

CYCLIC TOGGLE CONTROLLER FOR CRESTRON HOME

Revision: 1.0

Date: 23 July 2026

SUPPORTED INSTALLATION

This is a Crestron Home driver for Crestron Home processors.

DESCRIPTION

Ultamation's Cyclic Toggle Controller provides a single-button open/stop/close/stop cycle for shades and entry devices where a simple trigger is preferred. Each press of the input triggers a state change and cycles through the next action in the sequence. For example, a press may open the device, a press mid-travel stops it, the next press closes it, and so on. A single trigger input can fully control a device that would otherwise need separate open, close, and stop commands.

Where a device provides open and closed feedback signals, these can be connected to the controller to signal if the device is fully open or fully closed, to stop the opening / closing sequence. For devices that do not provide feedback, a configurable travel timer acts as a fallback. Once the fallback timer elapses on an opening or closing state, the controller assumes the end state has been reached and updates accordingly, so the next press always triggers the next command.

INSTALLATION

The driver can be found under:

Drivers > Ui Tiles > Ultamation

Supported Models

The following names are also associated with the Cyclic Toggle Controller:

- Shades Controller
- Blinds Controller
- Shutters Controller
- Gate Controller
- Garden Gate Controller
- Curtain Track Controller
- Pool Cover Controller

Adding the Driver

Ensure a room is selected, and then click on the '+' against the Cyclic Toggle Controller driver item or any of the supported model names.

You will be asked to provide a descriptive name – this can be anything you wish.

The driver is licenced via the cloud, but an optional "offline" key can be requested under special circumstances. Please FIRST refer to the "Licensing" section below and then contact support@ultamation.com if you REQUIRE offline activation. The same offline key can be used for multiple driver instances in the same system.

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Offline Key (Optional)
For devices that operate permanently offline. Not required for devices with an Internet connection.

If you do not have a cloud licence and do not enter a valid offline licence key, the system will function for ONE hour and then control will be suspended. The offline licence key can be entered at any time after initial setup without having to reconfigure each tile.

The next parameter is the duration of the Timeout. This setting is mandatory to prevent infinite opening and closing states for devices with no feedback. This timeout duration should be longer than the maximum expected opening / closing time of connected device(s). Setting this timeout to less than the time of an opening or closing sequence may result in devices not being able to fully open or close within the given time frame.

If the timeout is set to 0 seconds, using a trigger action will instantly set the controller to a fully open or fully closed state. "Opening" and "Closing" states are ignored.

Example:

Below is an example of how the aforementioned parameters could be set:

Test Cyclic Settings

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Duration Timeout
Maximum time allowed for transitioning between OPEN and CLOSED states.

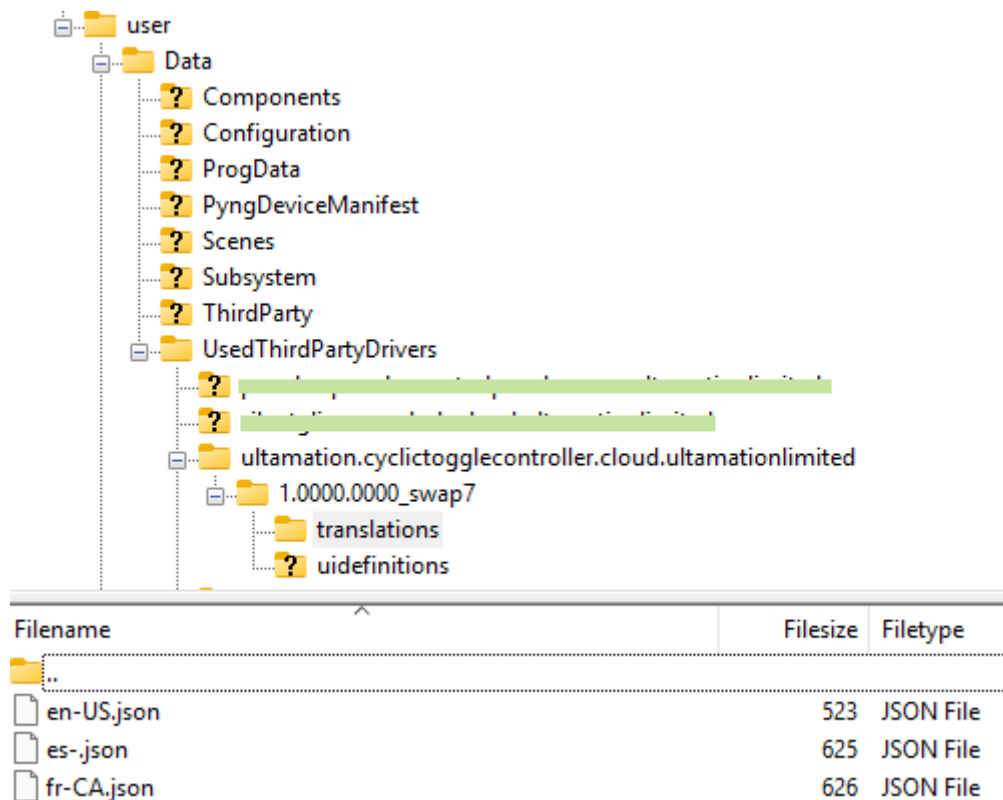
i

Offline Key (Optional)
For devices that operate permanently offline. Not required for devices with an Internet connection.

CREATING TRANSLATION FILES

To create a translation file, connect to the Crestron Home Processor using an FTP client and navigate to "user/Data/UsedThirdPartyDrivers". There should be a folder named "ultamation.cyclictogglecontroller.cloud.ultamationlimited", which will contain one or more folders with names corresponding to the version number of the driver.

Open the folder with the version currently in use. Inside, open the translations folder, and copy "en-US.json" to your PC. You can then change the translation values and save the json file as a new file with the correct language code as the name.



Example

To translate the driver to French (France), the following steps should be taken:

- Open the translations folder and copy "en-US.json".
- Translate keys to desired language, changing "Open" to "Ouvert", etc.
- Save the file as "fr-CA.json".

Now, copy the new json file to the same folder that the "en-US.json" file came from, and repeat for all languages you wish to create translations for. Reboot the processor, and the translations should then be usable.

If the translations do not show, and the device is running Crestron Home set to French, please check that the file name is correct.

UI TILE

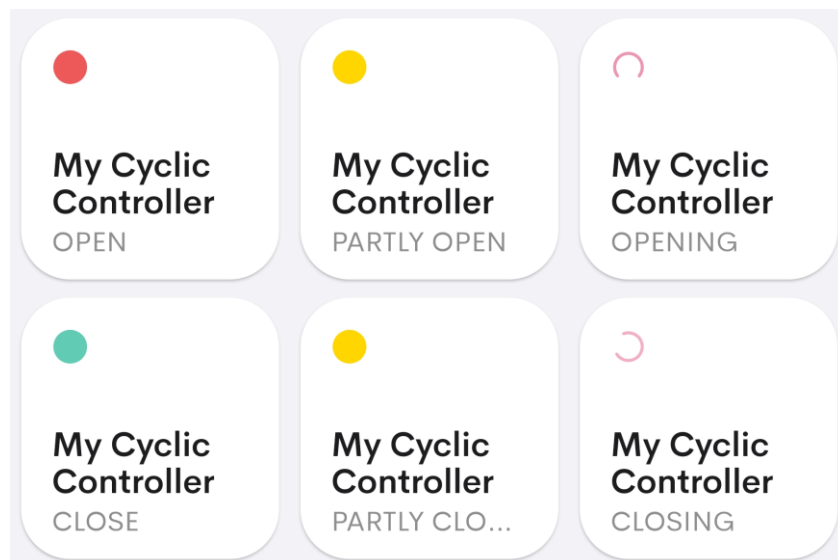
The UI Tile displays the current state of the connected device using a Colour Indicator and Status Text. Tapping the tile will trigger the "Trigger Controller" action.

The **Icon** displayed in the top left corner of the tile represents the current state of the device:

- Red – Closed
- Yellow – Partly Open / Partly Closed
- Green – Open
- Spinner – Opening / Closing

The **Status Text** displayed below the title represents the current action tapping the button will perform, along with if the device is opening / closing:

- OPEN
- OPENING
- CLOSE
- CLOSING
- PARTLY OPEN
- PARTLY CLOSED



PROGRAMMABLE ACTIONS

This controller features three programmable actions to be triggered by either the driver's tile or external devices.



Trigger Controller

This action is triggered by the tile, should be used either in sequence or as a quick action by an external trigger (like a physical button). When this action is triggered, a state change will begin. For example, when a connected device is in an open state, the trigger will change the state to "closing", update the tile's UI and raise the "State Change From (partly)Open" event.

If the controller's current state is "Opening" or "Closing", and this action is triggered, the "Stop State Change" event is raised and the controller will go to the "Partly Open" or "Partly Closed" state respectively. A second press will raise the other event (Partly Open > Closing > Partly Closed > Opening > Partly Open > etc.).

Feedback Trigger (Fully Open)

This action should be triggered by an external device (shades, etc.) when the device reaches its "Open" state. If the controller is in the "opening" state and receives this trigger, the state will snap to "Open". Receiving this action will always set the controller's state to "Open", regardless of its current state. "Partly Open" and "Partly Closed" states are ignored.

Feedback Trigger (Fully Closed)

This action should be triggered by an external device (shades, etc.) when the device reaches its "Closed" state. If the controller is in the "closing" state and receives this trigger, the state will snap to "Closed". Receiving this action will always set the controller's state to "Closed", regardless of its current state. "Partly Open" and "Partly Closed" states are ignored.

EVENTS

There are four events that this controller may raise:



State Change from Open / Partly Open

This event is raised when the controller changes its state from either "Open" or "Partly Open" and should be connected to the device's "Close" action.

State Change from Closed / Partly Closed

This event is raised when the controller changes its state from either "Closed" or "Partly Closed" and should be connected to the device's "Open" action.

Stop State Triggered

This event is raised when the controller is in either "Opening" or "Closing" states and the "Trigger Controller" action is called. This might be from either the controller's tile or any other button (physical or digital) linked via a sequence or quick action. This event should be connected to the device's "Stop" action.

Timeout Reached

This event is raised when the controller is in "Opening" or "Closing" states and a fully open (or closed) feedback has not been provided or received, so the duration of the timeout travel timer has elapsed.

SETUP AND USE

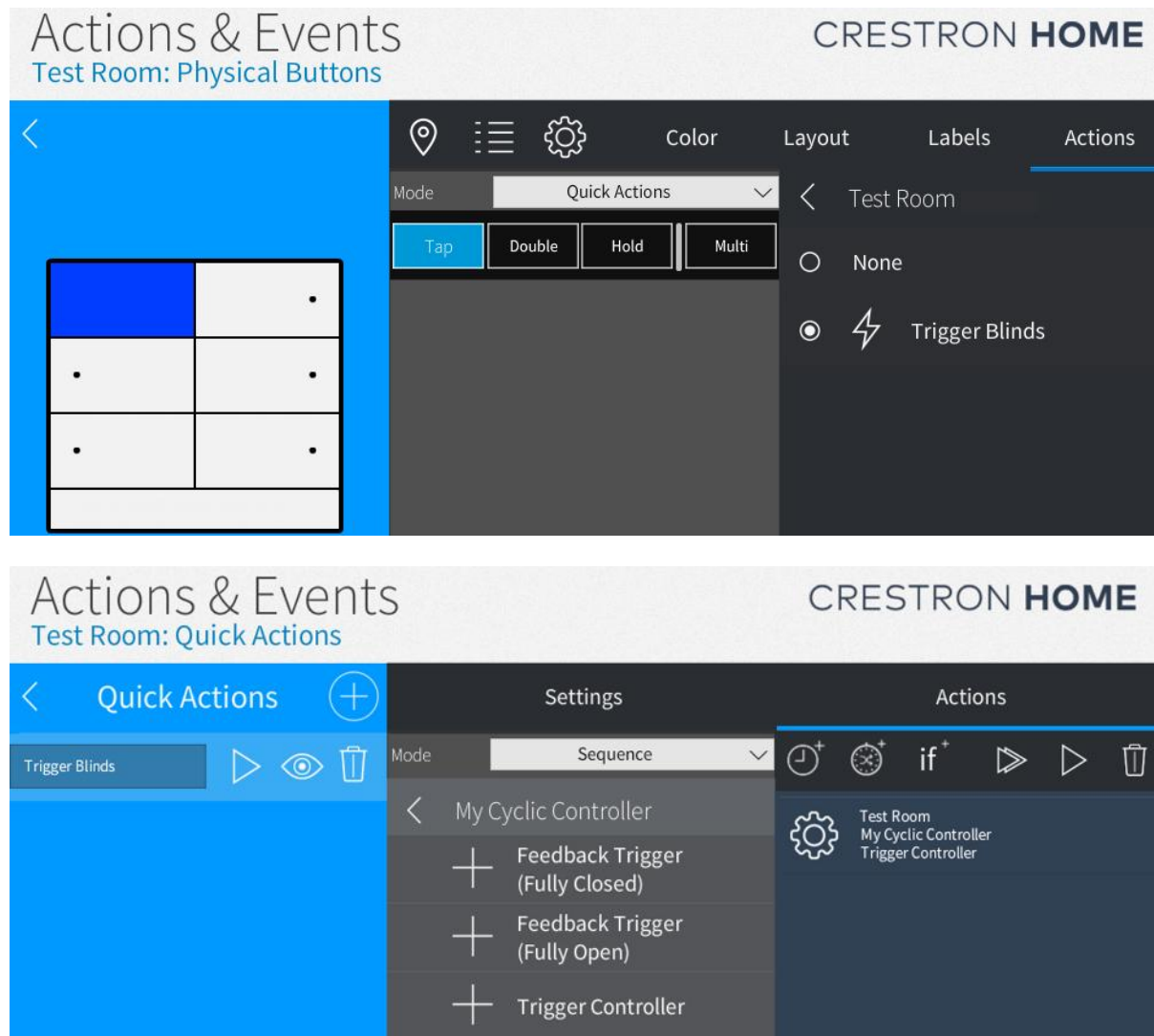
Variables and Conditions used to determine when open and closed states are achieved via external feedback may vary depending on device. Integrators should consult the device's manual for specific actions and events to link to this controller.

Quick action

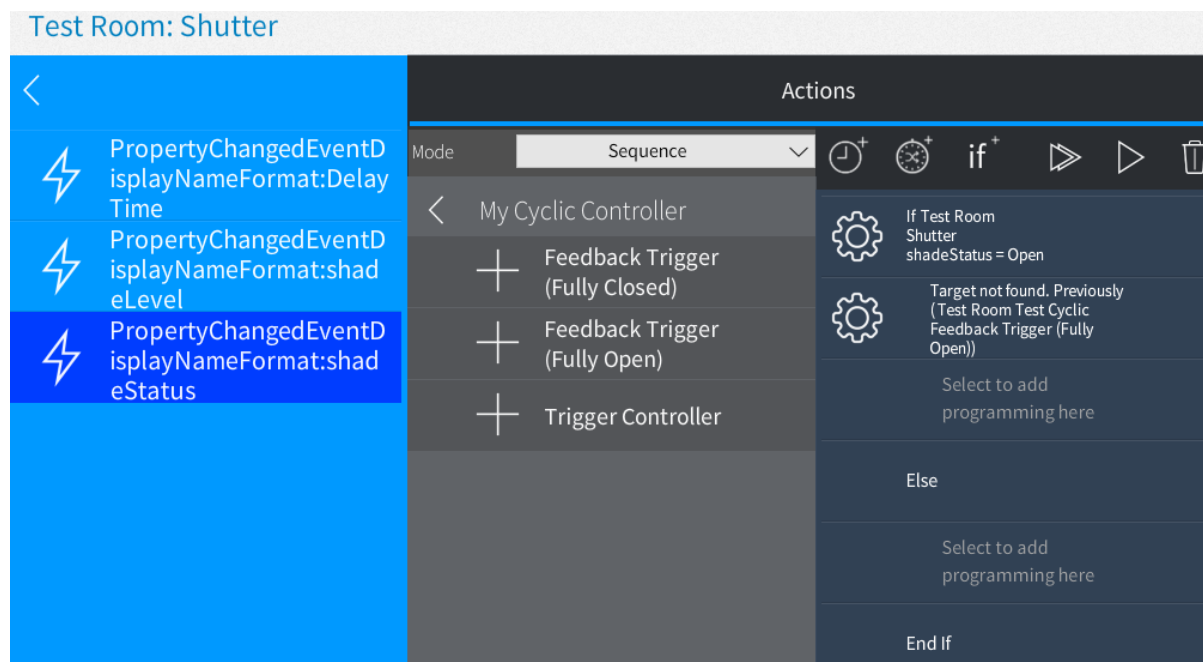
A quick action may be created and linked to the "Trigger Controller" action for extra devices to use the controller.

Example 1:

Below is custom quick action "Trigger Shades", running the sequence action "Trigger Controller" linked to a physical button on a Crestron CLWI-KPLCN device:

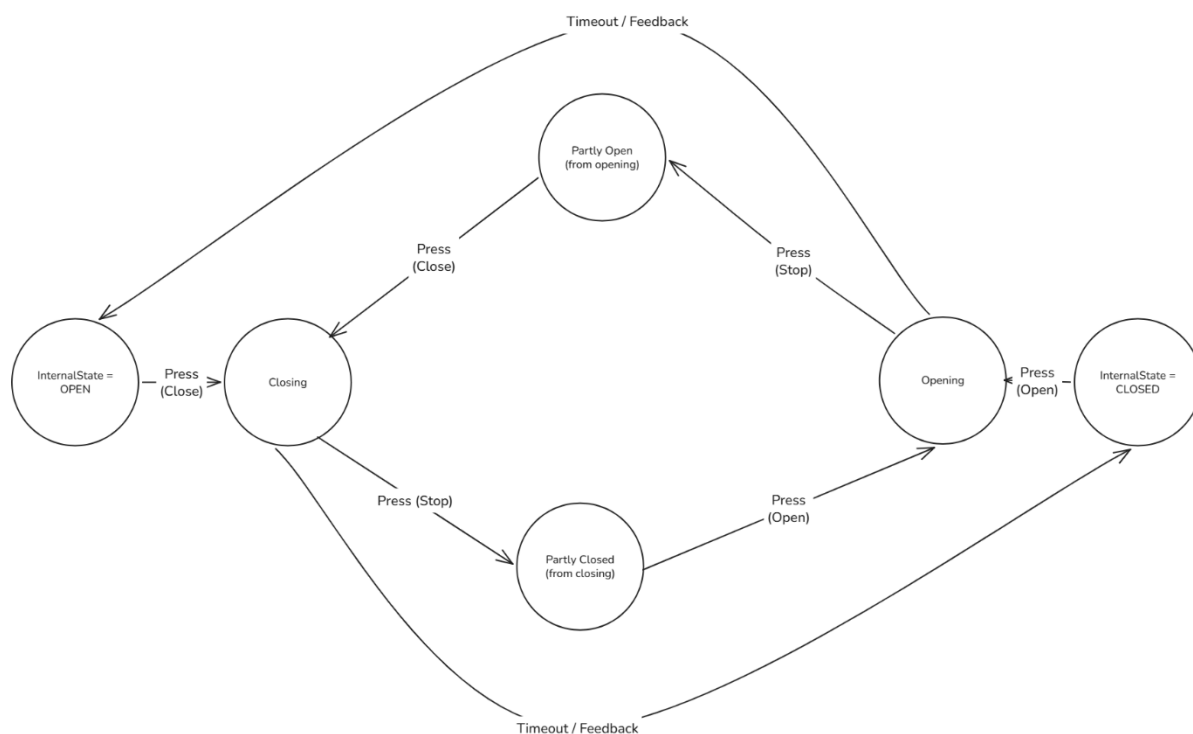
**Example 2:**

Below is the Actions & Events panel for a third party shades device. For this particular device, shadeStatus and shadeLevel properties are exposed and programmable. To determine if fully open feedback should be triggered, an integrator can check the shadeStatus string, or the shadeLevel using a conditional action.



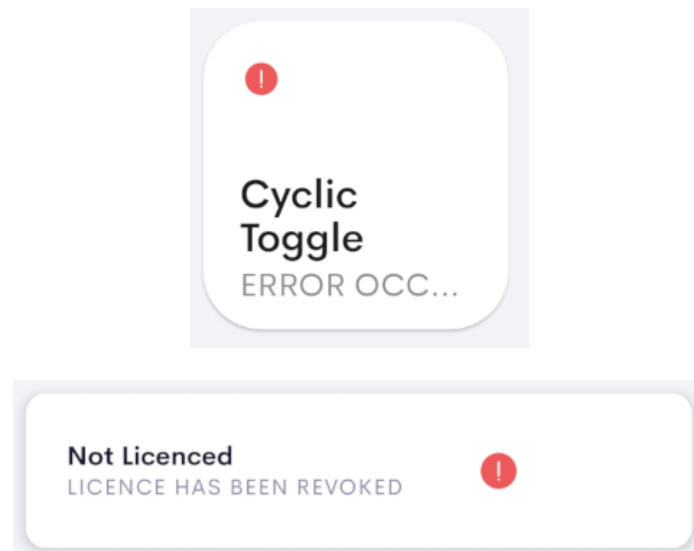
States

The diagram below illustrates how interacting with the controller through feedback and triggers will change the state of the controller:



LICENCE CHANGES

When requesting a licence status update from Ultamation's cloud licencing server, it is possible for a licencing error to occur, causing the UI tiles to switch to an error state and become unresponsive.



The following licencing errors may occur:

- Licence Expired – The trial period for this driver has expired, and a cloud licence for this driver has **NOT** been found.
- Licence Invalid – This driver has an invalid cloud licence.
- Licence Revoked – The cloud licence for this driver has been revoked.
- No Contact – There was an error contacting Ultamation's cloud licencing server.

SUPPORT

If you have any issues with an integration solution please let us know by contacting Ultamation support on support@ultamation.com and please include as much detail about your issue as possible, such as a recent processor error log.

Licence verification messages are posted to the error log, so please ensure you have checked this.

LICENCING

This integration solution (including software, images and all other associated assets distributed as part of the purchased download package) is licenced on a PER PROCESSOR basis.

A purchase should not be completed without correct information as refunds cannot be issued for errors or changes made to details following purchase.

This is an electronic product and there is no physical delivery.

The integration solution is provided without any warranty with respect to the reliability of the controlled device or changes to device protocol. We will endeavour, through best efforts, to maintain the integration solution's functionality and any bug fixes will be provided free-of-charge. Additional functionality may be released as a variation of this integration solution and this will be a separate, purchasable, product.

CLOUD LICENCE

This integration solution contacts Ultamation's licencing server at startup. If the server finds a matching licence for the integration solution and processor then the integration solution will be licenced. Otherwise, the integration solution will check the offline licence key. If you purchase a licence **after** you have loaded the integration solution, please reboot the system to see changes take effect.

If you purchased a licence **before** it was migrated to the cloud service, i.e. you have a licence key already, you must enter this into the **Offline Key** user attribute. If you purchased the integration solution **after** it was migrated, and you don't have a licence key, no further action is required.

If no licence exists for the product/processor the integration solution will enter a short trial period (ONE HOUR) to allow for verification of correct control or evaluation.

To request an OFFLINE key, please contact support@ultamation.com with your order details and a brief explanation why you REQUIRE offline activation. Ultamation reserve the right to refuse offline activation.

NOTE: Once an offline key has been issued no further licence changes will be granted. Moving the integration solution to a new processor will require an additional licence purchase.