



Building IoT Gateway

EG71

Installation Guide

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Chapter 1. About This Guide

This guide introduces the device's hardware, provides instructions on how to power and install the device, and how to log in to the gateway's web GUI.

Readers

This guide is intended for equipment installers, and for administrators accessing the device for the first time.

Copyright Statement

This guide may not be reproduced in any form or by any means to create any derivative such as translation, transformation, or adaptation without the prior written permission of Xiamen Milesight IoT Co., Ltd (Hereinafter referred to as Milesight).

Milesight reserves the right to change this guide and the specifications without prior notice. The latest specifications and user documentation for all Milesight products are available on our official website <http://www.milesight.com>

Safety Instruction

These instructions are intended to ensure that users can use the product correctly to avoid danger or property loss. Milesight will not take responsibility for any loss or damage resulting from failure to follow the instructions in this operating guide.



Warning:

Serious injury or death may be caused if any of these warnings is neglected.

- This installation must be conducted by a qualified service person and should strictly comply with the electrical safety regulations of the local region.
- To avoid the risk of fire and electric shock, keep the product away from rain and moisture before installation.
- The bottom of the device becomes extremely hot during operation. Do not touch it !
- Do not power the device or connect it to other electrical devices during installation.
- Do not connect or power the device using damaged cables.
- Make sure the plug is firmly inserted into the power socket.
- Make sure the device is firmly fixed when installing.

**CAUTION:**

Injury or equipment damage may be caused if any of these cautions are neglected.

- The device is intended only for indoor use.
- 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 drop the device or subject it to physical shock.
- To prevent heat accumulation, do not block air circulation around the device.

Revision History

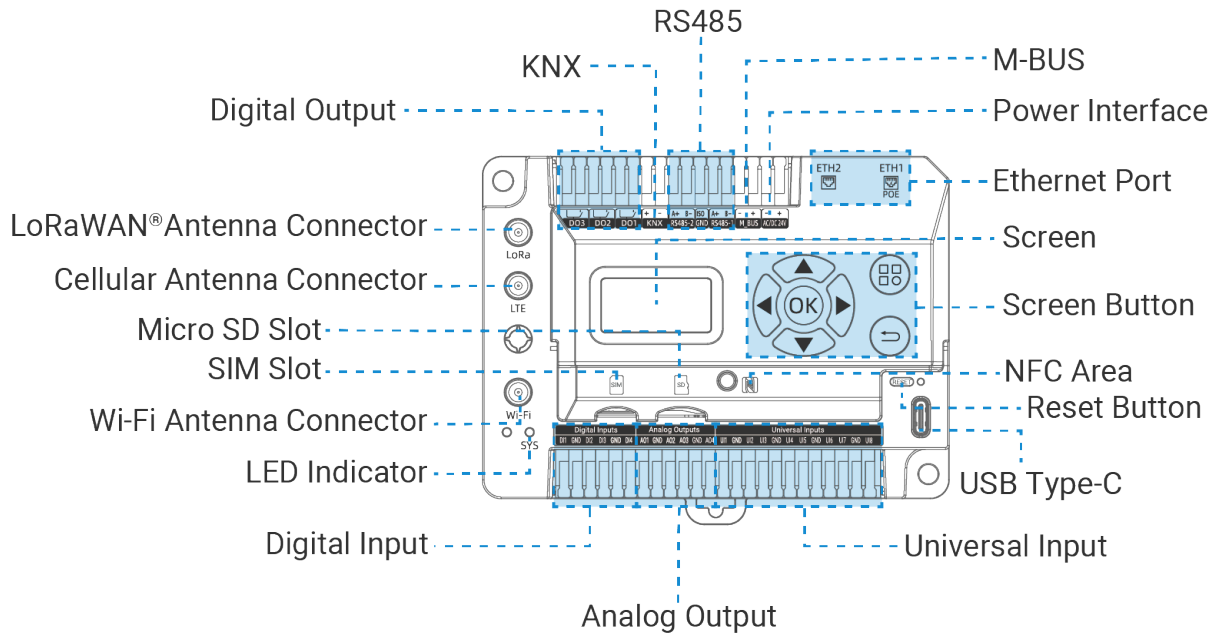
Release Date	Version	Description
Jan. 16, 2026	V1.0	Initial version
March 31, 2026	V1.1	<ol style="list-style-type: none"> 1. Add optional power adapter accessory; 2. HTTPS access is enabled by default, and HTTP access is disabled; 3. The password change prompt will pop up when login the web GUI for the first time; 4. Web password must contain at least one letter and one number.

Chapter 2. Hardware Introduction

This chapter describes the hardware design of the device.

Hardware Overview

The following figure shows the main components of the device.



Part	Description
LoRaWAN® Antenna Connector	Allows connection of external antennas to enhance wireless communication range and reliability.
Cellular Antenna Connector	
Wi-Fi Antenna Connector	
Micro SD Slot	Allows to insert a micro SD card to expand the storage.
SIM Slot	Allows to insert a SIM card to connect to the cellular network.
LED Indicator	See LED Patterns .
USB Type-C	Used for device console.
Reset Button	Allows to reset the device to factory defaults. For details see LED Patterns .

Part	Description
NFC Area	Allows addition of Milesight LoRaWAN [®] end devices. NFC is enabled by default.
Screen	Display the device's basic information, interface status, and operational status.
Screen Button	Used to check the device status and view the values of interfaces.
Ethernet Port	Allows connections of Ethernet end devices for data collection, or connection to an ISP for network access. ETH1 also supports the PoE PD feature, enabling it to receive power over Ethernet.
Power Interface	The interface for powering the device. For more details, refer to Wiring Diagrams .
M-BUS	The interfaces for connecting to terminal devices for data collection or control. For more details, refer to Wiring Diagrams .
RS485	
KNX	
Digital Output	
Digital Input	
Analog Output	
Universal Input	

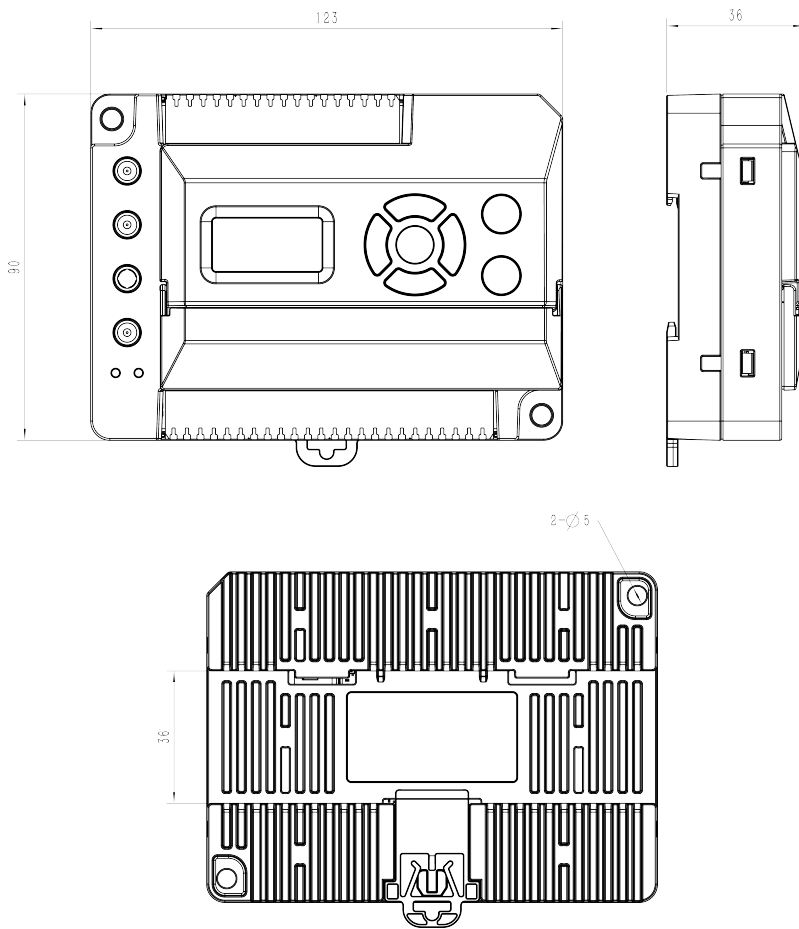
LED Patterns

LED	Function	Status	Description
SYS	Power Off	Off	The power is switched off
	Power On	Green Static On	The power is switched on and the system is working well
	System Fault	Red Static On	The power is switched on and the system malfunctions
	Factory Reset	Quickly Blinks	Press and hold the reset button for more than 5 seconds
Ethernet Port	Link Indicator (Yellow)	Off	Disconnected or connection failure

LED	Function	Status	Description
		Static On	Connected
		Blinks	Transmitting data
	Rate Indicator (Green)	Off	Other modes
		On	1000 Mbps

Device Dimensions

The following figure shows the device dimensions (unit:mm).



Screen Description

The screen displays multiple menu levels.

Main Menu

This menu displays the gateway model, SN, and network interface statuses.



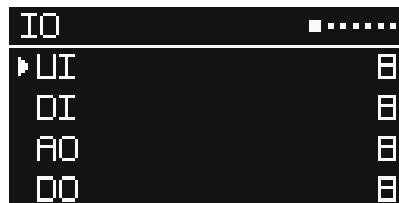
Interface	Icon	Description
Cellular		Cellular is disabled
		Cellular module abnormal
		No SIM card or SIM card error
		PIN Error, PIN Required or PUK Required
		SMSC Number Required, USSD Send Failed or Dial Number Required
		Cellular is active, with 5 signal strength levels: <ul style="list-style-type: none"> • X: No signal • 1: Poor • 2: Fair • 3: Good • 4: Excellent
WLAN		WLAN is disabled
		WLAN AP is down
		WLAN AP is up
		WLAN Client is disconnected
		WLAN Client is connected, with 5 signal strength levels: <ul style="list-style-type: none"> • X: No signal • 1: Poor • 2: Fair

Interface	Icon	Description
		<ul style="list-style-type: none"> • 3: Good • 4: Excellent
LoRaWAN®		LoRaWAN® access network works well.
		LoRaWAN® access network works abnormally.
ETH1		ETH1 is disabled
		ETH1 is disconnected or down
		ETH1 is connected and up
ETH2		ETH2 is disabled
		ETH2 is disconnected or down
		ETH2 is connected and up

Interface Status Menu

Press button to navigate to the Interface Status Menu. It has the following pages which can be switched by or button:

- **IO Status page:** Displays the numbers of enabled interfaces. To check the present values of each interface, click or button to select the interface, then click **OK** button.



- **RS485 Status page:** Displays the number of TX and RX bytes for RS485 interface. The count will reset when switching to other pages.

```

RS485      ..■.....
RX-1      0
TX-1      200000000000...
RX-2      2000
TX-2      222222220000
    
```

- **KNX Status page:** Displays the number of TX and RX bytes for the KNX/TP interface. The count will reset when switching to other pages.

```

KNX/TP     ..■.....
RX         0
TX         222222220000
    
```

- **Ethernet Status page:** Displays the enabled status and IP address of each Ethernet port.

```

Ethernet   ...■...
ETH-1     ①
-
ETH-2     ②
192.162.255.234
    
```

- **Cellular Status page:** Displays the cellular module status and network connection status.

```

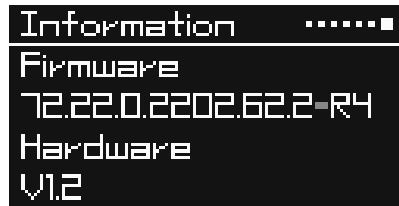
Cellular   ....■..
Disconnected
SMS Center Number
Required
    
```

- **WLAN Status page:** Displays the work mode, connection status, SSID, and IP address.








```

WLAN       .....■.
Model      Ap
Disconnected
Gateway-F35E0C
192.162.255.234
    
```

- **Information page:** Displays firmware version and hardware version of the gateway.



Screen Buttons

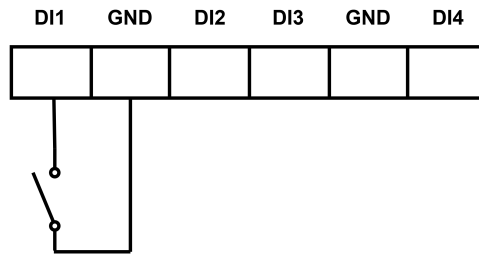
Button	Description
	Switches between the Main menu and the Interface Status menu.
	Returns to the previous menu level.
	Navigates to the next menu level.
	Switches the items in the IO Status page .
	
	Switches to the previous interface status page.
	Switches to the next interface status page.

Chapter 3. Wiring Diagrams

This chapter describes the wiring diagrams of interfaces.

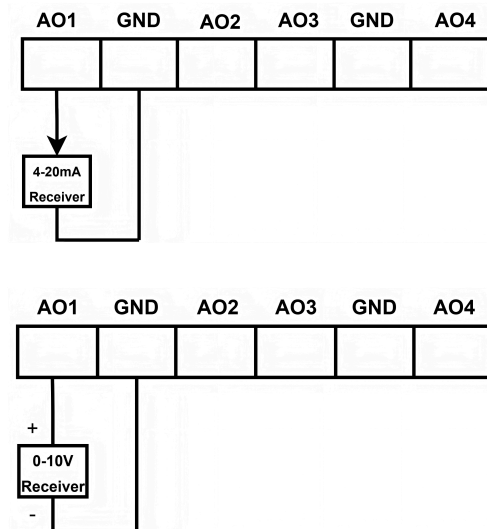
Digital Inputs

All digital inputs can function as standard dry contact inputs or pulse counters, supporting pulse frequency counting up to 100 Hz. By default, two connected contacts = low level, two disconnected contacts = high level.



Analog Outputs

The analog outputs support switching output type between 4-20mA or 0-10V DC, with a maximum load of up to 20mA.

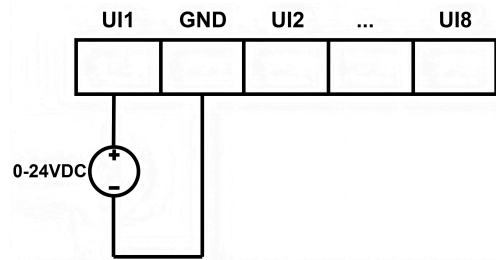


Universal Inputs

All universal inputs support switching among the following types of input signals via software.

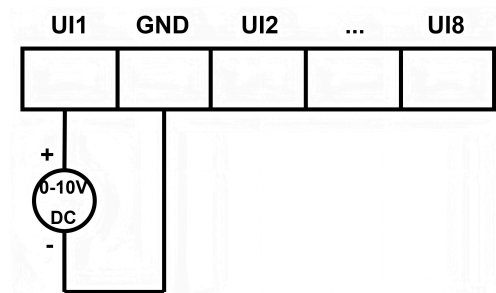
Digital Input (Wet Contact)

The universal inputs can work as standard digital inputs (wet contact inputs). The low level ranges from 0-2V and the high level ranges from 2-24V (software-configurable).



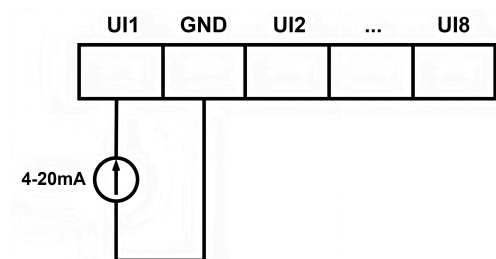
Analog Input (0-10V)

The universal inputs can work as standard analog inputs (0-10V DC).



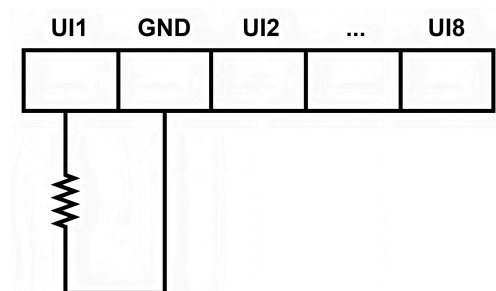
Analog Input (4-20mA)

The universal inputs can work as standard analog inputs (4-20 mA).



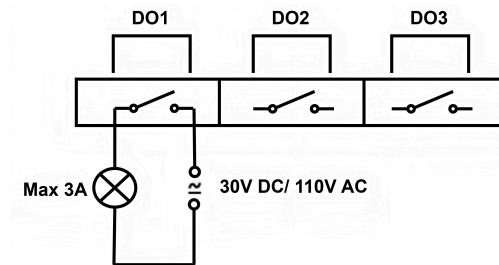
Temperature/Resistance Input

The universal inputs can work as temperature or resistance inputs to connect the following types of sensors: PT1000, Ni1000, NTC 10k Type 2, NTC 10k Type 3, NTC 20k, 1000 Ω, 2000Ω.



Digital Outputs

The relay outputs can connect to resistive loads up to 3A@110V AC or 3A@30V DC.

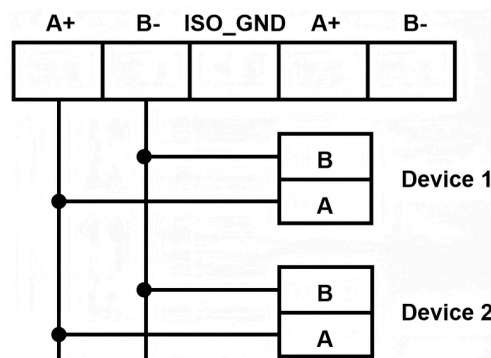


RS485

The RS485 interfaces support connecting to Modbus RTU or BACnet MS/TP devices.

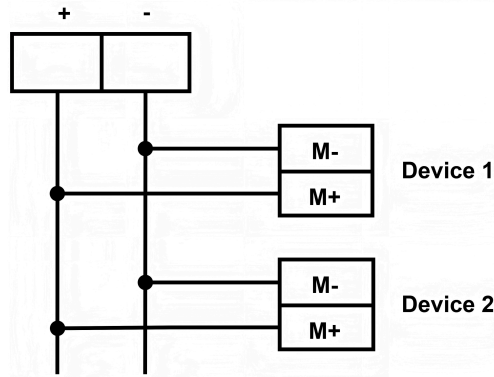
i Tip:

- When connecting multiple devices to a single RS485 interface, a bus-type daisy-chain connection is recommended to ensure stable communication. A star topology should not be used for wiring.
- To add a 120Ω termination resistor across the A and B terminals of an RS485 interface, refer to DIP settings in the web GUI.
- ISO_GND is typically used when the RS485 cable is long or environmental interference is high.



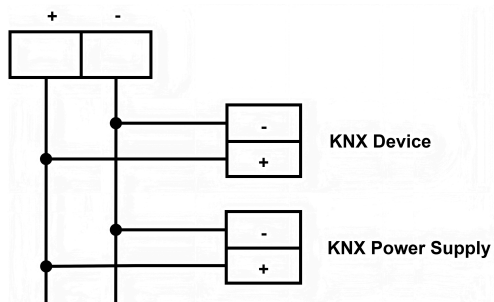
M-BUS (Under Development)

The M-BUS interface supports connecting to M-BUS devices.



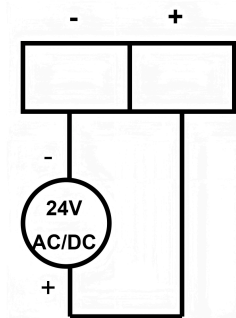
KNX

The KNX interface supports connecting KNX/TP1 devices and the KNX power supply.



Power Supply (24V)

The power interface can supply 24V DC/AC power to the device.

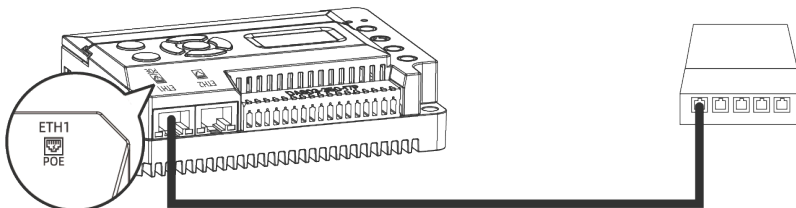


Chapter 4. Powering Options

This chapter describes the powering supply option supported by EG71 gateways. Please select one of the following options to power the gateway.

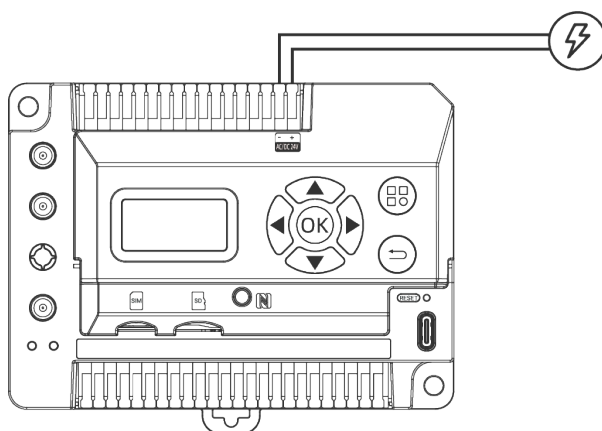
Powered by Active PoE

The ETH1 port can receive power by connecting to an 802.3af standard PoE switch or PoE injector.



Powered by Power Interface

The gateway can be powered via a 2-pin power interface (24V DC/AC). Click [here](#) to view the wiring diagram.



Powered by USB Type-C

The gateway can be powered by a USB Type-C port (5V DC/3A).



Note:

When powered via USB, the M-BUS and Universal Inputs will not work properly.



Tip:

If multiple power sources are connected at the same time, the device will primarily use power from the power interface, followed by PoE.

Chapter 5. Installation Instructions

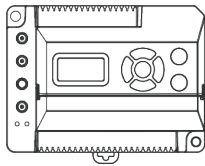
This chapter provide instructions on how to install the accessories and the device.

Warning:

Before installation, ensure the device is powered off!

Packing List

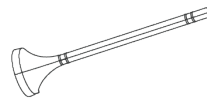
Before installation, please check the package contents against the following list to ensure all items are included. If any of the items is missing or damaged, please contact your sales representative.



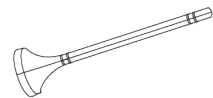
1 × EG71 Gateway



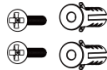
1 × LoRaWAN[®]
Magnetic Antenna



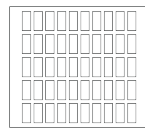
1 × Cellular Mag-
netic Antenna



1 × Wi-Fi Mag-
netic Antenna



2 × Wall Mount Kits



1 × Label Sticker



1 × Quick Guide



1 × Warranty Card



1 × DIN Rail AC-DC Pow-
er Adapter (Optional)

SIM Card or Micro SD Card Installation

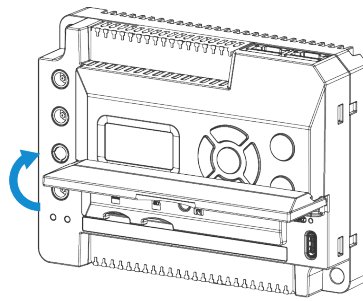
This section describes how to install a SIM card or a micro SD card into the device. If not needed, please skip this section.

Prerequisites

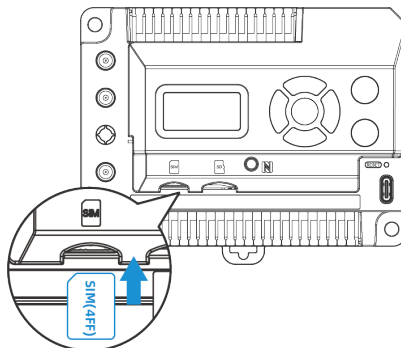
A SIM card (Nano-4FF) or a micro SD card.

Steps

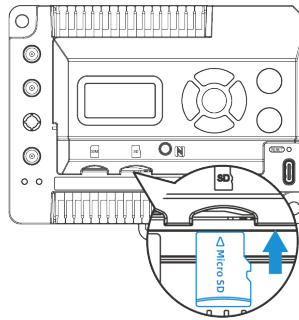
1. Open the front cover of the device.



2. Insert the SIM card or micro SD card into the corresponding slot in the correct orientation.



SIM(4FF)



3. (Optional) To remove the cards, simply press them and they will eject automatically.

Terminal Device Wirings

This section describes how to wire terminal devices to the gateway.

Prerequisites

- Check [Wiring Diagrams](#) to confirm that the terminal device is compatible with the gateway.
- Ensure the wire diameter of the terminal device complies with the AWG 24-16 standard.
- Strip 8-9 mm of insulation from the ends of the terminal device's wires.
- Use label stickers to mark the terminal device's wires for easy identification.

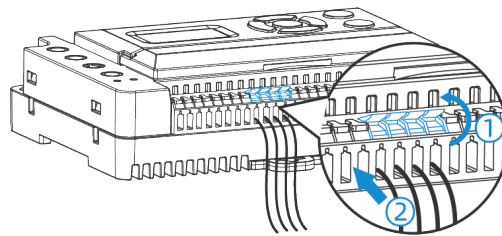
Steps

1. Lift the small levers of the corresponding interface.
2. Push the stripped wires fully into the terminal openings.

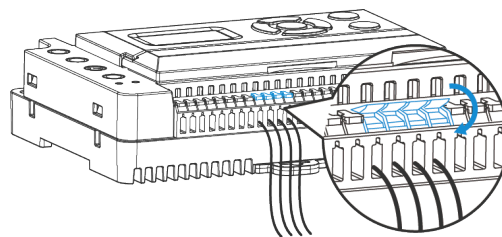


CAUTION:

Ensure the terminal device is connected to the correct interface; otherwise, it may damage the connected device or the gateway!



3. Close the levers to activate the internal spring clamps.



4. Gently pull the wires to ensure they are securely fixed to the gateway.

Antenna Installation

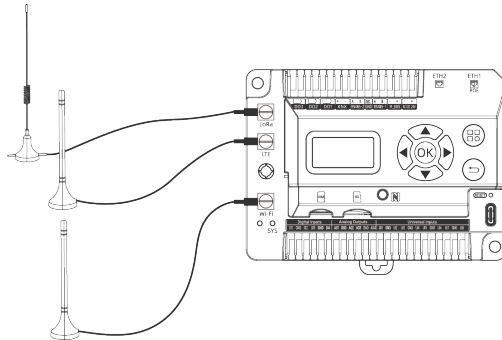
This section describes how to install the antennas to the device.

Steps:

Press antennas into the corresponding antenna connectors. The antennas should be installed vertically, with their magnetic bases attached to a metal surface.

i Tip:

- Keep the antennas away from walls and ensure there are no obstacles around them.
- For better coverage, it is recommended to position the antennas at a higher location.
- Place the antennas near windows when used indoors.



Gateway Installation

This section describes how to install the gateway. The gateway supports wall mounting with screws or DIN rail mounting.

i Tip:

To ensure proper ventilation, maintain a clear space of at least 5mm between the equipment and surrounding objects.

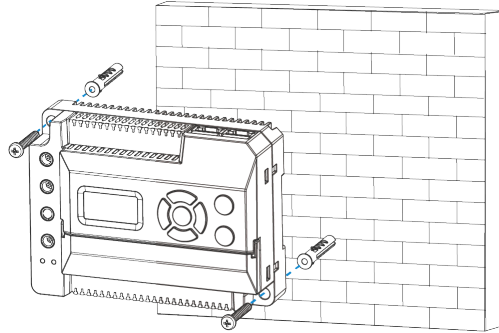
Wall Mounting

Prerequisites: Screwdriver, Wall Mount Kit

Steps:

1. Drill two holes in the wall according to the device's wall mounting holes.
2. Insert the wall plugs into the holes.

3. Secure the device to the wall plugs using the wall mounting screws.

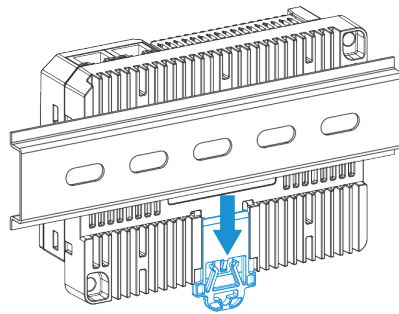


DIN Rail Mounting

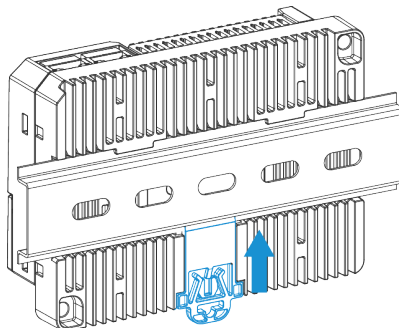
Prerequisites: 35mm DIN rail

Steps:

1. Pull down the locking clip on the back of the device.
2. Hang the device on the DIN rail.



3. Push up the locking clip to secure the device to the DIN rail.



Chapter 6. Access the Gateway

The device provides a web GUI for configuration. This chapter describes how to access the device's web GUI **for the first time**.

Prerequisites

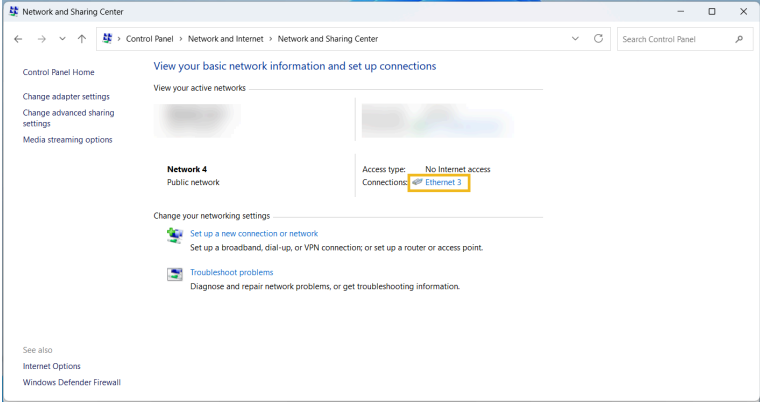
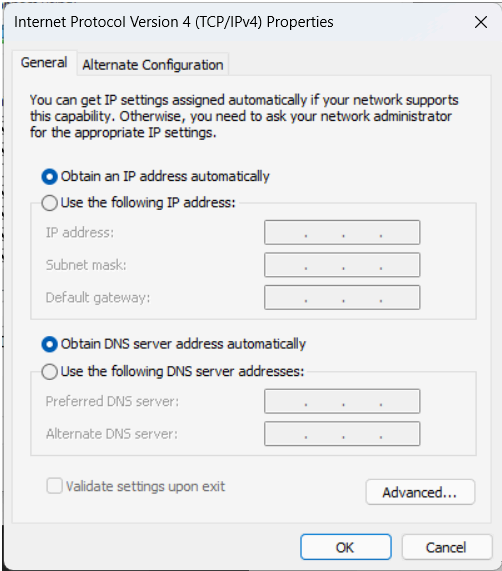
- A computer
- Optional: a network cable, a network router or switch with DHCP server enabled

Steps



The device can be accessed via wireless (Wi-Fi) or wired (Ethernet Port).

1. Select one of the following methods to connect to the gateway and access the web GUI.

Method	Step
Access via Wi-Fi	<ol style="list-style-type: none">a. Enable the Wireless Network Connection on your computer, search for the corresponding for Wi-Fi SSID, and connect to it. Default Wi-Fi credentials: SSID: Gateway_XXXXXX (last 6 digits of the Wi-Fi MAC address) Password: iotpasswordb. Open a web browser (Chrome is recommended) and type in https://192.168.2.1 to access the web GUI.
Access via a LAN Port	<ol style="list-style-type: none">a. Connect the ETH2 port of the device to your computer using a network cable.b. Configure the computer's IP address either manually or automatically. Take Windows 10 as an example:

Method	Step
	<p>i. Navigate to Control Panel > Network and Internet > Network and Sharing Center and select "Ethernet" (It may have a different name).</p>  <p>ii. Navigate to Properties > Internet Protocol Version 4 (TCP/IPv4) Properties, then select either Obtain an IP address automatically or Use the following IP address to manually assign a static IP address within the same subnet as the gateway.</p>  <p>c. Open a web browser (Chrome is recommended) and type in https://192.168.1.1 to access the web GUI.</p>

Method	Step
<p>Access via a WAN Port</p>	<p>a. Connect the ETH1 port of the device and your computer to the same network router or switch with DHCP server enabled.</p> <p>b. Configure the computer's IP address automatically. Take Windows 10 as an example:</p> <p>i. Navigate to Control Panel > Network and Internet > Network and Sharing Center and select "Ethernet" (It may have a different name).</p>
	<div data-bbox="662 590 1419 989" data-label="Image"> <p>The screenshot shows the Windows Network and Sharing Center window. The breadcrumb path is 'Control Panel > Network and Internet > Network and Sharing Center'. Under 'View your active networks', 'Network 4' is selected. The 'Access type' is 'Public network' and 'Connections' is 'Ethernet 3', which is highlighted with a yellow box.</p> </div> <p>ii. Navigate to Properties > Internet Protocol Version 4 (TCP/IPv4) Properties, then select either Obtain an IP address automatically.</p> <div data-bbox="662 1167 1162 1738" data-label="Image"> <p>The screenshot shows the 'Internet Protocol Version 4 (TCP/IPv4) Properties' dialog box. The 'General' tab is active. The radio button for 'Obtain an IP address automatically' is selected. Below it, there are fields for 'IP address:', 'Subnet mask:', and 'Default gateway:'. Further down, there are radio buttons for 'Obtain DNS server address automatically' (selected) and 'Use the following DNS server addresses:'. At the bottom, there are 'Validate settings upon exit', 'Advanced...', 'OK', and 'Cancel' buttons.</p> </div> <p>c. Check the device IP address received from the screen.</p>

Method	Step
	<ul style="list-style-type: none"> i. Press any screen button to activate the device screen. ii. Press  button to navigate to the Interface Status Menu. iii. Press  button several times to navigate to the Ethernet Status page to obtain the ETH1 IP address (in the format of xx.xx.xx.xx). d. Open a web browser (Chrome is recommended) and type in https://xx.xx.xx.xx to access the web GUI.

2. Log in to the web GUI using the default credentials:

Username: **admin**

Password: **password**

3. After logging the web GUI for the first time, it is necessary to change the default password.



- a. Enter the **Old Password**.
- b. Enter a **New Password**. The password must contain at least one letter and one number, and be 5 to 31 characters long.
- c. Enter **Confirm New Password**.
- d. Click **OK**.
- e. Log in to the web GUI using the new credentials.

Chapter 7. Services

Milesight provides customers with timely and comprehensive technical support services. End-users can contact their local dealer to obtain technical support. Distributors and resellers can contact Milesight directly for technical support.

Technical Support Mailbox: iot.support@milesight.com

Online Support Portal: <https://support.milesight-iot.com>

Resource Download Center: <https://www.milesight.com/iot/resources/download-center/>

MILESIGHT CHINA

TEL: +86-592-5085280

FAX: +86-592-5023065

Add: Building C09, Software Park Phase III, Xiamen 361024, Fujian, China