

Semi-industrial LoRaWAN[®] Gateway

UG65

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

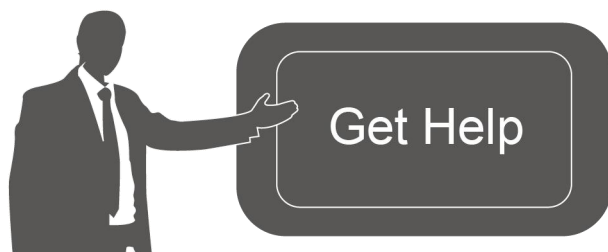
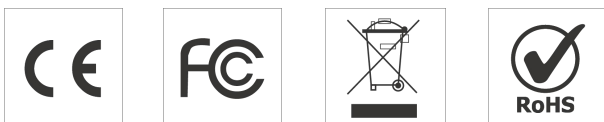
This Quick Start Guide only explains the installation of Milesight UG65 LoRaWAN® Gateway. For more functionality and advanced settings, please refer to the relevant documents as below.

Document	Description
UG65 Datasheet	Datasheet for UG65 LoRaWAN® Gateway.
UG65 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.com>

Declaration of Conformity

UG65 is in conformity with the essential requirements and other relevant provisions of the CE, FCC, and RoHS.



For assistance, please contact

Milesight technical support:

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Support Portal: support.milesight-iot.com

Tel: 86-592-5085280

Fax: 86-592-5023065

Address: Building C09, Software Park III, Xiamen
361024, China

Revision History

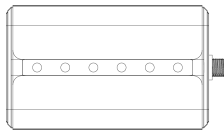
Date	Doc Version	Description
Aug. 31, 2020	V1.0	Initial version
Nov. 24, 2020	V2.0	Layout replace
May 6, 2021	V2.1	Layout replace
Oct. 31, 2022	V 2.2	1. Delete Ethernet cable 2. Web GUI pictures update
June 7, 2024	V 2.3	Add default WLAN connection password
April 11, 2025	V 2.4	Update Wi-Fi connection and network server steps
Dec. 24, 2025	V 2.5	Add web password prompt and limitation

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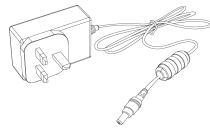
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1. Packing List

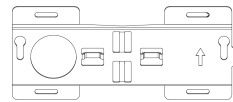
Before you begin to install the UG65 LoRaWAN® Gateway, please check the package contents to verify that you have received the items below.



1 × UG65



1 × DC Jack Power Adapter



1 × Mounting Bracket



2 × Bracket Fixing Screws



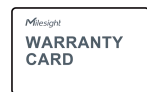
4 × Wall Mounting Kits



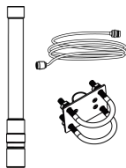
1 × LoRaWAN® Antenna
(18cm)



1 × Quick Start Guide



1 × Warranty Card



1 × 60 cm LoRaWAN®
Fiber-Glass N-N Antenna Kit
(Optional)

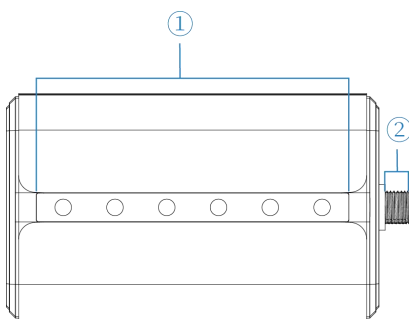


If any of the above items is missing or damaged, please contact your sales representative.

2. Hardware Introduction

2.1 Overview

A. Front Panel



① LED Area

POWER: Power Indicator

STATUS: System Indicator

LoRa: LoRa Indicator

Wi-Fi: Wi-Fi Indicator

LTE: Cellular Indicator

ETH: Ethernet Port Indicator

② LoRaWAN® Antenna Connector

(only for external antenna version)

		Blue Light	Wi-Fi is enabled
LTE	Cellular Status	Off	SIM card is registering or fails to register (or there are no SIM cards inserted)
		Blue 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	
ETH	Ethernet Port Status	Off	Disconnected
		Blue Light	Static: Connected

2.4 Reset Button

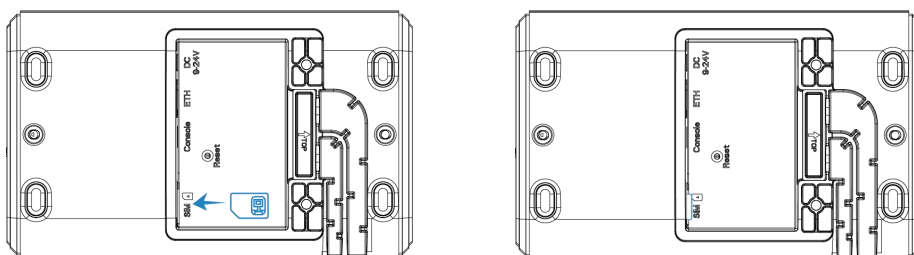
Function	Description	
	STATUS LED	Action
Reset	Static Blue	Press and hold the reset button for more than 5 seconds.
	Static Blue → Rapidly Blinking	Release the button and wait.
	Off → Static Blue	The gateway resets to factory default.

3. Hardware Installation

3.1 SIM Card Installation (Cellular Version Only)

Before inserting, ensure this gateway supports cellular feature which the PN includes “-Lxxxx” on the label.

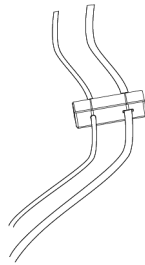
1. Use screwdriver to open the protective cover on the back panel of UG65.
2. Insert the SIM card into the device according to the direction icon on the device. If you need to take out the SIM card, press into the SIM card and it will pop up automatically.



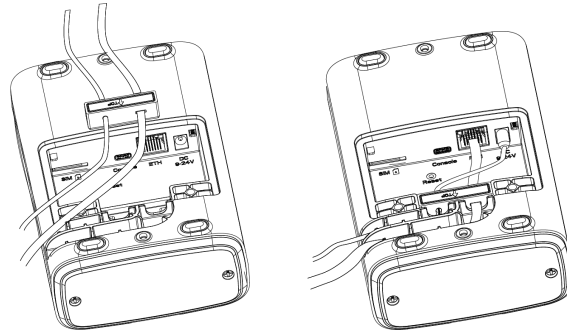
3.2 Cable Installation & Weather Protection

1. Connect the Ethernet cable and power cable to corresponding interfaces.
2. If the device needs to be installed outdoors, pass two cables through the opening in the waterproof

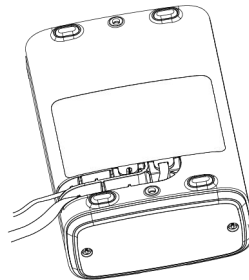
silicone. During operation, ensure that the silicone is not compressed or damaged.



3. Slid the cables into the grooves of the device.



4. Screw the protective cover back to the device.

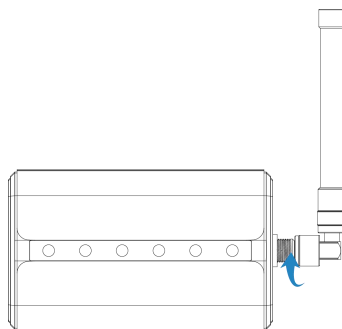


UG65 can also be powered by an 802.3af standard PoE injector or other PoE devices. If both are connected, DC power is preferred.

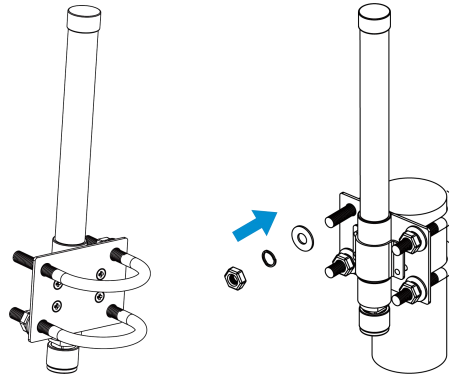
3.3 Antenna Installation

For external antenna version, rotate the antenna into the antenna connector accordingly. The external antenna should be installed vertically always on a site with a good signal.

Note: Please do not let the front panel of products faces to walls if you select embedded antenna mode.



If you use 60 cm antenna kit, fix the LoRaWAN® antenna to a pole via antenna clamp kit: pass the LoRaWAN® 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 the antenna to gateway antenna connector via the coaxial cable.



3.4 Gateway Installation

UG65 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.

3.4.1 Wall Mounting

Preparation: mounting bracket, bracket fixing screws, wall plugs, wall mounting screws and other required tools.

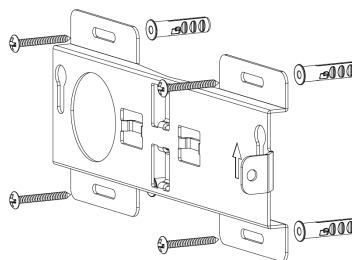
1. Align the mounting bracket horizontally to the desired position on the wall, use a marker pen to mark four mounting holes on the wall, and then remove the mounting bracket from the wall.

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

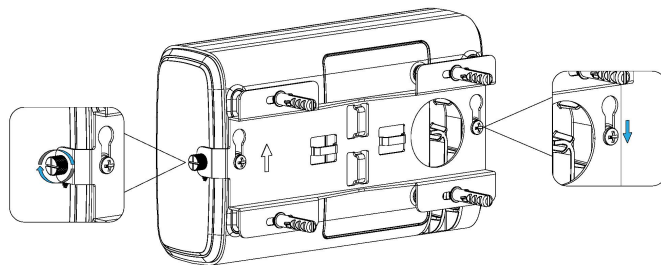
2. Drill four holes with a depth of 32 mm by using your drill with a 6 mm drill bit on the positions you marked previously on the wall.

3. Insert four wall plugs into the holes respectively.

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



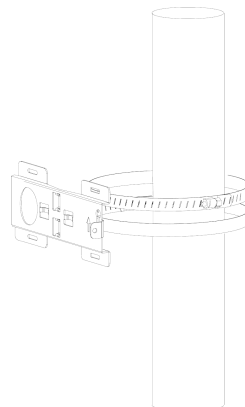
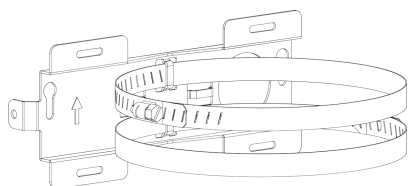
5. Screw the bracket fixing screws to the back panel of device, then hang the device to the mounting bracket on the wall.



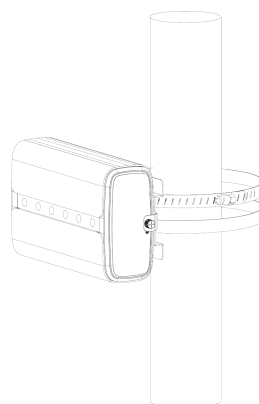
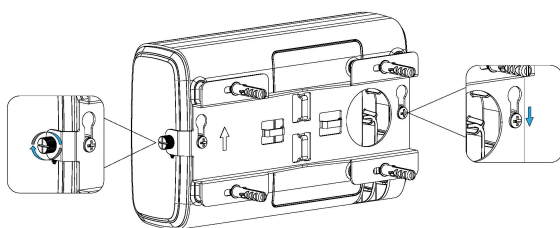
3.4.2 Pole Mounting

Preparation: mounting bracket, bracket fixing screws, hose clamp and other required tools.

1. Loosen the hose clamp by turning the locking mechanism counter-clockwise.
2. Straighten out the hose clamp and slide it through the rectangular rings in the mounting bracket, wrap the hose clamp around the pole.
3. Use a screwdriver to tighten the locking mechanism by turning it clockwise.



4. Screw the bracket fixing screws to the back panel of device, then hang the device to the mounting bracket on the pole.



4. Login the Web GUI

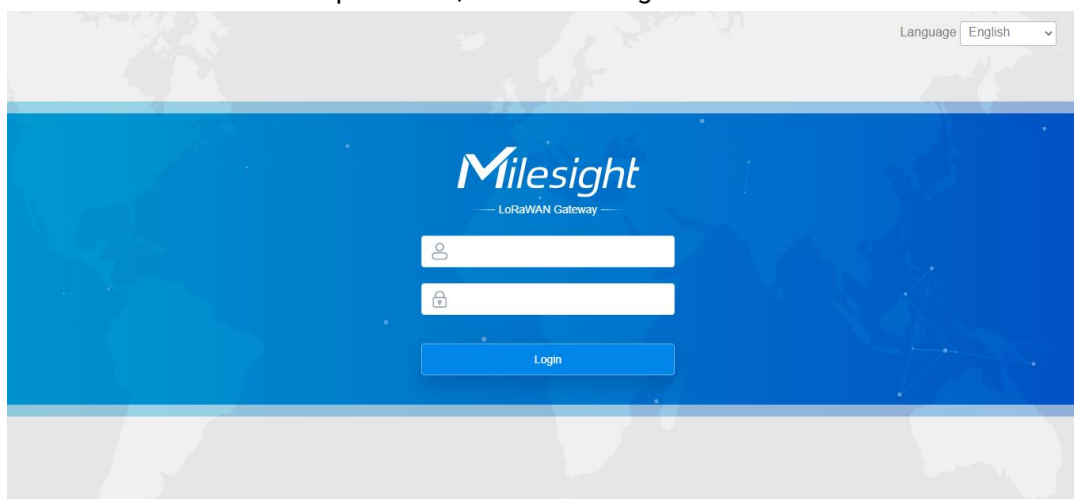
UG65 provides web-based configuration interface for management. If this is the first time you configure the gateway, please use the default settings below:

Username: **admin**

Password: **password**

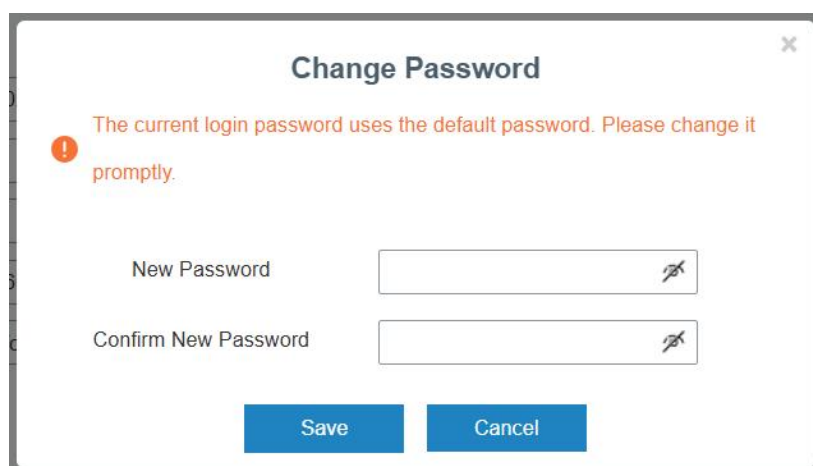
4.1 Wireless Access

1. Enable Wireless Network Connection on your computer and search for access point **Gateway_XXXXXX** (=last 6 digits of WLAN MAC address) and type default password **iotpassword** to connect it.
2. Open a Web browser on your PC (Chrome is recommended) and type in the IP address **https://192.168.1.1** to access the web GUI.
3. Enter the default username and password, then click "Login".



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

4. After logging the web GUI, it is necessary to change the web GUI password for the first time. The password must contain at least one letter and one number.



5. Use the new password to log in to the web GUI again. After logging the web GUI, you can view system information and perform configuration of the gateway.

The screenshot shows the Milesight web GUI interface. At the top, there is a navigation bar with the Milesight logo on the left and a user profile 'admin' on the right. Below the navigation bar is a warning message: 'For your device security, please change the default password'. The main content area is divided into several tabs: Overview, Packet Forward, Cellular, Network, WLAN, VPN, and Host List. The 'Overview' tab is selected, displaying 'System Information'. The system information is presented in a table:

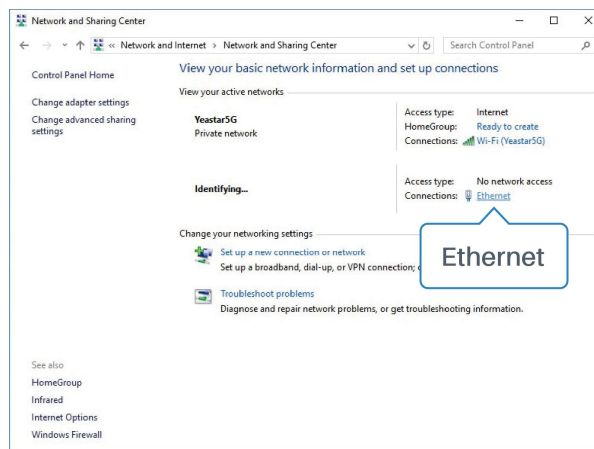
Parameter	Value
Model	UG65-L00E-470M-EA
Region	CN470
Serial Number	6221A4950760
Firmware Version	60.0.3000.26
Hardware Version	V1.1
Local Time	2020-12-10 17:57:24 Thursday
Uptime	03:04:04
CPU Load	6%
RAM (Capacity/Available)	512MB/65MB(12.7%)
eMMC (Capacity/Available)	2.0G/1.8G(90.80%)

At the bottom right of the system information table, there are two buttons: 'Manual Refresh' and 'Refresh'. On the right side of the page, there is a 'Help' sidebar with a search bar and several expandable sections: Model, Region, Serial Number, Firmware Version, Hardware Version, Local Time, and Uptime, each with a brief description of the information it provides.

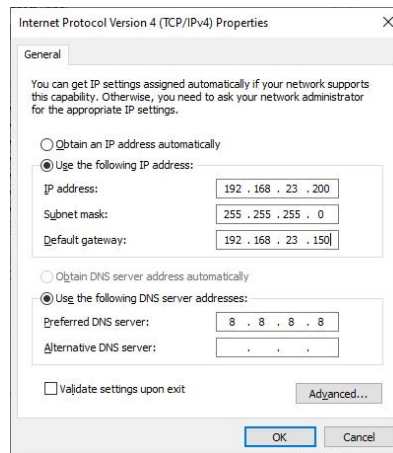
4.2 Wired Access

Note: This is only applicable to versions prior to 60.0.0.46.

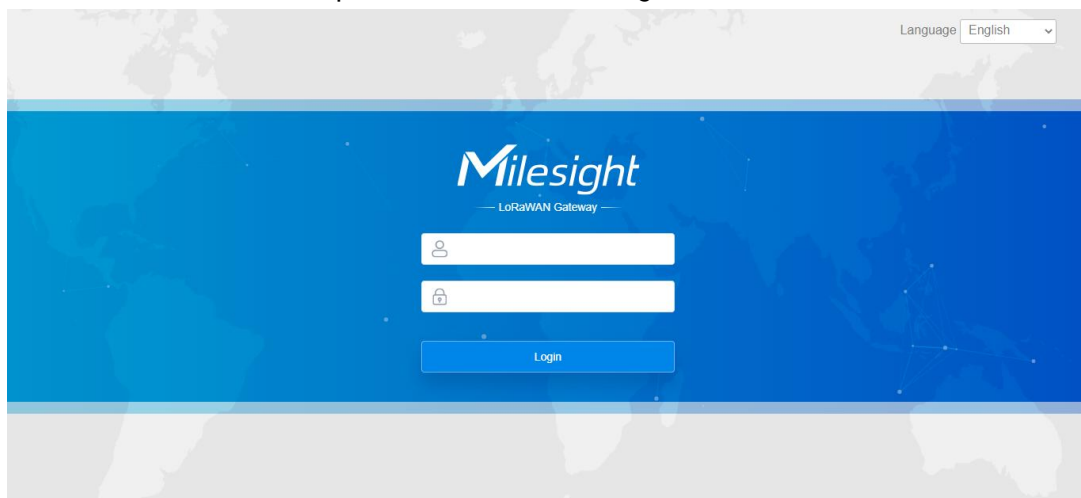
1. Connect PC to UG65 ETH port directly or through PoE injector.
2. Assign the IP address to your computer manually. The following steps are based on Windows 10 operating system for your reference.
 - A. Go to "Control Panel" → "Network and Internet" → "Network and Sharing Center", then click "Ethernet" (May have different names).



- B. Go to "Properties" → "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.

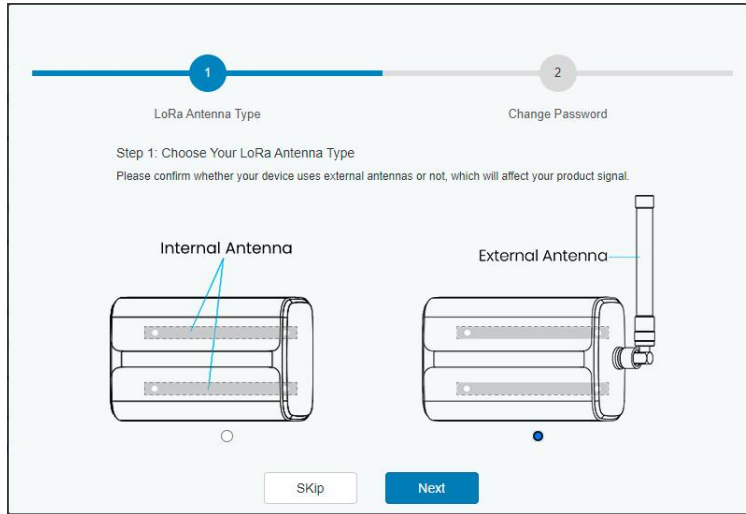


3. Open a Web browser on your PC (Chrome is recommended) and type in the IP address **192.168.23.150** to access the web GUI
4. Enter the default username and password, then click "Login".



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

5. 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.



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

Milesight admin

For your device security, please change the default password

Status	Overview	Packet Forward	Cellular	Network	WLAN	VPN	Host List	Help
Packet Forwarder	System Information							
Network Server	Model	UG65-L00E-470M-EA						
Network	Region	CN470						
System	Serial Number	6221A4950760						
Maintenance	Firmware Version	60.0.3000.26						
APP	Hardware Version	V1.1						
	Local Time	2020-12-10 17:57:24 Thursday						
	Uptime	03:04:04						
	CPU Load	6%						
	RAM (Capacity/Available)	512MB/65MB(12.7%)						
	eMMC (Capacity/Available)	2.0G/1.8G(90.80%)						
		Manual Refresh	Refresh					
			Model Show the model name of router. Region Show the Region of router. Serial Number Show the serial number of router. Firmware Version Show the current firmware version of router. Hardware Version Show the current hardware version of router. Local Time Show the current local time of system. 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

1. Go to **Network > Interface > Port** page to select the connection type and configure Ethernet port information, click "Save & Apply" for changes to take effect.

The screenshot shows the 'Port' configuration page in the Milesight gateway interface. The page has tabs for 'Port', 'WLAN', 'Cellular', 'Loopback', and 'VLAN Trunk', with 'Port' selected. Below the tabs, there is a section for 'Port_1' configuration. The fields are as follows:

Port	eth 0
Connection Type	Static IP
IP Address	192.168.45.190
Netmask	255.255.255.0
Gateway	192.168.45.1
MTU	1500
Primary DNS Server	8.8.8.8
Secondary DNS Server	
Enable NAT	<input checked="" type="checkbox"/>

Note: If there is IP conflict when changing the IP address of Ethernet port, please change the subnet of WLAN first.

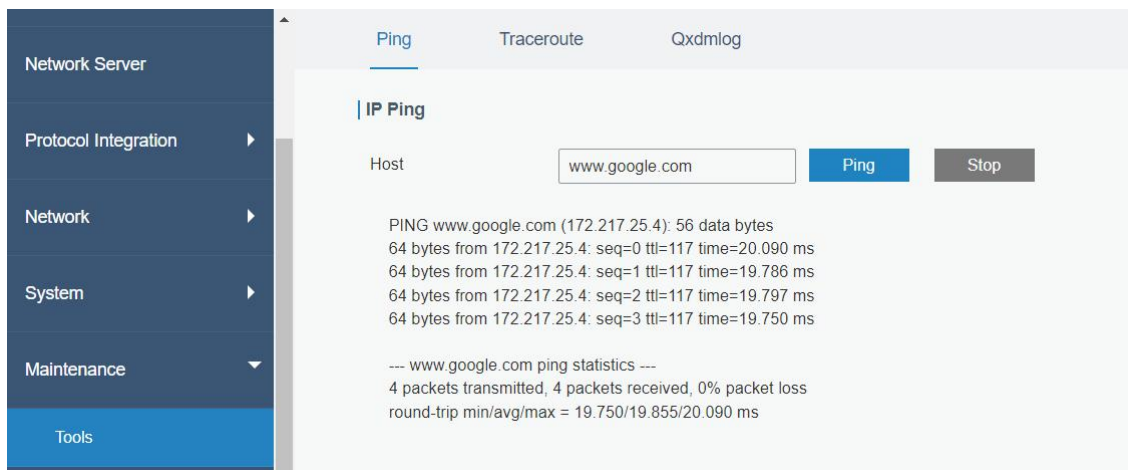
The screenshot shows the 'WLAN' configuration page in the Milesight gateway interface. The page has tabs for 'Port', 'WLAN', 'Loopback', and 'VLAN Trunk', with 'WLAN' selected. The 'WLAN' section is enabled, and the 'Work Mode' is set to 'AP'. Below this, there is an 'IP Setting' section with the following fields:

Protocol	Static IP
IP Address	192.168.10.1
Netmask	255.255.255.0

The IP Address and Netmask fields are highlighted with a red box.

2. Connect Ethernet port of gateway to devices like router or modem.

3. Go to **Maintenance > Tools > Ping** to check network connectivity.



5.2 Configure the Cellular Connection (Cellular Version Only)

1. Go to **Network > Interface > Cellular > Cellular Setting** page to enable cellular settings and configure the necessary cellular info of the SIM card, then click "Save" and "Apply" for changes to take effect.

The screenshot shows the 'Cellular Setting' configuration page with the following fields and values:

- Enable:
- Network Type: Auto (dropdown)
- APN: (empty text box)
- Username: (empty text box)
- Password: (empty text box)
- Access Number: (empty text box)
- PIN Code: (empty text box)
- Authentication Type: None (dropdown)
- Roaming:
- Customize MTU:
- MTU: 1500 (text box)
- Enable IMS:
- SMS Center: (empty text box)

2. Go to **Status > 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.

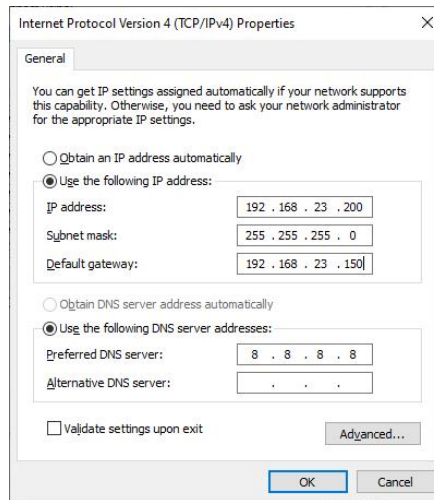
Overview	Packet Forward	Cellular	Network	WLAN
Modem				
Status	Ready			
Model	EC25			
Version	EC25ECGAR06A07M1G			
Signal Level	23asu (-67dBm)			
Register Status	Registered (Home network)			
IMEI	860425047368939			
IMSI	460019425301842			
ICCID	89860117838009934120			
ISP	CHN-UNICOM			
Network Type	LTE			
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			

5.3 Configure the Wi-Fi Connection

1. Go to **Network > Interface > Port** page to select connection type as **Static IP** and configure an IP address for the Ethernet WAN port.

Status	Port	WLAN	Cellular	Loopback	VLAN Trunk
Packet Forwarder	Port_1				
Network Server	Port	eth 0			
Protocol Integration	Connection Type	Static IP			
Network	IP Address	192.168.23.150			
Interface	Netmask	255.255.255.0			
Firewall	Gateway	192.168.23.1			
DHCP	MTU	1500			
DDNS	Primary DNS Server	8.8.8.8			
	Secondary DNS Server	223.5.5.5			
	Enable NAT	<input checked="" type="checkbox"/>			

2. Connect PC to UG65 ETH port directly or through PoE injector.
3. Assign the IP address to computer manually. Take Windows 10 system as an example:



4. Open a Web browser and type in the IP address of the Ethernet port to access the web GUI.
5. Go to **Network > Interface > WLAN** and click **Scan** to search for WiFi access point.

Port	WLAN	Cellular	Loopback				
< 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

6. Select one access point and click **Join Network**, then type the password of the access point.



Port	WLAN	Cellular	Loopback
WLAN			
Enable	<input checked="" type="checkbox"/>		
Work Mode	Client		Scan
SSID	AAA		
BSSID	24:e1:24:f0:c4:13		
Encryption Mode	WPA-PSK/WPA2-PSK		
Cipher	AES		
Key	*****		
IP Setting			
Protocol	DHCP Client		

Click **Save** and **Apply** buttons after all configurations are done.

7. Go to **Status > WLAN** to check the connection status of the client. If it shows "Connected", it means gateway connects to Wi-Fi successfully.

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
Cipher	AES
Status	Connected
IP Address	192.168.1.145
Netmask	255.255.255.0
Connection Duration	0 days, 02:44:45

8. Go to **Network > Failover > WAN Failover** to switch the wlan0 as main interface, then gateway can use the Wi-Fi to access the network.

Main Interface	Backup Interface	Startup Delay(s)	Up Delay(s)	Down Delay(s)	Track ID	Operation
wlan0	eth 0	30	0	0	1	
						

Save

6. Packet Forwarder Configuration

UG65 has installed multiple packet forwarders including Semtech, Chirpstack, etc. This section explains how to connect the gateway to network servers.



Make sure the gateway connects to the network as shown in [Section 5](#).

1. Go to **Packet Forwarder > General** page and click  to add a network server.

General Setting

Gateway EUI: 24E124FFFEF

Gateway ID: 24E124FFFEF

Frequency-Sync: Disabled

Multi-Destination

ID	Enable	Type	Server Address	Connect Status	Operation
0	Enabled	Embedded NS	localhost	Connected	✎ ✕
					+

[Save & Apply](#)

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

Enable

Type: Semtech

Server Address: eu1.cloud.thethings.network

Port Up: 1700

Port Down: 1700

[Save](#)

3. Go to **Packet Forwarder > Radio** page to configure the center frequency and channels. The channels of the gateway and network server need to be the same.

Region: US915

Name	Center Frequency/MHz
Radio 0	904.3
Radio 1	905.0

Multi Channels Setting

Enable	Index	Radio	Frequency/MHz
<input checked="" type="checkbox"/>	0	Radio 0	903.9
<input checked="" type="checkbox"/>	1	Radio 0	904.1
<input checked="" type="checkbox"/>	2	Radio 0	904.3
<input checked="" type="checkbox"/>	3	Radio 0	904.5
<input checked="" type="checkbox"/>	4	Radio 1	904.7
<input checked="" type="checkbox"/>	5	Radio 1	904.9
<input checked="" type="checkbox"/>	6	Radio 1	905.1
<input checked="" type="checkbox"/>	7	Radio 1	905.3

4. Add the gateway on network server page. For more details about the network server connection please refer to [Milesight IoT Support portal](#).

7. Network Server Configuration

The gateway can work as a LoRaWAN® network server to receive and analyze the data of LoRaWAN® end devices, and then achieve the flexible integration with different systems.



Make sure the gateway connects to the network as shown in [Section 5](#).

7.1 Connect to Milesight IoT Cloud

1. Go to **Packet Forwarder > General** page to enable the embedded network server.

ID	Enable	Type	Server Address	Connect Status	Operation
0	Enabled	Embedded NS	localhost	Connected	

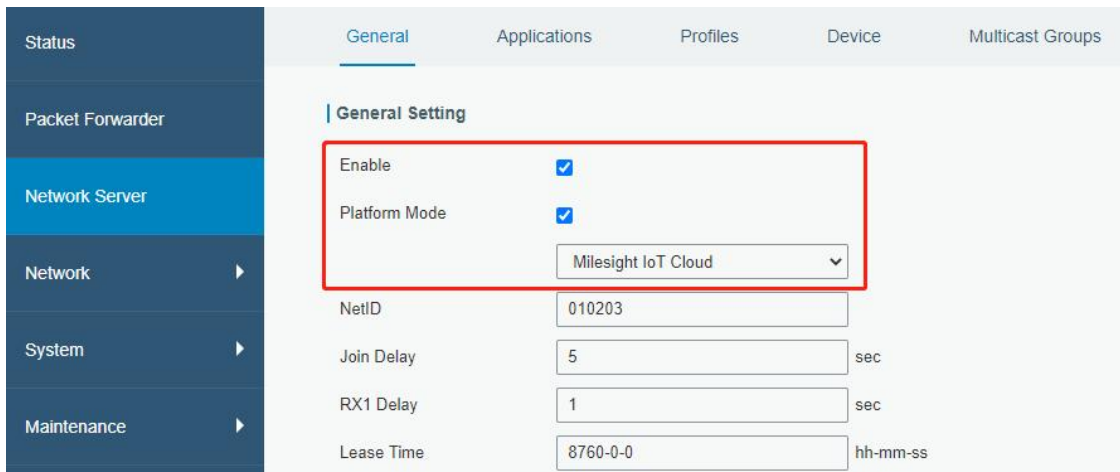
2. Go to **Packet Forwarder > Radio** page to select center frequency and channels. The channels of the gateway and the end devices need to be the same.

Name	Center Frequency/MHz
Radio 0	904.3
Radio 1	905.0

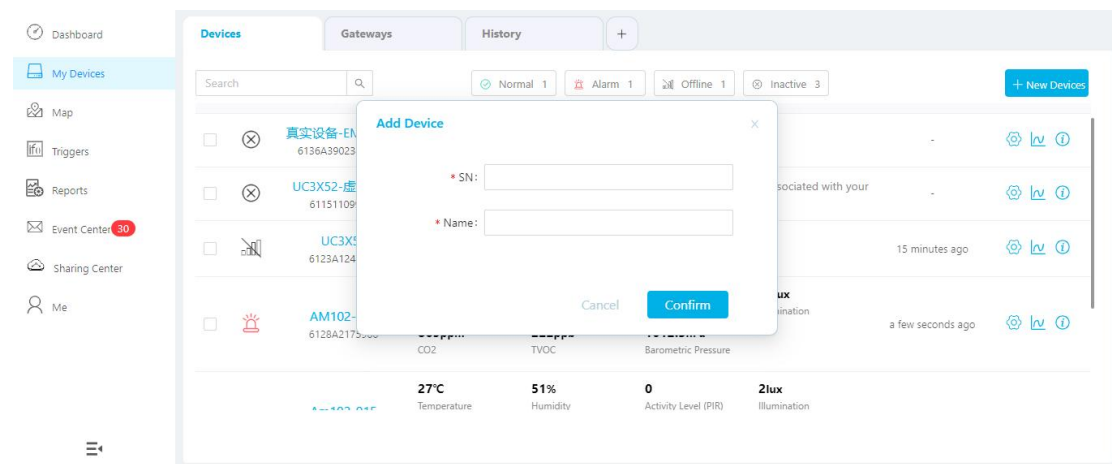
Enable	Index	Radio	Frequency/MHz
<input checked="" type="checkbox"/>	0	Radio 0	903.9
<input checked="" type="checkbox"/>	1	Radio 0	904.1
<input checked="" type="checkbox"/>	2	Radio 0	904.3
<input checked="" type="checkbox"/>	3	Radio 0	904.5
<input checked="" type="checkbox"/>	4	Radio 1	904.7
<input checked="" type="checkbox"/>	5	Radio 1	904.9
<input checked="" type="checkbox"/>	6	Radio 1	905.1
<input checked="" type="checkbox"/>	7	Radio 1	905.3

3. Go to **Network Server > General** page to enable the network server and “Milesight IoT Cloud” mode.

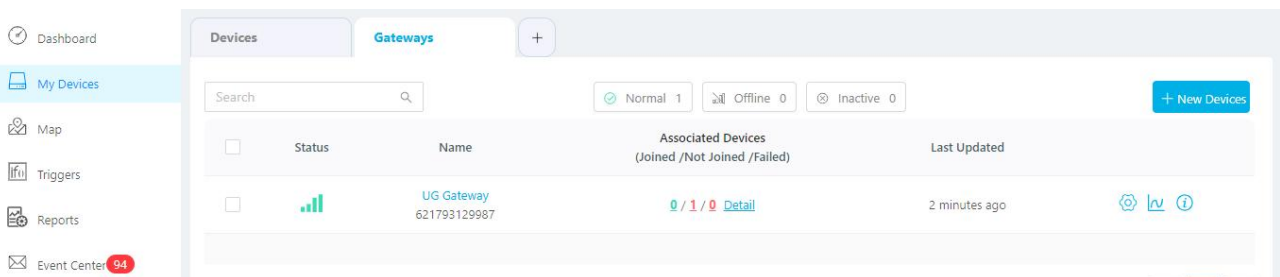
Note: after this mode is enabled, the other settings of network server will be not allowed to edit.



4. 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.



5. The gateway is online on Milesight IoT Cloud.



7.2 Add End Devices

1. Go to **Packet Forwarder > General** page to enable the embedded network server.

The screenshot shows the 'Packet Forwarder' configuration page. The 'General Setting' section includes:

- Gateway EUI: 24E124FFFEF
- Gateway ID: 24E124FFFEF
- Frequency-Sync: Disabled

The 'Multi-Destination' table is as follows:

ID	Enable	Type	Server Address	Connect Status	Operation
0	Enabled	Embedded NS	localhost	Connected	[Edit] [Delete] [Add]

2. Go to **Packet Forwarder > Radio** page to select the center frequency and channels. The channels of the gateway and the end devices need to be the same.

The screenshot shows the 'Radio' configuration page. The 'Region' is set to US915. The 'Name' and 'Center Frequency/MHz' table is:

Name	Center Frequency/MHz
Radio 0	904.3
Radio 1	905.0

The 'Multi Channels Setting' table is:

Enable	Index	Radio	Frequency/MHz
<input checked="" type="checkbox"/>	0	Radio 0	903.9
<input checked="" type="checkbox"/>	1	Radio 0	904.1
<input checked="" type="checkbox"/>	2	Radio 0	904.3
<input checked="" type="checkbox"/>	3	Radio 0	904.5
<input checked="" type="checkbox"/>	4	Radio 1	904.7
<input checked="" type="checkbox"/>	5	Radio 1	904.9
<input checked="" type="checkbox"/>	6	Radio 1	905.1
<input checked="" type="checkbox"/>	7	Radio 1	905.3

3. Go to **Network Server > General** page to enable the network server mode.

The screenshot shows the 'Network Server' configuration page. The 'General Setting' section includes:

- Enable:
- Milesight IoT Cloud:
- NetID: 010203
- Join Delay: 5 sec
- RX1 Delay: 1 sec
- Lease Time: 876000-0-0 hh-mm-ss
- Log Level: info

4. Go to **Network Server > Application** to add a new application.

The screenshot shows the 'Applications' management page. At the top, there is a table with the following data:

ID	Name	Description	Operation
1	Test	Test	[Edit] [Delete] [Add]

A red arrow points to the plus sign icon in the 'Operation' column of the first row. Below the table is a form for adding a new application. The form has the following fields:

- Name: cloud
- Description: cloud
- Metadata:

Below the form is a section for 'Data Transmission' with a table for Type and Operation, and Save and Cancel buttons.

5. Go to **Network Server > Device** page and click **Add** to add a LoRaWAN® end device. You can also click **Bulk Import** to use template to add bulk devices at once.

The screenshot shows the 'Device' management page. At the top, there are three buttons: **Add**, **Bulk Import**, and **Delete All**. To the right of these buttons is a search bar. Below the buttons is a table with the following columns: Device Name, Device EUI, Device-Profile, Application, Last Seen, Activated, and Operation. The table currently shows 'No matching records found'.

6. Fill in the information of the end device and click **Save&Apply**. The information can be found on the end device's configuration page or from manufacturer's manuals. Here are the default settings of Milesight end devices:

- Device EUI: this can be found on the device.
- Device-Profile: OTAA type files
- Payload Codec: select the model
- fPort: 85
- Application Key: select Default Value. If you use random keys, please select Custom Value.

Device Name	<input type="text" value="lora-sensor"/>
Description	<input type="text" value="a short description of your node"/>
Device EUI	<input type="text" value="0000000000000000"/>
Device-Profile	ClassA-OTAA
Application	cloud
Payload Codec	
fPort	<input type="text" value="1"/>
Frame-counter Validation	<input type="checkbox"/>
Application Key	<input checked="" type="radio"/> Default Value <input type="radio"/> Custom Value
Device Address	<input type="text"/>
Network Session Key	<input type="text"/>
Application Session Key	<input type="text"/>
Uplink Frame-counter	<input type="text" value="0"/>
Downlink Frame-counter	<input type="text" value="0"/>

[Save & Apply](#)

7. Go to **Network Server > Packets** page to check the packets from LoRaWAN® end devices. The type starts from “Up” means uplinks and “Dn” means downlinks.


Device EUI/Group	Gateway ID	Frequency	Datarate	RSSI/SNR	Size	Fcnt	Type	Time	Details
24E12	24E124	868300000	SF7BW125	-44/14.5	23	678	UpUnc	2025-04-03 10:09:25+08:00	!
24E12	24E124	868500000	SF7BW125	-44/10.2	23	677	UpUnc	2025-04-03 10:08:25+08:00	!
24E12	24E124	868100000	SF7BW125	-53/14.0	10	289	UpUnc	2025-04-03 10:07:46+08:00	!
24E12	24E124	868100000	SF7BW125	-39/14.2	23	676	UpUnc	2025-04-03 10:07:25+08:00	!
24E12	24E124	868100000	SF7BW125	-40/13.8	23	675	UpUnc	2025-04-03 10:06:25+08:00	!
24E12	24E124	868100000	SF7BW125	-40/14.0	23	674	UpUnc	2025-04-03 10:05:25+08:00	!
24E12	24E124	868500000	SF7BW125	-40/11.5	23	673	UpUnc	2025-04-03 10:04:25+08:00	!
24E12	24E124	868300000	SF7BW125	-49/13.8	18	0	JnReq	2025-04-03 10:04:16+08:00	!

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

Packet Details	
Bandwidth	120
SpreadFactor	7
Bitrate	0
CodeRate	4/5
SNR	13.5
RSSI	-54
Power	-
Payload(b64)	AXVjA2fqAARoPA==
Payload(hex)	0175630367ea0004683c
JSON	{ "battery": 99, "humidity": 30, "temperature": 23.4 }
MIC	7f3664cd

7.3 Connect to MQTT/HTTP Server

The gateway supports choosing the data transport protocol to send the data of device within this application to third-party servers. One application supports to add a MQTT transmission or a HTTP (HTTPS) transmission at most.

1. Go to **Network Server > Application** to select the application to edit.
2. Click  to add a data transmission type.

HTTP or HTTPS:

Step 1: select HTTP or HTTPS as transmission protocol.

Type	HTTP
------	------

Step 2: Enter the destination URL. Different types of data can be sent to different URLs.

URL	
Data Type	URL
Uplink data	<input type="text"/>
Join notification	<input type="text"/>
ACK notification	<input type="text"/>
Error notification	<input type="text"/>

Enter the header name and header value if there is user credentials when accessing the HTTP(s) server.

| HTTP Header

Header Name	Header Value	Operation
<input type="text"/>	<input type="text"/>	<input type="button" value="X"/>
		<input type="button" value="+"/>

MQTT:

Step 1: select the transmission protocol as MQTT and configuration mode as Manual Configuration.

| Data Transmission

Type

Configuration Mode

Step 2: Fill in MQTT broker general settings.

| General

Broker Address

Broker Port

Client ID

Connection Timeout/s

Keep Alive Interval/s

Data Retransmission

Step 3: Select the authentication method required by the server.

If you select user credentials for authentication, you need to enter the username and password for authentication.

| User Credentials

Enable

Username

Password

If certificate is necessary for verification, please select mode and import CA certificate, client certificate and client key file for authentication.

| TLS

Enable

Mode

CA File

Client Certificate File

Client Key File

SSL Secure

Step 4: Enter the topics to receive data or send downlinks, and choose the QoS.

| Topic

Data Type	topic	Retain	QoS
Uplink data	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="QoS 0"/>
Downlink data	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="QoS 0"/>
Multicast downlink data	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="QoS 0"/>
Join notification	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="QoS 0"/>
ACK notification	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="QoS 0"/>
Error notification	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="QoS 0"/>
Request data	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="QoS 0"/>
Response data	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="QoS 0"/>

[END]