ESPHome

Overview

Integrate ESPHome-based devices into Control4. ESPHome is an open-source system that transforms common microcontrollers, like ESP8266 and ESP32, into smart home devices through simple YAML configuration. ESPHome devices can be set up, monitored, and controlled using a web browser, Home Assistant, or other compatible platforms. This driver enables seamless monitoring and control of ESPHome devices directly from your Control4 system.

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System requirements

- Control4 OS 3.3+

Features

- Local network communication requiring no cloud services
- Real-time updates from all supported entities exposed by the device
- Supports encrypted connections using the device encryption key
- Variable Programming Support

Compatibility

Verified Devices

This driver will generically work with any ESPHome device, but we have tested extensively with the following devices:

- ratgdo - Configuration Guide

If you try this driver on a product listed above, and it works, let us know!

Supported ESPHome Entities

Entity Type	Supported
Alarm Control Panel	❌
API Noise	❌
Binary Sensor	✅
Bluetooth Proxy	❌
Button	✅
Climate	❌
Cover	✅
Datetime	❌
Date	❌
Time	❌
Camera	❌
Event	❌
Fan	❌
Light	✅
Lock	✅
Media Player	❌
Number	✅
Select	❌
Sensor	✅
Siren	❌
Switch	✅
Text	✅
Text Sensor	✅
Update	❌
Valve	❌
Voice Assistant	❌

Installer Setup

> ⚠️ Only a ***single*** driver instance is required per ESPHome device. Multiple instance of this driver connected to the same device will have unexpected behavior. However, you can have multiple instances of this driver connected to ***different*** ESPHome devices.

DriverCentral Cloud Setup

> If you already have the DriverCentral Cloud driver installed in your project you can continue to Driver Installation.

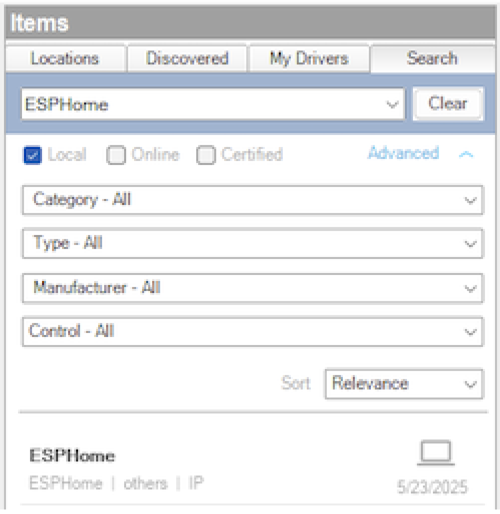
This driver relies on the DriverCentral Cloud driver to manage licensing and automatic updates. If you are new to using DriverCentral you can refer to their Cloud Driver documentation for setting it up.

Driver Installation

Driver installation and setup are similar to most other ip-based drivers. Below is an outline of the basic steps for your convenience.

1. Download the latest `control4-esphome.zip` from DriverCentral.
2. Extract and install the `esphome.c4z` , `esphome_light.c4z` , and `esphome_lock.c4z` drivers.
3. Use the "Search" tab to find the "ESPHome" driver and add it to your project.

   > ⚠️ A ***single*** driver instance is required per ESPHome device.



ESPHome

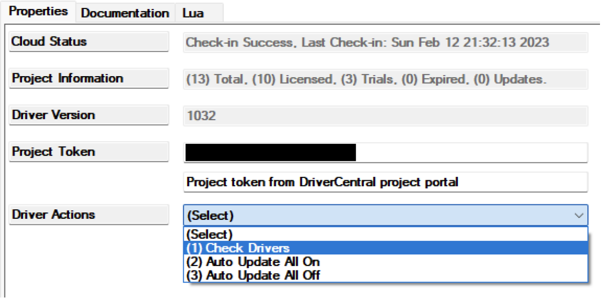
☑ Local □ Online □ Certified

Sort: Relevance

ESPHome
ESPHome | others | IP
5/23/2025

4. Select the newly added driver in the "System Design" tab. You will notice that the `Cloud Status` reflects the license state. If you have purchased a license it will show `License Activated`, otherwise `Trial Running` and remaining trial duration.

5. You can refresh license status by selecting the "DriverCentral Cloud" driver in the "System Design" tab and perform the "Check Drivers" action.



Cloud Status: Check-in Success, Last Check-in: Sun Feb 12 21:32:13 2023

Project Information: (13) Total, (10) Licensed, (3) Trials, (0) Expired, (0) Updates.

Driver Version: 1032

Project Token: [redacted]

Project token from DriverCentral project portal

Driver Actions: (Select)

6. Configure the Device Settings with the connection information.

7. After a few moments the `Driver Status` will display `Connected`. If the driver fails to connect, set the `Log Mode` property to `Print` and re-set the `IP Adress` field to reconnect. Then check the lua output window for more information.

8. Once connected, the driver will automatically create variables and connections for each supported entity type.

9. To control lights and/or locks, use the "Search" tab to find the "ESPHome Light" and/or "ESPHome Lock" driver. Add one driver instance for each exposed light or lock entity in your project. In the "Connections" tab, select the "ESPHome" driver and bind the light or lock entities to the newly added drivers.

Driver Setup

Driver Properties

Cloud Settings

Cloud Status

Displays the DriverCentral cloud license status.

Automatic Updates

Turns on/off the DriverCentral cloud automatic updates.

Driver Settings

Driver Status (read-only)

Displays the current status of the driver.

Driver Version (read-only)

Displays the current version of the driver.

Log Level [Fatal | Error | Warning | *Info* | Debug | Trace | Ultra]

Sets the logging level. Default is `Info`.

Log Mode [*Off* | Print | Log | Print and Log]

Sets the logging mode. Default is `Off`.

Device Settings

IP Address

Sets the device IP address (e.g. `192.168.1.30`). Domain names are allowed as long as they can be resolved to an accessible IP address by the controller. HTTPS is not supported.

> ⚠ If you are using an IP address, you should ensure it will not change by assigning a static IP or creating a DHCP reservation.

Port

Sets the device port. The default port for ESPHome devices is `6053`.

Authentication Mode [*None* | Password | Encryption Key]

Selects the authentication method for connecting to the ESPHome device.

- **None**: No authentication required.
- **Password**: Use a password for authentication (see below).
- **Encryption Key**: Use an encryption key for secure communication (see below).

Password

Shown only if Authentication Mode is set to `Password`.
Sets the device password. This must match the password configured on the ESPHome device.

Encryption Key

Shown only if Authentication Mode is set to `Encryption Key`.
Sets the device encryption key for secure communication. This must match the encryption key configured on the ESPHome device.

Device Info

Name (read-only)

Displays the name of the connected ESPHome device.

Model (read-only)

Displays the model of the connected ESPHome device.

Manufacturer (read-only)

Displays the manufacturer of the connected ESPHome device.

MAC Address (read-only)

Displays the MAC address of the connected ESPHome device.

Firmware Version (read-only)

Displays the firmware version of the connected ESPHome device.

Driver Actions

Reset Connections and Variables

> ⚠️ This will reset all connection bindings and delete any programming associated with the variables.

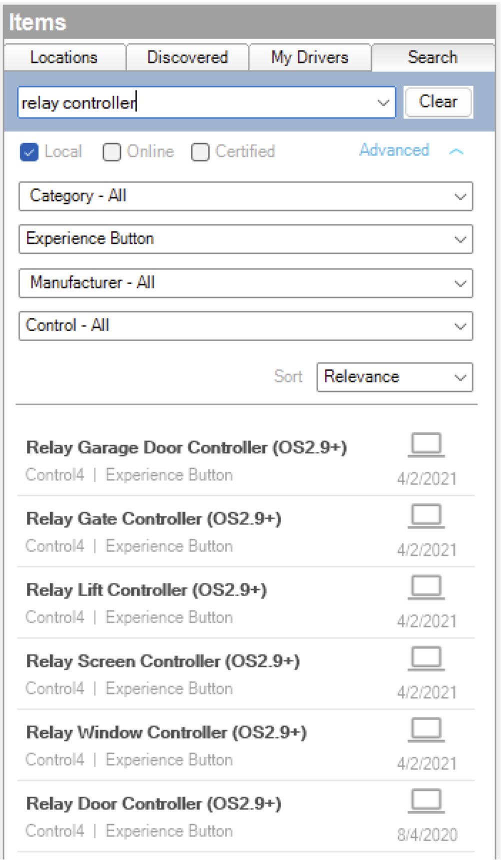
Reset the driver connections and variables. This is useful if you change the connected ESPHome device or there are stale connections or variables.

ratgdo Configuration Guide

This guide provides instructions for configuring the ESPHome driver to work with ratgdo devices for garage door control via relays in Control4 Composer Pro.

Add Relay Controller Driver

Add the desired relay controller driver to your Control4 project in Composer Pro.



relay controller

☑ Local ☐ Online ☐ Certified

Category - All

Experience Button

Manufacturer - All

Control - All

Sort: Relevance

Relay Garage Door Controller (OS2.9+) Control4 | Experience Button	4/2/2021
Relay Gate Controller (OS2.9+) Control4 | Experience Button	4/2/2021
Relay Lift Controller (OS2.9+) Control4 | Experience Button	4/2/2021
Relay Screen Controller (OS2.9+) Control4 | Experience Button	4/2/2021
Relay Window Controller (OS2.9+) Control4 | Experience Button	4/2/2021
Relay Door Controller (OS2.9+) Control4 | Experience Button	8/4/2020

Relay Controller Properties

The ratgdo device exposes a "Cover" entity in ESPHome, which maps to the relay controller functionality in Control4.

Number of Relays

The ratgdo device uses a multi-relay configuration to control the garage door. In Composer Pro, you should configure the relay settings as follows:

- Set to **2 Relays** (Open/Close) or **3 Relays** (Open/Close/Stop)
  - The ratgdo device uses separate commands for opening and closing the garage door
  - If your ratgdo firmware supports the "stop" command, configure for 3 relays to enable the stop functionality. If you are not sure, you can look at the ratgdo connections in Composer Pro to see if the "Stop Door" relay is available.

Relay Configuration

- Set to **Pulse**
  - ratgdo uses momentary pulses to trigger the garage door opener, similar to a wall button press

Pulse Time

- Set all relay pulse times to **500** (default)
  - This is the duration the relay will be activated

Invert Relay

- Set all invert relay properties to **No** (default)

Contact Debounce

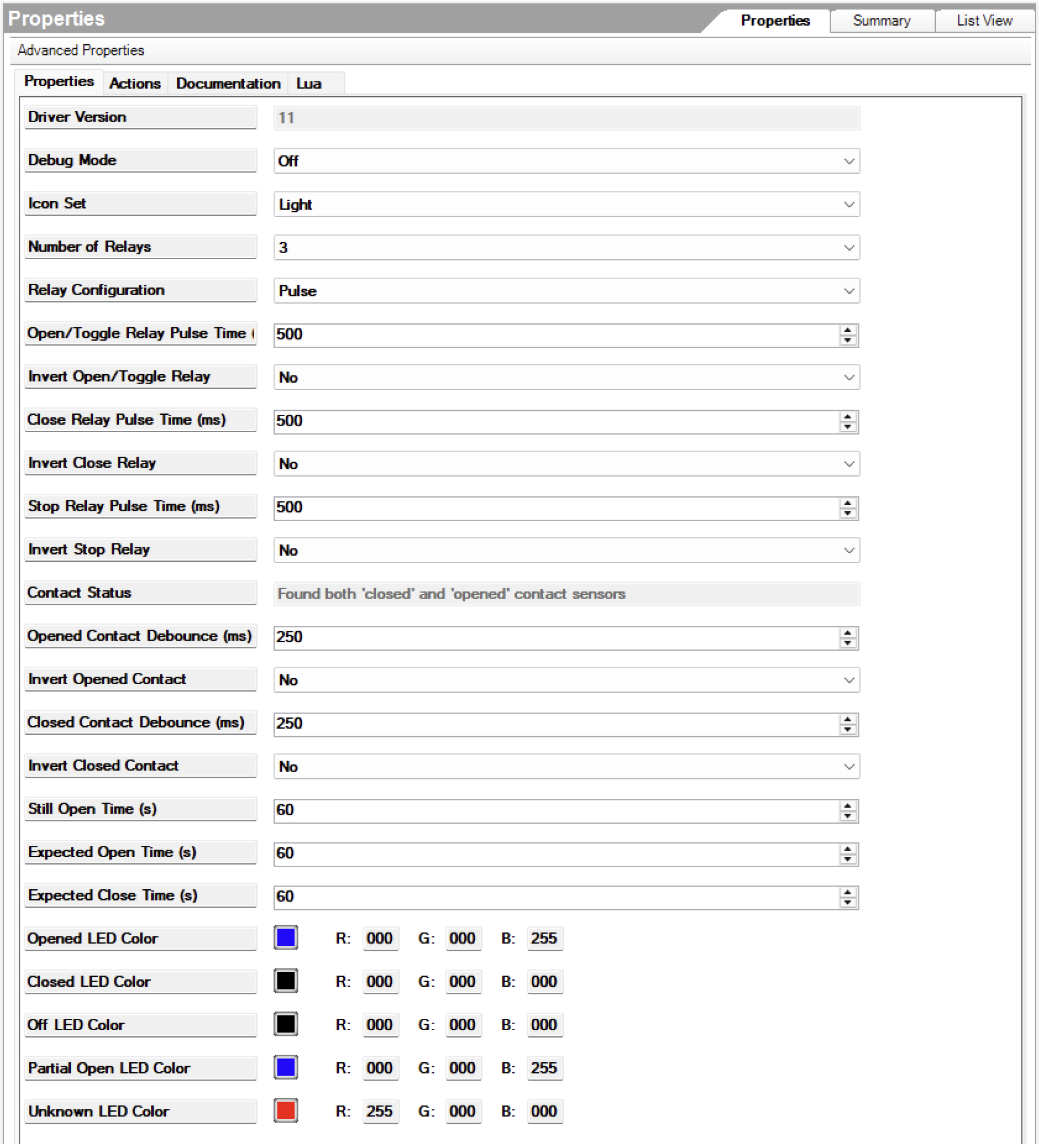
- Set all contact debounce times to **250** (default)
  - This helps prevent false flapping of the garage door state sensors

Invert Contact

- Set all invert contact properties to **No** (default)

Example Properties

For reference, here is an example of the relay controller properties in Composer Pro:



Driver Version	11						
Debug Mode	Off						
Icon Set	Light						
Number of Relays	3						
Relay Configuration	Pulse						
Open/Toggle Relay Pulse Time (	500						
Invert Open/Toggle Relay	No						
Close Relay Pulse Time (ms)	500						
Invert Close Relay	No						
Stop Relay Pulse Time (ms)	500						
Invert Stop Relay	No						
Contact Status	Found both 'closed' and 'opened' contact sensors						
Opened Contact Debounce (ms)	250						
Invert Opened Contact	No						
Closed Contact Debounce (ms)	250						
Invert Closed Contact	No						
Still Open Time (s)	60						
Expected Open Time (s)	60						
Expected Close Time (s)	60						
Opened LED Color	🟦	R: 000		G: 000		B: 255	
Closed LED Color	⬛	R: 000		G: 000		B: 000	
Off LED Color	⬛	R: 000		G: 000		B: 000	
Partial Open LED Color	🟦	R: 000		G: 000		B: 255	
Unknown LED Color	🟥	R: 255		G: 000		B: 000	

Relay Controller Connections

Relays

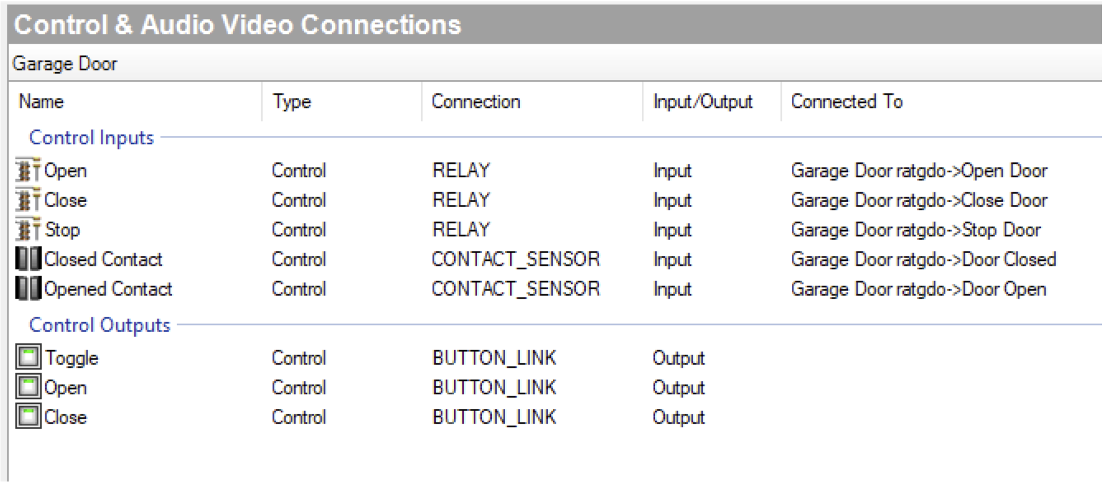
- **Open**: Connect to the ratgdo's "Open Door" relay
- **Close**: Connect to the ratgdo's "Close Door" relay
- **Stop**: Connect to the ratgdo's "Stop Door" relay, if available

Contact Sensors

- **Closed Contact**: Connect to the ratgdo's "Door Closed" contact
- **Opened Contact**: Connect to the ratgdo's "Door Open" contact

Example Connections

For reference, here is an example of how the connections should look in Composer Pro:



Control & Audio Video Connections

Garage Door

Name	Type	Connection	Input/Output	Connected To
Control Inputs				
Open	Control	RELAY	Input	Garage Door ratgdo->Open Door
Close	Control	RELAY	Input	Garage Door ratgdo->Close Door
Stop	Control	RELAY	Input	Garage Door ratgdo->Stop Door
Closed Contact	Control	CONTACT_SENSOR	Input	Garage Door ratgdo->Door Closed
Opened Contact	Control	CONTACT_SENSOR	Input	Garage Door ratgdo->Door Open
Control Outputs				
Toggle	Control	BUTTON_LINK	Output	
Open	Control	BUTTON_LINK	Output	
Close	Control	BUTTON_LINK	Output	

Programming

You can create programming in Control4 to:

- Open/close the garage door based on events
- Monitor the garage door state
- Set up notifications for garage door status changes
- Create custom buttons on touchscreens and remotes

Example: Creating a "Still Open" Alert

Using the "Still Open Time" property from the relay controller driver:

1. Set the "Still Open Time" to your desired duration (e.g., 10 minutes)
2. Create a programming rule that triggers when the "Still Open" event fires
3. Add actions to send notifications or perform other tasks

Additional Entities

Depending on your ratgdo device, firmware, and its capabilities, there may be additional entities exposed by the ESPHome driver. These can come as additional connections or driver variables.

Please refer to ratgdo's documentation for more information on specific entities:

https://ratgdo.github.io/esphome-ratgdo/webui_documentation.html

Developer Information

FINITE LABS

For the latest information, please visit https://drivercentral.io/platforms/control4-drivers/utility/esphome

Support

If you have any questions or issues integrating this driver with Control4 or ESPHome, you can contact us at driver-support@finitelabs.com or call/text us at +1 (949) 371-5805.

Changelog

v20250715 - 2025-07-14

Fixed

- Fixed bug causing entities to not be discovered on connect

v20250714 - 2025-07-14

Added

- Added support for encrypted connections using the device encryption key

v20250619 - 2025-06-19

Added

- Added ratgdo specific documentation

v20250606 - 2025-06-06

Added

- Initial Release