

# OpenGarage Firmware 1.0.9 API Document

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## 1. Overview

This document describes OpenGarage (OG) Firmware 1.0.9 API.

- In the following, when device key is required, it is referred to as **dkey=xxx**. The default device key at factory reset settings is opendoor.
- The device IP address is referred to as **devip**
- For most commands, parameters are optional and the order of parameters does not matter.
- **Return values** are all formatted in JSON, for example: {"result":1}
- **Return error code:**
  - 1 Success
  - 2 Unauthorized (e.g. missing device key or device key is incorrect)
  - 3 Mismatch (e.g. new device key and confirmation key do not match)
  - 16 Data Missing (e.g. missing required parameters)
  - 17 Out of Range (e.g. value exceeds the acceptable range)
  - 18 Data Format Error (e.g. provided data does not match required format)
  - 32 Page Not Found (e.g. page not found or requested file missing)
  - 48 Not Permitted (e.g. cannot operate on the requested station)
  - 64 Upload failed (e.g. OTA firmware update failed)

## 2. Get Controller Variables: <http://devip/jc>

Returned JSON variables:

- dist: distance sensor value (unit: cm)
- door: door status (binary, 1 means open, 0 means closed)
- vehicle: vehicle status (1 means vehicle detected, 0 no, 2 means unknown)
- rcnt: read count (increments every time distance sensor is read)
- fwv: firmware version
- name: device name
- mac: MAC address
- cid: WiFi chip ID
- rssi: WiFi signal strength (dB)
- temp: temperature reading (Celcius), only if T/H sensor is enabled
- humid: humidity reading (relative percentage), only if T/H sensor is enabled

## 3. Change Controller Variables:

<http://devip/cc?dkey=xxx&click=1&close=1&open=1&reboot=1&apmode=1>

Parameters:

- dkey: (required) device key (factory default device key is opendoor)
- click/close/open: (optional) trigger relay click / close door / open door
- reboot/apmode: (optional) reboot device / reset device in AP mode (to reconfigure WiFi settings)

Examples:

- <http://devip/cc?dkey=xxx&click=1> trigger relay click (i.e. toggle door)
- <http://devip/cc?dkey=xxx&close=1> close door (ignored if the door is already closed)
- <http://devip/cc?dkey=xxx&reboot=1> reboot device

#### 4. Get Options: <http://devip/jo>

Returned JSON variables: (factory default values indicated in bold font)

- fwv: firmware version (read-only)
- mnt: mounting type (**0: ceiling mount**; 1: side mount)
- dth: door distance threshold (unit: cm, used to detect if door is open)
- vth: vehicle distance threshold (unit: cm, used to detect if vehicle is present)
- riv: read interval (unit: second, default **3**)
- alm: alarm (0: no alarm; **1: 5-second alarm**; 2: 10-second alarm)
- lsz: log size (i.e. 50 means the controller keeps the most recent 50 records)
- tsn: temperature/humidity sensor (0:none; 1:AM2320; 2:DT11; 3:DHT22; 4:DS18B20)
- http: http port (default **80**)
- cdt: click delay time (unit: ms, default **1000**)
- dri: distance reading interval (unit: ms, default **500**)
- sto: sensor timeout option (default 0: ignore; 1: cap to maximum value)
- ati: automation time a (unit: minutes, detect if door is open for longer than ati)
- ato: automation option a (bit 0: notify; bit 1: auto-close)
- atib: automation time b (unit: UTC hour, detect if door is open after atib)
- atob: automation option b (bit 0: notify; bit 1: auto-close)
- noto: notification options (bit 0: door open events; bit 1: door close events)
- usi: use static IP (**0: use DHCP**; 1: use static IP)  
when usi=1, three additional string options are available: dvip, gwip, subn, which represent the custom device IP, gateway IP, subnet mask
- auth: cloud authorization token
- name: device name (default "**My OpenGarage**")
- iftt: IFTTT maker channel token
- ssid: the WiFi network OG is connected to currently
- mqtt: mqtt server IP
- dvip/gwip/subn: device ip / gateway ip / subnet mask (when in static IP mode)

#### 5. Change Options:

<http://devip/co?dkey=xxx&nkey=xxx&ckey=xxx&opname=opvalue...>

Options:

- For the list of option names (opnames), refer to Section 4 above.
- Some option are cannot be modified through the /co command: including fwv, dkey. These are either read-only options, or should be set in a different way.
- To change device key, use the nkey and ckey pairs (new key, and confirm key).

Examples:

- [devip/cc?dkey=xxx&nkey=abc&ckey=abc](http://devip/cc?dkey=xxx&nkey=abc&ckey=abc) set device key to 'abc'
- [devip/cc?dkey=xxx&dth=75](http://devip/cc?dkey=xxx&dth=75) set distance threshold to 75cm
- [devip/cc?dkey=xxx&cdt=500](http://devip/cc?dkey=xxx&cdt=500) set click delay time to 500ms
- [devip/cc?dkey=xxx&auth=0123456789abcdef](http://devip/cc?dkey=xxx&auth=0123456789abcdef) set cloud authorization token
- [devip/cc?dkey=xxx&http=8080&riv=5](http://devip/cc?dkey=xxx&http=8080&riv=5) set http port to 8080 and read interval to 5 seconds
- [devip/cc?dkey=xxx&iftt=xxxx](http://devip/cc?dkey=xxx&iftt=xxxx) set IFTTT maker channel token
- [devip/cc?dkey=xxx&ati=5&ato=3](http://devip/cc?dkey=xxx&ati=5&ato=3) set automation time a to 5 minutes and option to 0b11 (i.e. auto-notify and close if door is open for > 5 minutes).

## 6. Get Log Data: `http://devip/jl`

Returned JSON variables:

- name: device name
- time: device time (UTC epoch time)
- logs: log data - an array of log entries, each entry in the form of [time\_stamp, door\_status, distance\_value]

## 7. Clear Log Data:

`http://devip/clearlog?dkey=xxx`

This command clears the log data.

## 8. Reset All

`http://devip/resetall?dkey=xxx`

This command resets the device to factory default settings.