24E124FFFE	F				
Network Server		Gateway ID	24E124FFF	EF				
Network	۲	Frequency-Sync	Disabled	~				
System	•	Multi-Destination						
		ID	Enable	Тур	e	Server Address	Connect Status	Operation
Maintenance	Þ		Freehad	Enhadd	-1.10	la vella est	Orecepted	
		0	Enabled	Embedd	ed NS	localhost	Connected	
APP	•							<b>H</b>

B. Go to "Packet Forwarder"  $\rightarrow$  "Radio" page to select the antenna type, center frequency and channels. The channels of the gateway and nodes need to be the same.

Region		US915		~
	Name			Center Frequency/MHz
	Radio 0		[	904.3
	Radio 1		[	905.0
Multi Channels Settin	g			
Enable	Index	Radio		Frequency/MHz
	0	Radio 0	~	903.9
	1	Radio 0	~	904.1
	2	Radio 0	~	904.3
	3	Radio 0	~	904.5
	4	Radio 1	~	904.7
	5	Radio 1	~	904.9
	6	Radio 1	~	905.1
	7	Radio 1	~	905.3

C. Go to "Network Server"  $\rightarrow$  "General" page to enable the network server and "Milesight IoT Cloud" mode.

Status	General	Applications	Profiles	Device	Multicast Groups
Packet Forwarder	General Setting				
Network Server	Enable Platform Mode				
Network			t IoT Cloud	~	
	NetID	010203			
System 🕨	Join Delay	5		sec	
Maintenance	RX1 Delay	1		sec	
Maintenance /	Lease Time	8760-0-0		hh-mm-ss	

D. Log in the Milesight IoT Cloud. Then go to "My Devices" page and click "+New Devices" to add gateway to Milesight IoT Cloud via SN. Gateway will be added under "Gateways" menu.

② Dashboard	Devices	Gater	ways	History	+					
My Devices	Search	Q	]	Normal 1	🛱 Alarm 1	M Offline 1	$\otimes$	Inactive 3		+ New Devic
Map		真实设备-EN 6136A39023	Add Device				×		e.	@ M ()
Reports		UC3X52-虚 61151109	* SN: * Name:					sociated with your		@ <u>~</u> 0
Event Center 30		UC3X5 6123A124	* Name :						15 minutes ago	@ M 0
R Me		AM102- 6128A2175-	co2	TVOC	Cancel	Confirm Barometric Pressure		ux ination	a few seconds ago	@ k 0
		4	27℃ Temperature	<b>51%</b> Humidity		0 Activity Level (PIR)		<b>lux</b> umination		
≡•										

E. The gateway is online on Milesight IoT Cloud.

Milesight

🕐 Dashboard	Devices		Gateways	+		
My Devices	Search		٩	⊘ Normal 1 🛛 🕅 Offline 0 🛞 Inactiv	ve O	+ New Devices
Map		Status	Name	Associated Devices (Joined /Not Joined /Failed)	Last Updated	
Reports		all	UG Gateway 621793129987	<u>0 / 1 / 0 Detail</u>	2 minutes ago	© <u>M</u> ©
Event Center 94						

## 7.2 Connect UG67 to MQTT/HTTP Server

A. Go to "Packet Forwarder"  $\rightarrow$  "General" page to enable the embedded network server.

Status		General	Radios	Advanced	Custom	Traffic		
Packet Forwarder		General Setting						
		Gateway EUI	24E124FFF	EF MILL				
Network Server		Gateway ID	24E124FFI	FEF				
Network	•	Frequency-Sync	Disabled	*				
System	•	Multi-Destination						
		ID	Enable	Тур	e	Server Address	Connect Status	Operation
Maintenance	•	0	Enabled	Embedd	ed NS	localhost	Connected	
APP	►							8

B. Go to "Packet Forwarder"  $\rightarrow$  "Radio" page to select the antenna type, center frequency and channels. The channels of the gateway and nodes need to be the same.

Region		US915		~
	Name			Center Frequency/MHz
	Radio 0		9	04.3
	Radio 1		9	05.0
Multi Channels Settin	g			
Enable	Index	Radio		Frequency/MHz
	0	Radio 0	~	903.9
	1	Radio 0	~	904.1
	2	Radio 0	~	904.3
	3	Radio 0	~	904.5
	4	Radio 1	~	904.7
	5	Radio 1	~	904.9
	6	Radio 1	~	905.1
	7	Radio 1	~	905.3

C. Go to "Network Server"  $\rightarrow$  "General" page to enable the network server mode.

Status	General	Applications	Profiles	Device	Gateways
Packet Forwarder	General Setting				
Network Server	Enable Milesight IoT Cloud	<b>2</b>			
Network	NetID	010203			
	Join Delay	5		sec	
System	RX1 Delay	1		sec	
Maintenance	Lease Time	876000-0-	0	hh-mm-ss	
	Log Level	info		*	

D. Go to "Network Server"  $\rightarrow$  "Application" to add a new application.

General	Applications	Profiles	Device
Applications			
Name	[	cloud	
Description	[	cloud	
Payload Codec	[	None	~

After saving the application, you can select HTTP, HTTPS or MQTT protocol and fill in correspond server information to send data to another server.

MQTT	•
HTTP	
MQTT HTTPS	-
30	
60	
	HTTP MQTT HTTPS

E. Go to "Profiles" page to add a new profile for the device.

General	Applications	Profiles	Device
Device Profiles	5		
Name		ClassA-OTAA	
Max TXPower		)	
Join Type		OTAA	~
Class Type	5	Class A 🗌 Class B	Class C
Advanced			
Save	Cancel		

F. Go to "Device" page and click "Add" to add LoRaWAN  $^{\rm \tiny (8)}$  node devices.

General	Applications	Profiles	Device	Multicast Groups	Gateway Fleet	Packets	
Device							
Add	Bulk Import	Delete All				Search	O,
Device Nam	e Dev	rice EUI	Device-Profile	Application	Last Seen	Activated	Operation
			No m	atching records found			

Device Name	lora-sensor	
Description	a short description of y	our node
Device EUI	000000000000000000000000000000000000000	
Device-Profile	ClassA-OTAA	~
Application	cloud	~
Frame-counter Validation		
Application Key		
Device Address		
Network Session Key		
Application Session Key		
Uplink Frame-counter	0	
Downlink Frame-counter	0	

You can also click "Bulk Import" if you want to add many nodes all at once.



Import File	Browse	Import	Template Download

Click "Template Download" to download template file and add device information to this file. Application and device profile should be the same as you created on web page.

	A	В	C	D	E	F	G	Н	I I
1	name	description	deveui	application	deviceprofile	appkey	devaddr	appskey	nwkskey
2	24e1242191323266		24e1242191323266	cloud	ClassC-OTAA	112233445566778899aa112233445566			
3									
4									
5									

Import this file to add bulks of devices.

F. Go to "Packets" page to check the packets from LoRaWAN<sup>®</sup> node devices. The type starts from "Up" means uplinks and "Dn" means downlinks.

Clear								Search	0
Device EUI	Frequency	Datarate	SNR	RSSI	Size	Fcnt	Туре	Time	Details
24e124126a146579	868300000	SF7BW125	8.5	-85	4	14	UpUnc	2020-04-28T15:09:25+08:00	0

Click "Details" to check the properties and payload contents of packets.

ackets Details		
Fcnt	14	
Port	85	
Modulation	LORA	
Bandwidth	125	
SpreadFactor	7	
Bitrate	0	
CodeRate	4/5	
SNR	8.5	
RSSI	-85	
Power		
Payload(b64)	A3cYAA==	
Payload(hex)	03771800	
MIC	f5acdeb2	

[END]