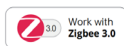
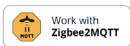




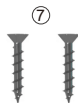
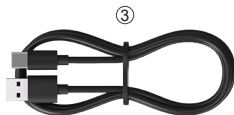
Zigbee 3.0 PoE Dongle



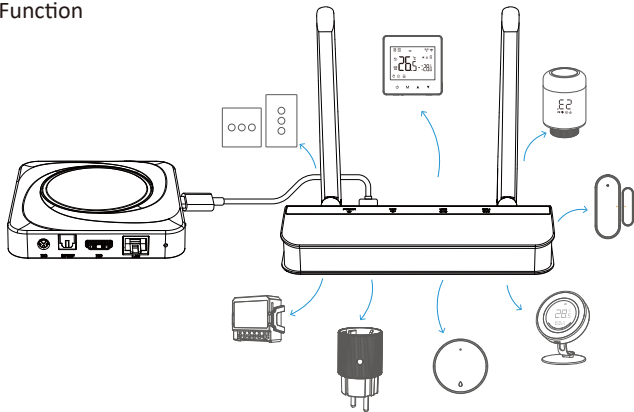
Specifications

Model: GW90-POE-Ti	
Supported Platform: Home Assistant	Chip: ESP32 + CC2652P
RAM: 256KB	Flash: 1536KB
Power Source: PoE/Type-C	
Interface: WiFi/Ethernet/USB	Coverage range: 200m
Network interface type: RJ45	
Supported Protocols: WiFi/Zigbee 3.0/MQTT	
Antenna: 5dBi Dual antennas with 360°rotation capability	
Working Temperature: -10°C~60°C	
Dimension: 157x45x23mm	
Material: Aluminum Alloy	
Input: 5V/1A for Type C or 48V/0.25A for PoE port	
Package Contents: Dongle × 1, User Manual × 1, Screws × 2	
Website: http://avattosmart.com	

Package

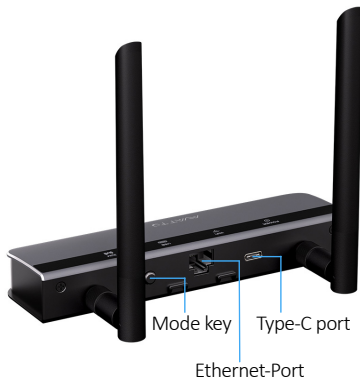
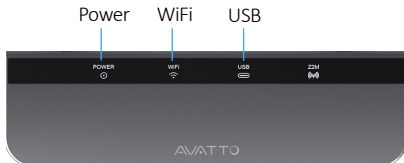


Function



This Zigbee 3.0 PoE gateway is compatible with the open-source smart home platform Home Assistant and supports the integration of Zigbee devices in your home into the Home Assistant system for unified management. Users simply need to install the Home Assistant app on their mobile phone to remotely control all connected smart devices.

Product Description



Press the "**Mode key**" to select WiFi, Ethernet, or USB connection. When you select WiFi or Ethernet mode, the WiFi icon will appear on the screen. When you select USB mode, the USB icon will appear on the screen.

The device supports power supply via PoE or Type-C.

You must ensure that your Ethernet cable is PoE-enabled in order to select Ethernet as the power supply method.

Operation

The AVATTO PoE Dongle is compatible with Zigbee2MQTT and ZHA with in Home Assistant and supports three connection options (WiFi, Ethernet, USB). The configuration process differs for each of these options.

Connection method	Applications
WiFi	Zigbee2MQTT or ZHA
Ethernet	Zigbee2MQTT or ZHA
USB	Zigbee2MQTT or ZHA

WiFi Connection (for Zigbee2MQTT)

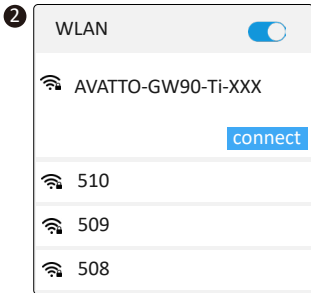
1



Power the device using either the Type-C cable or the Ethernet cable, this device supports Power over Ethernet (PoE).

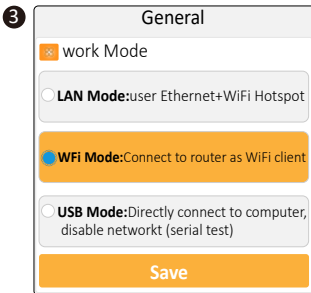
You must ensure that your Ethernet cable is PoE-enabled in order to select Ethernet as the power supply method.

Press the **Mode** key to select WiFi mode.



The Dongle enables a Wi-Fi hotspot by default. In the network list, find the Wi-Fi network named **AVATTO-GW90-Ti-XXX** and tap to connect. No password is required.

Connect to **AVATTO-GW90-Ti-XXX**, and the web console will open automatically. If not, go to <http://avatto-gw90-Ti.local/>



Select the "**General**" page.
Select WiFi mode, then save the settings.

When you select WiFi mode, the device screen will display the "WiFi" icon, indicating that the device is currently in WLAN mode.



Select the "**WiFi**" page.

Click the "Scan Wi-Fi" button to search for available Wi-Fi networks.

5

SSID	Security	Channel	RSSI
510	WPA2	6	-49
509	WPA2	4	-50
580	WPA2	3	-40

SSID

Password

Save

Select an available Wi-Fi network from the list, enter the password, and then click Save.

Once you have configured the Wi-Fi network, all your client devices (computers, phones, iPads) must connect to the same Wi-Fi network in order to access the Dongle web console.

6



Config Generator

☒ Zigbee2MQTT

☐ ZHA

☐ USB

#Serial settings
serial:
#Location of AVATTO-GW90-XK
Port:tcp://avatto-gw90-Ti.local:6638
adapter: zstack
baudrate: 115200
#Disable Zigbee (Y or W) led?
disable_led:false
#Set output power to max 20
advanced:
transmit_power:20

Select the "**ZHA/Z2M**" page.

Select the "Zigbee2MQTT" button,
then copy the following parameters:

tcp://avatto-gw90-Ti.local:6638
zstack
115200

7



Welcome home!

Username



Password



☐ Password

[Forgot password?](#)

LOG IN

Englisch

Help

Log in to your Home Assistant system
and install the Zigbee2MQTT add-on.

8

← Zigbee2MQTT

mqtt

serial

port
tcp://avatto-gw90-Ti.local:6638

adapter
zstack

baudrate
115200

rechts ☒

Open the Zigbee2MQTT add-on, go to Configuration, find the "serial" option, and then fill in the copied parameters.

tcp://avatto-gw90-Ti.local:6638

zstack

115200

WiFi Connection (for ZHA)

1

Settings

Devices & Services
Integrations, devices, entities, and helpers

+ Add integration

Log in to your Home Assistant system . then go to Settings > Devices & services > + Add integration.

2

×

Select brand

🔍 ZHA

 Zigbee Home Automation

Enter "ZHA" in the search box, then select "Zigbee Home Automation".

3

×

Select a serial port

Select the serial port for your Zigbee adapter

Serial device path

▼

Submit

Click the input box or the "▼" button.

4

🔍 Search

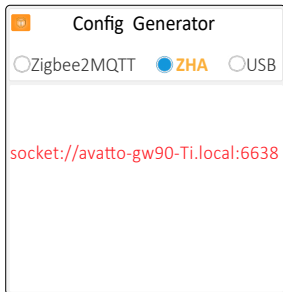
Enter "ZHA" in the search box, then select "Zigbee Home Automation".

 ttyS2
/dev/ttyS2

 Enter manually

Select "Enter manually" from the drop-down menu.

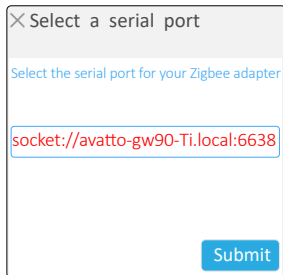
5



Open the Dongle console and select the **ZHA/Z2M** page. Click the "ZHA" button and copy the parameters.

`socket://avatto-gw90-Ti.local:6638`

6



Enter the copied parameters in the input box, then click the "Submit" button.

Ethernet connection (for Zigbee2MQTT)

1



Plug the Ethernet cable into the device.

If your Ethernet cable supports PoE, no additional power supply is needed for the device; otherwise, power it using the Type-C cable.

Press the **Mode** key to select WiFi mode.

2

General

 work Mode

☒ **LAN Mode:** user Ethernet + WiFi Hotspot

☐ **WiFi Mode:** Connect to router as WiFi client

☐ **USB Mode:** Directly connect to computer, disable network (serial test)

Save

Enter the following URL in your browser:

<http://avatto-gw90-Ti.local/>

Then select the "**General**" page.

Select "LAN Mode" and save. The device screen will then display the WiFi symbol.

Note: Your computer and the PoE Dongle must be on the same LAN.

3



Config Generator

☒ Zigbee2MQTT ☐ ZHA ☐ USB

#Serial settings
serial:
#Location of AVATTO-GW90-XK
Port:tcp://avatto-gw90-Ti.local:6638
adapter: zstack
baudrate: 115200
#Disable Zigbee (Y or W) led?
disable_led:false
#Set output power to max 20
advanced:
transmit_power:20

Select the "**ZHA/Z2M**" page.

Select the "Zigbee2MQTT" button,
then copy the following parameters:

tcp://avatto-gw90-Ti.local:6638
zstack
115200

4



Welcome home!

Username



Password



☐ Password [Forgot password?](#)

LOG IN

Englisch [Help](#)

Log in to your Home Assistant system
and install the Zigbee2MQTT add-on.

5

← Zigbee2MQTT

mqtt

serial

port
tcp://avatto-gw90-Ti.local:6638

adapter
zstack

baudrate
115200

rechts ☒

Open the Zigbee2MQTT add-on, go to Configuration, find the "serial" option, and then fill in the copied parameters.

tcp://avatto-gw90-Ti.local:6638

zstack

115200

Ethernet connection (for ZHA)

1

Settings

Devices & Services
Integrations, devices, entities, and helpers

+ Add integration

Log in to your Home Assistant system. then go to Settings > Devices & services > + Add integration.

2

✕ Select brand

🔍 ZHA

 Zigbee Home Automation

Enter "ZHA" in the search box, then select "Zigbee Home Automation".

3

✕ Select a serial port

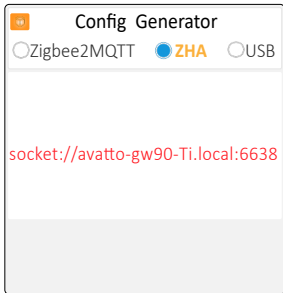
Select the serial port for your Zigbee adapter

Serial device path ▼

Submit

Click the input box or the "▼" button. Then select "Enter manually" from the drop-down menu.

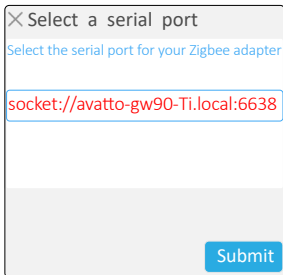
4



Open the Dongle console and select the **ZHA/Z2M** page. Click the "ZHA" button and copy the parameters.

`socket://avatto-gw90-Ti.local:6638`

5



Enter the copied parameters in the input box, then click the "Submit" button.

USB connection (for Zigbee2MQTT)

1

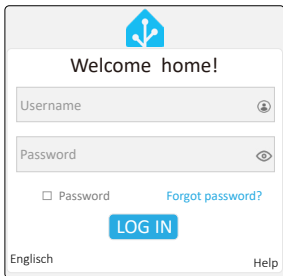


Use a Type-C cable to connect the Dongle to the Home Assistant Box's USB port.

The Dongle's display will show "USB". If not, press the **Mode** key on the Dongle to switch to USB mode.

Ensure the Home Assistant Box is powered on and connected to an Ethernet cable.

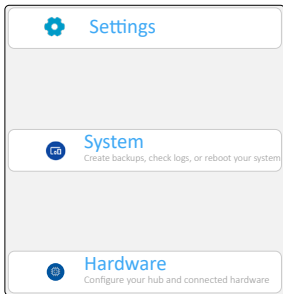
2



The login screen features a blue Home Assistant logo at the top. Below it is the text "Welcome home!". There are two input fields: "Username" with a user icon and "Password" with an eye icon. Below the password field is a checkbox labeled "Password" and a blue link "Forgot password?". A blue "LOG IN" button is centered below these. At the bottom left is the text "Englisch" and at the bottom right is "Help".

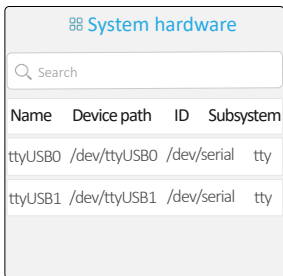
Log in to your Home Assistant system and install the Zigbee2MQTT add-on.

3



Log in to your Home Assistant system.
then go to Settings > System> Hardware

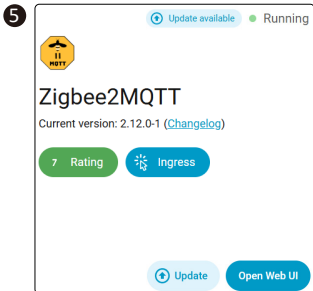
4



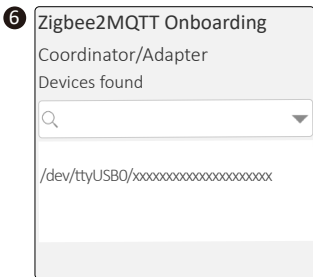
Switch to the **System hardware** page.
If you can find a device named **ttyUSB0** or **ttyUSB1** in the list, it indicates that the Dongle is successfully connected to the Home Assistant Box.

Note:

A Home Assistant Box can accommodate two Dongles simultaneously, and their device names will appear as ttyUSB0 or ttyUSB1.



Start Zigbee2MQTT, then click the "Open Web UI" button.



Click the input box, then select the successfully connected Dongle from the drop-down list.

7

MQTT	Serial	Availability
adapter		
zstack		
baudrate		
115200		
port		
/dev/ttyUSB0		
Submit		

Select the **Serial** parameter and configure it as follows.

adapter > **zstack**

baudrate > **115200**

port > **/dev/ttyUSB0**

Click the Submit button.

8

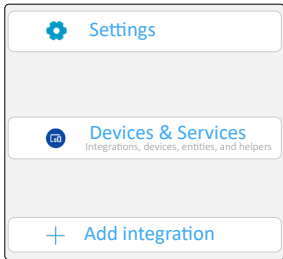
Zigbee2MQTT Onboarding

Settings saved successfully.
Zigbee2MQTT is now starting...
Redirecting in 26s...<http://localhost:8099/>

Configuration successful.

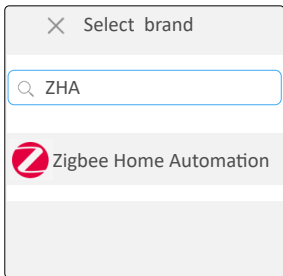
USB connection (for ZHA)

1



Log in to your Home Assistant system, then go to Settings > Devices & services > + Add integration.

2



Enter "ZHA" in the search box, then select "Zigbee Home Automation".

3

✕

Select a serial port

Select the serial port for your Zigbee adapter

Serial device path



 /dev/ttyUSB0/xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

 Enter manually

Submit

Click the input box, then select the successfully connected Dongle from the dropdown menu.

```
/dev/ttyUSB0/xxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

Click the Submit button.

Failed to configure the Dongle in USB mode?

- 1: The included Type-C cable not only supplies power to the device, but also supports data transfer.
- 2: When the Dongle is connected to the Home Assistant Box via the Type-C cable, the power indicator on the device screen should light up. If it does not, the Type-C cable may be damaged.
- 3: Make sure the Dongle is switched to USB mode.
- 4: Check the System hardware page for a device named `ttyUSB0` or `ttyUSB1`. You can also try unplugging and re-plugging the Type-C cable several times to identify the correct device.

ESP32 Update

1



Plug the Ethernet cable into the device and connect it to power.

Press the **Mode** key to select WiFi mode.

Enter the following URL in your browser:
<http://avatto-gw90-Ti.local/>

Note: Your computer and the PoE Dongle must be on the same LAN.

2

ESP32 Update

ESP32 file update

Install latest from Github

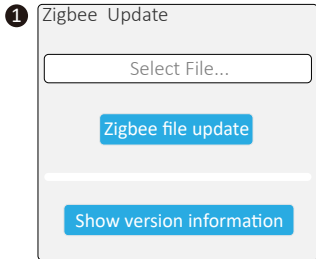
Show version information

Select Tools > Firmware Update

Option 1: Click the "Install latest from Github" button. After the download is complete, click the "ESP32 file update" button again to update.

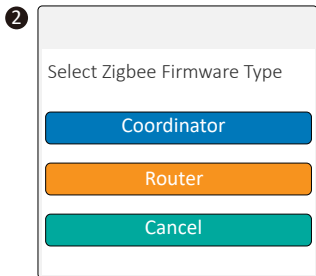
Option 2: Download the file from Github, click the input box to upload it, then click "ESP32 file update".

Zigbee Update



Select Tools > Firmware Update

Click the "Show version information" button.



Select the type of firmware to be flashed.

When the file is downloaded, click the "Zigbee file update" button to update.

Factory Reset

Prerequisite

This method requires the dongle to be running the latest ESP32 firmware. Update the firmware first if your device is on an older version.

A factory reset will erase all user configurations, including Wi-Fi credentials, pairing information, and the admin password.



1. Make sure the device is unplugged. Press and hold the Mode button.



2. While holding the Mode button, connect the USB-C cable. Once the LED flashes rapidly, release the button to complete the reset.

Note: If the LED doesn't flash rapidly, check the firmware and try again. After reset, the device enters pairing mode and can be reconfigured.

Note:

1. This device defaults to Zigbee Coordinator mode from the factory.
2. Before flashing the device to Router mode, you must first upgrade the ESP32 firmware. Failure to do so will prevent the flashing process from completing successfully.
3. When the device is switched to Router mode, it only acts as a signal repeater and can no longer add sub-devices.
4. When operating in WiFi or Ethernet mode, confirm that the WiFi icon is shown on the device display. When connected to the Home Assistant Box via USB, confirm that the USB icon is shown.
5. When you select WiFi or Ethernet mode, if you want to access the device's web console, your client devices (computers, phones, iPads) must be on the same local network as the PoE Dongle.

How to Get Help



Scan the QR code

Learn about the detailed user manual and help

If you wish to exchange the product or have any problems during use, please reach out to me at the email address above. I will assist you in a timely manner.



Website: www.avattosmart.com



Email: elvis.miuc@outlook.com
elvis.miuc@hotmail.com