

# Semi-Industrial LoRaWAN<sup>®</sup> Gateway UG65

Quick Start Guide

**Milesight IoT** 

#### **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<sup>®</sup> 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-iot.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: Email: iot.support@milesight.com Tel: 86-592-5085280 Fax: 86-592-5023065

#### FCC Statement:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and



(2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

#### FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator& your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

#### **ISED RSS Warning:**

This device complies with Innovation, Science and Economic Development Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

#### ISED RF exposure statement:

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator& your body. This transmitter must not be co-located or operating in conjunction with any other antenna or



transmitter.

Le rayonnement de la classe b repecte ISED fixaient un environnement non contrôlés.Installation et mise en œuvre de ce matériel devrait avec échangeur distance minimale entre 20 cm ton corps.Lanceurs ou ne peuvent pas coexister cette antenne ou capteurs avec d'autres.

#### **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



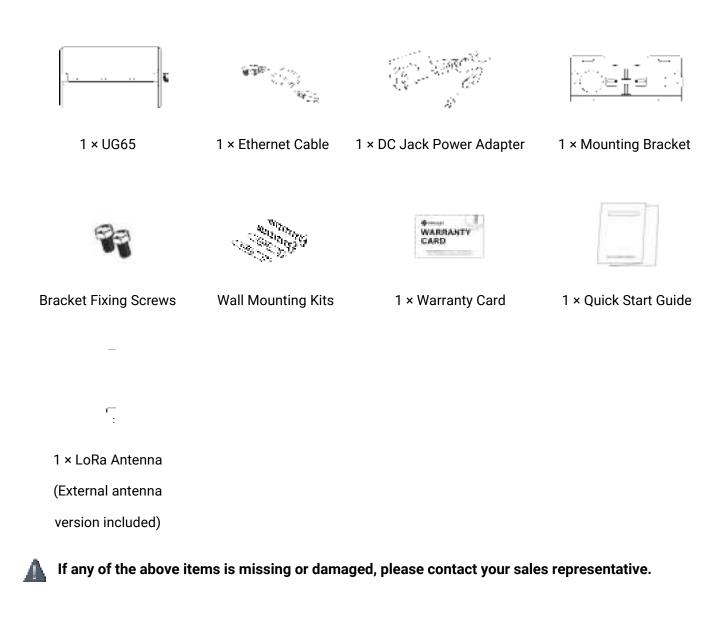
# Contents

1. Packing List6
2. Hardware Introduction
2.1 Overview7
2.2 Dimensions (mm)7
2.3 LED Indicators
2.4 Reset Button
3. Hardware Installation
3.1 SIM Card Installation9
3.2 Ethernet Cable & Power Cable Installation
3.3 Antenna Installation
3.4 Gateway Installation10
3.4.1 Wall Mounting10
3.4.2 Pole Mounting11
4. Login the Web GUI 12
4.1 Wireless Access12
4.2 Wired Access13
5. Network Connection15
5.1 Configure the Ethernet Connection15
5.2 Configure the Wi-Fi Connection15
5.3 Configure the Cellular Connection 16
6. Packet Forwarder Configuration18
7. Network Server Configuration20
7.1 Connect UG65 to Milesight IoT Cloud 20
7.2 Connect UG65 to MQTT/HTTP Server22



# 1. Packing List

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



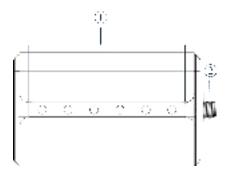
Milesight IoT

# 2. Hardware Introduction

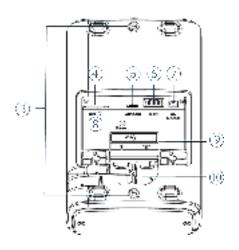
#### 2.1 Overview

Milesight

A. Front Panel



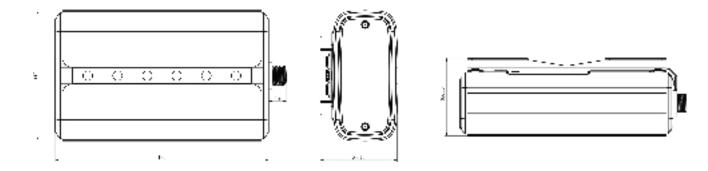
B. Rear Panel



LED Area
 POWER: Power Indicator
 STATUS: System Indicator
 LoRa: LoRa Indicator
 Wi-Fi: Wi-Fi Indicator
 UTE: Cellular Indicator
 ETH: Ethernet Port Indicator
 LoRa Antenna Connector
 (only for external antenna version)

- ③ Bracket Mounting Screws
- ④ SIM Slot
- 5 Type-C Port
- 6 Ethernet Port (PoE)
- ⑦ Power Connector
- (8) Reset Button
- (9) Waterproof Silicone
- 10 Cable Groove

## 2.2 Dimensions (mm)



# 2.3 LED Indicators

LED	Indication	Status	Description				
POWER	Power Status	Off	The power is switched off				
FUWER	Fower Status	On	The power is switched on				
STATUS	System Status	Blue Light	Static: the system is running properly				
517105	System Status	Red Light	The system goes wrong				
LoPo	LoRa Status	Off	Packet Forwarder mode is running off				
LoRa	LORA Status	Blue Light	Packet Forwarder mode is running well				
Wi-Fi	Wi-Fi Wi-Fi Status	Off	Wi-Fi is disabled				
VVI-F1	WI-FI Status	Blue Light	Wi-Fi is enabled				
		Off	SIM card is registering or fails to register				
	Cellular Status	UII	(or there are no SIM cards inserted)				
			Blinking slowly: SIM card has been registered				
LTE			and is ready for dial-up				
		Blue Light	Blinking rapidly: SIM card has been registered				
		Dide Light	and is dialing up now				
			Static: SIM card has been registered and dialed				
			up successfully				
ETH	Ethernet	Off	Disconnected				
	Port Status	Blue Light	Static: Connected				

# 2.4 Reset Button

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

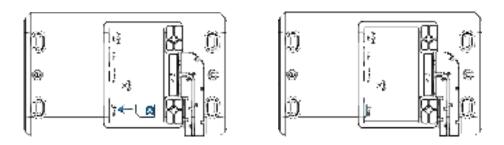
# 3. Hardware Installation

## 3.1 SIM Card Installation

A. Use screwdriver to open the protective cover on the back panel of UG65.

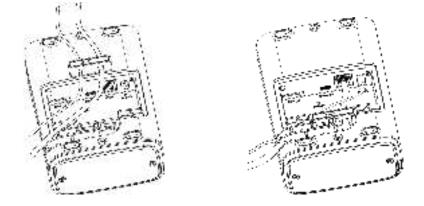
B. Insert the SIM card into the device according to the direction icon on the device. Note:

- If you need to take out the SIM card, press into the SIM card and it will pop up automatically.
- UG65 does not support hot plugging (also called hot swapping). please turn off the power before you insert or take off cards.



## 3.2 Ethernet Cable & Power Cable Installation

- A. Connect the Ethernet cable and power cable to corresponding interfaces.
- B. Pass two cables through the waterproof silicone and slid into the grooves.
- C. Screw the protective cover back to the device.



UG6x can also be powered by 802.3af standard PoE injector or other PoE devices. If both connected, DC power is preferred.

Note: When connecting, Ethernet cable of UG65 device side should be installed first, otherwise, PoE devices or gateway may be damaged.

# 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.



jeesseel <mark>y</mark> E

Note: Please do not let the front panel of products faces to walls if using embedded LoRa antennas.

#### 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.

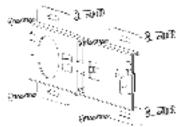
1. Align the mounting bracket horizontally to the desired position on the wall, use a marker pen to mark four mounting holes on the wall, and then remove the mounting bracket from the wall.

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

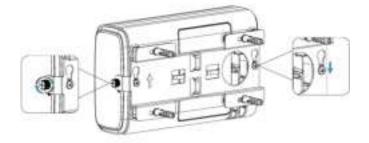
2. Drill four holes with a depth of 32 mm by using your drill with a 6 mm drill bit on the positions you marked previously on the wall.

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.



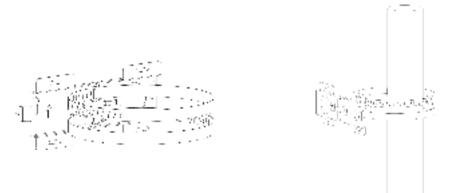
#### 3.4.2 Pole Mounting

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

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

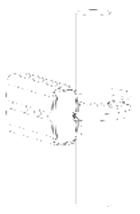
2. Straighten out the hose clamp and slide it through the rectangular rings in the mounting bracket, wrap the hose clamp around the pole.

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:

ETH IP Address: **192.168.23.150** Wi-Fi IP Address: **192.168.1.1** Wi-Fi SSID: **Gateway\_**\*\*\*\*\* 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.

C Holes

C. 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.

D. 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.

- O		Contract internation		
Bag + Chrone Passe selection	That Laffa Aylentia faith Mar and Maria and Patients a			
****	Construction Construction	Ename a		
taunti taun		2 100 100 100 100 100 100 100 100 100 10	65	
	*			

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

-	Contract of	Paral Driver	Other	Indexed.	10.00	1.0mm	All and a loss	Test.	
	1000		Sector.					Mader	
PaselPreame	) hystern inform	ution .						Director for some same of	2
	Marine		10010-0000-01000					August	
Nertical Philippine	Tegen		10075					Bartel Monday	-
-	Seld Series		00140100788					Date Repaired Autom	÷
	Press Store		46.5.5.26					Patrone Verbian	
	<ul> <li>Name and</li> </ul>	-	42.1					Direct the second from a constant of random	•
	Lica Tim		2020-01-24 19-004	6 Taxabay				Herthearn Verseen	
			2122-06					Delta Rei sameri hanke seratuk of custor	**
-	ONLine		m					Loosi Tree	
601 (S	NM (Denty)	hourse and the second	ST(NERMA) IS P	10				Three the competitions is of system:	-
	white Capacity	(Analistics)	Local Hugh inst					Uptime	
						Manual Re	test - Determine	Stern Sta tritoromov of Ineig Recordin ball beat	him

#### 4.2 Wired Access

Connect PC to UG65 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).

	elenet i Messieriterigipei	<ul> <li>(a) (a) (a) (a) (b)</li> </ul>
(mentanese)	The pld the which the state	and (4) spinored lines
the second second	The state of the second	
Corporation within a	Reduction Processory	Annalis have
	-	Lange American
	*	Ethernet
	A later state	
		V/610110-000101-0-0
Second Contraction of the local division of		
the second secon		

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.

Internet Protocol Version & COLUM-	4.Pegeta:	×
(ment		
Nor can pri D' tetringi assgord art Pre Isashifiy, Offerinia, siscinal for the appropriati P artilege.	31 and prior rational administration	1
Ogen e Faldes altow	ally.	
· · · · · · · · · · · · · · · · · · ·		
2 attent	HE HE . 11 . 000	
tighted mani-	213 . 218 . 306 . 0	
(phate prevent	812 - 809 - 23 - 330	
Open Def an or entities and		
# Lig for billing (10 proving	Ab space:	
polying 200 parties	9.18.8.8	
granative (36 Januar		
() islam artisp and and	April	
	(A) (A)	

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.



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

0	Milesight
A 1-	-
4 m	
	1000

Ø ligen

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.

-0-	-0-	-0		
Disp + Chronie Page + Chronie Page administ	That i sha nyanga kun That i sha nyanga kun	Cardial Internation		
910	nol Amoreno	Edama Ar	Aurora .	
Constant Constant		1	6	
	1.04	-		

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

			a pair present second	press and the local division of the local di					
-	Certain	Table Consult	Cable 1	Terrorit	(W5-8W	NPN .	1000100	all and the second s	-
								Model	
( Martin Contractory Contractory Contractory Contractory Contractory Contractory Contractory Contractory Contra	1 Byshew internal							State for making on the local sector of	2
								Regnit Dear by Dailed of some	
Contraction Descent	Augur -							Barral Huminar	
-	land haven		SUMPLEME.					West for sold market	•
	Concern Verdier.		00000					Personal Version	
	Summer Seaso		111					Short the survey former meaning of pushe	• 1
	Log Tex.		adde Heat Address of	6 Tanolog				NATIVALE WOLLS	
instant +	-		21214					Steel for tarined basis	
-	(Online)		100					Local Tree	
	All Cartylin	distant of the local distance of the local d	a contration ( ) of					Street the last and based in (1) supremu	-
	ARC CHARGE	- diality	10027040.010	63				Augusten .	
							anal a same	Bines for infration in long the outlet has been contents	

# 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.

B. Click "Save & Apply" for changes to take effect.

Port	WLAN	Cellular	Loopback	
- Port	.t.			
Port			eth 0	1
Con	nection Type		Static IP	÷
IP A	ddress.		192,168,22,112	3
Note	task		255 255 255 0	
Gete	way		192.168.22.1	
MTU			1500	
Prim	ary DNS Server		8.8.8.8	
Sec	endary DNS Server		114 114 114 114	
Enal	ole NAT			

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

D. Log in the web GUI via the newly assigned IP address and go to "Status"  $\rightarrow$  "Network" to check Ethernet port status.

OVERNEE	nae	Tervero	Other	NEWS YEAR	vite metae		
WANI							
First :	Tores .	Signe 1	IF Address	Retrievel	Geneway	049	Overtee
w910	-	Set	192 198 22 112	251 266 266 8	102 168.33 1		New 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".



Port	WLAN	0 8	Celular	Lot	рраск			
Goffack								
SSID		Channel	Signal	Cipher	BSSID	Security	Frequency	
AAA		Auto	-61dBm	AES	24 et 24 f0 c4 t3	WPA-PSK/WPA2-PSK	2#12MHz	John Network

C. Type the key of Wi-Fi.

ι.an			
natile	8		
Voriti Mode	Client	्भ <u>प</u>	-
50	AAA		
550	24:e1:24:0:c4:13		
scryption Mode	V/PA-POKW/PVQ-PSK	*	
iphier -	AES.	~	
÷.			
Setting			

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

Overvew	Packet Forward	Cettaar	<b>Network</b>	WLAN
WLAN Status				
Wireless Status		Enabled		
MAC Address		24 o1 24 10 de 14		
Interface Type		Clert		
SSID		AAA		
Ghannel		Auto		
Encryption Type		WPA-PSKWPA2-PSA	¢	
Cipher.		AES		
Stature		Connected		
IP Addrews		192 168 1 145		
Netmask		255 255 255 0		
Connection Duratio	n	0 days, 02 44 45		

# **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.
- C. Click "Save" and "Apply" for changes to take effect.

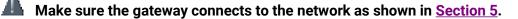
Port	WLAN	Cellular L	oopback
Cellular Sett	ting		
Enable		2	
Network Type		Auto	~
APN		1	
Usemame			
Password			
Access Numb	oor .		
PIN Code			
Authentication	п Туре	Auto	¥
Roaming		2	
SMS Center			
Connection 1	Setting	0	
Enable NAT		8	

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.

Ormine	Pathet Purvanti.	Collular	Retrock	102,446
Modimi		200		
20mil		Red;		
Michael		8C21		
Venue		EC2BECOARDEAD7M		
Nepst Lover		25444 (-4748et)		
Reprie Itano		Reported States (ed)		
1000		100421941349108		
MO		40001445101842		
1000		-	94	
iter -		DINUNCOM		
National Type		5.TE		
PLMNIE				
LAC		5522		
CHI D		343043		
1 Betwork				
Statur.		Converted		
PAdami )		10103-02-08		
Netwood		205205208246		
Galerau		10.132122-00		

# 6. Packet Forwarder Configuration

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



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

Tidas		Control	Ratio	Advanced	Custom	Traffic		
		(General Setting						
Network Server		Gateway ISB Gateway (D)		24E124ET1				
Nebrah		(Property Spri)		Dubled	*			
Syden		Multi-Destination General Status		Commented				
Million	•		10	Endlin		laps.	Server Bildress	Operative
NP				Enabled		Enthalded RB	bualted.	80

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

Туре	Sentech
Server Address	eut cloud thethings network
Port Up	1700
Past Dawn	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	Californ	Traffic
Antenna Type				-
		emal Antenno		External Antenna
	-	4		
	-	weet		CF
	<u> </u>	•	5	10

		115911		*	
	Name			Cantar FrequencyMMs	
	Radie 0			964.3	
	Radia 1		1	905.0	
Chainels Settin	ai li				
Enable	linke	Radio		Frequency®	Big.
5		Rate 2	*	953.9	
-	1	Redu D	φ]	904.1	
23	2	Radu-D	÷	954.3	
53	3	Radio 8	-	954.6	
53	×.	Fadlo 1	×	904.7	
53	5	Radio 1	-	964.9	
		Hadm 1	4	905.1	
52					

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 UG65.

Central White Bet		*: A0	ances.	Classes -	THERE			
100	_							
Bitch -	Divection	Time	Tebs	Enquincy	Datarate	Coderate	859	1988
ж.		n:Q38	317862187	105.385	SF78W125	45	38.5	4.0
2		11:922	31125010 3	MEE 585	SETEW125	. 47	-108	.11.0
8	diwn.	25	311M88813	861625	SELENTER S	45		8
		11.51.37	310788813		SF76W126	45	-16	

# 7. Network Server Configuration

UG65 can work as network server and transmit data to Milesight IoT Cloud or other platform via MQTT/HTTP/HTTPS.



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

## 7.1 Connect UG65 to Milesight IoT Cloud

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

Bates		General	Serve	Advanced	Castore	Treffic		
-		General Setting						
Network Server		Datesay EU Datesay D		24E 124FFF				
- National A		Finguency Dyra		Distind	÷			
System	•	Multi Destination Cannet Status		Common of the local data				
Mantonance			iú	Teste		Tepe	Server Address	Operation
				Enabled		Contracted HS	teathori	

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

iplan		1120.00		<u></u>	
	Marini			Canter Frequency Mits	
	Radie 0		1	çi4 3	
	Radia 1		13	06 B	
lutti Chairnais Bettin	a				
Enable	Uniter.	Radio		FrequencyMili	
51	8	Fields-D	*	963.9	
2	1	Redu D	4]	904.1	
53	2	Radio-1	4	954.3	
5	3	Radio 0	÷	994.6	
53		Radio 1	w	904.7	
51	5	Radio 1	-	104.10	
53		Hado: 1	÷	985.1	1
24					

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

Status		General	Applications	Profiles	Device	Gateways
Packet Forwarder		General Settin				
Nelwork Gerver		Enable Milesight InT Ci	ent El			
Network	ii:	NetD	010203	)		
System		Join Delay RX1 Delay	5		aac	
		Lease Time	6759-0-0		hh-mm-ca	
Mantenance	10	LogiLevel	into	<u>ب</u>		

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.

James of	-	-						
th.laws		1.5	2 183		en ( ja stie (	(II) and (IV)		1.000.0000
l har	6	-	ANDARA					0 k 0
Nation O		6/10m	+441					⊕is⊅
Tang Serie	ं अ							0 14 0
6m.	- a			id.	- Loke	P-	1000000044	o k o
		1. Aug	are	Are	0 	2140		
E)								

E. The gateway is online on Milesight IoT Cloud.

(2) comunit	panines ;		(100000)			
II witten			4	G forme 1 14 (Plice 4) (b matter 1		Te marganete
ADT Here		Table.	. Normal	Associated Devices United Alex Index (Asia)	Last Instance	
E and		-4		8111-8 mm	2 minute age.	0 h 0
SI parties O						



## 7.2 Connect UG65 to MQTT/HTTP Server

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

Bates	Centerial	Server)	Advanced	Custore	Tieffic		
<b>NAME TO MARK</b>	General Setting						
Network Server	Datesay EU Datesay D		4E 124FFF				
Nillein)	Finguency Dyna	1	Distind				
System	Multi Destination		instant				
Mantonion		iú	Teste		Tear	Server Address	Operation
AT		1	Enative		Cristended HS	teathort	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.

(kan		1159.19		Y	
	Martel			Canter Frequency/Mile	
	Radie 0			964.3	
	Radia 1			905 B	1
tti Chairnais Bettir	u.				
Enable	listen.	Radio		Frequency	Mitz
	8	Fields 0	¥.	953.9	
	1	Redu 5	φ]	904 t	
53	2	Redu-D	4	904.3	
5	3	Radio 0	-	904.6	
53	×.	Radio 1	×	904.7	
	5	Radio 1	÷	104.9	
5		Rado: 1	÷	305.1	
	r .	Radie 1	+	908.2	

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

1964	Grand	Applications	Pades	Onice	Galenaye
Product Polyanting	) Gameral Batting				
(Network Server)	Endia Marght UT Da	e) D.			
Network .	NetD	016260			
	July Dalay			and.	
System	POSt Delay	19		101	
	Loose Time	676064	H	10.000.00	
Manager	Anglere	inte		*	

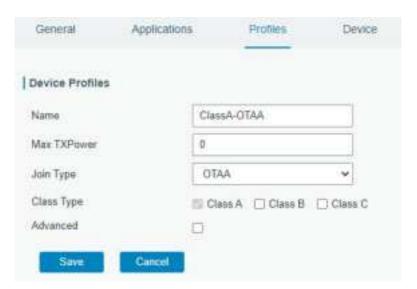
D. Go to "Network Server"  $\rightarrow$  "Application" to add a new application.

General	Applications	Profiles	Device
Applications			
Name	clo	ud	
Description	cfor	bu	
Payload Codec	No	ne	~

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

Data Transmission		
Түре	MQTT	
Status	HTTP MOTT HTTPS	
General	0	
Brokar Address		
Broker Port		
Client ID		
Connection Timeout/s	30	J
Keep Alive Interval's	60	

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



F. Go to "Device" page and click "Add" to add LoRaWAN® node devices.

	Applications	Profiles	Dewoe	Gateways	Packets	
Device						
Add	Buik Import	Delite Al			Surth	0
Device Name	Device EUI	Device-Profile	Application	Last Seen	Activated	Operation
		No ma	acting records found	ē.		

Denia liante	artit.	
Description	(+ 4.00 (here by or )	0.0.000
Dame (5.0	-	171
Demo-Profile	Classick, CTSUA	
Application	their .	
Farm Linese Validation	10	
Application Ray		
Dening Soldings		11
Address of Soundary Corp.		100
Application Designed Hop /		11
Siglinit Transmission	1411	
Desided Frank conten	140	

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

Import FBe	Browne	Import	Template Download
1			

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.

	A1 1		0	0.	1.0		1.4	10	1.00
- Nor	24+0242155833266	description			deviceprofile (Date: Date: D	apphey 112253449586778999641122254495666	devadde	appaloay	mitakey
1									

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								Death .	0
Device EUI	Evequency	Ostanate	SNR	859	Sze	Feat	Type	Time	Details
246124126a146579	866300400	SF78W125	8.5	-85	4	14	UpUnc	2020-04-20116-09-25+08-00	0
						-13	UpUlse	2020-04-20116-04-25+00.00	-

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

Packets Details		
Font	14	
Part	85	
Modulation	LORA	
Bandwidth	125	
SpreadFactor	<b>7</b> .	
Bitrate	0 4/5	
CodeRate	4/5	
SNR.	8.5	
RSSI	-85	
Power	5	
Payload(b64)	AJcYAA==	
Payload(hex)	03771800	
MIC.	f5acdeb2	

# [END]