Es Finite Labs **Essentials**

Overview

> DISCLAIMER: This software is neither affiliated with nor endorsed by Control4.

Create virtual sensors and relays controllable via Control4 programming. Enter comma-delimited names per type (temperature, humidity, contact, relay) and the driver exposes those as output bindings. Programming commands allow setting each sensor's value or state, and opening, closing, or toggling relays. Values are persisted and restored on boot.

Index

- System Requirements
- Features
- Installer Setup
  - DriverCentral Cloud Setup
  - Adding the Driver
  - Driver Properties
    - Cloud Settings
    - Driver Settings
    - Device Configuration
  - Driver Actions
- Programming
  - Connections
  - Commands
- Developer Information
- Support
- Changelog

System Requirements

- Control4 OS 3.3+

Features

- Create virtual temperature, humidity, and contact sensors
- Create virtual relays that accept Open, Close, and Toggle commands
- Set sensor values and relay states via programming commands
- Dynamic output bindings based on configured names
- Persistent values survive driver restarts

Installer Setup

DriverCentral Cloud Setup

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

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.

Adding the Driver

1. Download the latest `control4-finite-labs-essentials.zip` from DriverCentral.
2. Extract and install the `device_programmer.c4z` driver.
3. Use the "Search" tab to find "Device Programmer" and add it to your project.

Driver Properties

Cloud Settings

Cloud Status (read-only)

Displays the DriverCentral cloud license status.

Automatic Updates [Off | *On*]

Enables or disables automatic driver updates via DriverCentral. Changing it on any item of this driver changes it on all of them.

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 [0 - Fatal | 1 - Error | 2 - Warning | *3 - Info* | 4 - Debug]

Sets the logging level. Default is `3 - Info`. While a Support Code has Composer's Lua tab open, it also offers `5 - Trace` and `6 - Ultra`.

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

Sets the logging mode. Default is `Off`.

Support Code

Leave it blank unless Finite Labs support gives you a code: for an hour, it opens Composer's Lua tab to this driver and adds `5 - Trace` and `6 - Ultra` to Log Level.

Cloud Monitoring [Disabled | *Enabled*]

When Enabled, the driver sends Finite Labs a short report once an hour, and a report of each error it hits, at most 10 a minute. We use them to find and fix problems in the driver. Set it to Disabled to send nothing.

A report holds the controller's MAC address and OS version, the driver's name, version, device ID and DriverCentral license status, how much memory the driver uses, and the sizes of its largest internal tables. An error report also holds the error message and where in the driver it happened. Before a message is sent, anything in it that looks like a password, token, key, network address or email address is removed.

Device Configuration

Temperature Names

Comma-delimited list of virtual temperature sensor names (e.g., `Living Room,Kitchen`). Each name creates a TEMPERATURE_VALUE output binding. Names are trimmed of whitespace, deduplicated (case-insensitive, first wins), and colons are stripped (reserved for internal use).

Humidity Names

Comma-delimited list of virtual humidity sensor names (e.g., `Living Room,Kitchen`). Each name creates a HUMIDITY_VALUE output binding.

Contact Names

Comma-delimited list of virtual contact sensor names (e.g., `Front Door,Garage`). Each name creates a CONTACT_SENSOR output binding.

Relay Names

Comma-delimited list of virtual relay names (e.g., `Front Gate,Garage Door`). Each name creates a RELAY output binding. Bound consumers can send OPEN, CLOSE, and TOGGLE commands which update persisted state and send notifications.

Driver Actions

Reset Driver

Resets the driver state, clearing all persisted values and bindings.

It also turns Cloud Monitoring back on, as a fresh install has it.

Parameters:

- **Are You Sure?** [***No*** | Yes] - Confirmation to reset the driver.

Diagnostics Snapshot

Prints a report in the Lua output, and sends it to Finite Labs only while Cloud Monitoring is Enabled.

Programming

Connections

Output Bindings (provider)

Output bindings are dynamically created for each configured sensor name. For example, with Temperature Names set to "Living Room,Kitchen", the driver creates:

Binding	Class	Description
Living Room Temperature	TEMPERATURE_VALUE	Virtual temperature for Living Room
Kitchen Temperature	TEMPERATURE_VALUE	Virtual temperature for Kitchen

Similarly for humidity, contact, and relay names. For example, with Relay Names set to "Front Gate,Garage Door", the driver creates:

Binding	Class	Description
Front Gate Relay	RELAY	Virtual relay for Front Gate
Garage Door Relay	RELAY	Virtual relay for Garage Door

Relay bindings accept OPEN, CLOSE, and TOGGLE commands from bound consumers, making them fully functional virtual relays.

Connect these to devices that consume sensor values (e.g., a thermostat for temperature, or a lighting scene for contact sensors) or relay proxies (e.g., `relaysingle_relay_c4.c4i`).

Commands

Set Temperature

Sets the value of a virtual temperature sensor. The value is converted from the specified scale to the project's configured temperature scale, then persisted and sent to any connected consumer.

Parameters:

- **Name** (Dynamic List) - The name of the temperature sensor. Populated from the "Temperature Names" property.
- **Value** (String) - The temperature value.
- **Scale** (List) - The scale of the provided value: `Fahrenheit` or `Celsius`. The value is converted to the project's temperature scale if different.

Set Humidity

Sets the value of a virtual humidity sensor.

Parameters:

- **Name** (Dynamic List) - The name of the humidity sensor. Populated from the "Humidity Names" property.
- **Value** (String) - The humidity value as a percentage (clamped to 0-100).

Set Contact

Sets the state of a virtual contact sensor.

Parameters:

- **Name** (Dynamic List) - The name of the contact sensor. Populated from the "Contact Names" property.
- **State** (List) - The contact state: `Open` or `Closed`.

Set Temperature from Variable

Sets a virtual temperature sensor from a variable's current value. The value is converted from the specified scale to the project's configured temperature scale.

Parameters:

- **Name** (Dynamic List) - The name of the temperature sensor. Populated from the "Temperature Names" property.
- **Variable** (Variable Selector) - A number variable whose current value is used as the temperature.
- **Scale** (List) - The scale of the variable's value: `Fahrenheit` or `Celsius`. The value is converted to the project's temperature scale if different.

Set Humidity from Variable

Sets a virtual humidity sensor from a variable's current value.

Parameters:

- **Name** (Dynamic List) - The name of the humidity sensor. Populated from the "Humidity Names" property.
- **Variable** (Variable Selector) - A number variable whose current value is used as the humidity percentage (clamped to 0-100).

Set Contact from Variable

Sets a virtual contact sensor from a boolean variable's current value.

Parameters:

- **Name** (Dynamic List) - The name of the contact sensor. Populated from the "Contact Names" property.
- **Variable** (Variable Selector) - A boolean variable whose current value determines the contact state (`true` = Closed, `false` = Open).

Open Relay

Opens a virtual relay (sets state to Open).

Parameters:

- **Name** (Dynamic List) - The name of the relay. Populated from the "Relay Names" property.

Close Relay

Closes a virtual relay (sets state to Closed).

Parameters:

- **Name** (Dynamic List) - The name of the relay. Populated from the "Relay Names" property.

Toggle Relay

Toggles a virtual relay between Open and Closed states. If the relay has no persisted state, it defaults to Closed.

Parameters:

- **Name** (Dynamic List) - The name of the relay. Populated from the "Relay Names" property.

Set Relay from Variable

Sets a virtual relay state from a boolean variable's current value.

Parameters:

- **Name** (Dynamic List) - The name of the relay. Populated from the "Relay Names" property.
- **Variable** (Variable Selector) - A boolean variable whose current value determines the relay state (`true` = Closed, `false` = Open).

Developer Information



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Support

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

Changelog

v20261112 - 2026-11-12

Added

- Added the Device Programmer, Light Relay, Network Requests, Sensor Aggregator, Sensor Multiplexer and Variable Expressions drivers to DriverCentral.