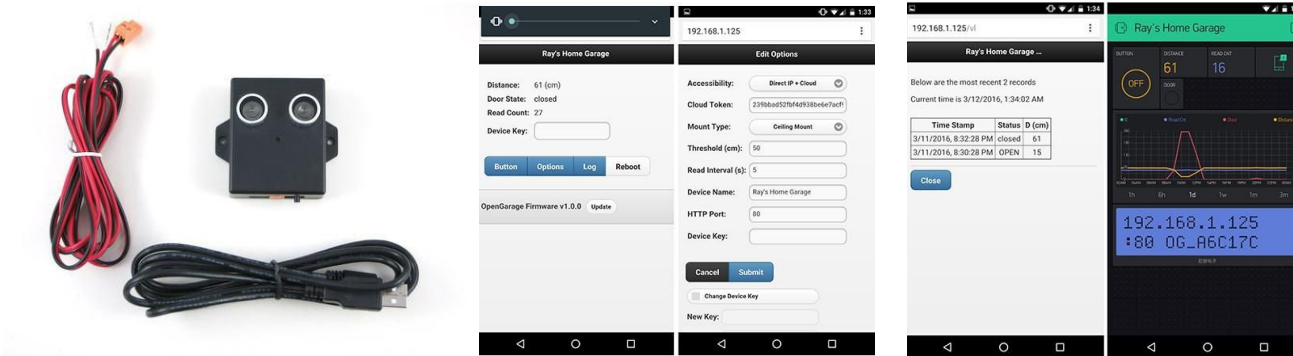


# OpenGarage (HW v1.0, FW v1.0.6) User Manual

Thank you for ordering OpenGarage. This is the user manual for OpenGarage (HW v1.0, FW v1.0.6). For additional instructions, [video tutorials](#), technical support, and user forum, visit <http://opengarage.io>

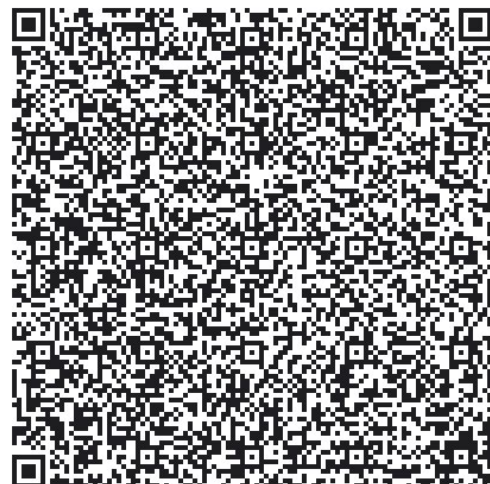


## What's New in Firmware 1.0.6?

Firmware 1.0.6 introduced support for setting static IP on the device, and support for resetting the device to AP mode (without wiping out settings). This allows re-configuring WiFi without losing settings. Resetting to AP mode can be done either through the web interface, or physically by using the button (long press for more than 5 seconds but less than 10 seconds, then release).

## Software Setup

- OpenGarage supports a built-in web interface for local access and configuration, and remote access through the **Blynk** app. Before proceeding, it's recommended that you install the **Blynk app**, create an account, and scan the QR code below to create the OpenGarage project. Creating a project requires energy points. Blynk gives you 2000 energy points for every new account. The QR code here is exactly 2000 points, so you don't need to pay any extra for using one OpenGarage device.
- You can log into **the same Blynk account** on multiple mobile phones, thus you and your family members can all share the access to the same device.
- If you need to set up multiple OpenGarage devices, just scan the same QR code as many times as you need. Each time you scan, the project will be replicated. You can give each project a custom name, and each comes with its unique authorization token. You will need additional Blynk energy points which require a small amount of payment.
- After the project is scanned, go to project settings and **copy the 32-digit authorization token**, which you will need in the following steps.
- **Power on** the device by plugging in a USB cable. The first time it powers on (or after factory reset), the device will create an open WiFi named **OG\_** followed by 6 digits (last 6 of MAC address). Use your



phone or computer to **connect to this WiFi**.

- o Note: on **Android** phones, you may receive a warning: *WiFi has no Internet connection*. Select 'Yes' to stay connected, before proceeding to the next step.
- Open a browser and type: <http://192.168.4.1>. Follow the instructions there to select or type in your WiFi router's SSID, and your WiFi password. If you already have a Blynk token, paste it to the **Cloud Token** box; if not, leave that box empty and you can always set it in later.
- Once the device connects to your WiFi, it will remember your router's SSID and password, and the next time it's powered on it will automatically enter client mode, and obtain an IP from your router. To access the device using a browser, type in **the client mode IP** (note: this is **NOT** the 192.168.4.1 IP as you did in AP mode step above). To perform certain actions, such as trigger a button click, change options, you will need a device key. **The default key is: opendoor**
- In case you need a **Factory Reset**: hold the push-button on the device for **10 seconds or more**, until the LED stays on. Then release the button. The device will recover to default settings. If you press the button for less than 5 seconds and release, it triggers the relay. If you press it for more than 5 seconds but less than 10 seconds and release, it resets the device to AP mode (settings are kept).

## Hardware Setup

- **NOTE:** OpenGarage is **NOT** waterproof. If you plan to use it outdoors, place it inside a waterproof box.
- **Locate Door-button Terminals:** OpenGarage uses a **built-in relay** to simulate button click. First, on your garage door system, **locate the terminals that connect to your door-button** (a.k.a. wall-button or console). Most garage door systems have four terminal ports: two connect to the door-button, and two connect to sensors. Refer to your garage door system user manual if you have trouble locate the terminals.
- **Wiring.** Take out the two-wire cable from the package, strip the wires to appropriate length. Next:
  - o If your device comes with an **orange** terminal block, insert and tighten the stripped wires to the orange terminal block.
  - o If your device comes with a **white** surface mount terminal block (as shown below), slowly and firmly push the stripped wires into the terminal holes. The terminal block has internal hooks to prevent the wires from coming out on their own. To release the wires, use a small screwdriver to press on the tabs of the terminal block, then pull the wires out.



Insert:



Release:

- o Insert the other end of the stripped wires to the door button terminal you located above. Because OpenGarage uses a relay to simulate button click, **the two wires have no polarity**.

- **Mounting.** The typical way is to mount OpenGarage to the ceiling, with the distance sensor facing down. Generally you should position it at 1 to 2 feet away from the garage door opener, and it's important to **make sure when the garage door is fully open, the distance sensor can 'see' the door**. After you've decided the location, use screws or double sided tape to securely mount the device to the ceiling. The wiring bag contains plastic washers to help mounting the device to the ceiling.



- Next, **carefully plug in the provided microUSB cable to OpenGarage**, and power OpenGarage through a USB adapter (any USB adapter with at least 500mA output current is sufficient).
- **Security+ 2.0 System.** If your garage door system has a **Yellow antenna** and **Yellow learn button**, it's one of the newest Security+ 2.0 system. For these systems, you need a Security+ 2.0 adapter, which you can purchase as an add-on to OpenGarage. If your garage door systems has different colored antenna (other than yellow), you don't need this adapter.

## Options

The device key is required to change any option below. The default device key is **opendoor**.

- **Accessibility:** the choices are Direct IP only, Direct IP + Cloud, and Cloud only [effective after reboot].
- **Cloud token:** Blynk authorization token [effective after reboot].
- **Mount type:** the choices are Ceiling Mount (default) or Side Mount. The latter is for **rollup** garage door systems where ceiling mount is not feasible. In this case, it may be easier to set up OpenGarage on the side of the door, facing the outside.
- **Threshold:** the distance below which the door is detected as open (default is 50 centimeter). This threshold should be larger than the distance from the ceiling to the door when the door is open, and smaller than the distance from the ceiling to the top of your car when the door is closed. The easiest way is to set it as the midpoint between the two distance values. The unit is centimeter.
- **Read Interval:** defines how often the device checks the distance sensor value. The unit is second.
- **Click Time:** defines how long the relay holds when it clicks. Default is 1000 milliseconds (1 second).
- **Sound Alarm:** defines how long the alarm will turn on to alert the user before door action is triggered.
- **Device Name:** custom device name (this name will show up on the OpenGarage homepage).
- **HTTP port:** custom HTTP port (default is 80) [effective after reboot].
- **Automation:** if the door is left open for more than the specified amount of time, you can choose for the device to **notify** your and / or **auto-close** the door. When auto-close is selected, a minimum 5-second sound alarm will be enforced to alert the user before the door is closed.
- **IFTTT Key:** IFTTT maker channel key. To use this feature, go to [ifttt.com](https://ifttt.com), create an account, search 'maker' channel and create a maker key. Copy and paste the key here. You can create IFTTT recipes that use 'maker' as trigger (this), and SMS, email, or push notification as action (that). When the device sends notifications, you will receive the message through SMS, email, or push notifications. The content of the message is passed via the 'value1' parameter in IFTTT recipe. Without IFTTT, you can still receive push notifications through the Blynk app.
- **Use Static IP:** configure the device to use custom IP [effective after reboot].

## Firmware Upgrade

As new firmwares become available, you can upgrade firmware by clicking on the **Update** button at the homepage. Select the firmware file name, and type in the device key. Then submit and wait for the upgrade to complete. In some rare cases (such as poor WiFi signal), the upgrade may fail. Just try again (or reboot the device and try again).

## Links and Resources

- [OpenGarage Homepage](#) (including product page, technical support, and user forum)
- [OpenGarage Github Repository](#)
- [OpenGarage Firmware Files](#)
- [OpenGarage Documentation](#) (including API)
- [OpenGarage Blog Post](#)