

InHand Networks

Edge Computing Gateway IG502

Quick Installation Manual

InHand Networks

www.inhandnetworks.com

Version: V1.0

December, 2020

Copyright © 2020. All rights are reserved by InHand Networks and its licensors. Without the written permission of the Company, no unit or individual is allowed to excerpt, reproduce or transmit in any form part or all of the contents in the manual.

Content

1. Preface.....	1
2. Packing List	1
2.1. Panel	2
2.2. Structure and Dimensions	3
3. Installation	3
3.1. Installing and Uninstalling the Device on a DIN-Rail	4
3.1.1. Installing with a DIN-Rail	4
3.1.2. Uninstalling with a DIN-Rail	4
3.2. Installing and Uninstalling the Device in Wall-mounted Mode	5
3.2.1. Installing in Wall-mounted Mode	5
3.2.2. Uninstalling in Wall-mounted Mode	5
3.3. Installing a SIM Card	6
3.4. Installing an Antenna	7
3.5. Installing the Power Supply	8
3.6. Installing the Ground Protection	8
3.7. Connecting the Network Cable	9
3.8. Connecting Terminals	9
4. Configuring Network Connection for a Wireless Gateway	10
4.1. Connecting to the Gateway	10
4.2. Logging in to the Gateway	12
4.3. Connect IG502 to Internet	12

1. Preface

This document describes how to install and operate the edge computing gateway IG502 series products of Beijing InHand Networks Technology. Before using these products, confirm the product model and the number of accessories inside the package, and purchase a SIM card from the local network operator.

2. Packing List

Each edge computing gateway product is delivered with accessories (such as standard accessories) frequently used at the customer site. Check the received product against the packing list carefully. If any accessory is missing or damaged, contact the InHand sales personnel promptly.

InHand provides customers with optional accessories based on the characteristics of different sites. For details, see the optional accessories list.

Standard accessories:

Accessory	Quantity	Description
Gateway	1	Edge computing gateway
Product document	1	Quick installation manual and user manual (Obtained by scanning a QR code)
Guide rail installation accessory	1	Used to fix the gateway
Power terminal	1	7-pin industrial terminal
Network cable	1	1.5 m long
Antenna	1	3G or 4G specification
Product warranty card	1	Warranty period: 1 year
Certificate of conformance	1	Certificate of conformance for the edge computing gateway

Optional accessories:

Accessory	Quantity	Description
AC power cord	1	Power cord for American English Australian or European Standard
Power Adapter	1	VDC Power Adapter
Antenna	1	Wi-Fi Antenna
	1	GPS Antenna
Serial Port	1	Gateway serial port line for debugging

The following sections describe the panel, structure, and dimensions of the edge computing gateway.

2.1.Panel



Figure 2-1 IG502

Caution

The IG502 series product is applicable to multiple panel appearances, as they have the same installation method. Refer to the actual product during operation.

2.2. Structure and Dimensions

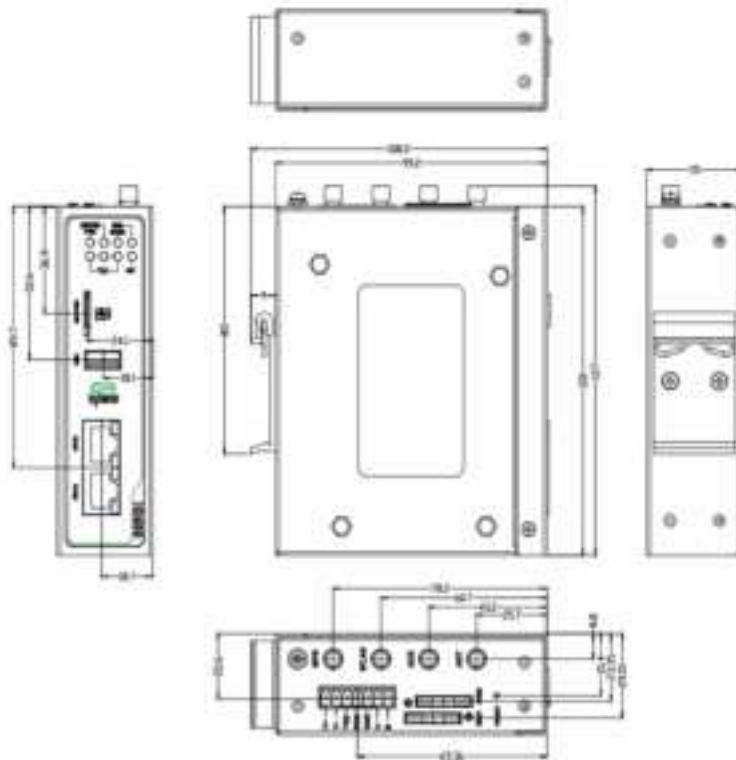


Figure 2-2 Structure size

3. Installation

Precautions:

- Power supply requirements: 24 V DC (12–48 V DC).
- Environment requirements: operating temperature -25°C to 75°C ; storage temperature -40°C to 85°C ; relative humidity 5% to 95% (non-condensing). The temperature on the device surface may be high. Install the device in a restricted area and assess the surrounding environment.
- Avoid direct sunlight and keep away from thermal sources or areas with strong electromagnetic interferences.
- Install the gateway product on an industrial DIN-rail.
- Check whether the required cables and connectors are installed.

3.1.Installing and Uninstalling the Device on a DIN-Rail

3.1.1.Installing with a DIN-Rail

Procedure:

Step 1: Select an installation place and reserve enough space for installation.

Step 2: Insert the upper part of the DIN rail seat onto the DIN rail. Grab the lower end of the device and revolve it upward in the direction indicated by arrow 2 with gentle force, to insert the DIN rail seat onto the DIN rail. Check that the device is installed reliably on the DIN rail, as shown in Figure 3-1 on the right.

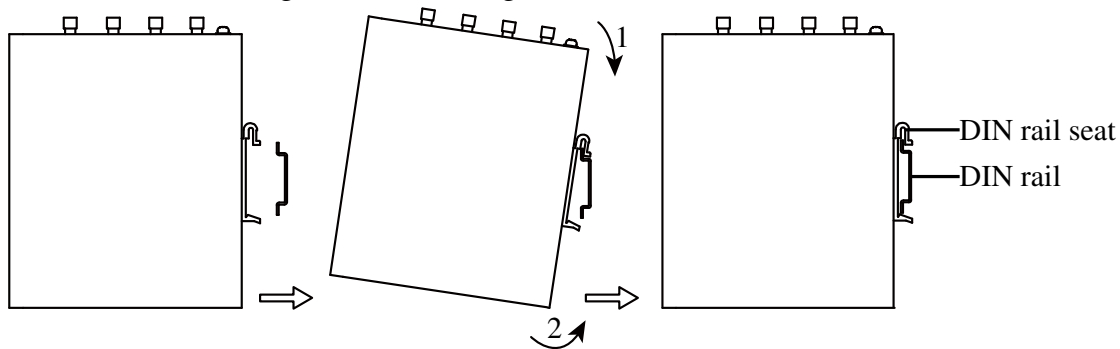


Figure 3-1-1 DIN rail installation schematic diagram

3.1.2.Uninstalling with a DIN-Rail

Procedure:

Step 1: Press the device downward in the direction indicated by arrow 1 in Figure 3-2 to create a gap near the lower end of the device so that the device isolates from the DIN rail.

Step 2: Revolve the device in the direction indicated by arrow 2, and grab the lower end of the device and move the device outward. Lift the device when its lower end isolates from the DIN rail. Then, take off the device from the DIN rail.

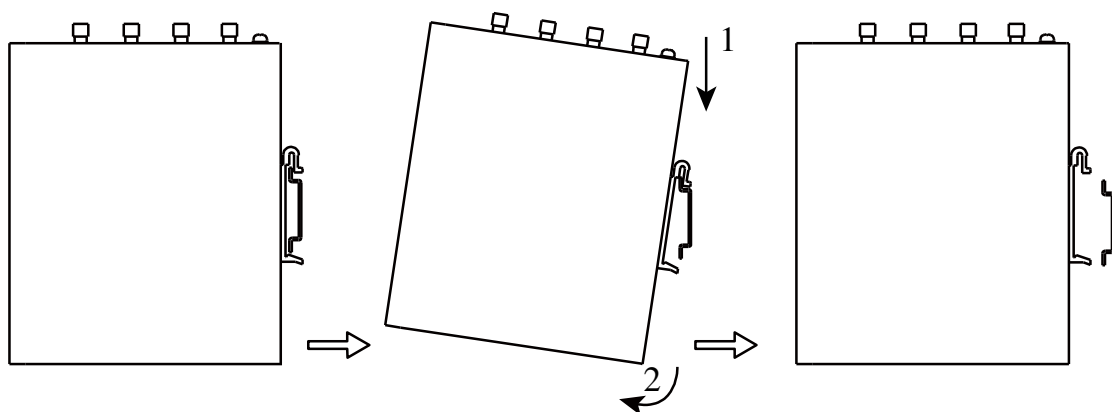


Figure 3-1-2 DIN rail disassembly schematic diagram

3.2.Installing and Uninstalling the Device in Wall-mounted Mode

3.2.1.Installing in Wall-mounted Mode

Procedure:

Step 1: Select an installation place and reserve enough space for installation.

Step 2: Install the wall mounting bracket on the back of the device by using a screwdriver, as shown in Figure 3-3.

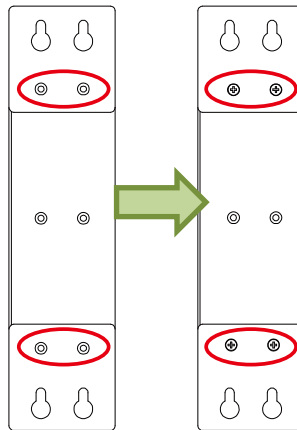


Figure 3-2-1-1 Wall mounted installation diagram

Step 3: Take out the screws (packaged with the wall mounting bracket), fasten the screws in the installation positions by using the screwdriver, and pull down the device to make it secure, as shown in Figure 3-4.



Figure 3-2-1-2 Wall mounted installation diagram

3.2.2.Uninstalling in Wall-mounted Mode

Procedure:

Hold the device with one hand and unfasten the screws that fix the upper end of the device with the other hand, to remove the device from the installation place.

3.3.Installing a SIM Card

IG502 supports Dual SIM card.



Figure 3-3 Install SIM card

3.4.Installing an Antenna

Revolve the movable part of the metal SMAJ interface with gentle force until it cannot be revolved, in which state the outer thread of the antenna connection cable is invisible. Do not wring the antenna with force by grabbing the black plastic cover.



Figure 3-4 Installing an Antenna



Note

- IG502 supports dual antenna: ANT antenna and AUX antenna. The ANT antenna sends and receives data. The AUX antenna only increases the antenna signal strength and cannot be used independently for data transmission.
- Only the ANT antenna is used in normal cases. It is used with the AUX antenna only when signal is poor and signal strength must be improved.

3.5.Installing the Power Supply

Procedure:

- Step 1: Remove the terminal from the gateway.
- Step 2: Unfasten the locking screw on the terminal.
- Step 3: Connect the power cable to the terminal and fasten the locking screw.



Figure 3-5 Installing the Power Supply

3.6.Installing the Ground Protection

Procedure:

- Step 1: Unfasten the ground screw cap.
- Step 2: Put the ground loop of the cabinet ground cable onto the ground post.
- Step 3: Fasten the ground screw cap.



Caution

Ground the gateway to improve its interference resistance. Connect the ground cable to the ground post of the gateway based on the operation environment.

3.7.Connecting the Network Cable

Connect the gateway to a PC directly by using the Ethernet cable.



Figure 3-3 Network connection

3.8.Connecting Terminals

Terminals provide the RS232 and RS485 interface modes. Connect cables to the corresponding terminals before using the interfaces. During installation, remove the terminals from the device, unfasten the locking screws on the terminals, connect cables to the corresponding terminals, and fasten the screws. Sort the cables in order.

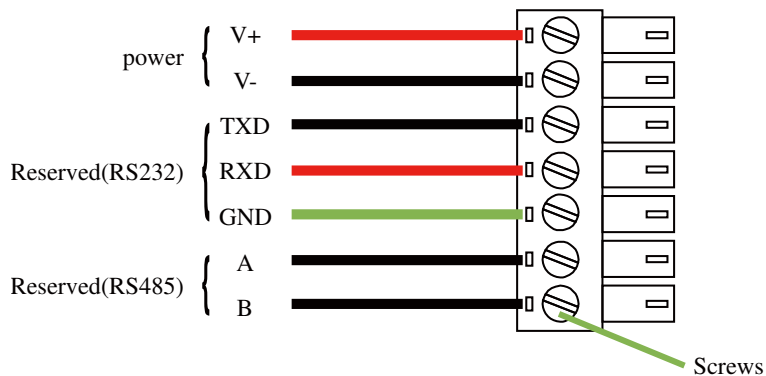


Figure 3-4 Terminal line



Note

This section is only applicable to IG500 with industrial interfaces.

4. Configuring Network Connection for a Wireless Gateway

4.1. Connecting to the Gateway

Step 1: By default, the IP address of FE 0/1 on IG502 is 192.168.1.1; the IP address of FE 0/2 on IG502 is 192.168.2.1. This document uses the FE 0/2 port to access the IG502 as an example. Set the PC's IP address to be on the same subnet with FE 0/2.

Method 1: Enable the PC to obtain an IP address automatically (recommended)

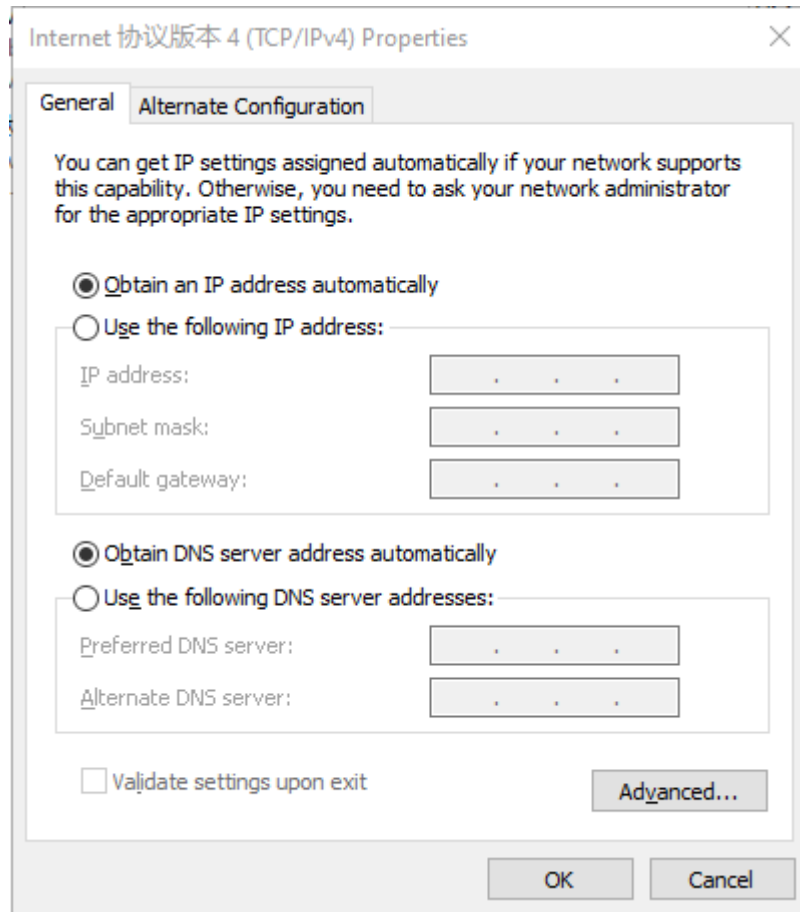
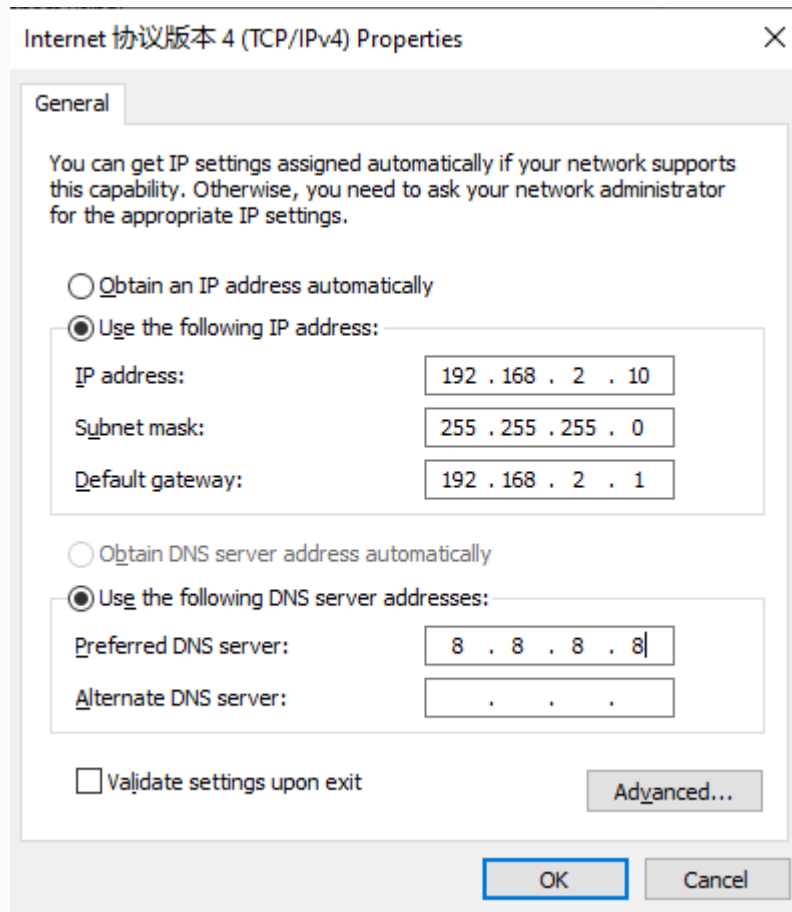


Figure 4-1-1 Gateway Settings(1)

Method 2: Set a fixed IP address

Select Use the following IP address, enter an IP address (By default, any from 192.168.2.2 to 192.168.2.254), subnet mask (By default, 255.255.255.0), default gateway (By default, 192.168.2.1), and DNS server address, and click OK.



Internet 协议版本 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address: 192 . 168 . 2 . 10

Subnet mask: 255 . 255 . 255 . 0

Default gateway: 192 . 168 . 2 . 1

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses:

Preferred DNS server: 8 . 8 . 8 . 8

Alternate DNS server: . . .

☐ Validate settings upon exit

Advanced...

OK Cancel

Figure 4-2-2 Gateway Settings(2)

4.2. Logging in to the Gateway

Connect the PC to the gateway directly by using the network cable, start the web browser, enter **https://192.168.2.1** in the address bar, and press **Enter** to jump to the web login page. Enter the user name (default: **adm**) and password (default: **123456**), and click **OK** or press **Enter** to access the web configuration page.

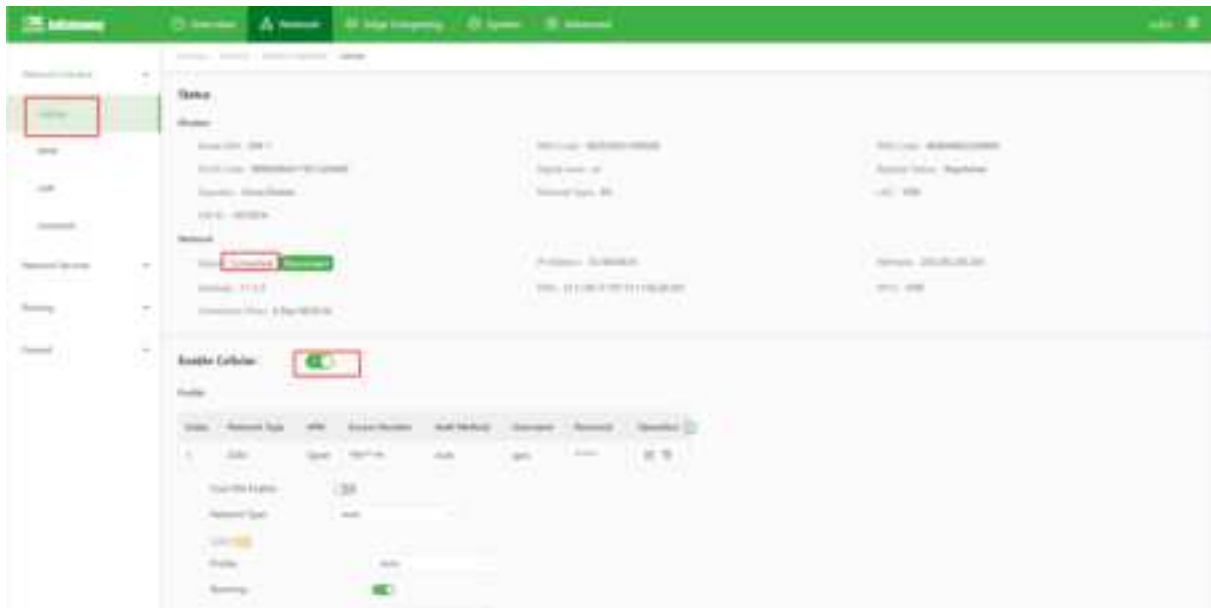
Figure 4-2 Login gateway Web management interface

4.3. Connect IG502 to Internet

Step 1: Insert the SIM card. (Note: Before inserting or removing the SIM card, unplug the power cable; otherwise, the operation may cause data loss or damage the IG502.) After inserting the SIM card, connect the 4G LTE antenna to the ANT interface and power on the IG502.

Step 2: Choose Network > Network Interfaces > Cellular page of IG502 and select Enable Cellular and click Submit.





When the network connection status is Connected and an IP address has been allocated, the IG502 has been connected to the Internet with the SIM card.