



ZBDongle-E

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## Product User Guide

For Advanced Users

# Zigbee 3.0 USB Dongle Plus



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# 1. Product Information

## 1.1 Overview

<b>Product Name</b>	SONOFF Zigbee 3.0 USB Dongle Plus V2
<b>Product Model</b>	ZBDongle-E

## 1.2 Introduction

**SONOFF Zigbee 3.0 USB Dongle Plus V2** is a universal Zigbee USB coordinator, model “**ZBDongle-E**”. It can be used as a Zigbee gateway in Home Assistant, openHAB, Zigbee2MQTT, or other open-source platforms to control all your Zigbee devices locally.

Additionally, it supports easy firmware flashing using the official Dongle Quick Flasher, allowing it to function as a Zigbee router for network extension, a Thread coordinator with OpenThread RCP firmware, or even a MultiPAN coordinator for multi-protocol support.

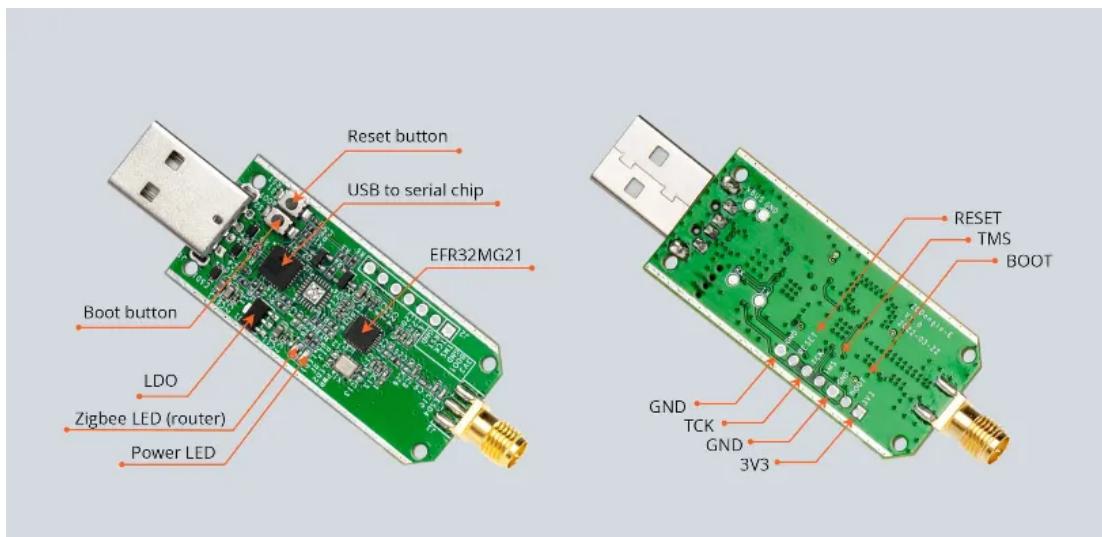
## 1.3 Packing List

- ZBDongle-E
- Gain antenna \* 1
- Quick guide \* 1
- Packaging box \* 1



## 1.4 Hardware Specification

Name	Description
Zigbee SoC	EFR32MG21 ARM® Cortex®-M33
USB-Serial Chip	CP2102(N)
Input	DC 5.0 V
Stand-by power consumption	60 mW
Signal range	135 m in free line of sight
Signal Strength	Max 20 dB + antenna gain 2 dB
RF Frequency	2.4 GHz
RF Standard	IEEE 820.15.4 / Zigbee 3.0
Working Temperature	-10 °C to 40 °C
Working Humidity	5%-95%RH
Supported OS	Windows, Ubuntu, Raspberry Pi OS / Raspbian, Docker
Dimensions	75 mm × 25.5 mm × 13.5 mm



## 1.5 Compatibility

### 1.5.1 Compatible Open-Source Platforms

Open-Source Platform	Supported
Home Assistant	✓
Zigbee2MQTT	✓
OpenHab	✓
ioBroker	✓
homeseer	✓
Domoticz	✓
Jeemom	✓

## Work With Most Popular Smart Home Systems

Works with popular home automation systems such as Home Assistant, ioBroker, Zigbee2MQTT, openHAB, Domoticz, Jeedom, etc



## 1.5.2 Compatible Devices

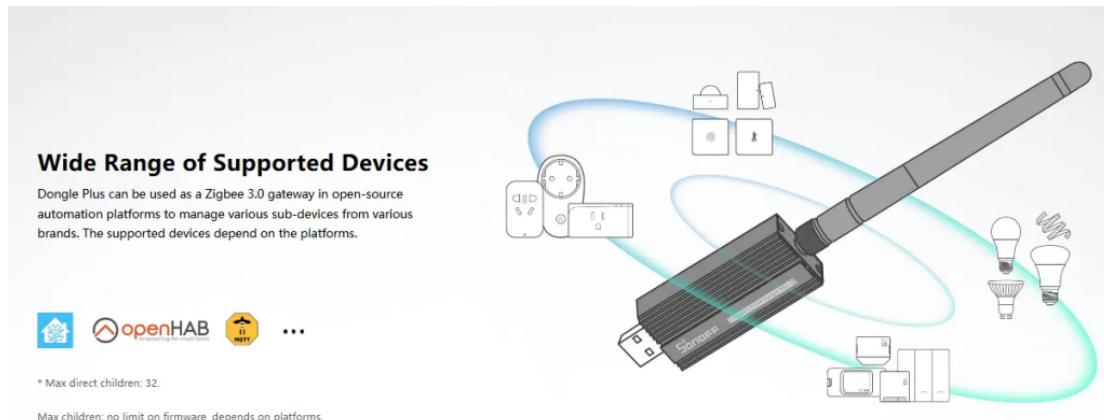
In theory, all Zigbee 3.0 devices are supported, including various lights, switches, and sensors from brands such as Philips Hue, IKEA Tradfri, Xiaomi Aqara, Ledvance Smart, Silvercrest, Schneider Electric, Nous, and SONOFF.

Actual device compatibility depends on the supported device list of each platform.

- 1、ZHA: <https://www.home-assistant.io/integrations/zha>
- 2、Zigbee2MQTT: <https://www.zigbee2mqtt.io/supported-devices/>
- 3、ioBroker: <https://github.com/Jey-Cee/ioBroker.deconz>
- 4、Domoticz: <https://github.com/Smanar/Domoticz-deCONZ>
- 5、Openhab: <https://www.openhab.org/addons/bindings/deconz/>
- 6、Jeedom:  
<https://compatibility.jeedom.com/index.php?v=d&p=home&protocol=Zigbee>

For more information on supported devices, please refer to:

<https://zigbee.blakadder.com/>



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## 2. Getting Started



### 2.1 Overview

This article serves as a quick-start guide for the SONOFF Dongle, covering topics such as connecting to operating systems, integrating with open-source platforms, and firmware updates.

### 2.2 Step 1: Connecting to the Operating System

Operating System	Plug & Play	Guide Link
Windows	No. Driver installation required	<a href="#">ZBDongle-E</a> , <a href="#">ZBDongle-P</a> , <a href="#">Dongle-LMG21</a> , <a href="#">Dongle-PMG24</a>
Linux/Ubuntu	Yes	/
Raspberry Pi OS	Yes	/
Mac OS	No. Driver installation required	<a href="#">ZBDongle-E</a> , <a href="#">ZBDongle-P</a> , <a href="#">Dongle-LMG21</a> , <a href="#">Dongle-PMG24</a>
Virtual Machine	It depends on the host where the virtual machine is deployed	<a href="#">ZBDongle-E</a> , <a href="#">ZBDongle-P</a> , , <a href="#">Dongle-LMG21</a> , <a href="#">Dongle-PMG24</a>

Please connect the device to the USB port of the host, and install the appropriate driver according to the host operating system.

**Note:** This tutorial is compatible with the SONOFF ZBDongle-E

## 2.2.1 Connecting to Windows

### 2.1.1.1 Step 1: Install Driver

- Install the CP210x Driver: [CP210x\\_VCP\\_Windows](#)
- Or you can download and install the driver via the official Silicon Labs website: [Silicon Labs CP210x Driver Download](#)

#### Download and Install VCP Drivers

Downloads for Windows, Macintosh, Linux and Android below.

\*Note: The Linux 3.x.x and 4.x.x version of the driver is maintained in the current Linux 3.x.x and 4.x.x tree at [www.kernel.org](#).

#### Software Downloads

The screenshot shows a software download page with a list of drivers. The 'CP210x VCP Windows' driver is highlighted with a red box. The table below provides details for each driver:

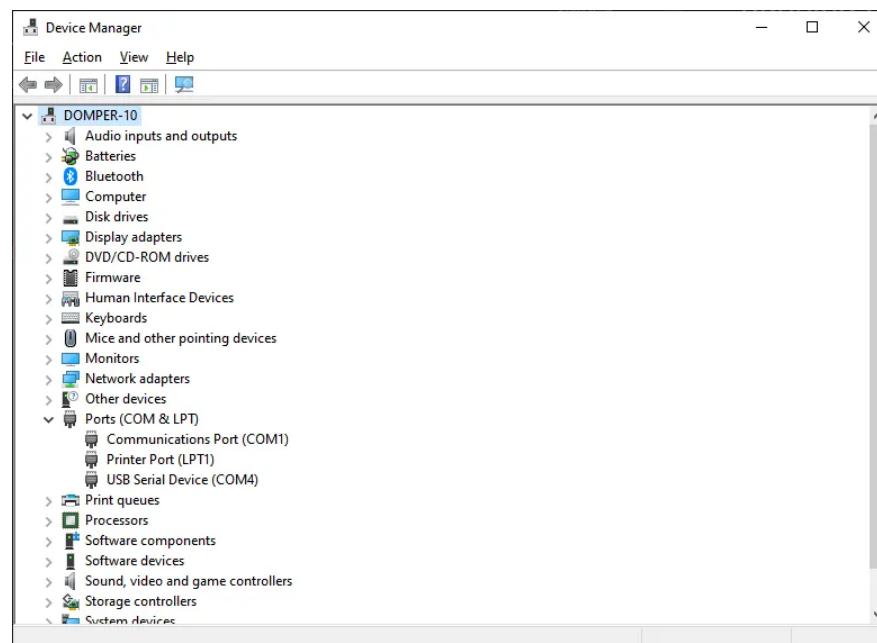
Driver	Version	Last Updated
CP210x Universal Windows Driver	v11.4.0	12/18/2024
CP210x VCP Mac OSX Driver	v6.0.2	10/27/2021
CP210x VCP Windows	v6.7	9/4/2020
CP210x Windows Drivers	v6.7.6	9/4/2020
CP210x Windows Drivers with Serial Enumerator	v6.7.6	9/4/2020

Below the table, there are links for 'Legacy OS Software Versions' and 'Serial Enumeration Driver'.

Note: Products purchased before 2024 use the CH9102 serial chip. Normally, the driver is pre-installed in the operating system. If the device is not recognized, please download and install the driver manually: [CH343SER](#)

### 2.1.1.2 Step 2: Confirm that the device is recognised

After the driver is successfully installed, open Device Manager and expand Ports (COM & LPT). The corresponding USB device will be recognized.



As shown above, the serial port for the device is: COM4

## 2.2.2 Connecting to Linux

Most recent versions of Ubuntu or other Linux distributions already include the CP210x driver by default, so no additional installation is required.

After connecting the ZBDongle device, you can check if it was recognized by entering the following command in the terminal:

Plain Text

```
$ sudo dmesg
...
[ 534.580638] usb 3-8: new full-speed USB device number 2 using xhci_hcd
[ 534.708589] usb 3-8: New USB device found, idVendor=10c4, idProduct=ea60,
bcdDevice= 1.00
[ 534.708604] usb 3-8: New USB device strings: Mfr=1, Product=2,
SerialNumber=3
[ 534.708611] usb 3-8: Product: Sonoff Zigbee 3.0 USB Dongle Plus V2
[ 534.708616] usb 3-8: Manufacturer: Itead
[ 534.708620] usb 3-8: SerialNumber: 76536147c914ef11950378b8bf9df066
[ 534.736381] usbcore: registered new interface driver usbserial_generic
[ 534.736392] usbserial: USB Serial support registered for generic
[ 534.739907] usbcore: registered new interface driver cp210x
[ 534.739925] usbserial: USB Serial support registered for cp210x
[ 534.739948] cp210x 3-8:1.0: cp210x converter detected
[ 534.741643] usb 3-8: cp210x converter now attached to ttyUSB0
```

### Checking the Serial Port Path

To obtain the serial port path of the connected device, use the following command:

Plain Text

```
ls -l /dev/serial/by-id
```

Example output:

Plain Text

```
coolkit@coolkit-All-Series:~$ ls -l /dev/serial/by-id
total 0
lrwxrwxrwx 1 root root 13 3月 31 18:09 usb-
Itead_Sonoff_Zigbee_3.0_USB_Dongle_Plus_V2_76536147c914ef11950378b8bf
9df066-if00-port0 -> ../../ttyUSB0
```

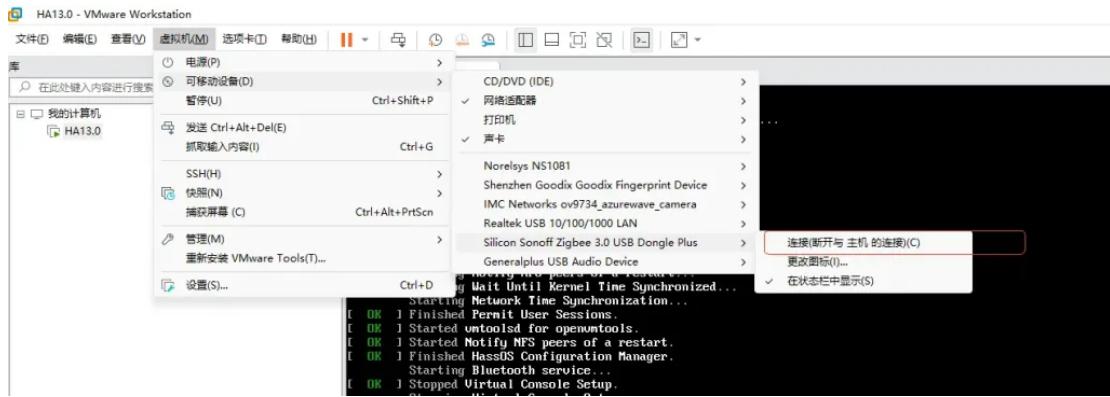
The corresponding serial port path is:

Plain Text

```
/dev/ttyUSB0
```

## 2.2.3 Connecting to Virtual Machine

If Home Assistant is running on a virtual machine, in addition to installing the appropriate driver for the operating system, make sure to connect the device to the virtual machine. VMware is used as an example here.



## 2.2.4 Connecting to macOS

### 2.2.4.1 Step 1: Install Driver

Install the CP20x driver: [Mac OSX VCP Driver](#)

or download from: [Silicon Labs CP210x Driver Download](#)

OVERVIEW DOWNLOADS TECH DOCS COMMUNITY & SUPPORT

### Download and Install VCP Drivers

Downloads for Windows, Macintosh, Linux and Android below.

\*Note: The Linux 3.x.x and 4.x.x version of the driver is maintained in the current Linux 3.x.x and 4.x.x tree at [www.kernel.org](http://www.kernel.org).

### Software Downloads

Software (11)

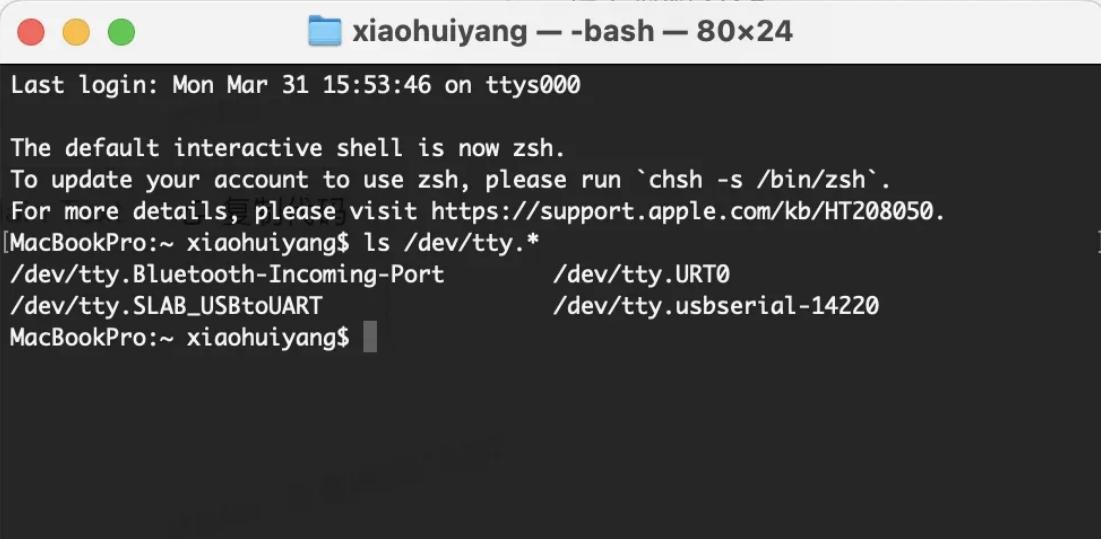
Software	Version	Last Updated
CP210x Universal Windows Driver	v11.4.0	12/18/2024
CP210x VCP Mac OSX Driver	v6.0.2	10/27/2021
CP210x VCP Windows	v6.7	9/4/2020
CP210x Windows Drivers	v6.7.6	9/4/2020
CP210x Windows Drivers with Serial Enumerator	v6.7.6	9/4/2020
Show 6 more Software		

### 2.2.4.2 Step 2: Confirm that the device is recognised

After successful installation, run the following command in Terminal:

```
Plain Text  
ls /dev/tty.*
```

If recognized, the information will be returned after Enter:



```
Last login: Mon Mar 31 15:53:46 on ttys000
The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
[MacBookPro:~ xiaohuiyang$ ls /dev/tty.*
/dev/tty.Bluetooth-Incoming-Port      /dev/tty.URT0
/dev/tty.SLAB_USBtoUART                /dev/tty.usbserial-14220
MacBookPro:~ xiaohuiyang$
```

The serial port is:

```
Plain Text
/dev/tty.usbserial-14220
```

## 2.2.5 Connecting to Raspberry Pi OS

Most Raspberry Pi OS typically includes the CP210x driver by default. No installation is required.

After connecting the ZBDongle device, you can check if it was recognized by entering the following command in the terminal:

```
Plain Text
$ sudo dmesg
...
[ 534.580638] usb 3-8: new full-speed USB device number 2 using xhci_hcd
[ 534.708589] usb 3-8: New USB device found, idVendor=10c4, idProduct=ea60,
bcdDevice= 1.00
[ 534.708604] usb 3-8: New USB device strings: Mfr=1, Product=2,
SerialNumber=3
[ 534.708611] usb 3-8: Product: Sonoff Zigbee 3.0 USB Dongle Plus V2
[ 534.708616] usb 3-8: Manufacturer: Itead
[ 534.708620] usb 3-8: SerialNumber: 76536147c914ef11950378b8bf9df066
[ 534.736381] usbcore: registered new interface driver usbserial_generic
[ 534.736392] usbserial: USB Serial support registered for generic
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[ 534.739925] usbserial: USB Serial support registered for cp210x
[ 534.739948] cp210x 3-8:1.0: cp210x converter detected
```

```
[ 534.741643] usb 3-8: cp210x converter now attached to ttyUSB0
```

### Checking the Serial Port Path

To obtain the serial port path of the connected device, use the following command:

```
Plain Text  
ls -l /dev/serial/by-id
```

Example output:

```
Plain Text  
coolkit@coolkit-All-Series:~$ ls -l /dev/serial/by-id  
total 0  
lrwxrwxrwx 1 root root 13 3月 31 18:09 usb-  
Itead_Sonoff_Zigbee_3.0_USB_Dongle_Plus_V2_76536147c914ef11950378b8bf  
9df066-if00-port0 -> ../../ttyUSB0
```

The corresponding serial port path is:

```
Plain Text  
/dev/ttyUSB0
```

## 2.3 Step 2: Connecting to Open-source Platforms

Open-source Platforms	Guide Link
Home Assistant	<a href="#">ZBDongle-E</a> , <a href="#">ZBDongle-P</a> , <a href="#">Dongle-LMG21</a> , <a href="#">Dongle-PMG24</a>
Zigbee2MQTT	<a href="#">ZBDongle-E</a> , <a href="#">ZBDongle-P</a> , <a href="#">Dongle-LMG21</a> , <a href="#">Dongle-PMG24</a>
OpenHab	<a href="#">ZBDongle-E</a> , <a href="#">Dongle-LMG21</a> , <a href="#">Dongle-PMG24</a>
ioBroker	<a href="#">ZBDongle-E</a> , <a href="#">ZBDongle-P</a> , <a href="#">Dongle-LMG21</a> , <a href="#">Dongle-PMG24</a>
Domoticz	ZBDongle-E, ZBDongle-P, Dongle-PMG24
Jeedom	ZBDongle-E, ZBDongle-P, Dongle-PMG24

## 2.3.1 Connecting to Home Assistant via ZHA

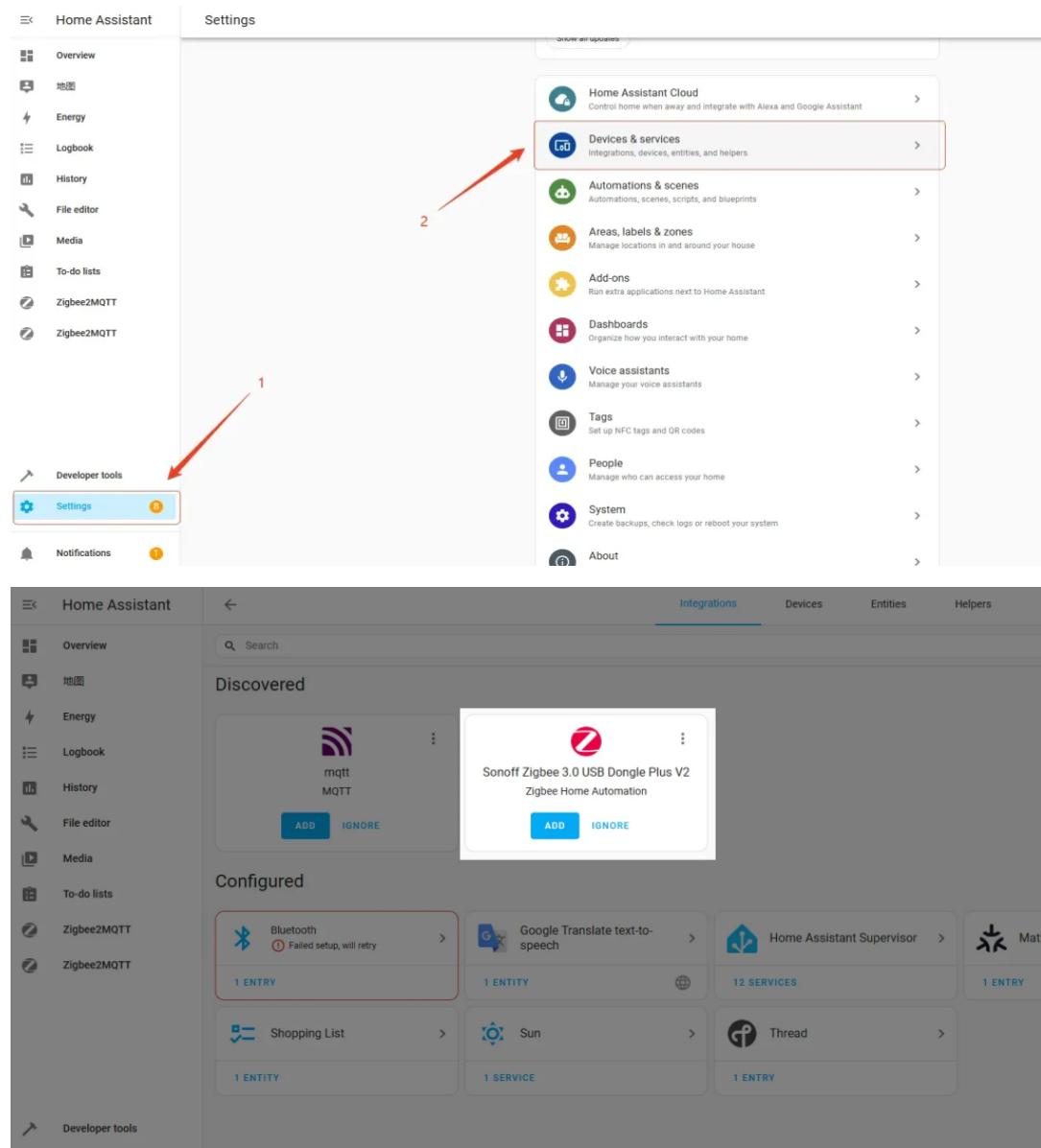
This guide is based on Home Assistant. For more details, please visit: [Home Assistant – ZHA](#)

### 2.3.1.1 Preparation

Before getting started, ensure that Home Assistant is installed and the ZBDongle is connected to the host's USB port. If not yet installed, please follow the [Home Assistant Installation Guide](#).

### 2.3.1.2 Step 1: Add Integration

In most cases, once the device is connected to the **operating system**, it will be automatically discovered by Home Assistant. Go to [Settings > Devices & Services](#), and click “**ADD**” to start the configuration.



## Auto Discovery Name

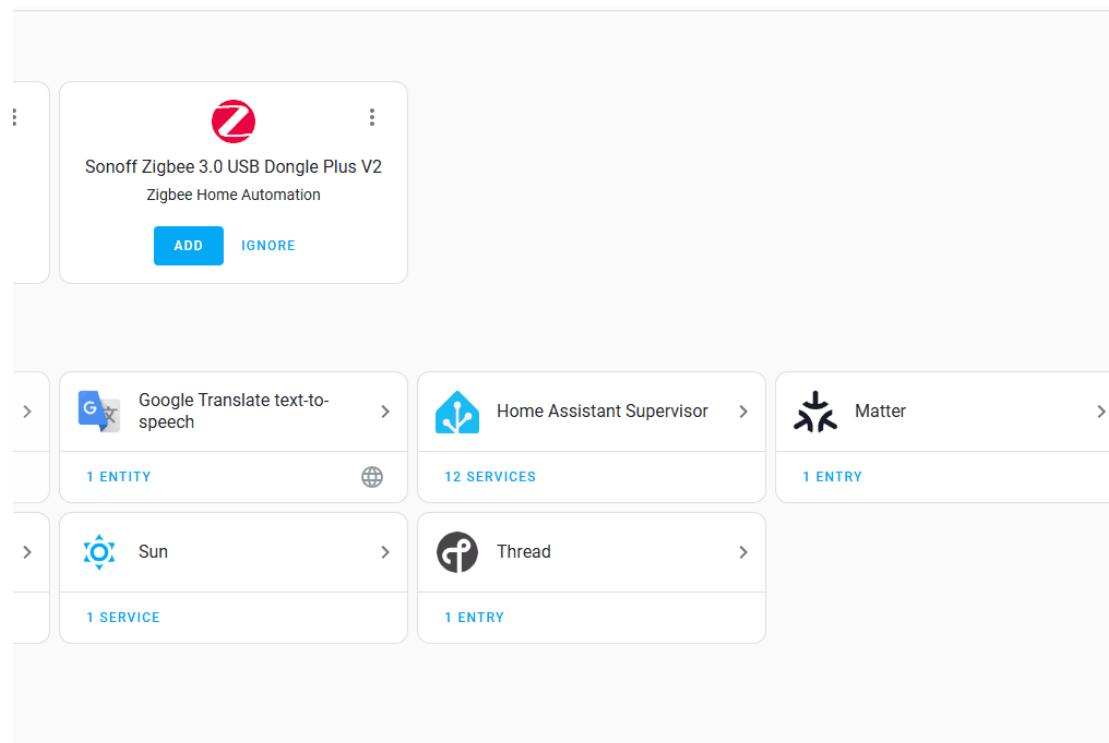
Product	USB Auto Discovery
ZBDongle-E	SONOFF Zigbee 3.0 USB Dongle Plus V2

### 2.3.1.3 Step 2: Configure the ZBDongle

After clicking the “ADD” button, follow the prompts to configure the ZBDongle. You will need to select a network initialization method:

- 1、**Restore from previous network backup**: Used when replacing the Zigbee coordinator. Restores based on the last available network backup.
- 2、**Keep existing network settings**: Used when the Zigbee coordinator remains the same and ZHA integration is re-added. Generally not recommended.
- 3、**Manually upload network backup**: Used when manually migrating network data during HA migration.
- 4、**Erase and create a new network**: Used to create a new Zigbee network by erasing existing network data.

1.



### 2.3.1.4 Step 3: Add a Zigbee Sub-device

Put the Zigbee sub-device into pairing mode. Then go to the **ZHA Integration > Devices** page, click “**Add Device**”, and the integration will begin scanning and automatically adding the Zigbee sub-device.

← Zigbee Home Automation

The screenshot shows the Zigbee Home Automation integration page. On the left, there's a sidebar with the Zigbee logo and several options: "6 devices" (with a gear icon), "72 entities" (with a document icon), "Documentation" (with a book icon), "Known issues" (with a bug icon), and "Enable debug logging" (with a gear icon). The main area is titled "Integration entries" and lists "Sonoff Zigbee 3.0 USB Dongle Plus V2" with "6 devices and 72 entities". It includes a "CONFIGURE" button and a three-dot menu icon. Below this, there's a blue "ADD ENTRY" button.

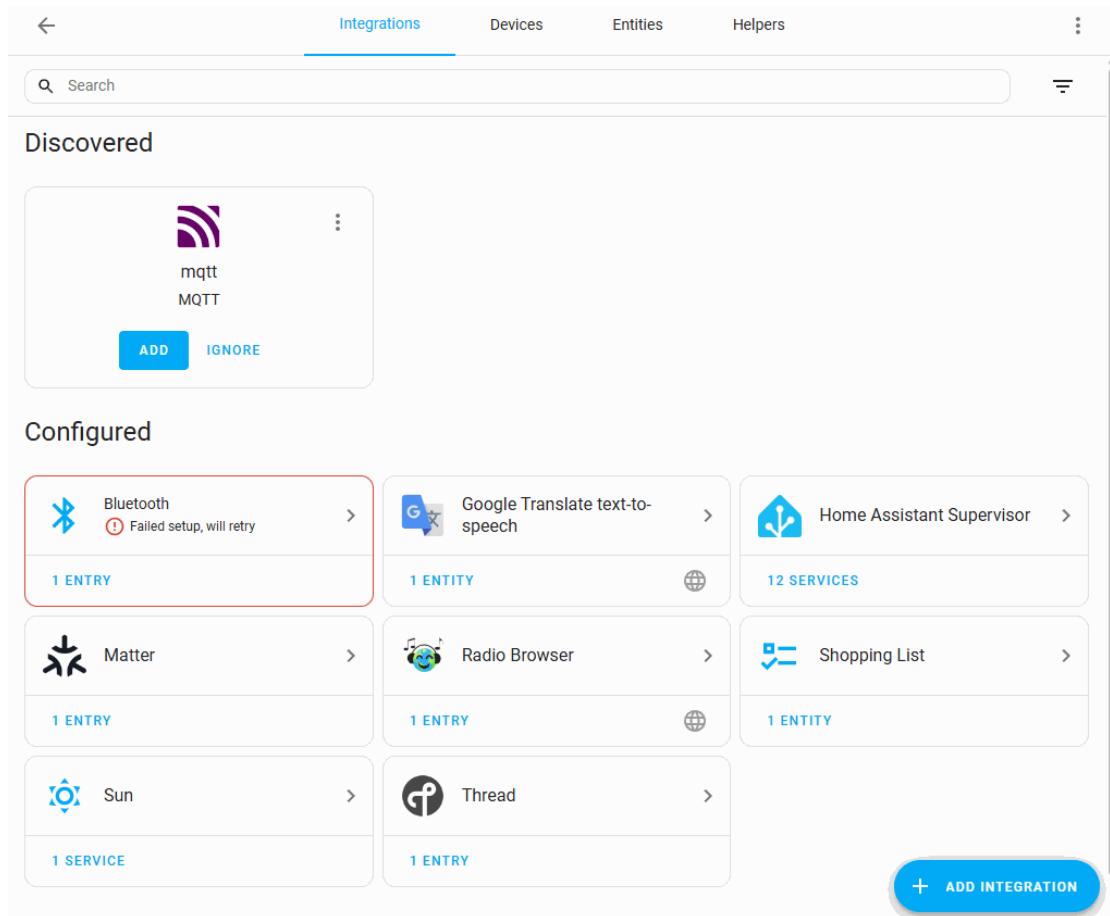
#### Plain Text

**Note:** The name will vary depending on the product added.

### 2.3.1.5 Troubleshooting

If the device is not automatically discovered due to special circumstances, you can manually add the ZHA integration:

**Settings → Devices & Services → Add Integration → Search for ZHA → Manually select device path → Submit**



## 2.3.2 Connecting to Home Assistant via Z2M Add-on

This guide is based on the GitHub project:

<https://github.com/zigbee2mqtt/hassio-zigbee2mqtt#installation>

### 2.3.2.1 Preparation

Before getting started, ensure that Home Assistant is installed and the ZBDongle is connected to the host's USB port. If not yet installed, please follow the [Home Assistant Installation Guide](#).

### 2.3.2.2 Step 1: Install Add-ons

When connecting HA through the Zigbee2MQTT Add-on, you need to install two add-ons:

- 1、**Mosquitto broker (MQTT Broker)**
- 2、**Zigbee2MQTT**

#### 2.3.2.2.1 Install MQTT Broker

Go to [Settings → Add-ons → Add-on store](#) and install the [Mosquitto broker](#) add-on, then start it.



## Mosquitto broker

6.5.0

[Changelog](#)

7 Rating

Auth

Signed

An Open Source MQTT broker.  
Visit the [Mosquitto broker](#) page for more details.

[INSTALL](#)

## Home Assistant Add-on: Mosquitto broker

MQTT broker for Home Assistant.

[aarch64 yes](#) [amd64 yes](#) [armhf yes](#) [armv7 yes](#) [i386 yes](#)

### About

You can use this add-on to install Eclipse Mosquitto, which is an open-source (EPL/EDL licensed) message broker that implements the MQTT protocol. Mosquitto is lightweight and is suitable for use on all devices from low power single board computers to full servers. For more information, please see [mosquitto](#).

### 2.3.2.2 Install Zigbee2MQTT

#### 1、Add Repository

Go back to the Add-on store, click “→ “**Repositories**“, fill in

<https://github.com/zigbee2mqtt/hassio-zigbee2mqtt>

and click “**Add**” → “**Close**” or click the “**Add repository**” button below, click “**Add**” → “**Close**”

[Installation Link](#)

## Add-on Store

The screenshot shows the 'Official add-ons' section of the Home Assistant Add-on Store. On the right side, there is a vertical sidebar with three items: 'Check for updates', 'Repositories', and 'Registries'. The main area displays several add-ons in a grid:

- Assist Microphone**: Use Assist with local microphone.
- CEC Scanner**: Scan for HDMI CEC devices.
- deCONZ**: Control a Zigbee network with ConBee or RaspBee by Dresden.
- DHCP server**: A simple DHCP server.
- Dnsmasq**: A simple DNS server.
- Duck DNS**: Free Dynamic DNS (DynDNS or DDNS) service with Let's Encrypt.
- File editor**: Simple browser-based file editor for Home Assistant.
- Git pull**: Simple git pull to update the local configuration.
- Google Assistant SDK**: A virtual personal assistant developed by Google.
- Let's Encrypt**: Manage certificate from Let's Encrypt.
- MariaDB**
- Matter Server**

## 2、Install Zigbee2MQTT

Return to the [store list](#), find **Zigbee2MQTT**, and proceed with installation.

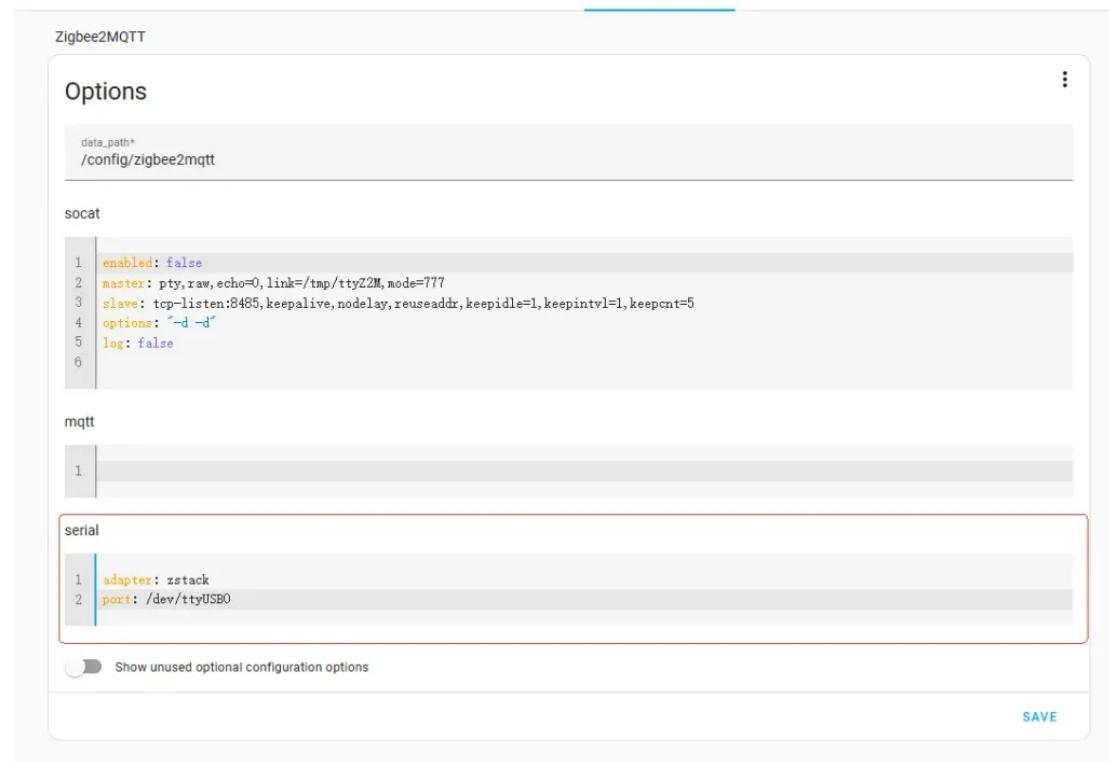
The screenshot shows the 'Home Assistant Add-on: Zigbee2MQTT' section of the Home Assistant Add-on Store. The 'Zigbee2MQTT' add-on is highlighted. Other visible add-ons include:

- VLC**: Turn your device into a Media Player with VLC.
- Whisper**: Speech-to-text with Whisper.
- Z-Wave JS**: Control a Z-Wave network with Home Assistant Z-Wave JS.
- ESPHome Device Builder**: Build your own smart home devices using ESPHome, no code required.
- ESPHome Device Builder (beta)**: Beta version of ESPHome Device Builder.
- ESPHome Device Builder (dev)**: Development version of ESPHome Device Builder.
- Zigbee2MQTT**: Use your ZigBee devices without the vendor's bridge or gateway.
- Zigbee2MQTT Edge**: Development build of the Zigbee2MQTT add-on.
- Zigbee2MQTT Proxy**: Proxy for externally running Zigbee2MQTT.
- AdGuard Home**: Network-wide ads & trackers blocking DNS server.
- Advanced SSH & Web Terminal**: A supercharged SSH & Web Terminal access to your Home Assistant instance.
- AirCast**: AirPlay capabilities for your Chromecast devices.
- AirSonos**: AirPlay capabilities for your Sonos (and UPnP) devices.
- AppDaemon**: Python Apps and Dashboard using AppDaemon 4.x for Home Assistant.
- Bazarr**: Download and manage subtitles for Sonarr and Radarr.

### 2.3.2.3 Step 2: Configure Zigbee2MQTT

Open the **Zigbee2MQTT** add-on → **Configuration** page.

You need to configure the device's adapter type and serial port path under serial.



The following format:

```
Plain Text
adapter: Adapter Type
port: ZBDongle Serial Port Path
```

#### Example Configuration For ZBDongle-E

```
Plain Text
adapter: ember
port: /dev/ttyUSB0
```

The serial port path may vary depending on the host system. On Linux, you can find the serial path by running:

```
Plain Text
ls -l /dev/serial/by-id
```

Example output:

Plain Text

```
coolkit@coolkit-All-Series:~$ ls -l /dev/serial/by-id  
total 0  
lrwxrwxrwx 1 root root 13 3月 31 18:09 usb-  
Itead_Sonoff_Zigbee_3.0_USB_Dongle_Plus_V2_76536147c914ef11950378b8bf  
9df066-if00-port0 -> ../../ttyUSB0
```

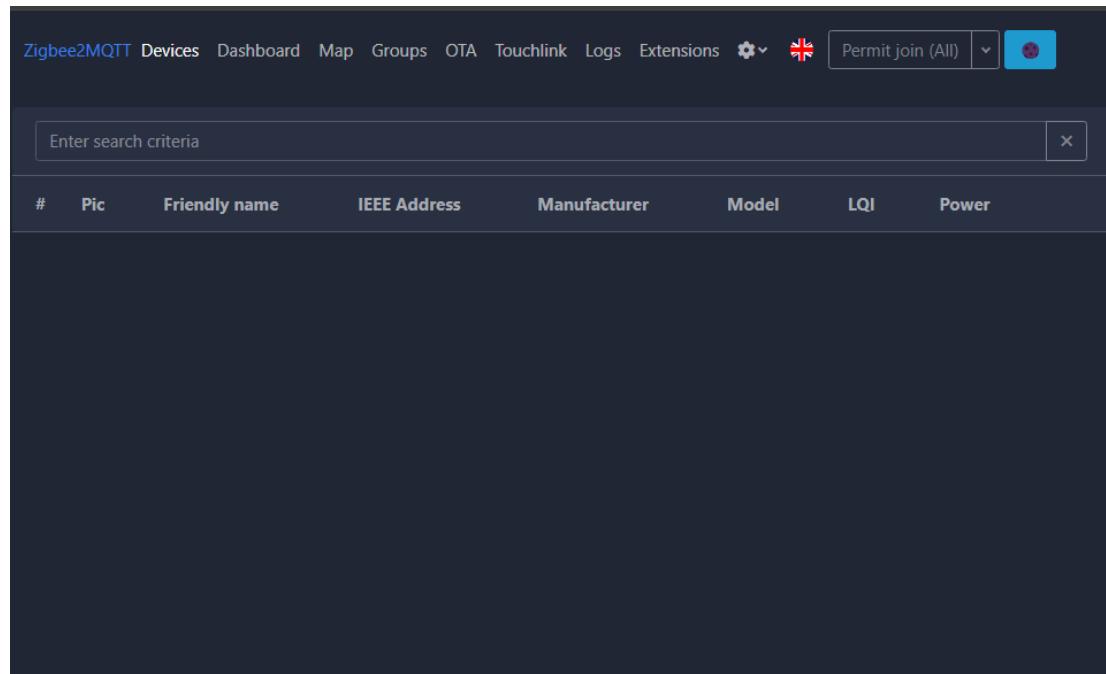
The serial port path in this case is:

Plain Text

```
/dev/ttyUSB0
```

For other operating systems, please refer to the [respective connection instructions](#).

After completing the configuration, start the **Zigbee2MQTT** add-on. Wait for about two minutes, then you can click to enter the **Web UI Console** to add and manage devices.



### 2.3.3 Connecting to Zigbee2MQTT

This guide follows the official Zigbee documentation. For more operations, please visit [Zigbee2MQTT](#).

#### 2.3.3.1 Preparation

Before getting started, ensure that Zigbee2MQTT is installed and that the ZBDongle is connected to the host's USB port.

If Zigbee2MQTT and Mosquitto MQTT Broker have not been installed yet, please refer to the [Zigbee2MQTT Installation Guide](#) and the [Mosquitto Installation Guide](#).

### 2.3.3.2 Step 1: Start Zigbee2MQTT

It is recommended that Zigbee2MQTT be updated to version **2.2.0**, which supports automatic discovery and configuration of ZBDongle-E.

Run the following commands to start Zigbee2MQTT:

Plain Text

```
cd /opt/zigbee2mqtt  
sudo pnpm start
```

If started successfully, you will see output similar to the following, indicating that Zigbee2MQTT has been launched correctly:

Plain Text

```
[2025-04-02 09:44:12] info: z2m: Logging to console, file (filename: log.log)  
[2025-04-02 09:44:12] info: z2m: Starting Zigbee2MQTT version 2.2.0 (commit  
#c5c07e7d)  
[2025-04-02 09:44:12] info: z2m: Starting zigbee-herdsman (3.4.11)  
[2025-04-02 09:44:12] info: zh:adapter:discovery: Matched adapter:  
{ "path": "/dev/ttyUSB0", "manufacturer": "Itead", "serialNumber": "76536147c914ef119  
50378b8bf9df066", "pnpld": "usb-  
Itead_Sonoff_Zigbee_3.0_USB_Dongle_Plus_V2_76536147c914ef11950378b8bf  
9df066-if00-port0", "vendorId": "10c4", "productId": "ea60" } => ember:  
path=/dev/ttyUSB0, score=4  
...  
[2025-04-02 09:44:15] info: z2m: zigbee-herdsman started (restored)  
[2025-04-02 09:44:15] info: z2m: Coordinator firmware version:  
'{"meta":{"build":0,"ezsp":13,"major":7,"minor":4,"patch":4,"revision":"7.4.4  
[GA]","special":0,"type":170},"type":"EmberZNet"}'  
[2025-04-02 09:44:15] info: z2m: 0x00124b00258a5e02  
(0x00124b00258a5e02): S26R2ZB - SONOFF Zigbee smart plug (Router)  
[2025-04-02 09:44:15] info: z2m: Currently 1 devices are joined.  
[2025-04-02 09:44:15] info: z2m: Connecting to MQTT server at mqtt://localhost  
[2025-04-02 09:44:15] info: z2m: Connected to MQTT server  
[2025-04-02 09:44:15] info: z2m: MQTT publish: topic  
'zigbee2mqtt/bridge/state', payload '{"state":"online"}'  
[2025-04-02 09:44:15] info: z2m: Started frontend on port 8081  
[2025-04-02 09:44:15] info: z2m: MQTT publish: topic  
'zigbee2mqtt/0x00124b00258a5e02', payload '{"state":"OFF"}'  
[2025-04-02 09:44:15] info: z2m: Zigbee2MQTT started!
```

## (Optional) Manually Configure Zigbee2MQTT

This section is only required if:

- Your Zigbee2MQTT version is **below 2.2.0**, or
- You encounter errors when starting Zigbee2MQTT.

Normally, running Zigbee2MQTT will automatically detect and configure the dongle without manual intervention.

To manually configure, modify the configuration.yaml file. Example steps on Linux:

Plain Text

```
cp /opt/zigbee2mqtt/data/configuration.example.yaml  
/opt/zigbee2mqtt/data/configuration.yaml  
nano /opt/zigbee2mqtt/data/configuration.yaml
```

The first command backs up the original configuration file. The second command opens configuration.yaml for editing. Modify the following sections:

Plain Text

```
# MQTT settings  
mqtt:  
    base_topic: zigbee2mqtt  
    server: 'mqtt://localhost'  
  
frontend:  
    enabled: true      //Enable frontend  
# adapter settings  
serial:  
    port: /dev/ttyUSB0 //Replace with the serial port path obtained in Step 1  
    adapter: ember  
  
//For the ZBDongle-P, the adapter is zstack.  
//For the ZBDongle-E, the firmware version below 7.4 uses ezsp, while firmware  
version 7.4 and above uses ember.
```

After editing, press “CTRL + O” to **save** and “CTRL + X” to **exit**.

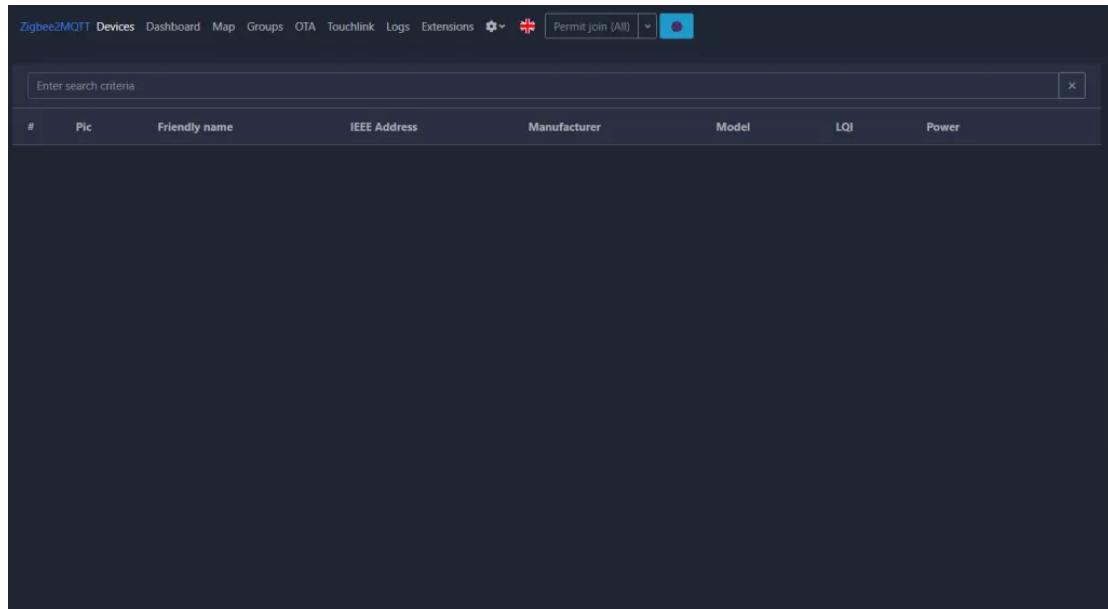
Then, **restart** Zigbee2MQTT:

Plain Text

```
cd /opt/zigbee2mqtt  
sudo pnpm start
```

### 2.3.3.3 Step 2: Access the Frontend Console

You can access the Zigbee2MQTT frontend via:

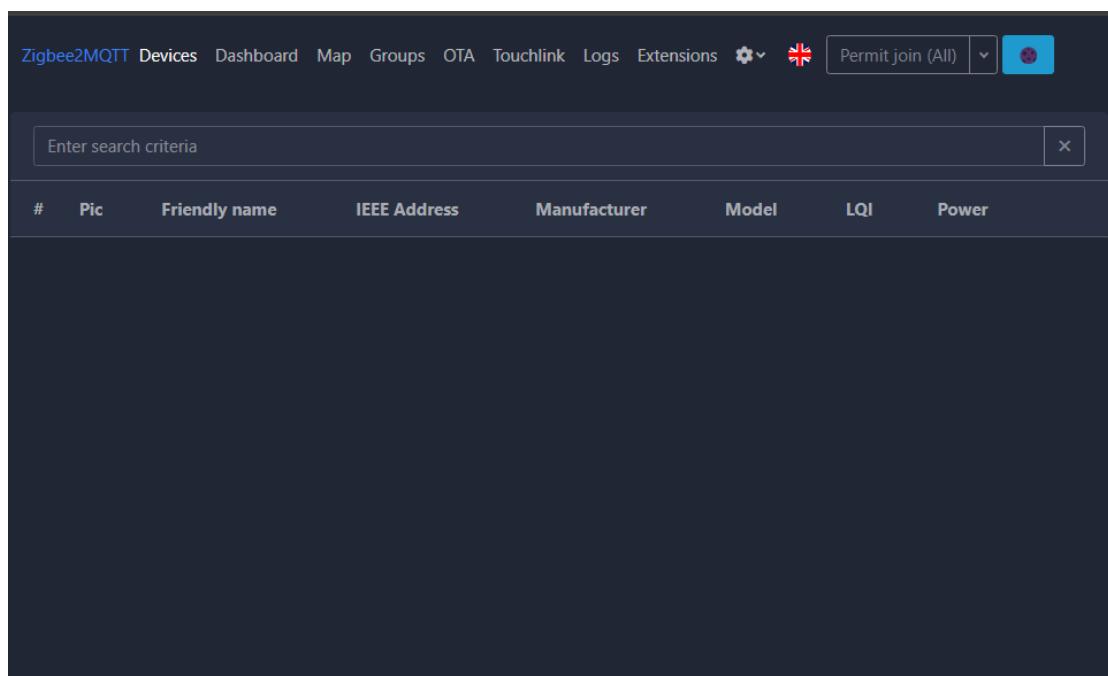


### 2.3.3.4 Step 3: Add a Zigbee Sub-device

Put your Zigbee device into pairing mode, then click “**Permit join (All)**” in the Zigbee2MQTT frontend.

The device will be scanned and added automatically.

The Zigbee2MQTT Supported Devices List: [Zigbee2MQTT Support device](#)



## 2.3.4 Connecting to OpenHab

This guide is based on OpenHab. For more details, please visit [OpenHab – Zigbee Bindings](#).

**Note:** **ZBDongle-P (TI CC2652P Chip)** is currently not supported. For detailed progress, please refer to [GitHub](#).

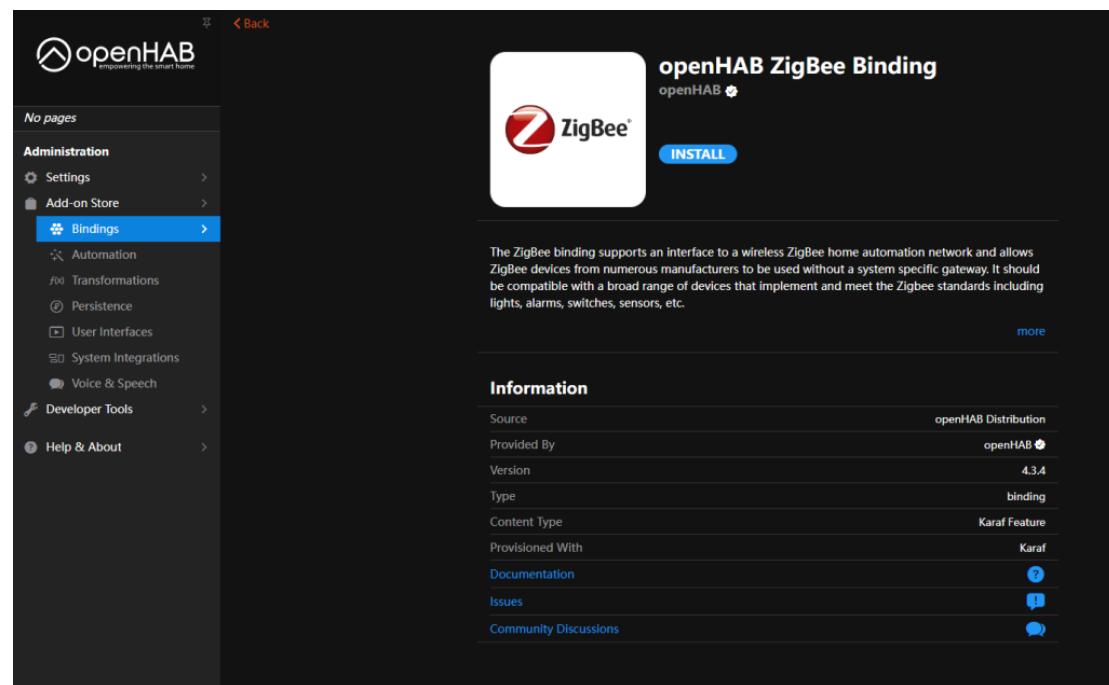
### 2.3.4.1 Preparation

Before getting started, ensure that Zigbee2MQTT is installed and that the ZBDongle is connected to the host's USB port.

If OpenHab have not been installed yet, please refer to the [OpenHab installation guide](#) for setup instructions.

### 2.3.4.2 Step 1: Install Zigbee Binding

Go to the Add-on Store, search for Zigbee, and install the **openHAB ZigBee Binding**.



### 2.3.4.3 Step 2: Add Things

Go to the Things page, click the “Add” icon, and select Ember Coordinator. Then configure the following parameters:

Plain Text

Port: Select the usb-Itead-Sonoff-Zigbee-3.0-USB-Dongle-V2 device

Flow Control: Select None

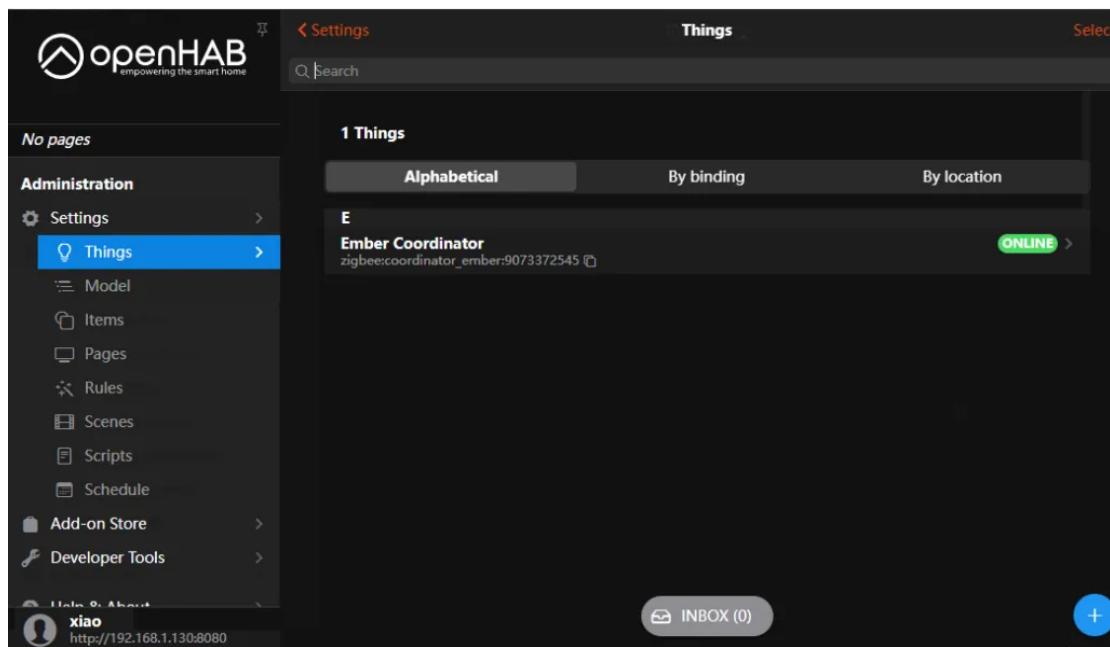
Keep other settings as default. After configuration, click “**Create Things**”. Once the Thing’s status turns green (ONLINE), the setup is complete

## Add Things

The screenshot shows the openHAB Admin interface. On the left, the navigation menu is visible with the 'Bindings' option selected. The main content area is titled 'ZigBee Binding' and contains a brief description of the binding's purpose: "The ZigBee binding supports an interface to a wireless ZigBee home automation network and allows ZigBee devices from numerous manufacturers to be used without a system specific gateway. It should be compatible with a broad range of devices that implement and meet the Zigbee standards including lights, alarms, switches, sensors, etc." Below this is a 'Information' section with details like Source (openHAB Distribution), Provided By (openHAB), Version (4.3.4), and a 'more' link.

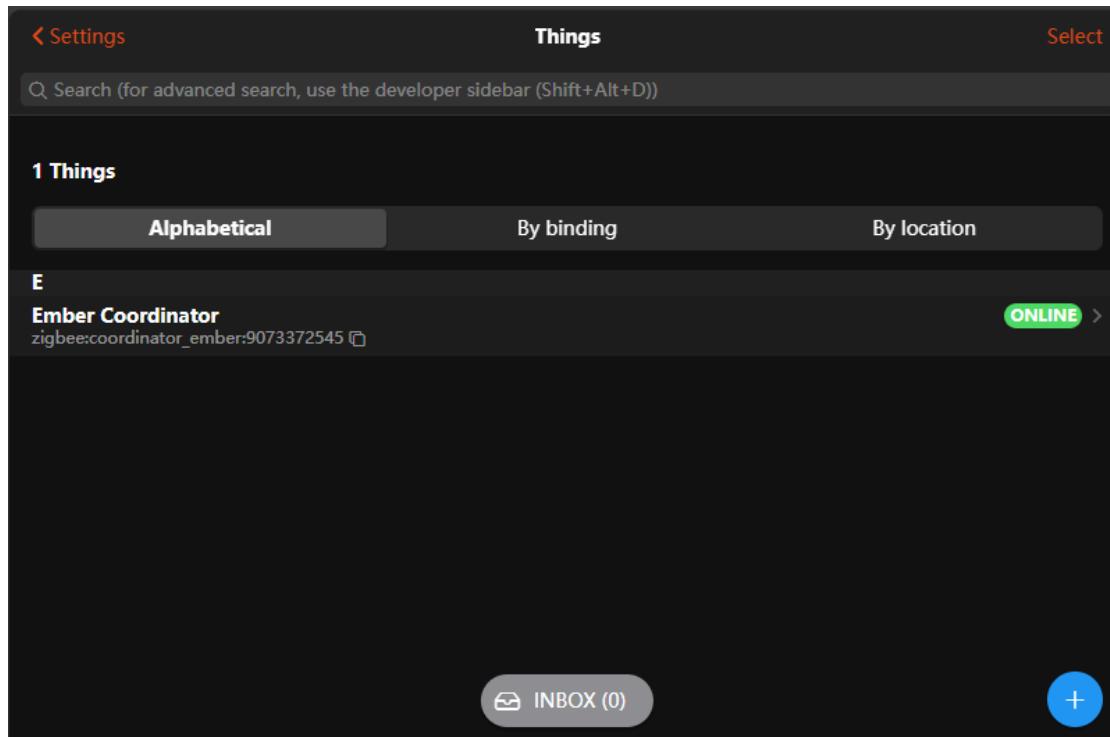
## Configuration

The screenshot shows the openHAB Admin interface. The navigation menu on the left has 'Things' selected. The main content area is titled 'New Ember Coordinator' and shows configuration for a SiLabs Ember based NCP. It includes fields for 'Port' (set to '/dev/serial/by-id/usb-Itead\_Sonoff\_Zigbee\_3.0\_USB\_Dongle\_Plus\_V2\_76536147c914ef11950378b8bf9df066-if0'), 'Flow Control' (set to 'None'), 'Baud Rate' (set to '115200'), and a 'Required Serial Port Flow Control' section which is currently empty. There is also a 'Show advanced' checkbox.



#### 2.3.4.4 Step 3: Add a Zigbee Sub-device

Put your Zigbee device into pairing mode. Then, click the “**Add**” button at the bottom right of the Things page, select Zigbee Binding, and click “**SCAN**” to start scanning and adding Zigbee devices.



Once added, the device can be configured as a Switch and controlled.

#### 2.3.5 Connecting to ioBroker

This guide is based on ioBroker. For more details, please visit [ioBroker – Zigbee](#).

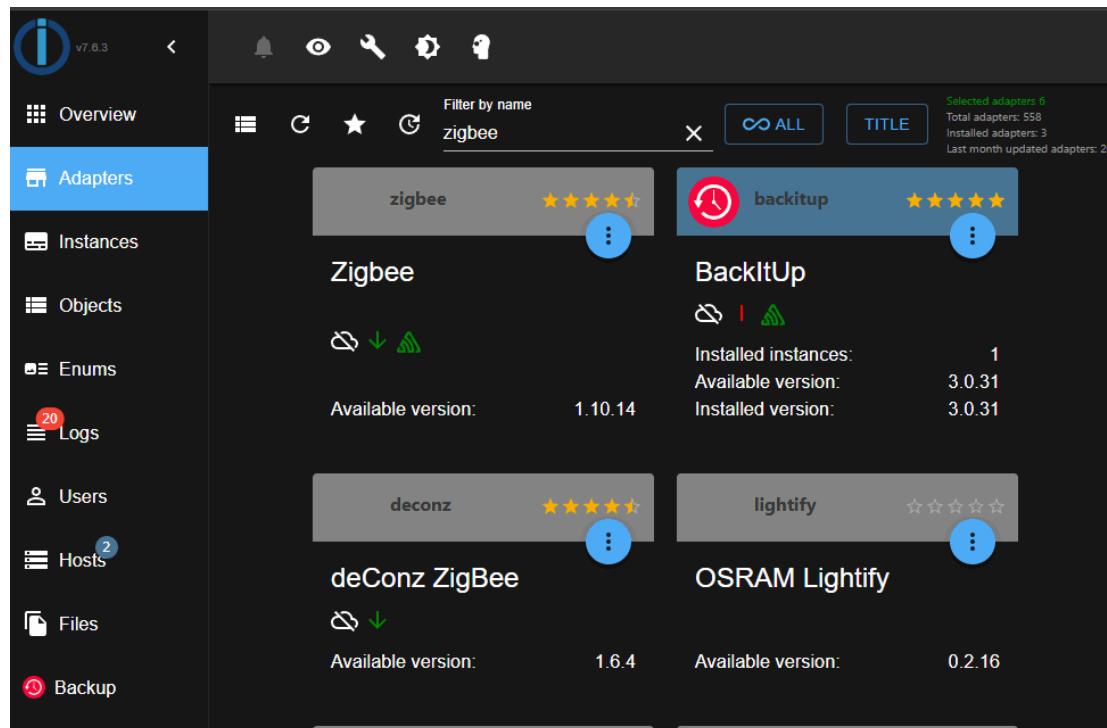
### 2.3.5.1 Preparation

Before getting started, make sure that IoBroker is installed and that the ZBDongle is plugged into the host's USB port.

If IoBroker has not yet been installed, please refer to the [IoBroker installation guide](#) for setup instructions.

### 2.3.5.2 Step 1: Add Adapter

After logging into IoBroker, go to **Adapters**, search for **zigbee**, and install the first **Zigbee adapter** listed.



### 2.3.5.3 Step 2: Configure the Adapter

Go to Instances, open the settings for the Zigbee adapter, and configure the serial port path and device type:

**For ZBDongle-E、Dongle-PMG24、Dongle-LMG21**

Plain Text

```
COM port name: /dev/ttyUSB0 //configure according to the actual serial path  
Type: SL-EFR32(EMBER) FW 7.4.x.x
```

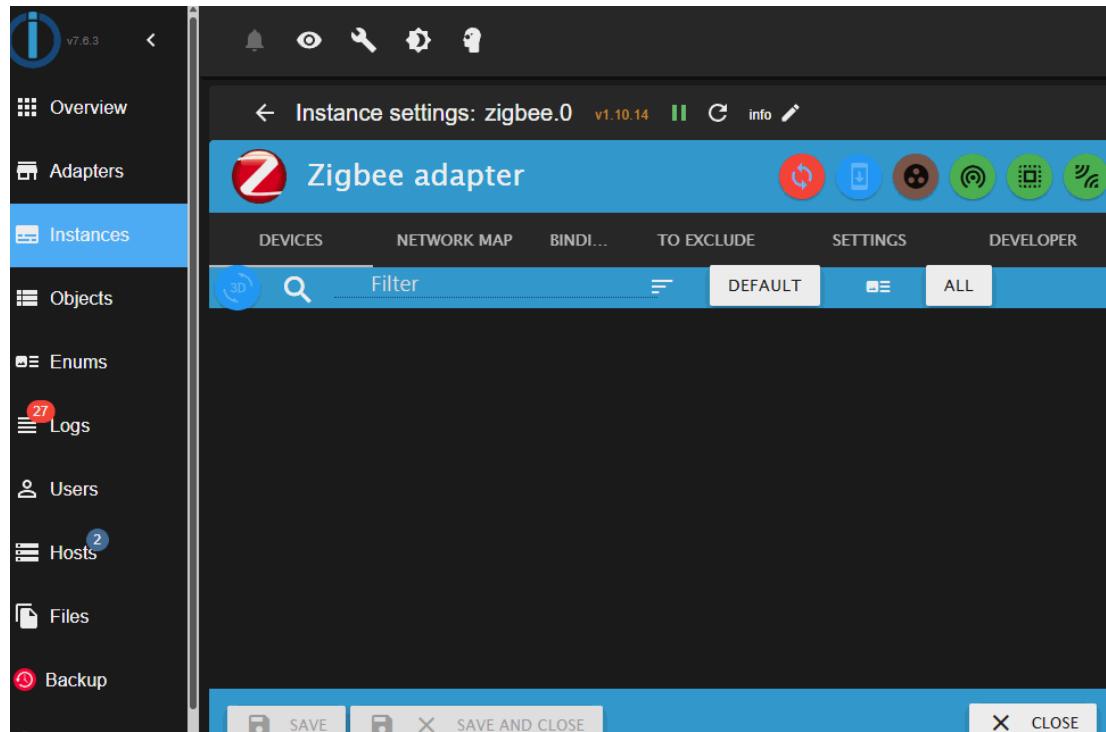
**For ZBDongle-P(SONOFF Zigbee 3.0 USB Dongle Plus)**

Plain Text

```
COM port name: /dev/ttyUSB0 //configure according to the actual serial path  
Type: TIZ-Stack/CCxxox
```

After completing the configuration, click “**Save**”.

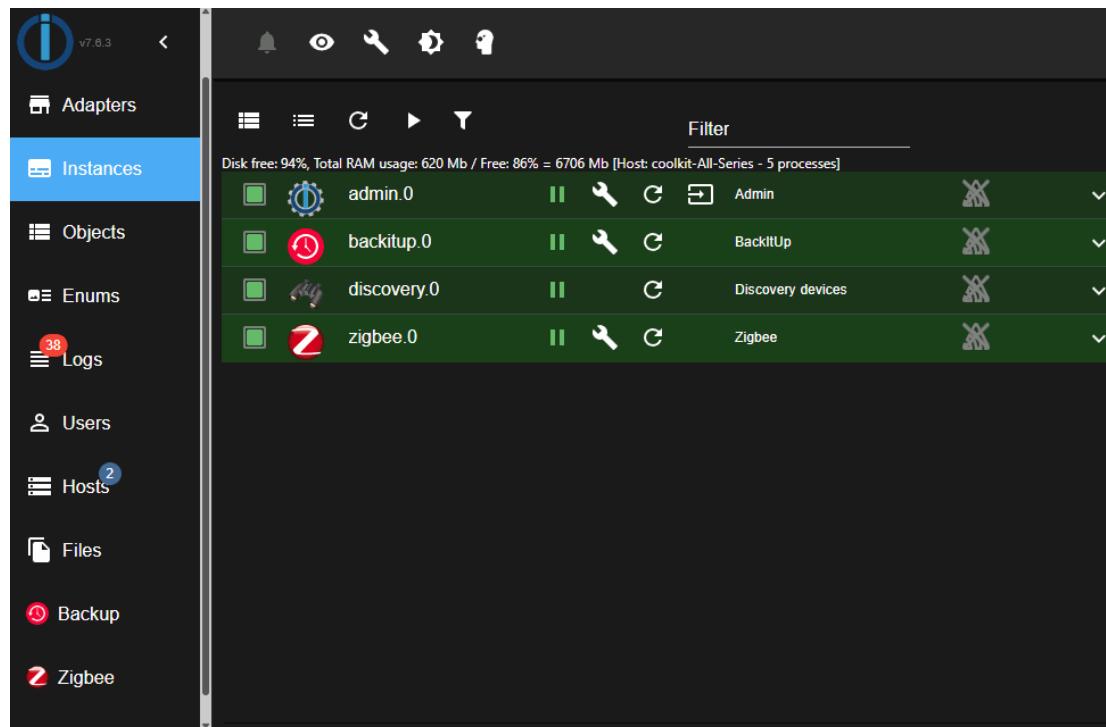
Wait until the status icon turns **green** — this indicates that the configuration is complete.



#### 2.3.5.4 Step 3: Add a Zigbee Sub-device

Put your Zigbee device into pairing mode.

Then, go to the **Zigbee** page and click the “**Pairing**” icon to start searching for and automatically adding Zigbee devices.



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### 3. How to Upgrade/Flash Firmware

All SONOFF Dongle products support firmware switching (including Zigbee Coordinator, Zigbee Router, and other firmware variants) through the [SONOFF Dongle Flasher](#) tool.

- **SONOFF Dongle Flasher:** <https://dongle.sonoff.tech/sonoff-dongle-flasher/>
- **Another option:** Flash firmware via Home Assistant Add-on

#### 3.1 Supported Firmware

For ZBDongle-E(SONOFF Zigbee 3.0 USB Dongle Plus V2)

Firmware Type	Supported	Flashing Guide
Zigbee NCP	✓	<a href="#">Click to view</a>
Zigbee Router	✓	<a href="#">Click to view</a>
OpenThread RCP	✓	<a href="#">Click to view</a>
MultiPAN RCP	✓	<a href="#">Click to view</a>
Custom Firmware	✓	<a href="#">Click to view</a>

#### 3.2 How to Flash Customize Firmware

Please Check Link: [https://dongle.sonoff.tech/guide/zbdongle-e/how\\_to\\_flash\\_customize\\_firmware/](https://dongle.sonoff.tech/guide/zbdongle-e/how_to_flash_customize_firmware/)

#### 3.3 How to Upgrade Zigbee Firmware

Please Check Link: [https://dongle.sonoff.tech/guide/zbdongle-e/how\\_to\\_upgrade\\_zigbee\\_firmware/](https://dongle.sonoff.tech/guide/zbdongle-e/how_to_upgrade_zigbee_firmware/)

#### 3.4 How to Flash Zigbee Router Firmware

Please Check Link: [https://dongle.sonoff.tech/guide/zbdongle-e/how\\_to\\_flash\\_zigbee\\_router\\_firmware/](https://dongle.sonoff.tech/guide/zbdongle-e/how_to_flash_zigbee_router_firmware/)

### **3.5 How to Flash OpenThread Firmware**

Please Check Link: [https://dongle.sonoff.tech/guide/zbdongle-e/how\\_to\\_flash\\_openthread\\_firmware/](https://dongle.sonoff.tech/guide/zbdongle-e/how_to_flash_openthread_firmware/)

### **3.6 How to Flash MultiPAN Firmware**

Please Check Link: [https://dongle.sonoff.tech/guide/zbdongle-e/how\\_to\\_flash\\_multipan\\_firmware/](https://dongle.sonoff.tech/guide/zbdongle-e/how_to_flash_multipan_firmware/)

### **3.7 Flash Firmware via Home Assistant Add-on**

Please Check Link: <https://dongle.sonoff.tech/guide/zbdongle-e/flash-firmware-via-home-assistant-add-on/>

When flashing with the [SONOFF Dongle Flasher](#), choose the firmware, the correct function, and then start flashing.

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## More Detailed Tutorials

<https://dongle.sonoff.tech/guide/zbdongle-e/introduction/>

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## Manufacturer Information

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