



# Mini LoRaWAN<sup>®</sup> Gateway

UG63

User 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 disassembled or remodeled 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 another 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.

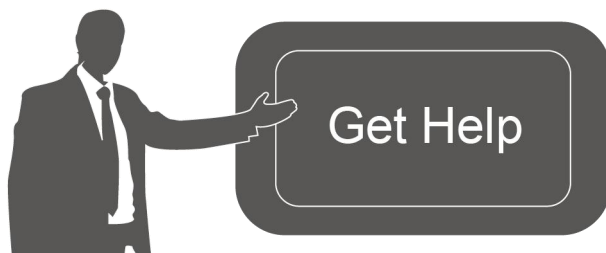
## Declaration of Conformity

UG63 is in conformity with the essential requirements and other relevant provisions of the CE, FCC, and RoHS.



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## Revision History

Date	Doc Version	Description
Jan. 5, 2024	V 2.0	Initial version based on UG63 V2

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# 1. Product Introduction

## 1.1 Overview

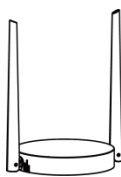
UG63 is an 8-channel lightweight indoor LoRaWAN® gateway. Adopting, the SX1302 chip, UG63 can set up packet forwarding connection between end nodes and mainstream network servers (such as TTN, ChirpStack, etc.). With its compact size and high performance, it is highly suitable for independent deployment of LoRaWAN® networks in small-scale scenarios or single spaces. It can also serve as a supplementary gateway, along with UG65/UG67 or other main gateways, to enhance LoRaWAN® signal coverage in large-scale scenarios by filling in signal blind spots. It is an ideal supplement for wide indoor areas such as offices, parking lots, campuses, etc.

## 1.2 Key Features

- Equip with SX1302 chip, handling a higher amount of traffic with lower consumption
- 8 half-duplex channels for more than 2000 end-nodes connections
- Small in size for easy carrying & deployment
- Desktop, wall, or ceiling mounting support
- Multi-backhaul backups with Ethernet and Cellular (4G)
- Cover the blind spot of LoRaWAN® network by transmitting data to Milesight UG56/UG65/UG67 controller gateway
- High-cost performance, suitable for small applications
- Milesight DeviceHub 2.0 & Development Platform provide easy and centralized management of remote devices
- Compatible with mainstream network servers like The Things Industries, ChirpStack, AWS IoT Core for LoRaWAN®, etc.

## 2. Hardware Introduction

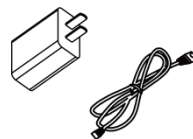
### 2.1 Packing List



1 × UG63 Device



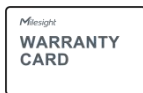
2 × Wall Mounting  
Kits



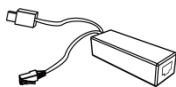
1 × Type-C Cable &  
Power Adapter



1 × Quick Guide



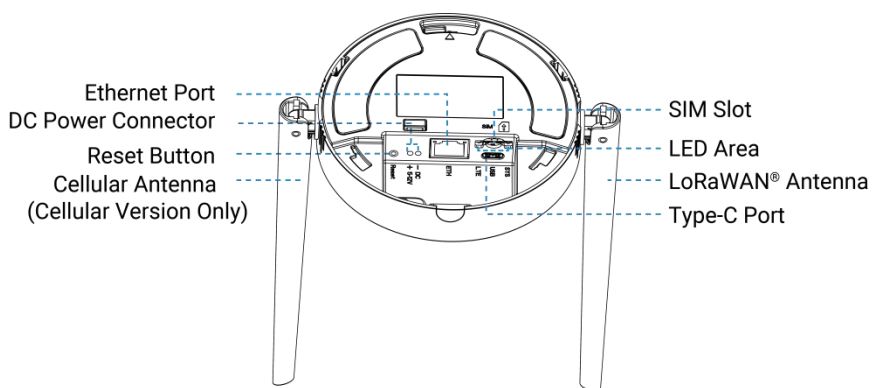
1 × Warranty Card



1 × PoE Splitter  
(Optional)

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

## 2.2 Hardware Overview



## 2.3 LED Indicator and Reset Button

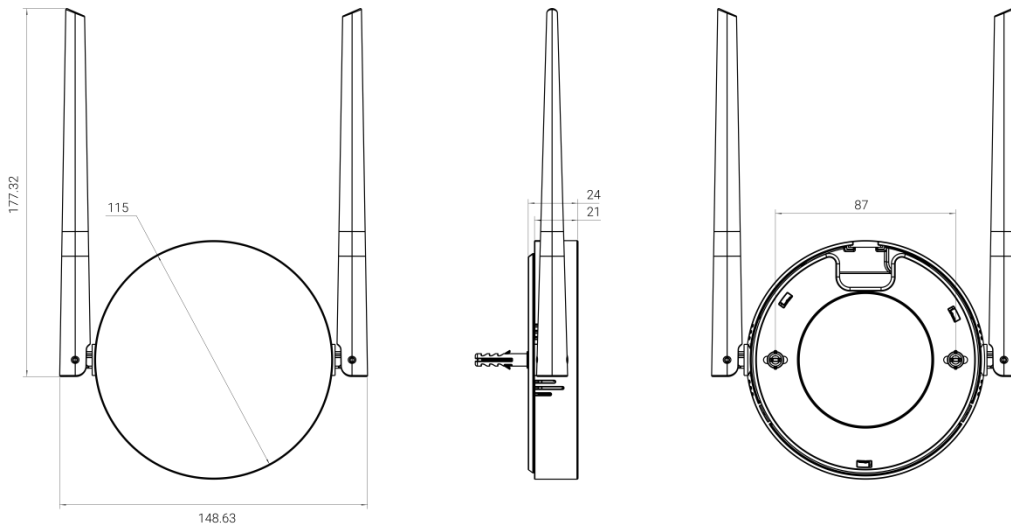
### LED Indicators

LED	Indication	Status	Description
SYS	Power & System Status	Off	The power is off
		Green Light	The system is running properly
		Red Light	The system goes wrong
LTE	Cellular Status	Off	SIM card is registering or failed to register (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
Ethernet Port	Link Indicator	Off	Disconnected or connect failure
		Yellow Blinking	Transmitting data
	Connection Indicator	Off	Ethernet port is disconnected
		Green Light	Ethernet port is connected

## Reset Button

Function	Action	LED Indication
Reset to Factory Default	Press and hold the button for more than 5 seconds	SYS: blinks rapidly.

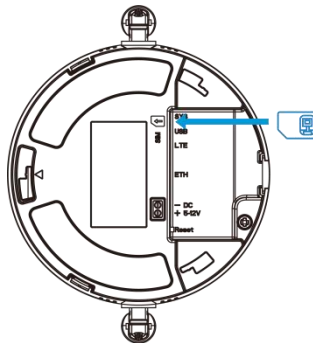
## 2.4 Dimensions (mm)



## 3. Hardware Installation

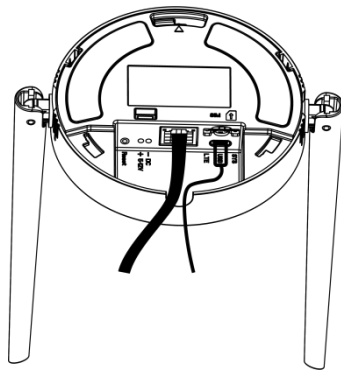
### 3.1 SIM Card Installation (Cellular Version Only)

Insert the micro (3FF) SIM card into the device according to arrows as follows. If you need to take out the SIM card, press the SIM card and it will pop up automatically.

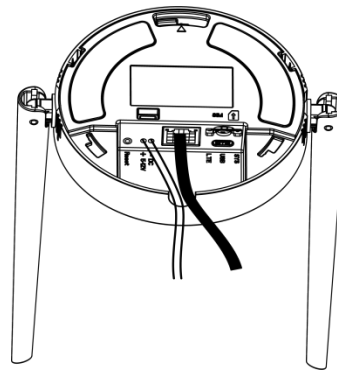


### 3.2 Power Supply

UG63 can be powered by USB (5V) or a DC power connector (5-12V) by default. When installing the power cables, pass them with Ethernet cables through the groove.

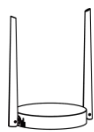


USB Powered



DC Powered

Additionally, it can also be powered by an 802.3af standard PoE source via a PoE splitter.



UG63

USB Cable  
(Power)

Ethernet Cable  
(Data)



PoE Splitter

Ethernet Cable  
(Power & Data)



PoE Switch

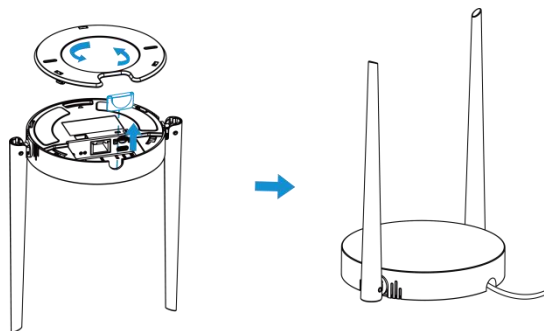
### 3.3 Gateway Installation

UG63 supports multiple installation methods like desktop, wall mounting, ceiling mounting, etc. Before you start, make sure that all cables have been installed and configurations are completed.

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

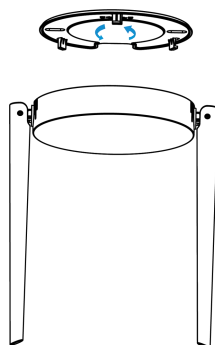
#### 3.3.1 Desktop

Take off the baffle and mounting plate on the back of the device, then you can place the device on the desktop.

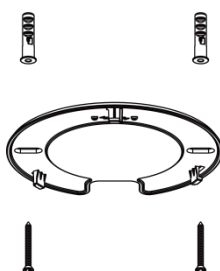


#### 3.3.2 Wall/Ceiling Mounting

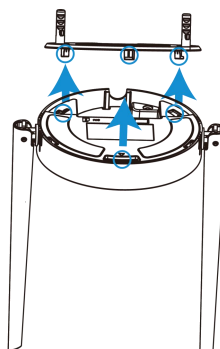
1. Take off the mounting plate on the back of the device.



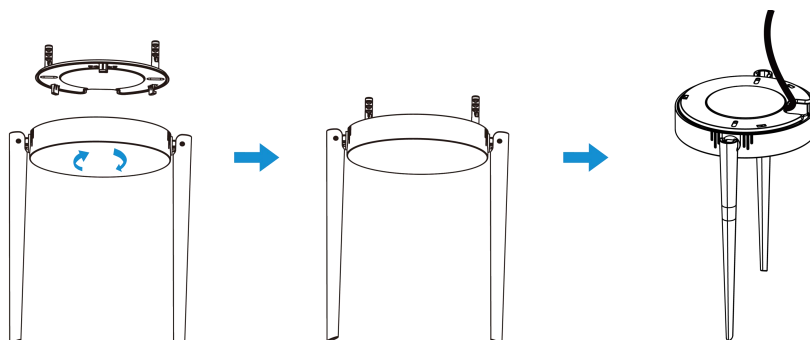
2. Align the mounting plate horizontally to the desired position on the wall or ceiling to mark two mounting holes, drill two holes as these marks, and insert wall plugs into the holes respectively.



3. Fix the mounting plate to the wall plugs with screws.



4. Turn the device clockwise to lock it to the mounting plate.





## 4. Access the Gateway

UG63 provides user-friendly web GUI for configuration and users can get access to it via Wi-Fi. The default settings are listed below:

Wi-Fi SSID: **Gateway\_XXXXXX** (can be found on the label)

Wi-Fi IP Address: **192.168.1.1**

Browser: **Chrome (Recommended)**

Username: **admin**

Password: **password**

Configuration Steps:

Step 1: Enable the Wireless Network Connection on your computer and search for the corresponding access point, then connect the computer to this access point.

Step 2: Open the browser and type 192.168.1.1 to access the web GUI.

Step 3: Select the language.

Step 4: Enter the default username and password to log in the web GUI.

English



Step 5: It is suggested to follow the wizard to complete basic settings. Users can also skip all steps or exit the wizard to configure the device.

1) Configure the Link Failover settings to decide the main link as required and ping detection settings. For details please refer to [Link Backup](#) chapter.

2) Configure the Ethernet WAN settings to set up network access as required. For details please refer to [WAN](#) chapter.

3) Configure the cellular network settings to set up cellular connections. Usually, it is necessary to type the APN parameter to register to cellular networks. For details please refer to [Cellular](#) chapter.

4) Configure correct system time. For details please refer to [Time](#) chapter.

5) Configure the device to connect a LoRaWAN® network server. For details please refer to [Packet Forward-General](#) chapter.

6) Configure the packet filter. For details please refer to [Packet Forward-Packet Filters](#) chapter.

7) Configure the WLAN settings. For details please refer to [WLAN](#) chapter.

8) Change a device password for security.

**Note:** The connection type of Ethernet port is DHCP by default. UG63 also supports wired access if you select the connection type of Ethernet port as static IP and assign an IP address to Ethernet port.

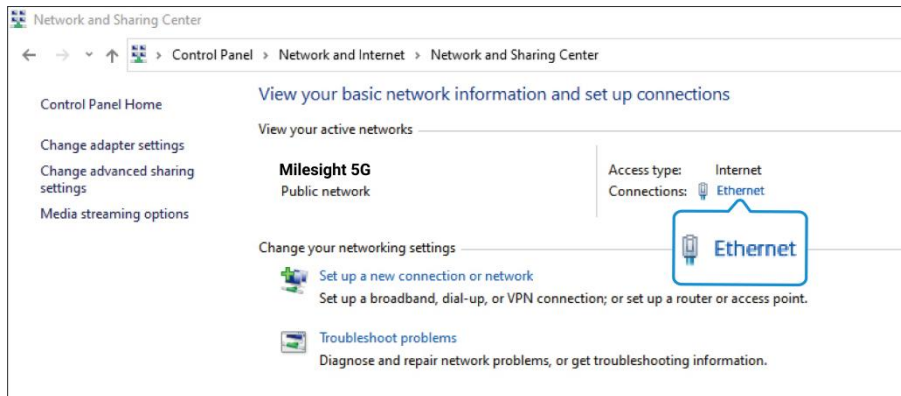
Step 1: Go to **Network > WAN** page to select connection type as **Static IP** and configure an IP address for the Ethernet WAN port.

Link backup	WAN	Cellular	WLAN
Connection Type	Static IP		
IP Address	192.168.40.185		
Netmask	255.255.255.0		
Gateway	192.168.40.1		
Primary DNS Server	8.8.8.8		
Secondary DNS Server	223.5.5.5		

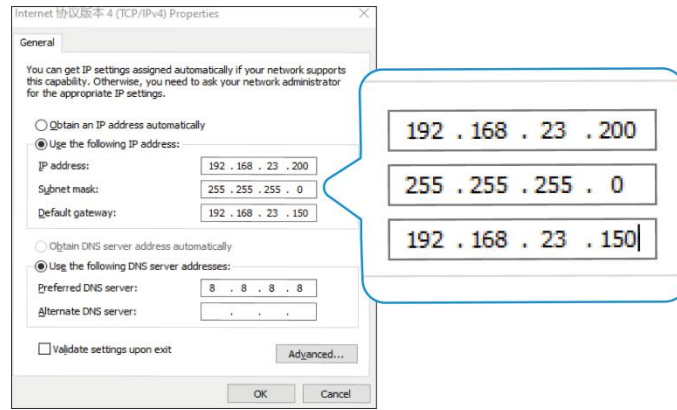
Step 2: Connect computer to Ethernet port of UG63 directly or via switch.

Step 3: Assign the IP address to computer manually. Take Windows 10 system as an example,

A. Go to "Control Panel" → "Network and Internet" → "Network and Sharing Center", then click "Ethernet" (It 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 UG63.



Step 4: Open the browser and type the IP address of Ethernet port to access the web GUI.

## 5. Operation Guide

### 5.1 Status

#### Overview

Parameters	Description
Model	The whole model name of the gateway.
SN	The serial number of the gateway.
EUI	The unique identifier of the gateway and it's non-editable.

#### System Information

Firmware Version	The current firmware version of the gateway.
Hardware Version	The current hardware version of the gateway.
Region	The LoRaWAN® frequency region of the gateway. This is non-editable. <b>Note:</b> the frequency plan can be changed on <b>Packet Forward &gt; Radios</b> page

	and will be not affected by this region value. For example, the gateway with region AU915 can also change the frequency plan to US915, AS923-1, etc.
Local Time	The current local time of the system.
Uptime	The information on how long the gateway has been running.
CPU Temperature	The temperature of CPU.
<b>Ethernet</b>	
Type	The latitude of the location.
IP	The IP address of Ethernet port.
MAC	The MAC address of the Ethernet port.
Gateway	The upper gateway address of the Ethernet port.
DNS	The DNS server address of the Ethernet port.
Connection Duration	The information on how long the Ethernet network has been connected.
<b>Cellular (Cellular Version Only)</b>	
IP Address	The IP address of cellular network.
Connection Duration	The information on how long the cellular network has been connected.
<b>WLAN</b>	
SSID	The SSID of the WLAN access point.
<b>LoRaWAN Packet Forward</b>	
Server Type	The LoRaWAN® packet forward connection type.
Server Address	The LoRaWAN® network server address. When server type is Basic Station, this will show LNS URI and CUPS URI.

The screenshot displays the 'Cellular' configuration page of a Milesight gateway. It is divided into two main sections: 'SIM' and 'NET'.

**SIM Section:** Shows 'Ready' status with 'Register Status: Registered (Home network)'. Below this is a 'Modem' table with the following details:

Model	EG912U
Version	EG912UGLAAR03A09M08
Signal Level	31 asu(-51 dbm)
IMEI	869487060733168
IMSI	460115210733084
ICCID	89860321245923785509
ISP	CHN-CT
Network Type	FDD LTE
PLMN ID	46011
LAC	5F0C
Cell ID	0E0B70B

**NET Section:** Shows 'Connected' status with 'Connection Duration: 0days, 00:27:49'. Below this is a 'Network' table with the following details:

IPv4 Address	10.139.25.142/32
IPv4 Gateway	192.168.0.1
IPv4 DNS	218.85.152.99

At the top right of the interface, there are buttons for 'Manual Refresh' and 'Refresh'.

Cellular (Cellular Version Only)	
Parameters	Description
<b>Modem</b>	
SIM Status	<p>Corresponding detection status of module and SIM card.</p> <ul style="list-style-type: none"> <li>● No SIM Card: the SIM card is not inserted</li> <li>● SIM Card Error: the SIM card is error</li> <li>● PIN Error: the PIN code is error</li> <li>● PIN Required: the SIM card requires to type PIN code</li> <li>● PUK Required: the SIM card requires to be unlocked by PUK code</li> <li>● No Signal: no cellular signal</li> <li>● Ready: the SIM card is inserted</li> <li>● Down: the SIM card is deactivated</li> </ul>
Register Status	The registration status of SIM card.
Model	The name of cellular module.
Version	The firmware version of cellular module.
Signal Level	The RSSI (Received Signal Indicator) of registered cellular network.
IMEI	The IMEI of the cellular module.
IMSI	The IMSI of the SIM card.
ICCID	The ICCID of the SIM card.
ISP	The network provider on which the SIM card registers.
Network Type	The connected network type, such as FDD LTE.
PLMN ID	The current PLMN ID, including MCC, MNC, LAC and Cell ID.
LAC	The location area code of the SIM card.
Cell ID	The Cell ID of the SIM card location.
<b>Network</b>	
Connection Status	The connection status of the cellular network.
Connection Duration	The information on how long the cellular network has been connected.
IPv4 Address	The IPv4 address of the cellular network.
IPv4 Gateway	The IPv4 gateway of the cellular network.
IPv4 DNS	The IPv4 DNS sever of the cellular network.

## 5.2 Packet Forward

UG63 supports to work as a packet forwarder to set up communication between LoRaWAN® end

devices and LoRaWAN® network server.

## 5.2.1 General

General	Radios	Packet Filters	Advanced	Traffic
EUI	24E124FFFEF7FC26			
Gateway ID *	<input type="text" value="24E124FFFEF7FC26"/>			
Destination				
Enable	<input checked="" type="checkbox"/>			
Type	<input type="text" value="Semtech"/>			Connected
Server Address	<input type="text" value="eu1.cloud.thethings.network"/>			
Port Up	<input type="text" value="1700"/>			
Port Down	<input type="text" value="1700"/>			

### General

Parameters	Description
EUI	The unique identifier of the gateway and it's non-editable.
Gateway ID	The customizable ID for registering gateway to network server, such as TTN. It is the same as gateway EUI by default.

### Destination

Enable	Enable or disable the packet forward feature.
Type	<p>Select packet forward type among Semtech, Chirpstack-Generic, Basic Station, Remote Embedded NS, DeviceHub LNS or Milesight Development Platform LNS.</p> <p><b>Semtech:</b> connect to network server through the Semtech UDP protocol. It supports to connect to most mainstream network servers.</p> <p><b>Chirpstack-Generic:</b> connect to Chirpstack via generic MQTTgateway bridge.</p> <p><b>Basic Station:</b> connect to network server through TCP protocol. When configuring, there is no need to configure both LNS and CUPS settings.</p> <p><b>Remote Embedded NS:</b> connect to embedded network server of Milesight UG65/UG67/UG56 gateways.</p> <p><b>DeviceHub LNS:</b> connect to Milesight DeviceHub LNS. This needs to select and enable DeviceHub 2.0 option on <b>Service</b> page and type the platform address.</p>

	<b>Milesight Development Platform LNS:</b> connect to Milesight Development Platform LNS. This needs to select and enable Milesight Development Platform option on <b>Service</b> page and add the gateway to your platform account.
<b>Semtech</b>	
Server Address	The LoRaWAN® network server IP address or domain.
Port Up	The UDP port to forward uplinks from end device to network server.
Port Down	The UDP port to forward downlinks from network server to end device.
<b>Basic Station</b>	
URI	The URL of LoRaWAN® network server. Please type as below format and replace <i>&lt;server-address&gt;</i> and <i>&lt;port&gt;</i> as real server address and server port. <b>LNS URI:</b> <i>wss://&lt;server-address&gt;:&lt;port&gt;</i> or <i>ws://&lt;server-address&gt;:&lt;port&gt;</i> <b>CUPS URI:</b> <i>https://&lt;server-address&gt;:&lt;port&gt;</i>
CA File	CA certificate to secure the server domain. <b>Note:</b> change the certificate file format as <i>.trust</i> before import.
Client Certificate File	Client certificate file to verify the identity of the gateway.
Client Key File	Private key file to verify the identity of the gateway.
GPS	When connecting via LNS, enable or disable it to forward gateway GPS data to network server.
<b>Chipstack-Generic</b>	
Server Address	The LoRaWAN® network server IP address or domain.
MQTT Port	The LoRaWAN® network server port.
User Credentials	After enabled, username and password are required to type for verification.
TLS Authentication	Select “Self signed certificates” or “CA signed server certificate”. <b>CA signed server certificate:</b> verify with the certificate issued by Certificate Authority (CA) that pre-loaded on the device. <b>Self signed certificates:</b> upload the custom CA certificates, client certificates and secret key for verification.
<b>Remote Embedded NS</b>	
Server Address	The IP address or domain name of Milesight controller gateway.
MQTT Port	The communication port to Milesight controller gateway.

## 5.2.2 Radios

General | **Radios** | Packet Filters | Advanced | Traffic

**Radio Channel Setting**

Supported Freq: EU868

Radio 0: 867.5

Radio 1: 868.5

**Multi Channels Setting**

Enable	Radio	Frequency/MHz
<input checked="" type="checkbox"/>	Radio 1	868.1
<input checked="" type="checkbox"/>	Radio 1	868.3
<input checked="" type="checkbox"/>	Radio 1	868.5
<input checked="" type="checkbox"/>	Radio 0	867.1
<input checked="" type="checkbox"/>	Radio 0	867.3
<input checked="" type="checkbox"/>	Radio 0	867.5
<input checked="" type="checkbox"/>	Radio 0	867.7
<input checked="" type="checkbox"/>	Radio 0	867.9

**LoRa Channel Setting**

Enable:

Radio: Radio 1

Frequency/MHz: 868.3

Bandwidth/kHz: 250KHz

Data Rate/Bit: SF7

**FSK Channel Setting**

Enable:

Radio: Radio 1

Frequency/MHz: 868.8

Bandwidth/kHz: 125KHz

Data Rate/Bit: 50000

Radios	
Parameters	Description
Radio Channel Setting	



Supported Freq	The LoRaWAN® frequency plan used for the uplink and downlink frequencies and datarates. Available options depend on the gateway's model: <b>-470M:</b> CN470 <b>-868M:</b> EU868, RU864, IN865 <b>-915M:</b> US915, AU915, KR920, AS923-1&2&3&4
Radio 0/Radio 1	The center frequencies to receive packets from LoRaWAN® nodes.
<b>Multi Channels Setting</b>	
Enable	Enable or disable this channel to transmit packets.
Radio	Choose Radio 0 or Radio 1 as the center frequency.
Frequency/MHz	Set the frequency of this channel. Range: center frequency $\pm$ 0.4625.
<b>LoRa/FSK Channel Setting</b>	
Enable	Enable or disable this channel to transmit packets.
Radio	Choose Radio 0 or Radio 1 as the center frequency.
Frequency/MHz	Set the frequency of this channel.
Bandwidth/kHz	Set the bandwidth of this channel.
Data Rate/Bit	Set the data rate.

### 5.2.3 Packet Filters

UG63 supports to filter uplink packets via different conditions to reduce network congestion, save network traffic and ensure the safe operations.

General
Radios
Packet Filters
Advanced
Traffic

Filters by NetID ⓘ

Mode  White List  Black List

List  +

Filters by JoinEUI ⓘ

Mode  White List  Black List

List  To  +

Filters by DevEUI ⓘ

Mode  White List  Black List

List  To  +

Packet Filters	
Parameters	Description
Filters by NetID	Forward/Not forward the uplink packets that meet the NetID.
Filters by JoinEUI	Forward/Not forward the join request packets that meet the JoinEUI range.
Filters by DevEUI	Forward/Not forward the join request packets that meet the DevEUI range.
Mode	Select the filter mode as black list or white list. <b>White List:</b> Only forward the packets in this list to the network server. <b>Black List:</b> Only forward the packets except this list to the network server.
List	Set the specific filtering value or range list. Every condition supports to add 5 lists at most.

**Note:** When join EUI and dev EUI are both configured, only packets that meet both conditions will be forwarded.

## 5.2.4 Advanced

Advanced	
Parameters	Description
<b>Beacon Setting</b>	
Beacon Period	Interval of gateway sending beacons for Class B device time synchronization. 0 means the gateway will not send beacons. <b>Please select the value as 128 if end device type is Class B.</b>
<b>Intervals Setting</b>	
Keep Alive Interval/s	The interval of keepalive packet which is sent from gateway to network server to keep the connection stable and alive.

Start Interval/s	The interval to update the network server with gateway statistics.
Push Timeout/ms	The timeout to wait for the response from server after the gateway sends data.
<b>Expert Options</b>	
Enable	<p>After enabled, the device supports customizing the configuration file to configure packet forwarder and <b>customized configuration will overwrite the packet forward configurations of web GUI.</b></p> <p>To customize configuration file with correct format, click “Example” to go to reference page.</p>

## 5.2.5 Traffic

UG63 supports to display latest 30 pieces of traffic received from end devices or network server.

Direction	Time	Frequency	Datarate	Channel	RSSI	SNR	Data
Up	0000-00-00T00:00:00.000000Z	868.300000	SF12BW125	1	-68	7.8	ghYKGAzAbxzV1CCs4WGqzt DhsEnqTV8=
Up	0000-00-00T00:00:00.000000Z	868.300000	SF10BW125	1	-59	12.0	AAEAkqDAJOEMgU4TGEk4 SQqStl0xtl=
Up	0000-00-00T00:00:00.000000Z	868.300000	SF12BW125	1	-84	-0.5	QFUDAAASBYGMNVXWJ55eO 6oOGHnb<=
Up	0000-00-00T00:00:00.000000Z	868.100000	SF12BW125	0	-70	8.2	AAABAAAQUCeJUIVHQbxB QKjMK<HR0Fk=
Up	0000-00-00T00:00:00.000000Z	868.100000	SF10BW125	0	-67	11.5	QCrgKQYAn9ta1X42GokikvA SBvVRH0=
Up	0000-00-00T00:00:00.000000Z	868.100000	SF10BW125	0	-68	12.2	QCC3k<EA9eV0XBWchrcEz/ 1L7AW/EKjgRtrvBaSGTbvYw WyoZHWnjJqJGv3XGICzW Mus8NV2zh49eE=
Up	0000-00-00T00:00:00.000000Z	867.700000	SF7BW125	6	-94	-2.5	QP6GzQCAm1FV6jXGjxO1/ x7B9ncuw==
Up	0000-00-00T00:00:00.000000Z	868.500000	SF10BW125	2	-59	8.5	AAEAkqDAJOEMgU4TGEk4 SSzLNDAla=
Up	0000-00-00T00:00:00.000000Z	868.300000	SF12BW125	1	-95	-6.8	QFFVdMKBmqvNVdJOJWYrL 2w94KKEE9U63ABA==
Up	0000-00-00T00:00:00.000000Z	867.700000	SF7BW125	6	-80	10.2	QG1BQGADY1VNsm0Eof3KU RCne+NkkG+KJD
Up	0000-00-00T00:00:00.000000Z	868.100000	SF7BW125	0	-80	11.2	QAlYyQa8A8CKLbn7-9pcT Rku6SeyZlnVUBe
Up	0000-00-00T00:00:00.000000Z	868.300000	SF7BW125	1	-83	12.0	QG1BQGADY1VNsm0Eof3KU RCne+NkkG+KJD

Traffic	
Parameters	Description
Fresh/Stop	<p><b>Fresh:</b> click to fresh this page to update latest data automatically.</p> <p><b>Stop:</b> click to stop fresh this page to update latest data.</p>
Direction	The transmission direction of this packet.
Time	The receiving time of this packet.
Frequency	The frequency of receiving or sending this packet.
Datarate	The datarate of this packet.
Channel	The frequency channel of receiving or sending this packet.
RSSI	The received signal strength of this packet.
SNR	The signal-to-noise ratio of this packet.
Data	The encrypted data of this packet.

## 5.3 Network

### 5.3.1 Link Backup

UG63 supports to set the priorities of both network links and the ping detection settings to check if the link is available.

**Main Link**

Main Link

Enable Ping Detection

Primary Server (IPv4)

Secondary Server (IPv4)

Interval/s

Retry Interval/s

Timeout/s

Max Ping Retries

**Secondary link**

Secondary link

Enable Ping Detection

Primary Server (IPv4)

Secondary Server (IPv4)

Interval/s

Retry Interval/s

Timeout/s

Max Ping Retries

**More**

Revert to Main Link

Revert Interval/s

Emergency Reboot

#### Link Backup

Parameters	Description
------------	-------------

Main Link	Select from WAN and Cellular.
Secondary Link	Select from WAN (Cellular) or None.
Enable Ping Detection	After enabled, the device will send ICMP packets to corresponding servers to detect the connection periodically. <b>Note:</b> it is suggested to disable this option if the device is connected to the private network (Non-internet).
Primary Server (IPv4)	The device will send ICMP packet to this server address to determine whether the Internet connection is still available or not.
Secondary Server (IPv4)	The device will try to ping the secondary server address if primary server is not available.
Interval/s	Time interval between two Pings.
Retry Interval/s	When ping failed, the device will ping again at every retry interval.
Timeout/s	The maximum time which the device will wait for a response to a ping request. If it does not receive a response for the timeout, the ping request will be considered to have failed.
Max Ping Retries	The number of times the device will retry sending a ping request until determining that the connection has failed.

#### More

Revert to Main Link	When the connection of main link returns back, reverting back to main link.
Recovery interval/s	Specify the number of seconds to wait for switching to the main link, 0 means disable the function.
Emergency Reboot	Enable to reboot the device if no link is available.

## 5.3.2 WAN




UG63 supports to connect Ethernet port to a router to get network access.

Connection Type	Static IP <span style="float: right;">▼</span>
IP Address	192.168.45.178
Netmask	255.255.255.0
Gateway	192.168.45.1
Primary DNS Server	8.8.8.8
Secondary DNS Server	223.5.5.5

WAN	
Parameters	Description
Connection Type	Select connection type as required. <b>Static IP:</b> assign a static IP address, netmask and gateway for Ethernet WAN port. <b>DHCP Client:</b> configure Ethernet WAN interface as DHCP Client to obtain IP address automatically.
Primary DNS Server	Set the primary IPv4 DNS server.
Secondary DNS Server	Set the secondary IPv4 DNS server.
<b>Static IP</b>	
IP Address	Set the IPv4 address of the Ethernet port.
Netmask	Set the Netmask for Ethernet port.
Gateway	Set the gateway for Ethernet port's IPv4 address.
<b>DHCP</b>	
Use Peer DNS	Obtain DNS from DHCP server.

### 5.3.3 Cellular (Cellular Version Only)

UG63 supports to insert a SIM card to get cellular network connections.

APN	<input type="text"/>
Username	<input type="text"/>
Password	<input type="password"/> 
Authentication Type	None 
PIN Code	<input type="text"/> 
AT Command	<input type="text" value="AT+CGREG?"/> <input type="button" value="Send"/> <input type="button" value="Clear"/>


```
+CGREG: 0,0
OK
```

Cellular	
Parameters	Description
APN	The Access Point Name for cellular dial-up connection provided by local ISP. Please contact cellular operator or search for the Internet to get it.
Username	The username for cellular dial-up connection provided by local ISP.
Password	The password for cellular dial-up connection provided by local ISP.
Authentication Type	Select from None, PAP and CHAP.
PIN Code	A 4-8 characters PIN code to unlock the SIM.
AT Command	Send AT Command to get cellular information or configure advanced settings.

### 5.3.4 WLAN

UG63 supports wlan feature to work as AP mode to configure device and it can not connect to other access points.

**Note:** one UG63 device only supports 2 devices' WLAN connection to log in this device at the same time.

Enable	<input checked="" type="checkbox"/>
SSID	<input type="text" value="Gateway_F8184B"/>
Encryption Mode	<input type="text" value="WPA-PSK"/>
Key	<input type="text"/> 

WLAN	
Parameters	Description
Enable	Enable or disable Wi-Fi feature.
SSID	The unique name for this device Wi-Fi access point. The default SSID is Gateway_XXXXXX. (XXXXXX=last 6 digits of MAC address)
Encryption Mode	No Encryption and WPA-PSK are optional.
Key	Customize the Wi-Fi password when security mode is WPA-PSK.

## 5.4 Service

**Device Management**

**Auto Provision**

Enable

**Management Platform**

Enable

Platform Type

Devicehub Address

Parameters	Description
Auto Provision	Enable to receive the configurations from Milesight Development Platform once after the device is connected to Internet. This will work even management platform mode is disabled.
<b>Management Platform</b>	
Enable	Enable the device to be managed by Milesight management platforms.
Platform	Milesight DeviceHub 2.0 or Milesight Development Platform is optional.
DeviceHub Address	Set the DeviceHub server IP address or domain name.

## 5.5 System

### 5.5.1 General



Username	<input type="text" value="admin"/>
Old Password	<input type="password"/>
New Password	<input type="password"/>
Confirm New Password	<input type="password"/>

Parameters	Description
Username	Enter a new username. Only capital, lowercase, digits, "_", and "-" are allowed.
Old Password	Enter the old password.
New Password	Enter a new password.
Confirm New Password	Enter the new password again.

## 5.5.2 Time

Current Time	2023-10-25 13:47:15
Time Zone	<input type="text" value="Asia/Beijing"/>
Sync Type	<input type="text" value="Sync with NTP Server"/>
NTP Server Address	<input type="text" value="pool.ntp.org"/>

Parameters	Description
Current Time	Show the current system time.
Time Zone	Click the drop-down list to select the time zone you are in.
Sync Type	It's fixed as Sync with NTP Server.
NTP Server Address	Set the NTP Server's IP address or domain name.

## 5.5.3 Access Service

## | HTTP

Local access



Access port

80

Parameters	Description
Local access	Enable or disable the local access of HTTP.
Access port	Set the service port of HTTP.

## 5.6 Maintenance

### 5.6.1 Log

Log Backup/Upgrade Reboot

Log Severity

Log File

Core dump ⓘ

Parameters	Description
Log Severity	The list of severities follows the syslog protocol.
Log File	Download log file.
Core dump	Core dump file contains a snapshot of a program's memory at a specific point in time when the program encounters a critical error or crashes, which can be used for debugging and troubleshooting purposes.

### 5.6.2 Backup/Upgrade

## | Backup

Download Backup

Download

## | Restore

Reset

Perform Reset

Config File

Import

Restore

## | Upgrade

Firmware Version

64.0.0.1

Reset

Upgrade Firmware

Import

Upgrade

**Backup/Upgrade****Parameters****Description****Backup**

Backup

Export the current configuration file to the PC.

**Restore**

Reset

Reset device to factory default settings. The device will restart after reset process is done.

Config File

Click "Import" button to select configuration file, and then click "Restore" button to upload the configuration file to the device.

**Upgrade**Firmware  
Version

Show the current firmware version.

Reset

When this option is enabled, the device will be reset to factory defaults after upgrade.

Upgrade  
Firmware

Click "Import" button to select the new firmware file, and click "Upgrade" to upgrade firmware.

### 5.6.3 Reboot

On this page, you can reboot the gateway and return to the login page. We strongly recommend clicking "Save" button before rebooting the gateway so as to avoid losing the new configuration.

Log

Backup/Upgrade

Reboot

Reboot

Reboot

## Appendix

### Default Frequency

Supported Freq	Channel/MHz
CN470	471.9, 472.1, 472.3, 472.5, 472.7, 472.9, 473.1, 473.3 (8~15)
EU868	868.1, 868.3, 868.5, 867.1, 867.3, 867.5, 867.7, 867.9
IN865	865.0625, 865.4025, 865.6025, 865.985, 866.185, 866.385, 866.585, 866.785
RU864	868.9, 869.1, 869.3, 867.3, 867.5, 867.7, 867.9, 868.1
AU915	916.8, 917, 917.2, 917.4, 917.6, 917.8, 918, 918.2 (8~15)
US915	903.9, 904.1, 904.3, 904.5, 904.7, 904.9, 905.1, 905.3 (8~15)
KR920	922.1, 922.3, 922.5, 922.7, 922.9, 923.1, 923.3, 923.5
AS923-1	923.2, 923.4, 922, 922.2, 922.4, 922.6, 922.8, 923
AS923-2	921.2, 921.4, 921.6, 921.8, 922, 922.2, 922.4, 922.6
AS923-3	916.6, 916.8, 917, 917.3, 917.4, 917.6, 917.8, 918
AS923-4	917.3, 917.5, 917.7, 917.9, 918.1, 918.3, 918.5, 918.7

-END-