Garadget Controller: MQTT and Home Assistant

Setup guide: controller firmware 1.1.0 or later

You need the controller with its USB power supply, a 2.4 GHz Wi-Fi network, Home Assistant with the MQTT integration, and an MQTT broker (for example Mosquitto) that the controller can reach. The controller connects with plain MQTT, without TLS. Setup takes 10 to 20 minutes.

Part 1. Connect the controller to Wi-Fi and the broker

1. Power the controller through the USB connector on its back.
2. Four LEDs blinking every second mean setup mode. If the controller shows another pattern, press and hold the **M** button for 3 seconds. Holding it for 10 seconds resets the controller to factory defaults.
3. Join the open Wi-Fi hotspot **Garadget-XXXXXX** and open `http://192.168.0.1/` (most phones open the page by themselves).
4. Select your network and enter its password. For a hidden network choose *Enter Manually*.
5. Switch on **Advanced Settings: Show**, scroll to **MQTT Integration** and switch **Enable MQTT** on (Figure 2).
6. Enter the broker's address and port. Enter the username and password if the broker requires them. To make a new broker password, click ↻ and copy the value to the broker's user.
7. Press **Save & Connect**. The controller restarts and joins your network: two LEDs on and one blinking. About 3 seconds after the broker accepts the connection, LED 4 pulses slowly.

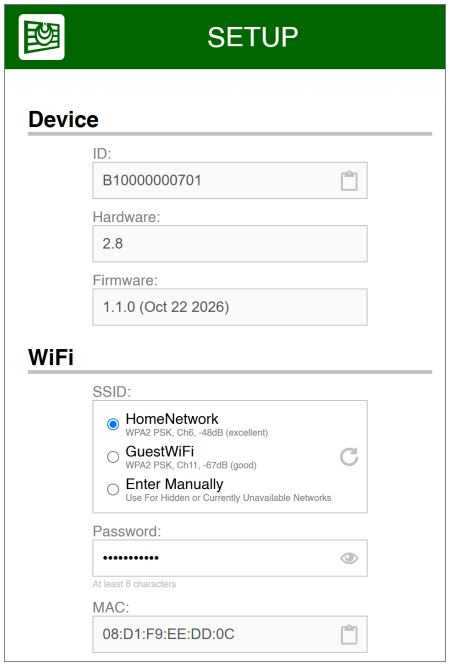


Figure 1. Setup page: WiFi

Client ID must be unique on the broker. **Device ID** is part of the topic names and **Device Name** is the name shown in Home Assistant, so give every controller its own. Client ID and Device ID accept letters, digits, `-` and _ only; a value with other characters is dropped without a message and the old value stays.

Keep **Discovery** on and **Base Topic** at `homeassistant/cover`. The controller announces the door on `<Base Topic>/<Device ID>/config`, and Home Assistant reads announcements only under `<discovery prefix>/cover/...` (the prefix is `homeassistant` unless changed in the MQTT integration's settings). With another Base Topic the topics still work, but the door has to be added by hand.

Switching Discovery off removes the door from Home Assistant. Changing the Device ID or Base Topic later leaves the old announcement on the broker, so the old entity stays in Home Assistant until you remove it.

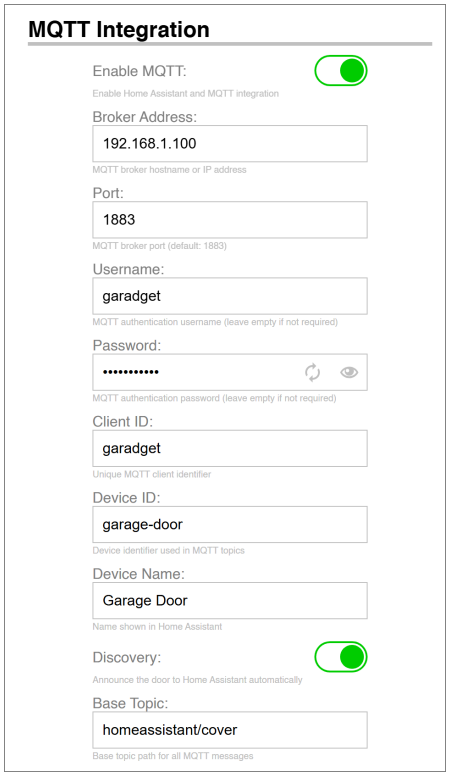


Figure 2. Setup page: MQTT Integration

Part 2. Home Assistant

1. In Home Assistant add the MQTT integration (**Settings > Devices & services > Add integration > MQTT**) with the same broker, and leave *Enable discovery* on. The broker must allow the controller's user; with the Mosquitto add-on, create a Home Assistant user for it.
2. When the controller connects, it publishes a discovery message and the door appears under the MQTT integration as a device named after the Device Name, with one garage door cover. No YAML is needed.
3. Open the device to open, close and stop the door (Figure 3). Home Assistant shows *open*, *opening*, *closed* or *closing*; a door stopped midway shows as open (or closed if it was closing), and the *status* attribute shows *stopped*. *Unknown* means the controller has not read the door yet. Sensor readings (reflection, brightness, signal strength and more) are attributes of the cover.
4. The cover shows as unavailable while the controller is offline or has lost the broker: up to 90 seconds after a power loss, and at once when the controller enters setup mode.

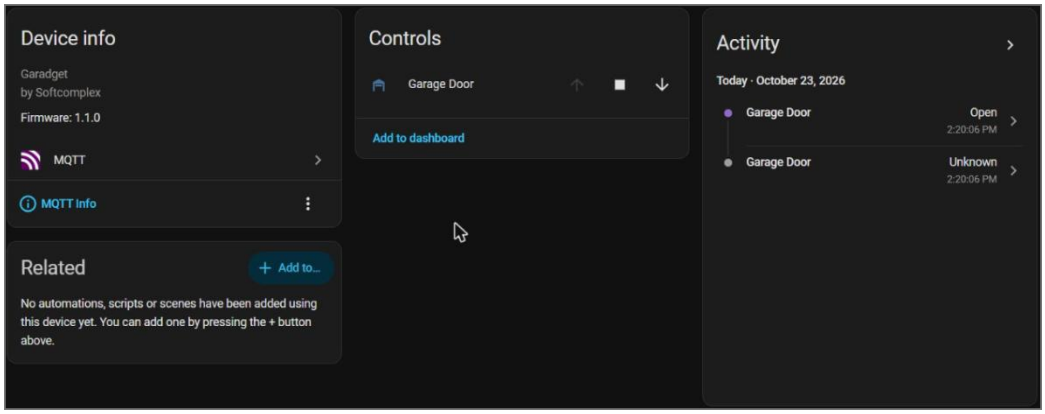


Figure 3. The device in Home Assistant

Part 3. Install the controller in the garage

1. Mount the controller on a clean, dry surface of the opener's enclosure, in line of sight of the top panel of the closed door, using the included mount.
2. Aim the laser at the top panel of the closed door and fix the reflective tag where the laser hits its center.
3. **Dry-contact opener:** wire the controller's **G** terminal to the opener's dry-contact terminals (polarity does not matter). **Security+ 2.0 opener** (yellow Learn button) or **Security+ 3.0 opener** (white Learn button): use the matching Garadget dry-contact adapter, wired or wireless (see the store in Resources), and no direct wire between the controller and the opener. Follow the adapter's product page for installation and pairing.
4. In Home Assistant, confirm that the door state is correct and that open and close work.

MQTT topics

With the defaults, the status topic is `homeassistant/cover/garage-door/status`.

Topic	Direction	Content
<Base Topic>/<Device ID>/status	Controller publishes	Door status as JSON, retained, on every change: `{"status":"closed",...}`
<Base Topic>/<Device ID>/command	Controller subscribes	`{"status":"open"}`, `{"status":"close"}` or `{"status":"stop"}`. Retained messages are ignored.
<Base Topic>/<Device ID>/available	Controller publishes	`online`, or `offline` (retained; the broker sends it when the connection drops)
<Base Topic>/<Device ID>/config	Controller publishes	Home Assistant discovery message, retained

Controller LED indications

LED 1 is next to the garage door opener (GDO) control terminal **G** and the buttons. The numbering continues clockwise, so LED 4 is next to the wired door sensor terminal **S**.

Controller LEDs	State
All 4 blink together once per second	Setup mode (hotspot active)
LED 1 blinking	Not connected to Wi-Fi
LED 1 on, LED 2 blinking	Connected to Wi-Fi, no IP address yet
LEDs 1 and 2 on, LED 3 blinking	On the network, not connected to the broker
LED 4 pulsing slowly, others off	Connected to the broker (or to a Control4 driver, if one is used)
4 quick blinks with beeps	Factory reset done (after holding **M** for 10 seconds)

Troubleshooting

Symptom	What to check
LED 4 never pulses (no Control4 driver connected)	The controller is on the network but not connected to the broker. It retries every 10 seconds, so a broker that comes up later is picked up by itself. Otherwise hold **M** for 3 seconds, enter the Wi-Fi password again, check **Enable MQTT**, the broker address and port, the username and password, and press **Save & Connect**.
Door does not appear in Home Assistant	LED 4 must pulse. Then check that **Discovery** is on, the Base Topic is `<discovery prefix>/cover` (`homeassistant/cover` by default), and that Home Assistant uses the same broker.
Cover is unavailable	The controller is offline or has lost the broker. A Client ID shared with another device makes the broker drop one of them.
State is *unknown*	The controller has restarted and has not read the door yet; this clears within a few seconds. If it stays, the door sensor is not reading: check the laser aim and the reflective tag.
Setup page not available	Setup mode ends after 10 minutes without a request. Hold **M** for 3 seconds to start it again (all 4 LEDs blink together) and enter the Wi-Fi password again before pressing **Save & Connect**.

Resources

Product page	garadget.com/product/garadget-for-control4
Store (controllers and adapters)	garadget.com/store
Support	garadget.com/contact-us
Home Assistant MQTT integration	home-assistant.io/integrations/mqtt