

InHand Networks Edge Computing Gateway IG502 Quick Installation Manual

InHand Networks www.inhandnetworks.com

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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.

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			

Standard accessories:

Optional accessories:

Accessory	Quantity	Description			
AC power cord	1	Power cord for American English Australian or European Standard			
Power Adapter	1 VDC Power Adapter				
	1	Wi-Fi Antenna			
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





ACaution

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.



3.1.1. Installing with a DIN-Rail

Procedure:

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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.







- 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.



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.





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)

nternet 协议版本 4 (TCP/IPv4) Properties									
General Alternate Configuration									
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:									
Sybnet mask:									
Default gateway:									
Obtain DNS server address automatically									
Use the following DNS server add	resses:								
Preferred DNS server:									
<u>A</u> lternate DNS server:									
Validate settings upon exit	Ad <u>v</u> anced								
	OK Cancel								

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) Prope	rties	Х						
General								
You can get IP settings assigned auton this capability. Otherwise, you need to for the appropriate IP settings.	natically if your network supports ask your network administrator							
Obtain an IP address automatical	ly							
• Use the following IP address:								
IP address:	192 . 168 . 2 . 10							
S <u>u</u> bnet mask:	255.255.255.0							
Default gateway:	192.168.2.1							
Obtain DNS server address automatically								
• Use the following DNS server add	resses:							
Preferred DNS server:	8.8.8.8							
<u>A</u> lternate DNS server:								
Validate settings upon exit Advanced								
	OK Cance	I						

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.

Sign in	
https://192.1	68.2.1
Username	admin
Password	
	Sign in Cancel

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.

Network Connection Status System Information Image: System Information Name: System Information Image: System Information System Information Image: System Informa	
Beteral Network Name: Name: WN P 10.188.9453 Image: State Address: Model: DHS 211.136.17.07 State Address: State Address: MAC Address: WAN Set UP Waders: State Address: State Address: MAC Address: # Address: 192.158.11 Model: State Address: State Address: MAC Address: # Address: 192.158.11 Model: State Address: State Address: MAC Address: # Address: 192.158.11 Model: State Address: State Address: MAC Address: # Address: 192.158.11 Model: State Address: State Address: MAC Address: # Address: 192.158.11 Model: State Address: MAC Address: MAC Address: # Address: 192.158.11 Model: Model: State Address: MAC Address: # Address: 192.158.11 Model: Model: State Address: MAC Address: # Address: 192.158.11 Model: State Address: <td< th=""><th>חכ</th></td<>	חכ
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Dk3 211156/2023 Strill Number: Strill Number: MC WAN Strill Number: Strill Number: MC Ø Advess Strill Number: Strill Num	IG502L
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Materials 192, 100, 11 192 Status Connected Bootloader Version: Network 125252530 Spallared al Bootloader Version: DNS 00.00 Register Status Registered Device Time: LN SetUP Connection Time 0.00,000431 Host Time:	00:18:05:12:e9:fb 2.0.0.r13470
DNS 0.0.0 Payter Statu Registered Device Time : LNN SetUP Connection Time 0 Dpy 000451 Host Time :	2017.01.r13456(test)
LAN Set UP Connection Time 0 Dip 000451 Host Time: To Mark 1	2020-12-23 17:46:04
10 Address 102 160 2 1	2020-12-23 17:46:04
Manager 101,183,453 System Up Time:	0 Day 00:05:59
DHS 0.04.0 211.134/1.107 Python Edit 211.134/2.028 211.134/2.028 Python 50 Python 50	fge Computing Engine : Disable DK Version : 1.4.2
Performance And Storage Piow Usage Monitoring(Day) Piow Usage Monitoring(Month)	
Memory 11% Used 57M8/495M8 Used data 0 8 Komma	
OO/ Flash 1% Used 57ME/6550MB	
V70 No Data	
MicroSD 0% Used 0E/ 08	
CPU Usage Rate	

12

inpand InGateway	🕐 Overview	A Network	Edge Comp	uting 🔯 Syste	em BB	Advanced					adm 🕲
Network Interface	Overview / Network / Network Interfaces / Gebuar										
Nework Interface	Status										
Cellular	Modem										
WAN	Active SIM	1: SIM 1			IMEI C	IMEI Code: 865553051508598 IMSI Code: 460048482209480					
	ICCID Cod	le: 898604640119C	1429480		Signal	Signal Level: all Register Status: Registered					
LAN	Operator:	China Mobile			Netwo	rk Type: 4G				LAC: 1095	
Loopback	Cell ID: 1	6C03C4									
	Network										
Network Services 👻	Status: Co	onnected Disconn	ect		IP Add	Iress: 10.188.94	.55			Netmask: 255.255.255.255	
	Gateway:	1.1.1.3			DNS:	DNS: 211.136.17.107 211.136.20.203 MTU: 1500					
Routing	Connectio	n Time: 0 Day 00:0	::24								
Firewall 🗸	Enable Cellular:										
	Index Ne	twork Type Al	N Access Number	Auth Method	Username	Password	Operation (+)				
	1 GS	iм З ₅	net *99***1#	Auto	gprs	*****	C O				
	Dual SIM Enable:										
	Netwo	rk Type :	Auto								
	SIM1	a									
	Profile:		Auto								
	Roamir	ng:									

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.