Control4 Z-Wave S2

Setup Guide

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Z-Wave S2 Setup Guide

With a Control4© CORE 3 or CORE 5 controller you can add and control supported Z-Wave™ devices to your Control4 system. The Z-Wave radios in the CORE controllers are Z-Wave S2 compliant and support Z-Wave Long-Range devices. Z-Wave S2 requires a CORE 3 or CORE 5 controller running OS 3.3.1 or newer.

Note! This guide covers Z-Wave S2 on a CORE controller. For the Z-Wave module on an EA or CA-1 controller, see ctrl4.co/z-wave.

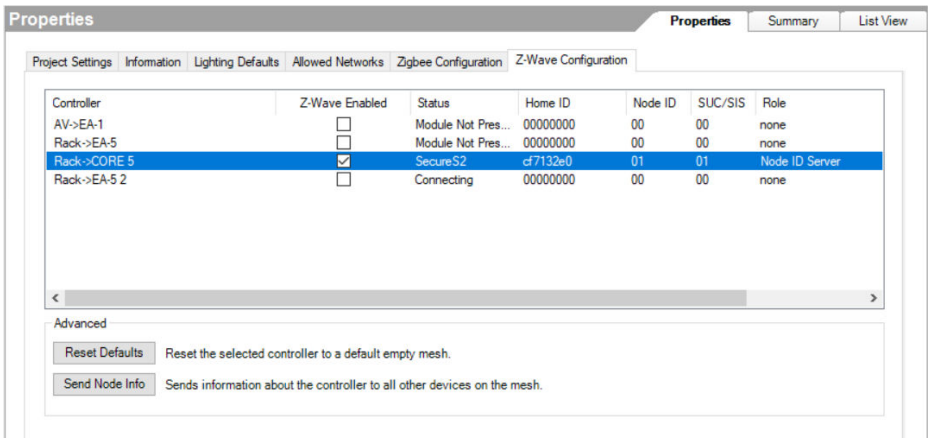
Important! For best results, do not install the controller running Z-Wave in a metal enclosure or near materials that interfere with wireless signals.

Configuring a Z-Wave S2 controller

You can use System Design to check the project properties, enable a Z-Wave controller, and view the status of the Z-Wave controller running in a Control4 project.

To configure a Z-Wave S2 controller:

1. In the *Project Tree*, select the **Project Name** (top line of the Project Tree) object for the project properties to appear.
2. Click on the **Z-Wave Configuration** tab.



3. Check the box under **Z-Wave Enabled** for the controller you want to be your Z-Wave controller.

Note: Only one Z-Wave controller can be configured in a Control4 project.

The configuration should show a status of **SecureS2** for Z-Wave S2 on a CORE controller when it is configured properly. If the *Status* field is empty, make sure the Z-Wave module is connected and installed properly, and that the CORE controller is online and identified in the project.

*Note: The Status field for a Z-Wave module on an EA or CA-1 controller will show **SecureS0** to indicate a legacy Z-Wave network when it is configured properly.*

Advanced configuration

Several options are available for advanced Z-Wave configurations in the Z-Wave Configuration tab in the project properties window. These are not required in most cases when operating Z-Wave devices with a Z-Wave module in a Control4 system. They can be used for extending operation with external devices and third-party Z-Wave controllers.

- **Reset Defaults**—Reset Defaults clears the Home ID on the Z-Wave controller and abandons any nodes on the existing network. Any Z-Wave devices previously joined to the network must be removed before they can join the new network. See "*Removing Z-Wave devices*." Use this procedure only in the event that the network primary controller is missing or otherwise inoperable.

Note: If this controller is the primary controller for your network, resetting it will result in the nodes in your network being orphaned and it will be necessary, after the reset to defaults, to reset and re-add all of the nodes in the network. If this controller is being used as a secondary controller in the network, use this procedure to reset this controller only if the network primary controller is missing or otherwise inoperable.

- **Send Node Info**—When connected to another mesh, Send Node Info sends information about the controller to all other devices on the mesh.

Adding Z-Wave devices

After configuring your Z-Wave controller, add drivers corresponding to the Z-Wave devices to your project. Many legacy Z-Wave device drivers will also need a motorization, sensor, or light driver, like a door or window driver, added into your Control4 project to represent the Z-Wave device in a Control4 Navigator.

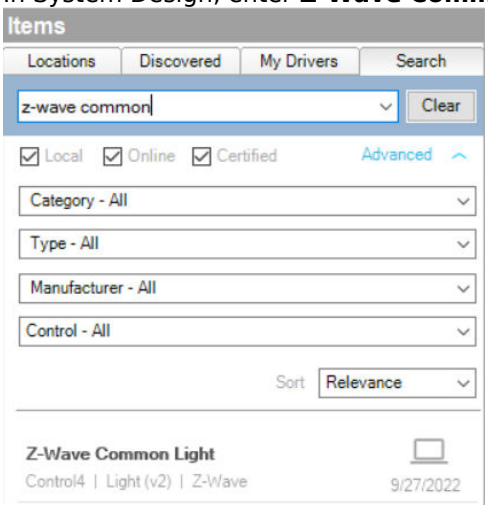
Z-Wave Common drivers

Z-Wave Common drivers can be used for Z-Wave S2 devices if there is not a manufacturer-specific Z-Wave driver. Z-Wave Common drivers include:

- Z-Wave Common Light—You can use this common light driver for many Z-Wave S2 lights and dimmers.
- Z-Wave Common Sensor—You can use this common sensor driver for many Z-Wave S2 sensors, like a window sensor or a motion sensor.
- Z-Wave Common Relay—You can use this common sensor for many Z-wave S2 relays, like a door lock or outlet switch.

To add a Z-Wave Common driver into your project:

1. In System Design, enter **Z-Wave Common** in the *Search* tab.

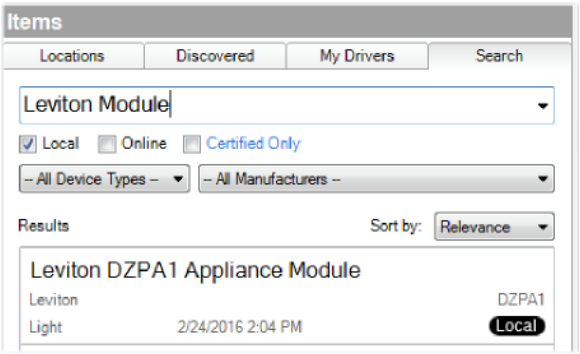


2. **Double-click** on the driver to add it into the project. You can also right-click on the driver and select **Add to Project** to add the driver.
3. If you have more than a couple Z-Wave devices, it is recommended that you rename this driver to help with troubleshooting multiple devices. **Right-click** on the driver and select **Rename**. Enter a descriptive name and press **Enter.**

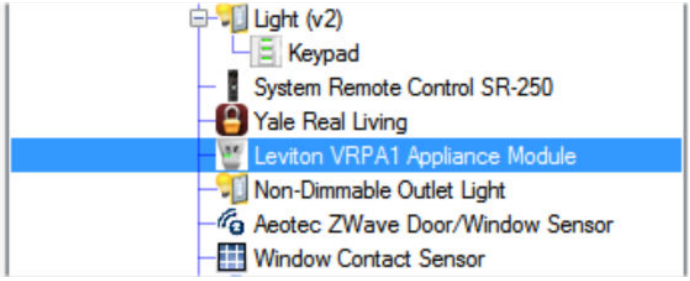
Z-Wave legacy device drivers

To add a Z-Wave legacy device driver into your project:

1. In System Design, enter the name of driver in the *Search* tab.



2. **Double-click** on the driver to add it into the project. You can also right-click on the driver and select **Add to Project** to add the driver.



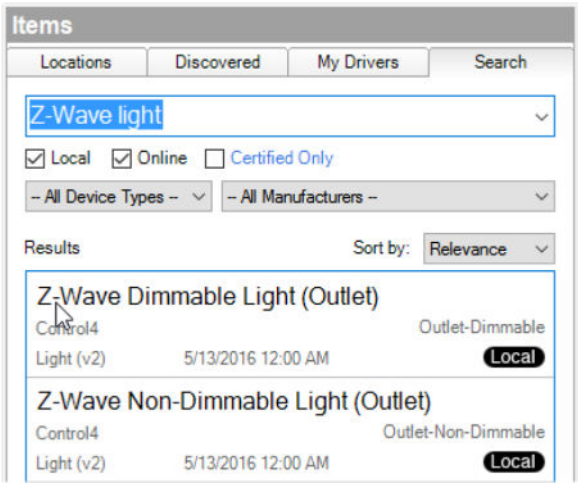
3 If you have more than a couple Z-Wave devices, it is recommended that you rename this driver to help with troubleshooting multiple devices. **Right-click** on the driver and select **Rename**. Enter a descriptive name and press **Enter.**

Most Z-Wave device drivers will also need a motorization, sensor, or light driver. For example, a window contact sensor device driver also needs the Window Contact Sensor driver and an outlet module device driver needs the Z-Wave Dimmable Light (Outlet) driver.

Motorization, sensor, and light drivers

To add a motorization, sensor or light driver into your project:

1 In System Design, enter the name of the driver in the search field in the *Search* tab.



2 **Double-click** on the driver to add it into the project. You can also right-click on the driver and select **Add to Project** to add the driver.

3 This is the driver that will show up in the UI, rename the driver to represent the device it is controlling. **Right-click** on the driver and select **Rename**. Enter the name to be shown in the UI and press **Enter**.

Connecting Z-Wave devices

After you have added all the necessary device drivers and motorization, sensor or light drivers into your project, you are ready to make the necessary connections for these drivers.

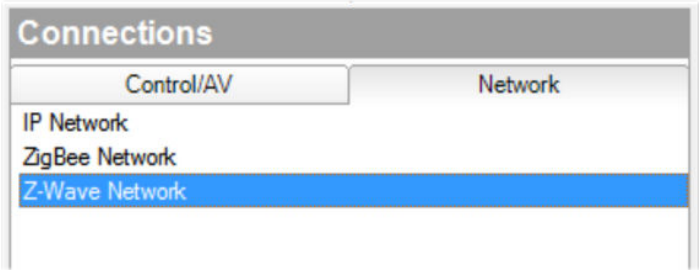
There are two types of connections that need to be made:

- Connect Z-Wave device drivers to the Z-Wave controller and identify them into the project
- Connect Z-Wave device drivers virtually in the Control4 project to motorization, sensor, or light drivers

Connecting Z-Wave S2 device drivers to the Z-Wave network

To connect a Z-Wave device driver to the Z-Wave controller:

1. In Connections in the *Network* tab, select **Z-Wave Network**.

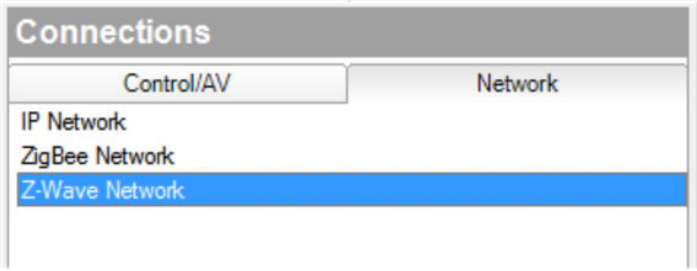


2. In *Available Devices* on the right, click **Add**.
3. Identify (add) the Z-Wave device according to the manufacturer's instructions, usually by pressing a Z-Wave button on the device. See the documentation for the Z-Wave device for more information.
4. For Z-Wave S2 devices, If prompted, enter the pin. The pin is usually found on the device itself and is required to enable secure Z-Wave S2 functionality. If the pin is entered incorrectly, the device functionality will be limited.
5. Click and drag the device from *Available Devices* to the driver for the Z-Wave device in the middle pane and release the mouse.

Connecting legacy Z-Wave device drivers to the Z-Wave network

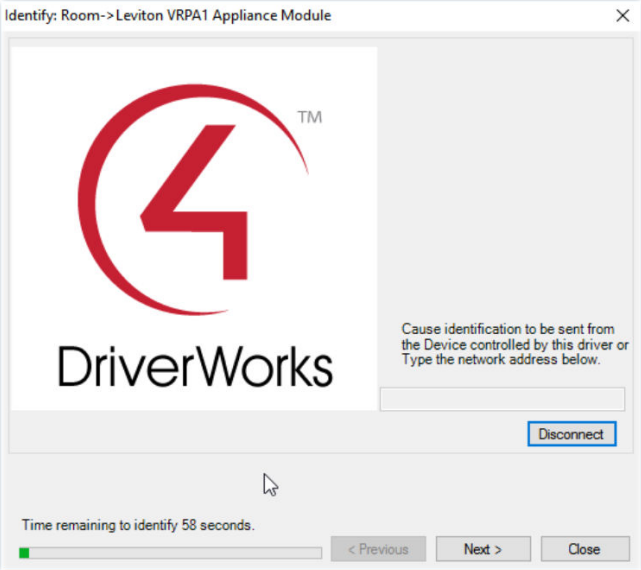
To connect a Z-Wave device driver to the Z-Wave controller:

1. In Connections in the *Network* tab, select **Z-Wave Network**.



A list of Z-Wave device drivers will show in the *Z-Wave Network Connections* window.

2 **Double-click** on the Z-Wave device driver to open the identify window or highlight the device and click on the **Identify** button.

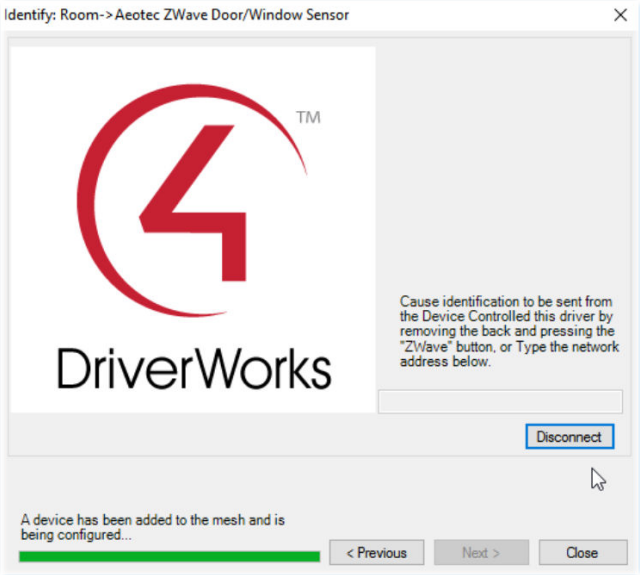


3 Identify (add) the Z-Wave device according to the manufacturer's instructions, usually by pressing a Z-Wave button on the device. See the documentation for the Z-Wave device for more information.

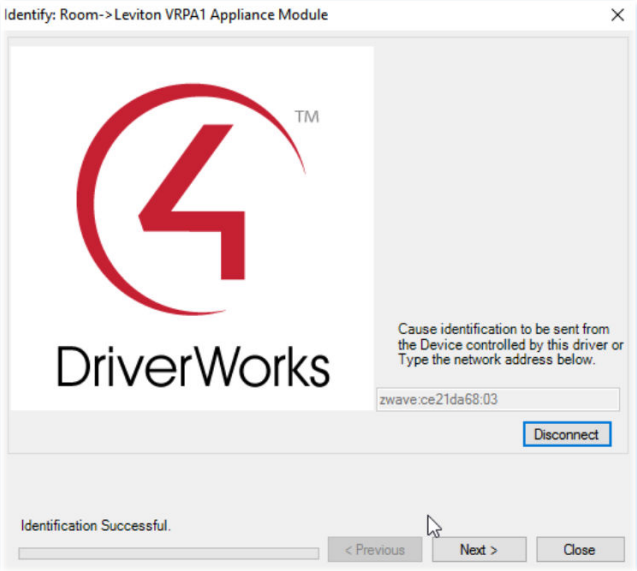
Note: You have 60 seconds to identify (add) the Z-Wave device to the network and a timer will show the time remaining. If you run out of time, close the window and try to identify the Z-Wave device again.

4 After adding the Z-Wave device to the Z-Wave network, the driver will do some additional configuration.

Important: Do not skip this step by closing the window or clicking next!



5 If the device is added, configured, and identified successfully, the address will show in the address field and the timer instructions will change to say "Identification Successful".



Note: If the Z-Wave device will not identify (add), you should try to remove the device and then try to identify the device again. See "Removing Z-Wave devices".

Using the Z-Wave SmartStart agent to add devices

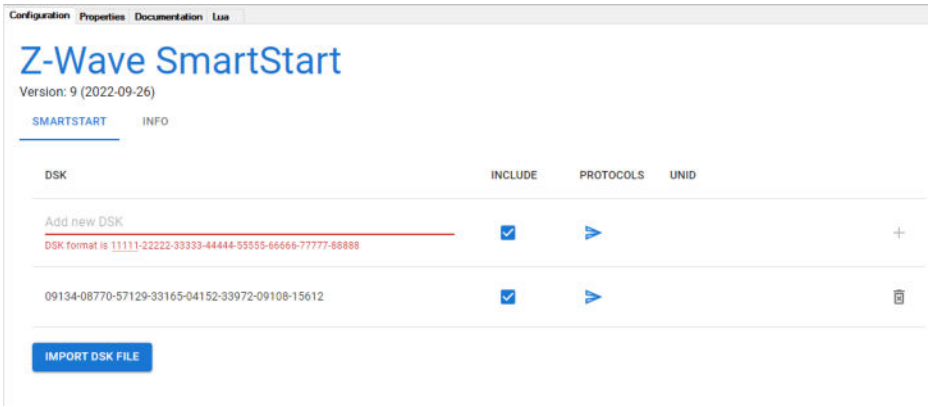
You can add SmartStart-enabled devices into a network by entering the DSK into a Node Provisioning List of a controller providing SmartStart inclusion. No further action is required and the SmartStart device is added automatically when switched on in the network vicinity.

The Control4 CORE controllers can perform SmartStart inclusions both for Z-Wave and Z-Wave Long Range nodes.

Use the Z-Wave SmartStart agent to add Z-Wave devices to your Z-Wave S2 network on a Control4 CORE controller without having to send the identify sequence from the device.

To add the Z-Wave SmartStart agent:

1. In the **Agents** view, click **Add.**
2. Double-click the **Z-Wave SmartStart** agent to add it to the project.



To add a Z-Wave device using the SmartStart agent:

1. In Agents, select **Z-Wave SmartStart.**
2. Enter the DSK of the Z-Wave device. The device must support Z-Wave SmartStart protocols.

Other options in the Z-Wave SmartStart agent

The SmartStart tab in the Z-Wave SmartStart agent consists of a table populated with entered device specific keys (DSK) and corresponding SmartStart parameters.

DSK—DSK is used both for unique identification of the device and secure key exchange or out-of-band authentication. Generally, its format can be one of the following:

- 8 groups of 5 decimal characters separated by hyphens
- 16/18/22/26 groups of 2 hexadecimal characters separated by hyphens

Z-Wave SmartStart agent uses the first format (e.g. "11111-22222-33333-44444-55555-66666-77777-88888").

INCLUDE—There is an **INCLUDE** checkbox for each DSK. **INCLUDE** is used to indicate if the device identified by the DSK must be included into the network. In case that Include checkbox for corresponding DSK is not selected, the Z-Wave protocol controller will not include the device when it detects its presence.

PROTOCOLS—By clicking on **Arrow** under protocols, the SmartStart agent displays a list of preferred protocols for SmartStart. This is a prioritized list and is used to indicate the preferred protocols for inclusion, the first element being the highest priority. During a SmartStart inclusion, the protocol controller initiates the inclusion with the protocol of highest priority that is supported by the device. This option can be useful in case multiple protocols are supported by the device.

UNID—UNID is the SmartStart parameter which is used to advertise which UNID has been assigned to the SmartStart entry. UNID is in the form "zw-homeID-nodeID". The UNID field indicates that the unique identifier is assigned to the node. A non-empty value means that it is included in our network

+—Click on **+** to add another DSK in SmartStart list with its own SmartStart parameters.

IMPORT DSK FILE—Click **IMPORT DSK FILE** to import device specific keys from a file. In the file, one DSK must be in each line.

NOTE: If you use another window outside of Composer Pro and switch back, and then need to enter text in the SmartStart agent, click to another tab like System Design and back to refresh the agent.

NOTE: Bootstrapping Mode setting is not available for provisioning list entries.

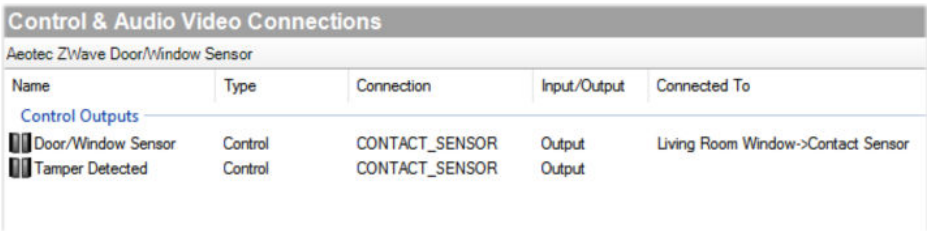
NOTE: Advanced Joining setting (selecting which keys shall be granted) is not available for provisioning list entries.

NOTE: If the S2 Security Bootstrapping is handed-over by another controller, check the INFO tab of the
Z-Wave SmartStart agent for a DSK/PIN input dialog.

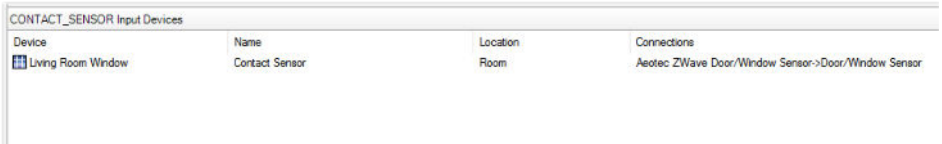
Connecting Z-Wave device drivers to motorization, sensor or light drivers

To connect a Z-Wave device driver to a motorization, sensor or light driver:

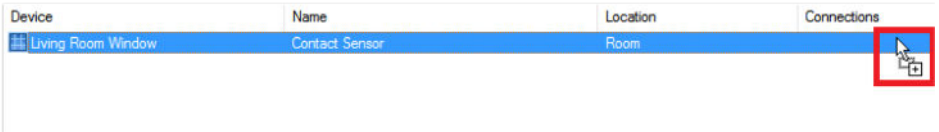
1. In Connections under the Control/AV tab, select the Z-Wave device driver. The *Control & Audio Video Connections* window will show the available connections.



2. Click on the Control Output connection **Door/Window Sensor** and the available devices to connect appear below in the *CONTACT_SENSOR Input Devices* window.



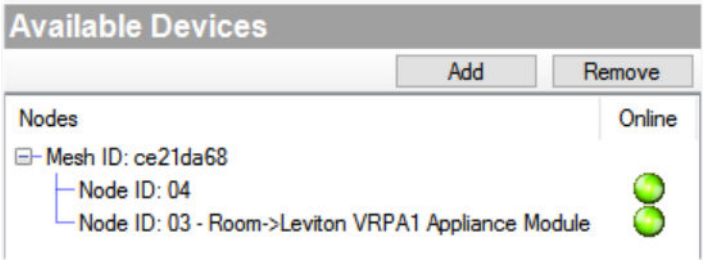
3. **Click and drag** the contact sensor output in the upper window to the contact sensor input in the lower window. When a valid connection is available, the cursor changes and has a + symbol. **Release** the mouse button to make the connection.



When the Z-Wave devices are connected to the appropriate motorization, sensor or light drivers, the UI will now show appropriate drivers to represent the Z-Wave devices. Now the Z-Wave device drivers must be connected to the Z-Wave controller and identified in the project.

Available Devices

When the device is identified and added to the Z-Wave network, the Available Devices window will show the device online with a green icon. A Z-Wave device that is added to the Z-Wave network and also identified to a device driver will show the device driver name and location next to the Node ID.



Z-Wave devices that are added to the Z-Wave network, but not identified to a device driver will show up with just the Node ID.

Removing Z-Wave devices

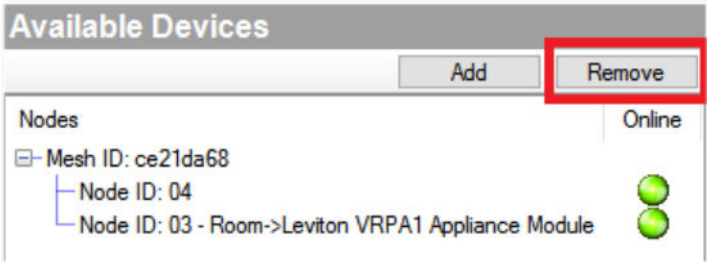
Z-Wave devices can be removed from any network at any time by using the Remove button found in *Available Devices*. This is true even if they are not part of the network performing the remove operation.

Removing Z-Wave devices from a previously installed network requires an available Z-Wave controller and interaction with the Z-Wave device-usually by pressing the Z-Wave button on the device. There is no “Remove from mesh” button press sequence similar to ZigBee Pro devices.

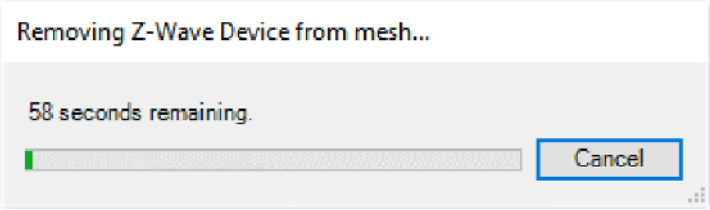
Removing Z-Wave devices from the network

To remove a Z-Wave device from the network:

1. In Connections in the Z-Wave Network, click **Remove** in the *Available Devices* window.



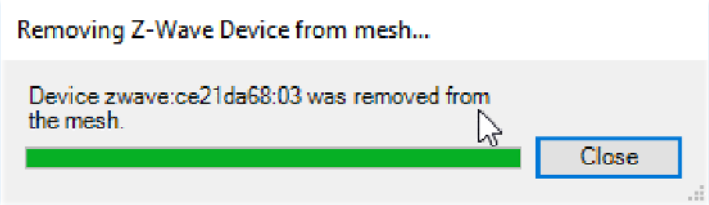
The Removing Z-Wave Device window appears and a 60 second timer starts.



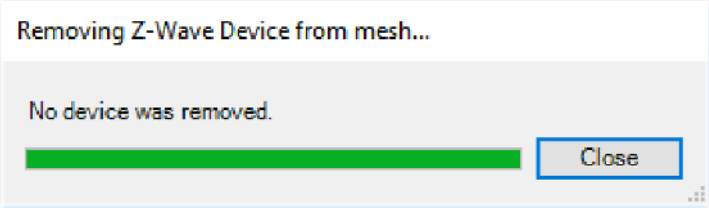
2 Remove the Z-Wave device from the network according to the manufacturer's instructions, usually by pressing a Z-Wave button on the device. See the documentation for the Z-Wave device for more information.

*Note: If the device is not removed from the network before the timer ends, close the window and click the **Remove** button to try again.*

3 If the device was removed successfully, the timer will stop and the window will say the devices was removed from the network.



4 If the device is not removed from the network before the timer ends, close the window and click the **Remove** button to try again.



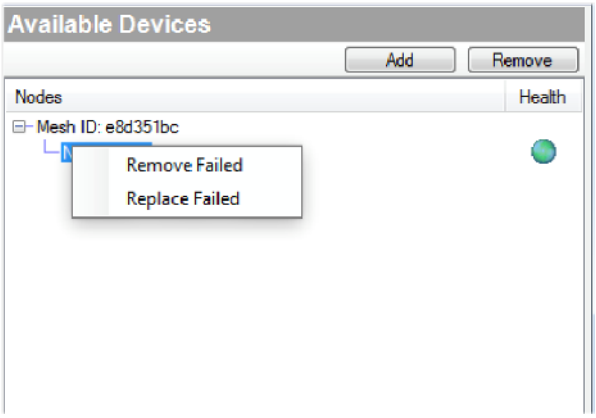
Removing failed Z-Wave devices

If a Z-Wave device has become lost or inoperable so that a physical button press cannot be performed to remove it from the network, the Remove Failed option is provided. Remove Failed is used to force a Z-Wave device off of the network.

Important! Do not use this option if the device is operational. Use this option only if a device has physically failed and is inoperable!

To remove a failed Z-Wave device:

1 In Connections under Z-Wave Network, right-click on the **Node ID** of the failed Z-Wave device, and select **Remove Failed.**



2. The controller will make one last attempt to communicate with the Z-Wave device. If the device successfully communicates, the Remove Failed will not proceed and the device must be removed using the Remove button instead. Remove the device according to the manufacturer's instructions, usually by pressing the Z-Wave button.
3. If the communication attempt fails, the device will be removed from the network and will not be tracked as a Z-Wave node by the Z-Wave controller. Be aware that this device must now be reset to defaults before using the device again within the system. See the manufacturer's instructions for more information.

Advanced concepts

Replication—Control4 controllers do not implement controller replication. The controller will respond appropriately to replicate requests.

Basic Command Class—Control4 controllers allow controlling unknown devices with the Basic Command Class (see Interoperability below). Control4 controllers "Do Nothing" when receiving Z-Wave Basic Command Class commands.

Interoperability—Control4 controllers allow adding unknown Z-Wave devices through a "Z-Wave2 Universal" driver. When a device is connected to this driver, it can be controlled through the Basic Command Class using the properties page for the device. Information reported from the device is also be available on this properties page. Non-preferred devices can also be added to a Z-Wave mesh using the *Available Devices* Add button. This allows devices to be added and then associated using manufacturer specific methods for doing so. See manufacturer specific documentation on how to create associations on specific devices.

Association Command Class—Control4 controllers implement associations on the Lifeline association group (group 1). This association is used to provide device reset information to an associated device. A single associated device is supported.

Repeater Functionality—This product can be operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers. All mains operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

Using Z-Wave2 Universal Driver

This driver provides control for any Z-Wave device based on Silicon Labs Unify SDK. Add in one Z-Wave2 Universal Driver for each device.

Compatible devices—Features implemented in this driver should be supported for all Z-Wave certified devices.

Driver Limitations

- Feature support is limited only on SDK UCL MQTT topics
- No Z-Wave Scene cluster support
- No OS 3.3.0 color support

Supported Control Transports—This driver communicates via Control4 Z-Wave server.

Control Transport Configuration—This driver will be automatically bound after installation.

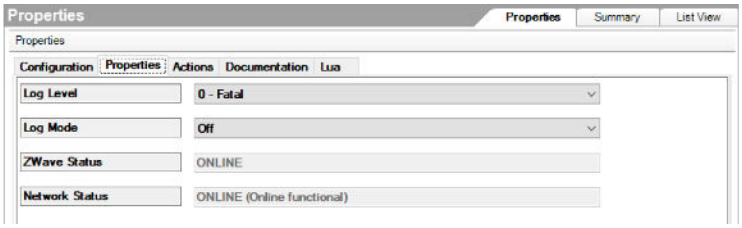
Quick Configuration

To add the Z-Wave2 Universal Driver:

1. In Composer Pro System Design view, search for “ZWave2 Universal” in the Items tab.
2. Double-click to add the driver to the project.

To add (discover) devices:

1. In the Composer Pro Connections > Network > Z-Wave Network tab click **Add** button in the right corner.
2. Discovered devices will appear under the Available Devices section.
3. Connect discovered device with universal driver (use drag and drop).
4. Verify successful connection-in the Properties tab, ZWave Status and Network Status should be populated
   - ZWave Status: ONLINE
   - Network Status: ONLINE (Online functional)



To remove devices:

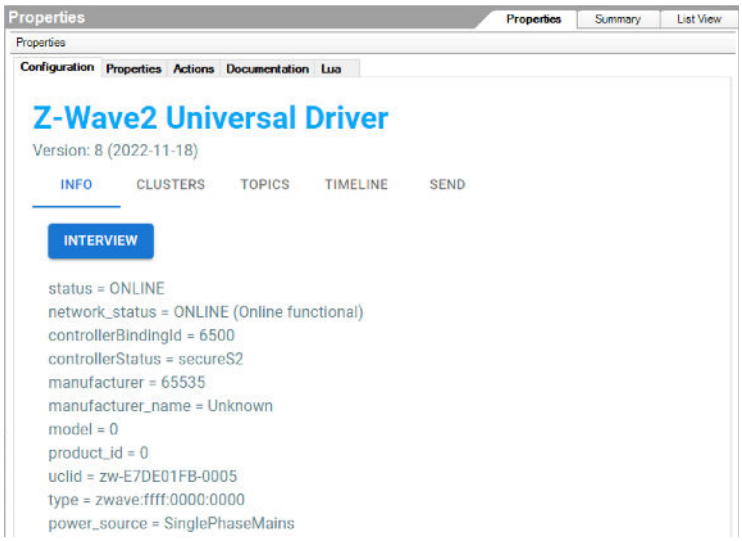
1. In Connections > Network > Z-wave Network, select the device and click **Disconnect**.
2. Proceed with removing device as described in “Removing Z-Wave devices”.

Z-Wave2 Universal Driver Properties

In Composer, the Z-Wave2 Universal Driver Properties window consists of the following tabs:

- **Info**—This tab displays following information about device:
  - Status

- Network status
- Controller binding ID
- Controller status
- Manufacturer
- Manufacturer name
- Model
- Product ID
- UCL ID
- Type
- Power source



Click the **INTERVIEW** button to discover the capabilities of a device that has been joined to the Z-Wave network. The capabilities show in INFO tab of Z-Wave2 Universal Driver.

- **Clusters**—This tab displays all clusters and their corresponding end points that are specified for device. By clicking on radio button with corresponding end point and cluster, driver will display all attributes and commands for that cluster which are obtained from MQTT. If device has writable attributes, they will be displayed with checkboxes in separate box. In order to change some of these attributes, it is necessary to select corresponding checkbox for that attribute firstly, enter new value and then click on "WriteAttributes" button.

- **Topics**—This tab displays clusters and their topics sorted by end points in tree form. It's possible to view content of payload for every topic by clicking on eye symbol.

- **Timeline**—This tab displays table with latest topics that are received from MQTT in real time. It's possible to clear timeline table by clicking on "Clear Timeline".

- **Send**—This tab allows to send manually entered payload for selected end point and command.

Driver Properties

- **ZWave Status**—This property holds information about status of the Zwave Agent and driver - agent connection. If this property is NOT set to ONLINE, there is a problem interfacing Control4 Zwave Agent.
- **Network Status**—This property holds information about status of the Z-Wave network and the driver connectivity. If this property is NOT set to ONLINE (Online functional), there is a problem with Z-Wave network.

Table of Supported Command Classes

Command Class	Supported Version	Support	Control	Security Level	Comment
Association	2	+	+	Network Scheme	
Association Group Info (AGI)	3	+	+	Network Scheme	
Basic	2		+	N/A	
Battery	3		+	N/A	
Binary Sensor	1		+	N/A	
Binary Switch	2		+	N/A	
Central Scene	3		+	N/A	Partial control: 1.Central Scene Notification is not available in the UI
Configuration	4		+	N/A	
Color Switch	3		+	N/A	Partial control: 1.Durations are ignored 2. No support for Start/Stop Level Change 3.No support for other Color Component IDs other than 0, 1, 2, 3, 4
Device Reset Locally	1	+		Network Scheme	
Door Lock	2		+	N/A	Partial control: 1. Configuration of Door Lock is not supported
Firmware Update	7	+		Network Scheme	
Inclusion Controller	1	+		Unencrypted	
Indicator	3	+	+	Network Scheme	
Manufacturer Specific	2	+		Network Scheme	
Multi Channel	4			N/A	
Multi Channel Association	3	+		Network Scheme	
Multi Command	1	+		Unencrypted	
Multilevel Sensor	11		+	N/A	Partial control: 1. Not all scales are supported 2. Not all types are shown in the UI
Multilevel Switch	4		+	N/A	Partial control:

Command Class	Supported Version	Support	Control	Security Level	Comment
					1. The value 0xFF canniot be used in Multilevel Switch Set Commands 2.No Start/Stop Level Change
Meter	6		+	N/A	Partial control: 1. Meter Reset Command is not supported
Notification	8		+	N/A	Partial control: 1. No Push/Pull discovery is done 2. No Pull sensor support 3.Unknown types are not supported 4. No Regular probing is done
Powerlevel	1	+		Network Scheme	
Security 0	1	+		Unencrypted	
Security 2	1	+		Unencrypted	
Supervision	2	+		Unencrypted	
Thermostat Mode	3		+	N/A	Partial control: 1.Setting Thermostat Mode is not supported
Thermostat Setpoint	3		+	N/A	Partial control: 1.No discovery of ambiguous types in v1-v2 2.Only a few setpoints can be configured 3.Precision/size fields in the set are determined automatically by the controller
Time	1	+		Unencrypted	
Transport Service	2	+		Unencrypted	
Version	3	+	+	Network Scheme	
Wake Up	3		+	N/A	
Z-Wave Plus™ Info	2	+		Unencrypted	

Using supported command classes

Z-Wave Universal Driver has the following tabs: INFO, CLUSTERS, TOPICS, TIMELINE, SEND and WARNINGS. The INFO tab contains general information about the device. In the CLUSTERS tab, you can see all clusters and corresponding endpoints specified for the device. The TOPICS tab shows topics sorted by endpoints in the tree form. The TIMELINE tab displays a table with latest topics that are received from MQTT in real time. Z-Wave Universal Driver allows you to send commands by manually entering payload for selected endpoint and command using SEND tab.

NOTE: If you use another window outside of Composer Pro and switch back, and then need to enter text in the Driver Configuration view, click to another tab like Driver Properties and back to refresh the driver.

Association Command Class

CORE 3/CORE 5 controller partially controls Association Command Class. It does not implement a UI which allows an end user to establish associations between nodes.

Grouping Identifier	Maximum Number of Associations	Group Name	Usage/Trigger
1	10	Lifeline	ZPC reset will issue a Device Reset Locally Command

Association Group Information Command Class

CORE 3/CORE 5 controller partially controls Association Group Information Command Class.

Basic Command Class

CORE 3/CORE 5 controller controls Basic Command Class. It is possible to set and see the state of Basic Command Class.

To see the state of the Basic Command Class, navigate to CLUSTERS tab of the Z-Wave universal Driver and choose **OnOff** cluster. The state is represented with the small light bulb icon. When the color of the light bulb icon is grey, the state of the included node is off. When the color of the light bulb icon is white, the state of the included node is on.

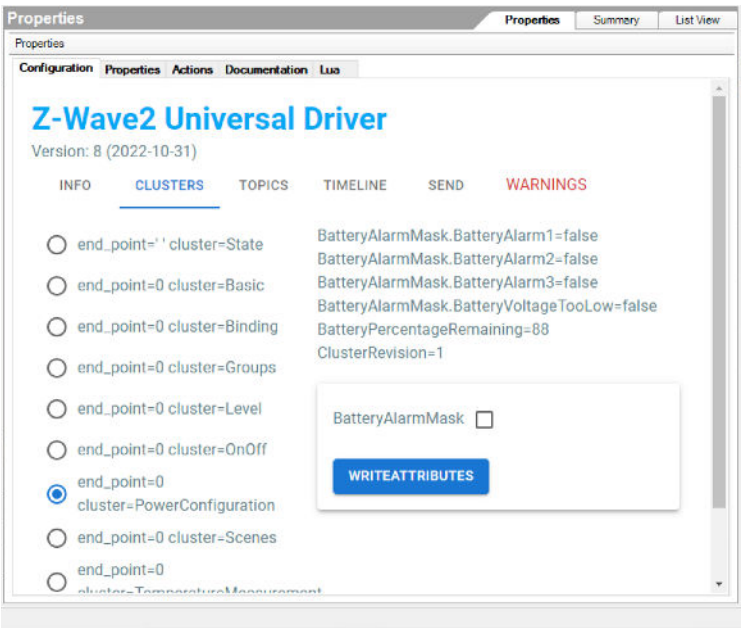
To set the state of the Basic Command Class, use one of the available commands: OFF, ON, TOGGLE.

Battery Command Class

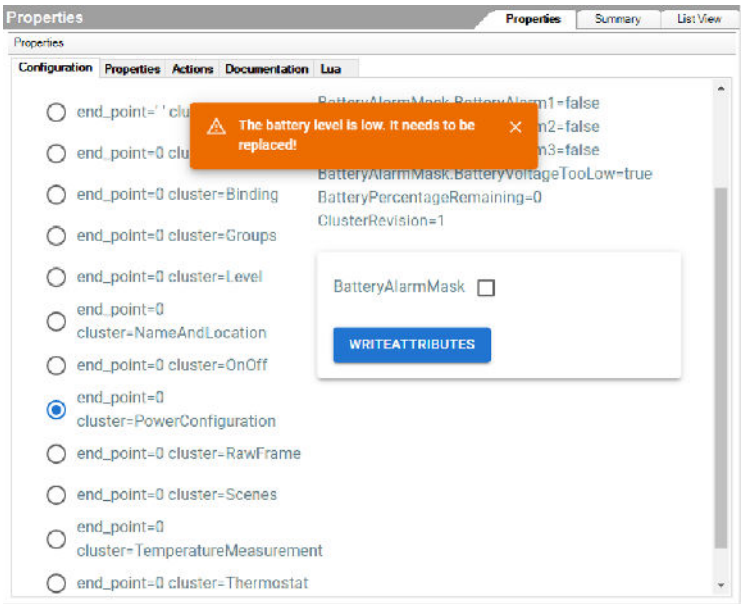
CORE 3/CORE 5 controller controls Battery Command Class. It is possible to see the current Battery level for the Battery supporting node.

To check the Battery Level Status, navigate to the CLUSTERS tab of the Z-Wave Universal Driver and choose **PowerConfiguration** cluster.

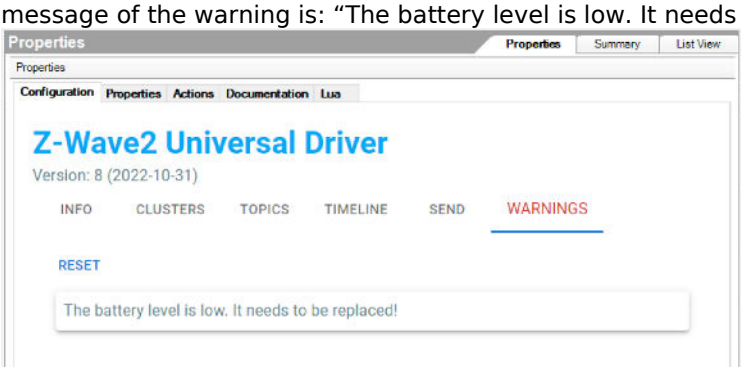
The remaining percentage of the battery is displayed in **BatteryPercentageRemaining** field.



If the Battery Level is too low, a warning message pops up in Z-Wave Universal Driver.



This warning can also be seen in the WARNINGS tab of Z-Wave Universal Driver. The message of the warning is: “The battery level is low. It needs to be replaced!”



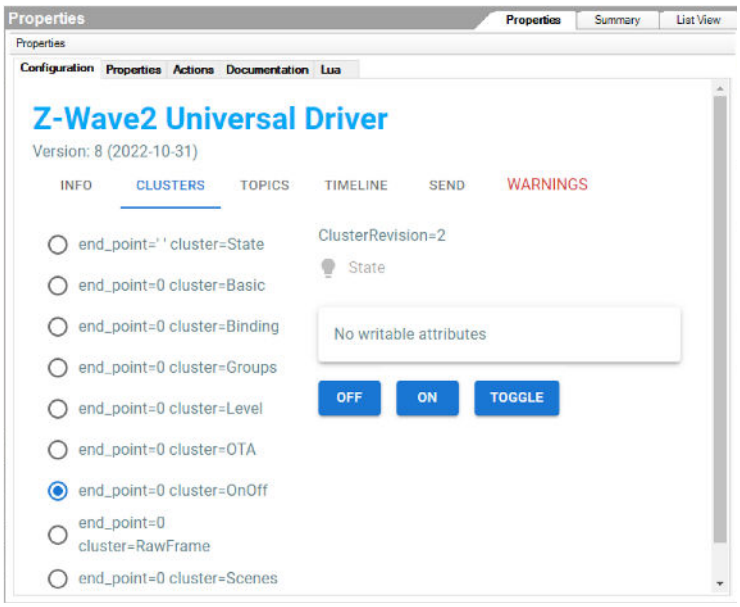
To erase previous warnings, press the **RESET** button in the WARNINGS tab.

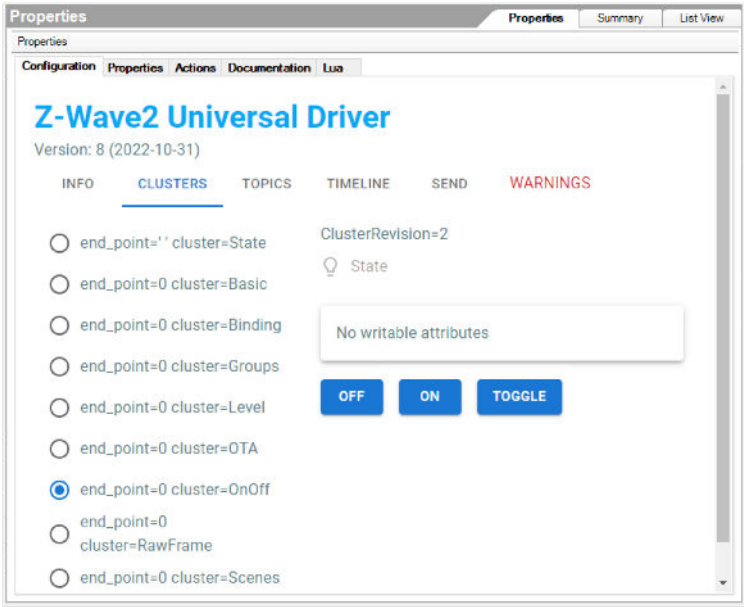
Binary Switch Command Class

CORE 3/CORE 5 controller controls the Binary Switch Command Class. It is possible to set and see the current state of the Binary Switch supporting node.

To send Binary Switch Set command, navigate to the CLUSTERS tab of the Z-Wave Universal Driver and choose **OnOff** cluster. To trigger Binary Switch Set, select one of three available buttons: OFF, ON and TOGGLE.

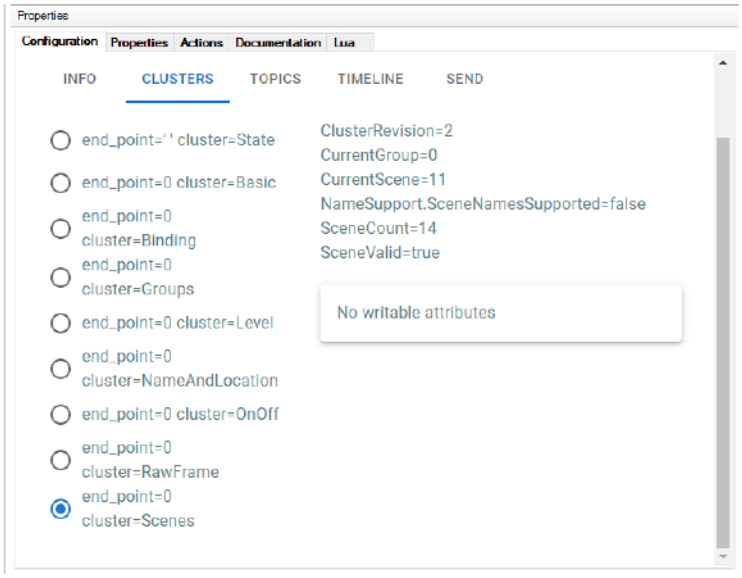
The state of Binary Switch is represented with the small light bulb icon. When the color of the light bulb icon is gray, the Binary Switch is turned off. When the color of the light bulb icon is white, the Binary Switch is turned on.





Central Scene Command Class

CORE 3/CORE 5 controller partially controls Central Scene Command Class.



It is possible to see the number of Scenes that are supported by a Central Scene supporting node. Also, it is possible to see the identifier of a current scene.

To see the state of the Central Scene Command Class, navigate to the CLUSTERS tab of the Z-Wave Universal Driver and choose **Scenes** cluster. Check **SceneCount** field to see the number of scenes and **CurrentScene** to discover which scene is currently active.

CurrentScene is a unique number derived from the combination of Scene attributes. It is calculated as follow: *Current Scene = ((SceneID - 1) * Max Key Attribute) + (Key Attribute).*

SceneValid field indicates if the Current Scene is active. More precisely, it indicates if the current scene was activated within the last 5 seconds or is being activated.

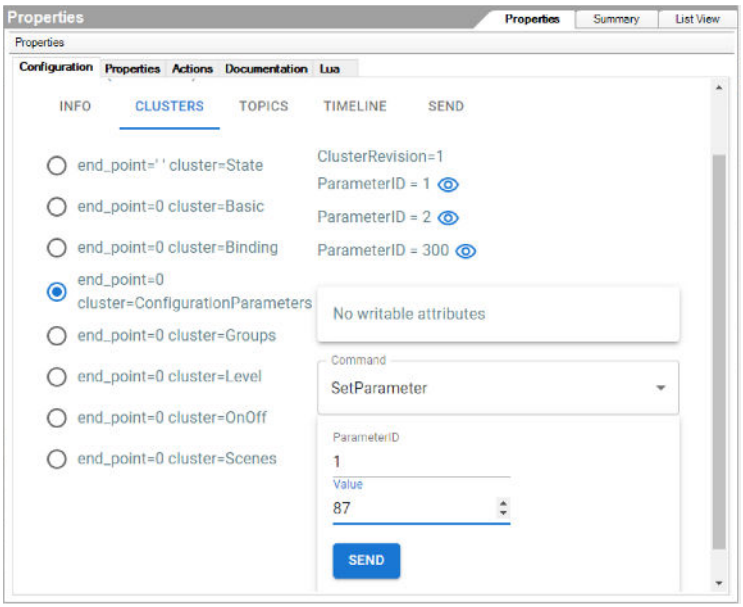
The CORE controller does not make received Central Scene Notification available to the end user.

Configuration Command Class

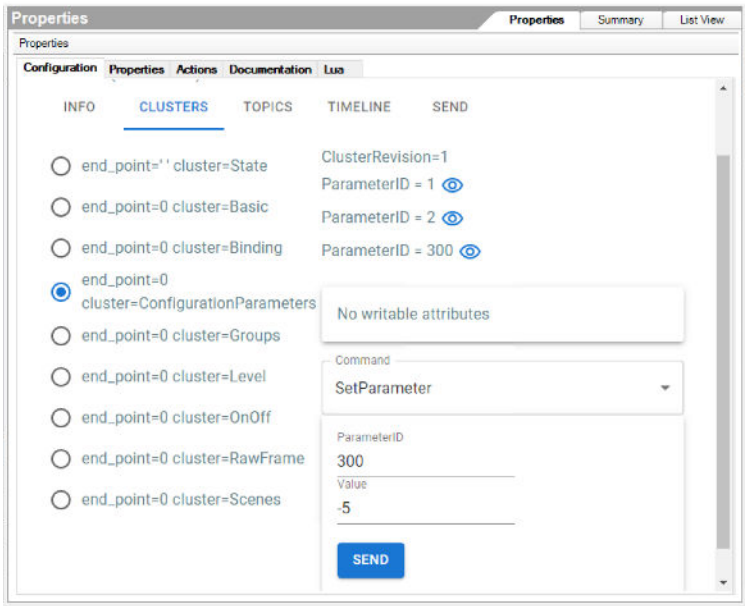
CORE 3/CORE 5 controller controls Configuration Command Class. It is possible to discover and set the parameter values and reset all configuration parameter values to their default values.

To set the state of Configuration Command Class, you should navigate to the CLUSTERS tab of Z-Wave Universal Driver and choose **ConfigurationParameters** cluster. By choosing ConfigurationParameters cluster, you can see the list of all the parameters that you can configure.

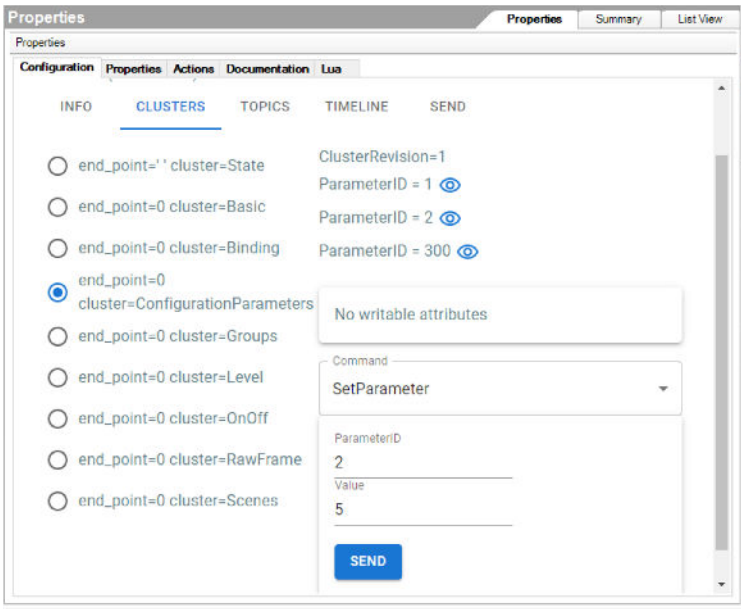
To set the parameter, choose the **SetParameter** command from the drop-down menu and enter the **ParameterID** and desired **Value** that you want to set. Then, click the SEND button.

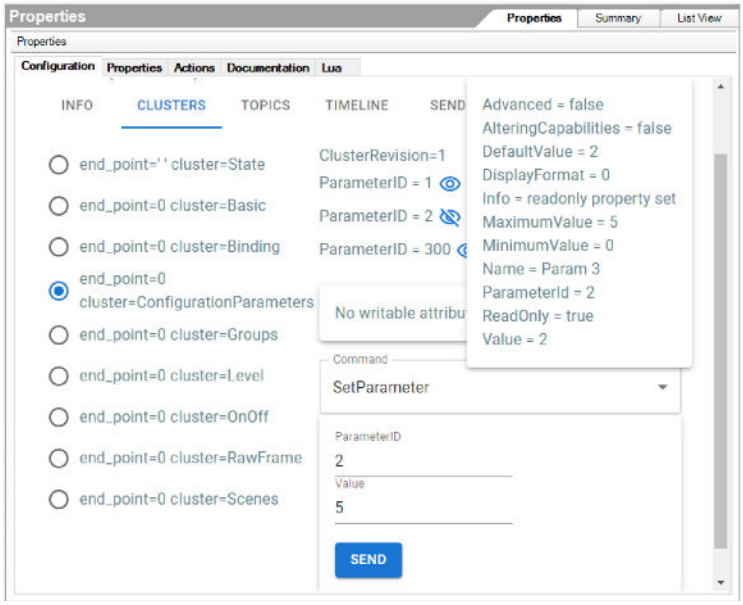


It is possible to set the negative value of the parameter, if the value is within the predefined range for that specific parameter.

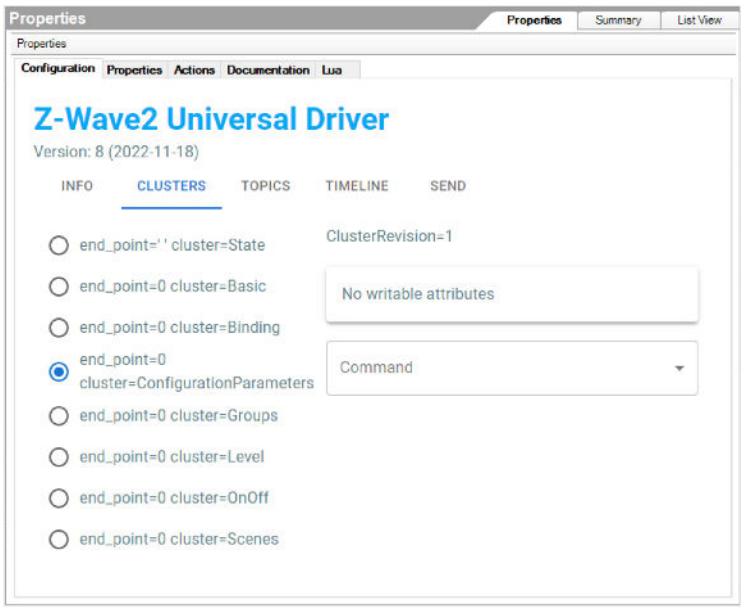


When configuration of parameters is finished, you can check the parameter settings by clicking on show/hide eye icon.

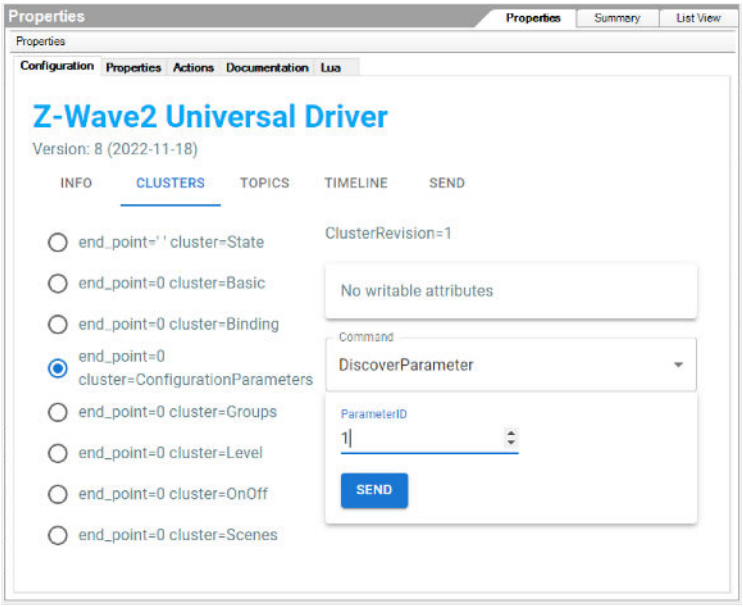




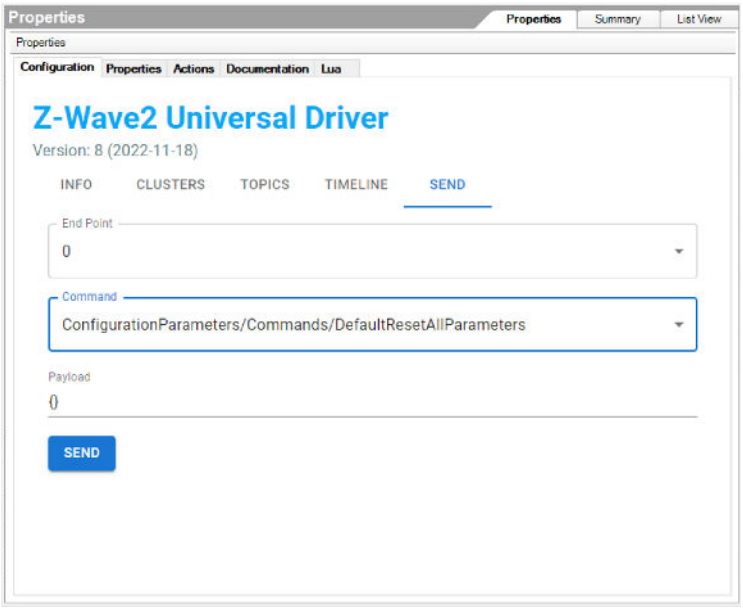
If the connected device supports Configuration Command Class Version 1 or 2, you can initiate the discovery of the configuration parameters by using the **DiscoverParameter** command.



To send **DiscoverParameter** command from the Z-Wave Universal Driver, choose **DiscoverParameter** command from a drop-down menu and enter the configuration parameter ID which is expected to be supported by the supporting node.



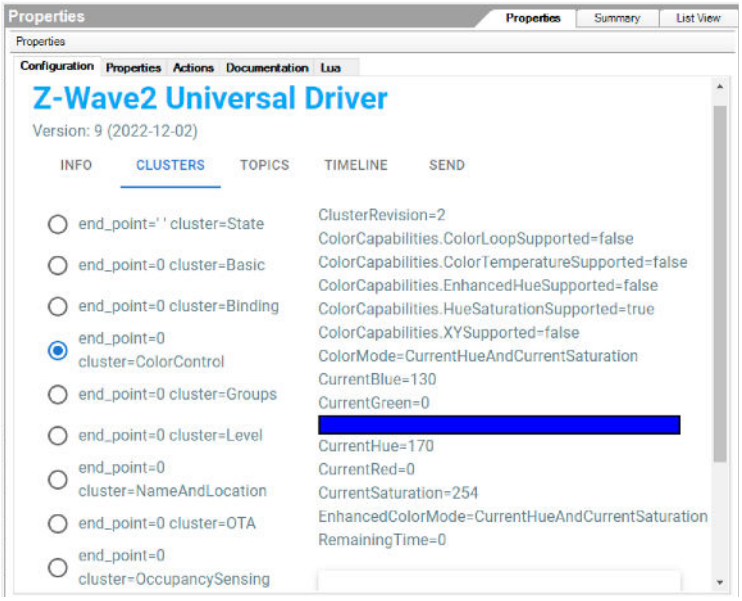
To send **DefaultResetAllParameters**, navigate to the **SEND** tab of the Z-Wave Universal Driver and choose this command from a drop-down menu.



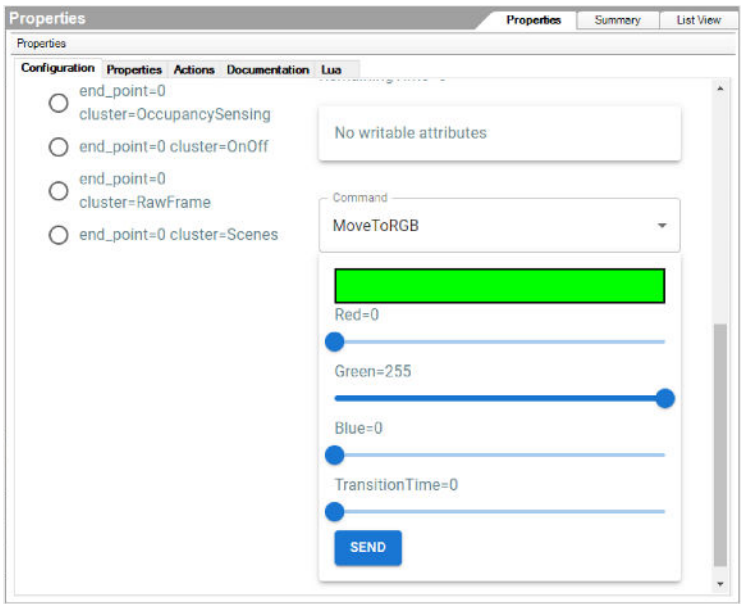
Color Switch Command Class

CORE 3/CORE 5 controller partially controls Color Switch Command Class. It is possible to set the color of the Color Switch supporting node, however it is not possible to send Start/Stop Level Change to the node. The controller can display the last known state of the Color Switch supporting node.

To see the last known color state of the supporting node, navigate to the CLUSTERS tab of Z-Wave Universal Driver and choose **ColorControl** cluster.



To change the color of Color Switch, choose **MoveToRGB** command from a drop-down menu and adjust Red, Green, and Blue color component.

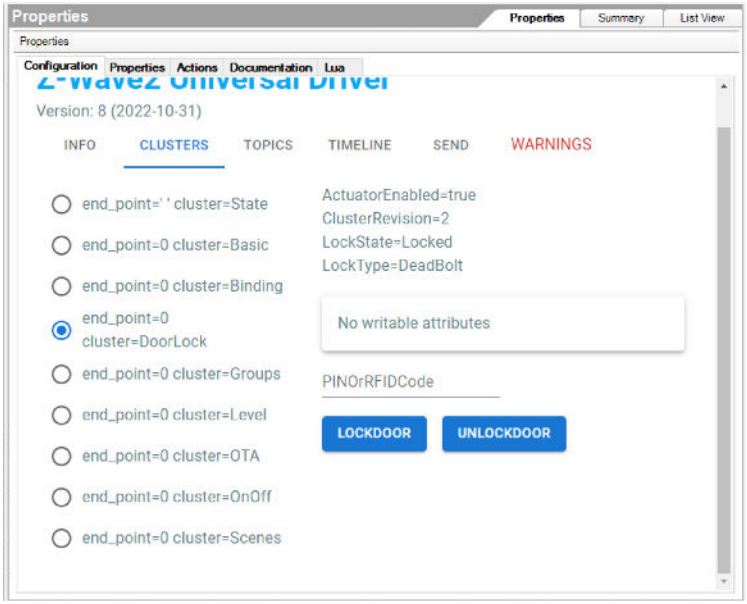


Door Lock Command Class

CORE 3/CORE 5 controller partially controls Door Lock Command Class. It is possible to set and see the Door Lock Mode of the nodes, however it is not possible to configure Door Lock.

To see the state of Door Lock Command Class, navigate to the CLUSTERS tab of Z-Wave Universal Driver and choose DoorLock cluster. The current state of Door Lock is shown in **LockState** field.

To change the state of Door Lock, send one of the following commands: LOCKDOOR, UNLOCKDOOR.

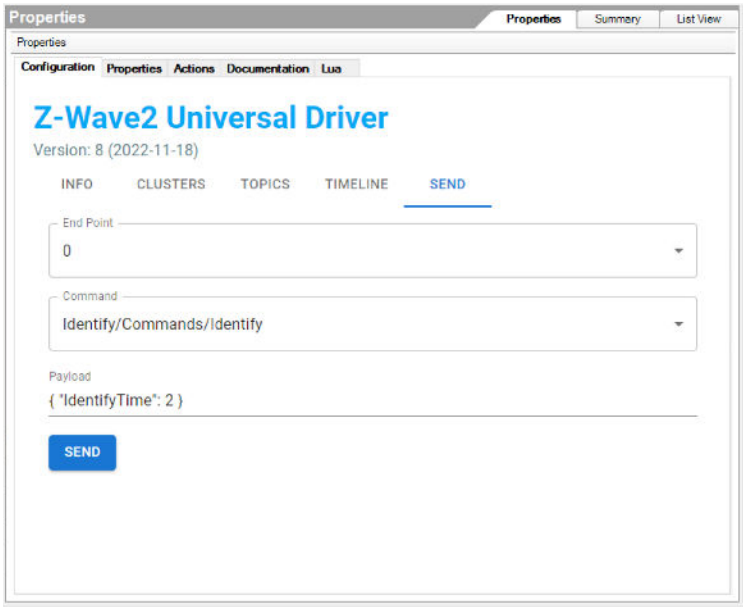


Indicator Command Class

CORE 3/CORE 5 controller both support and control Indicator Command Class.

It is possible to send **Identify** command for a connected node by navigating to CLUSTERS tab of Z-Wave Universal Driver, choosing Identify cluster and selecting Identify command from a drop-down menu. Then, enter the desired value for **IdentifyTime** and click on the SEND button.

Also, you can use SEND tab of Z-Wave Universal Driver and set the desired **IdentifyTime**.

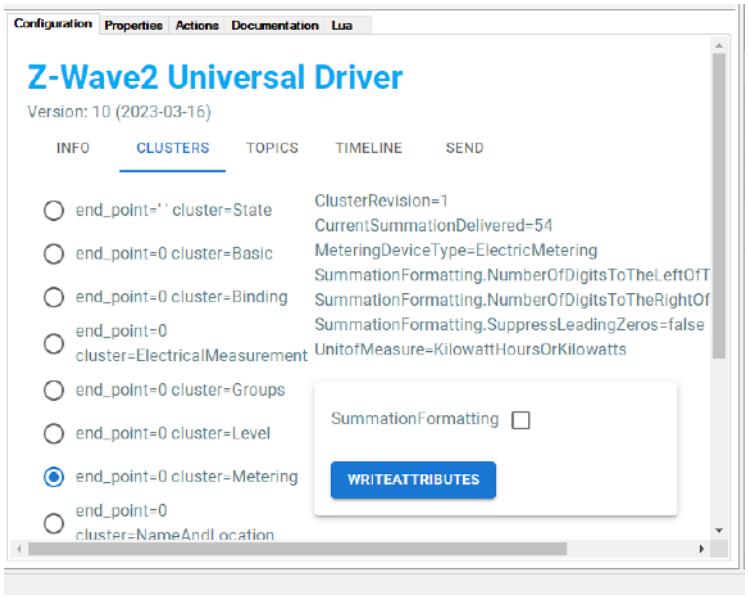


Set the value to **2** to trigger the Identify command.

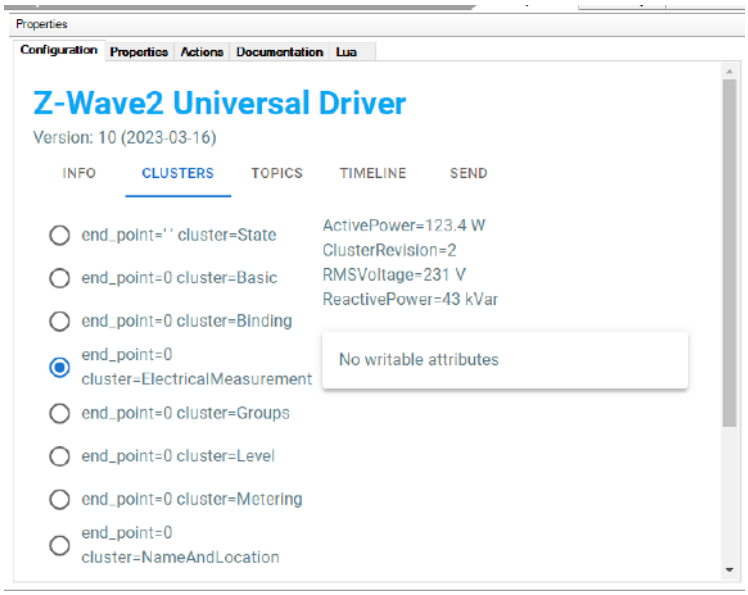
Meter Command Class

CORE 3/CORE 5 controller partially controls Meter Command Class.

It is possible to see the last reported value and different meter values of a node. The displayed values are rounded. To see the last reported value, navigate to CLUSTERS tab of Z-Wave Universal Driver and choose **Metering** cluster. Check **CurrentSummmationDelivered** field.



To see different metering values, navigate to CLUSTERS tab of Z-Wave Universal Driver and choose **ElectricalMeasurement** cluster. Check **ActivePower**, **ClusterRevision**, **RMSVoltage** and **ReactivePower** field.

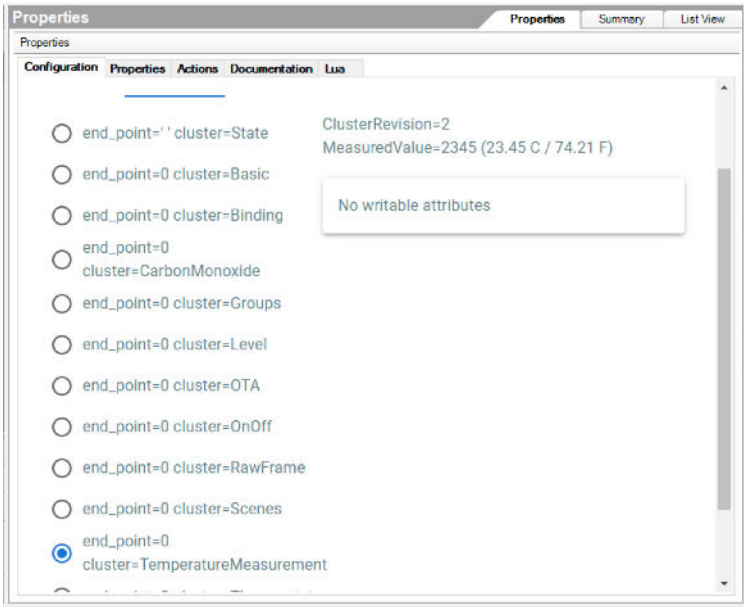


Sending Meter Reset command is not supported.

Multilevel Sensor Command Class

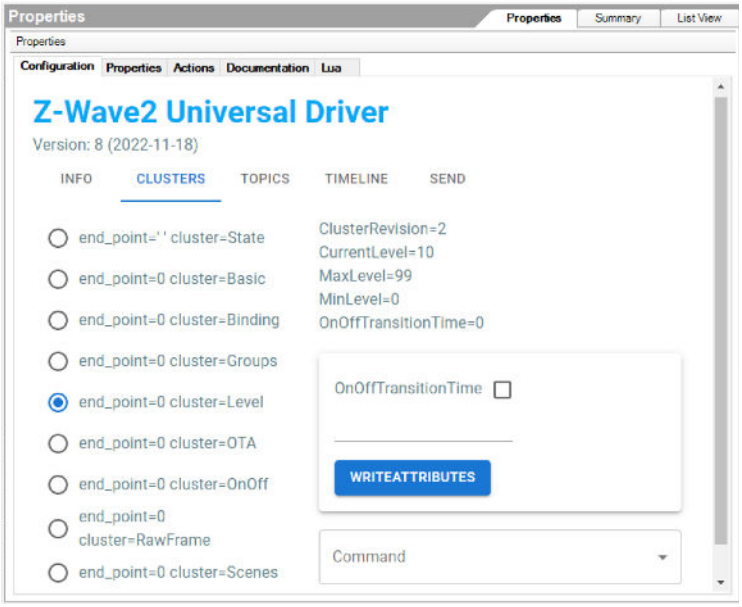
CORE 3/CORE 5 controller partially controls Multilevel Sensor Command Class. The controller can display Air Temperature readings in Celsius and Fahrenheit. However, it is not possible to display Air Temperature readings in unknown scale, Carbon Monoxide readings in mol/m3 nor ppm or Time in seconds.

To see Air Temperature readings in Celsius and Fahrenheit, navigate to CLUSTERS tab of Z-Wave Universal Driver and choose **TemperatureMeasurement** cluster.



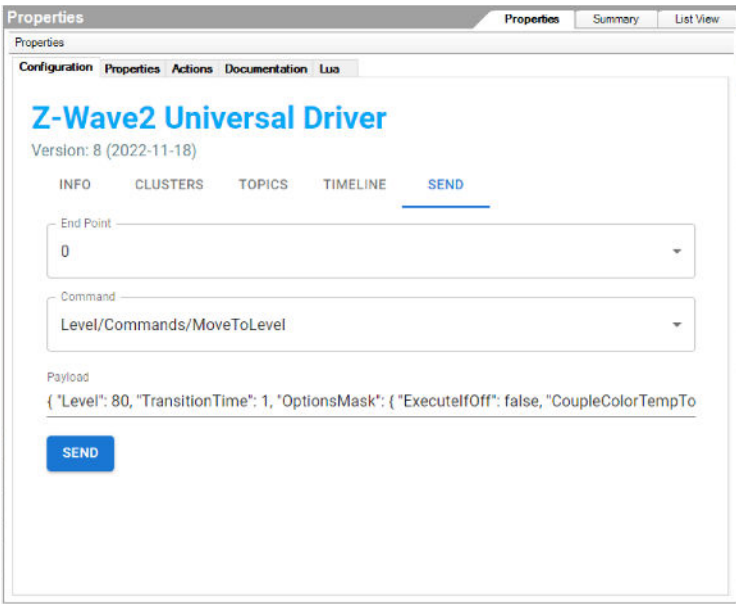
Multilevel Switch Command Class

CORE 3/CORE 5 controller partially controls Multilevel Switch Command Class. It is possible to set and see the current level of Multilevel Switch supporting node. Multilevel Switch supporting node is represented both with an OnOff and a Level functionality.



To set the level of Multilevel Switch supporting node, navigate to SEND tab of Z-Wave Universal Driver and choose **MoveToLevel** command. Then, enter desired values for **Level** and **TransitionTime**.

It is possible to specify the 0xFF duration for Multilevel Switch Set Commands by setting the **TransitionTime** to 1.



Notification Command Class

CORE 3/CORE 5 controller partially controls Notification Command Class. The controller supports interviewing node supporting Notification Command Class.

Due to the diverse nature of the Notification states and events that can be reported via the Command Class, information from Notification Command Class is displayed in **IASZone** and **OccupancySensing** cluster of the Z-Wave Universal Driver.

The **OccupancySensing** cluster will be shown as Occupied when receiving:

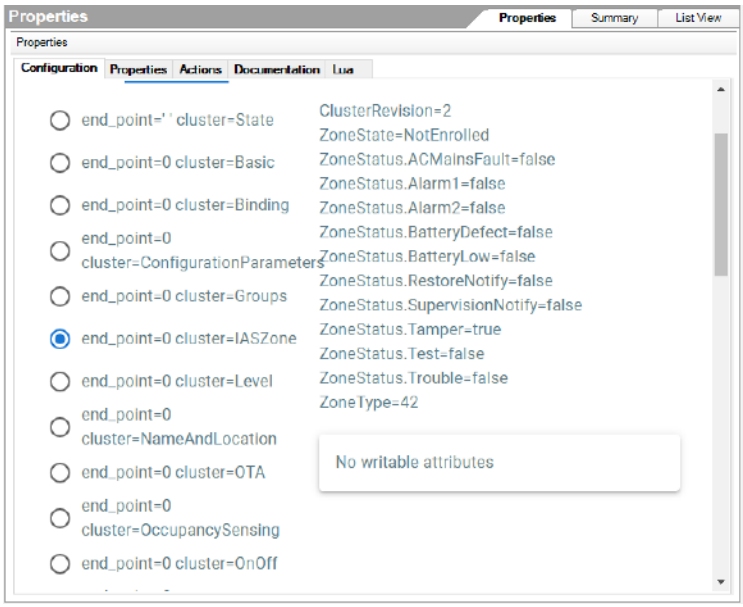
- Home Security - Motion Detection
- Home Security - Motion Detection with location
- Home Security – Intrusion
- Home Security - Intrusion (location provided)
- Access Control - Door window open

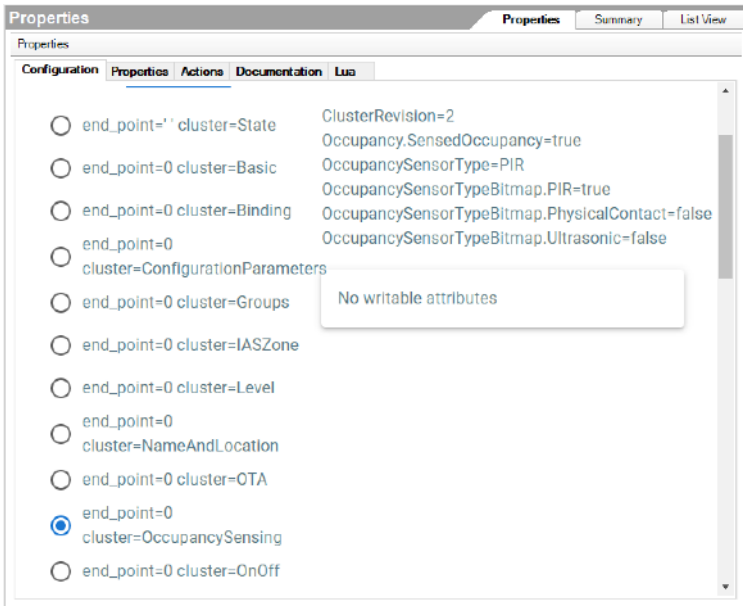
The **OccupancySensing** cluster will be shown as UnOccupied when receiving:

- Home Security - State Idle (Motion Detection)
- Home Security - State Idle (Motion Detection with location)
- Home Security - State Idle (Intrusion)
- Home Security - State Idle (Intrusion location provided)
- Access Control - Door window closed

The state of an **IASZone** cluster is shown in the **ZoneStatus** for the following type and events:

- Home Security - Motion detected -> Alarm2
- Home Security - Intrusion -> Alarm1
- Home Security - Tampering -> Tamper





It is not possible to send commands for the Notification Command Class.

Security 0 – Security 2 Command Class

CORE 3/CORE 5 controller supports Security 0 and Security 2 Command Class. The set of granted keys is shown in the following table:

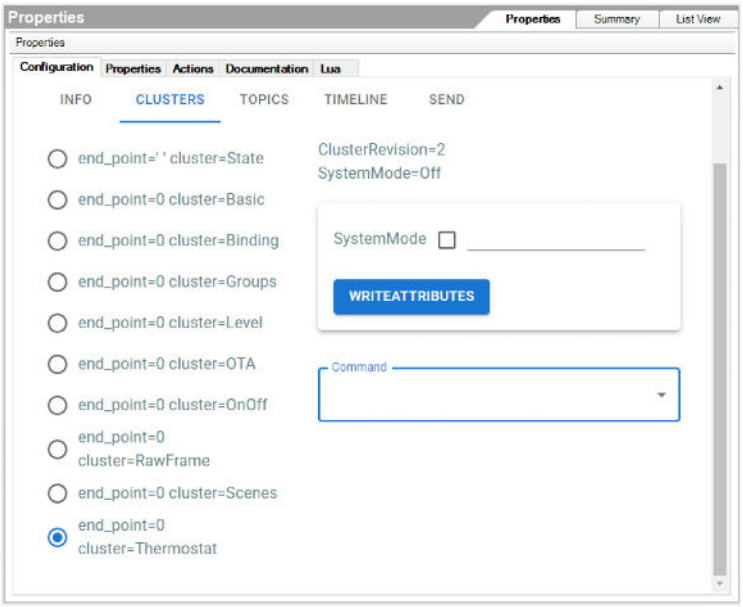
Security Class	**Protocol**
S2 Access Control	Z-Wave and Z-Wave Long Range
S2 Authenticated	Z-Wave and Z-Wave Long Range

S2 Unauthenticated	Z-Wave
S0	Z-Wave

Thermostat Mode Command Class

CORE 3/CORE 5 controller partially controls Thermostat Mode Command Class. The controller can display the last known state of Thermostat Mode supporting node. **SystemMode** represents the current mode of Thermostat Mode Command Class.

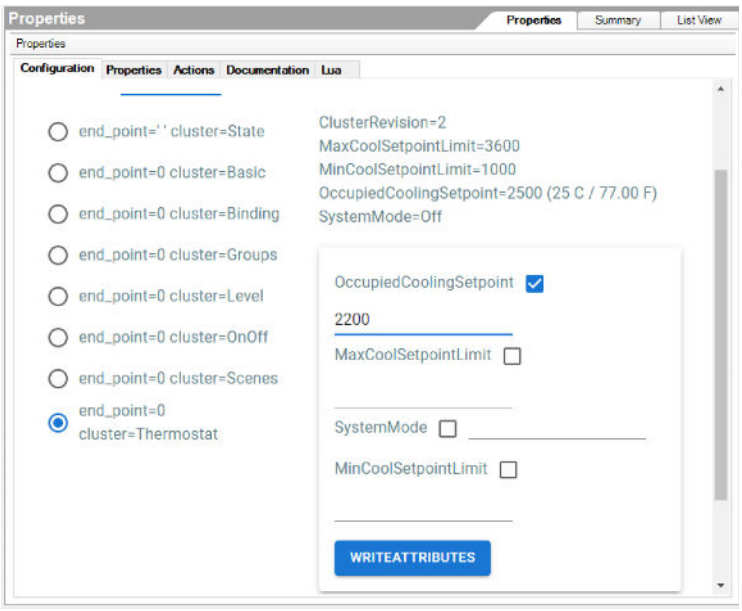
It is not possible to set the Thermostat Mode.



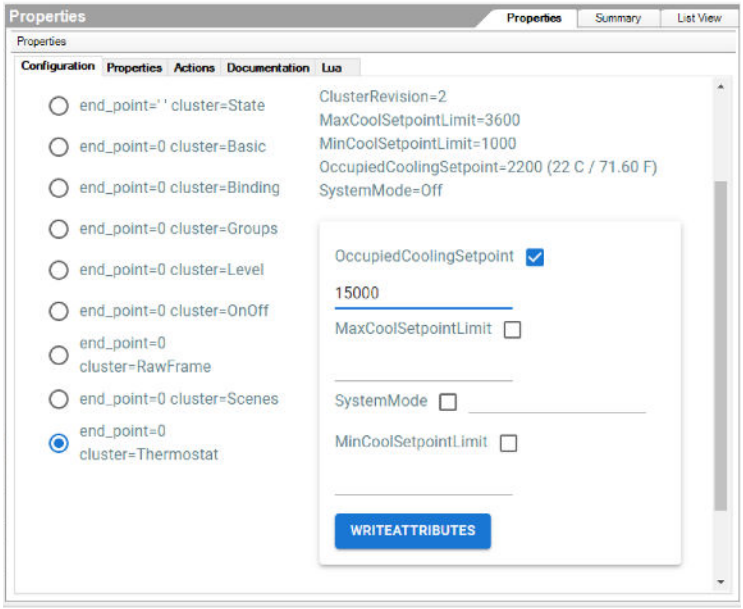
Thermostat Setpoint Command Class

CORE 3/CORE 5 controller partially controls Thermostat Setpoint Command Class. The controller can change setpoint for a supported type.

To set the Thermostat Setpoint, navigate to the CLUSTERS tab of Z-Wave Universal driver and choose Thermostat cluster. Then, enter the desired value for Occupied Setpoint. If the desired value is within the allowed range, the value of Occupied Setpoint will be changed.



The value of Occupied Setpoint will not change if you entered the value outside of allowed range.

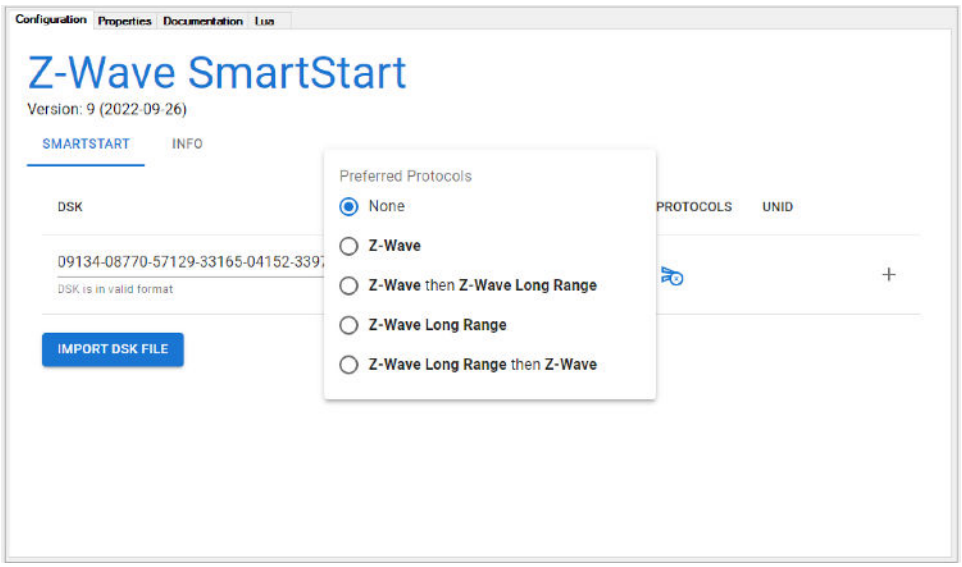


Z-Wave Long Range

Control4 CORE controllers can operate as Z-Wave Long Range controllers. Nodes can be included using Z-Wave Long Range.

Control4 CORE controllers do not support QR Code scanning. We use Z-Wave SmartStart agent for inclusion.

In Z-Wave SmartStart agent, you can change the bootstrapping mode by clicking on Arrow under Protocols and choosing desired preferred protocol for inclusion.



Identify the controller using the Indicator command class

When sending the Indicator command class to the CORE controller, the Caution LED on the front of the controller blinks green. The on time, off time, and number of blinks can be specified in the parameters of the command class.

Troubleshooting

When joined to a network, a Z-Wave device will not join a different network.
Z-Wave devices can be removed from any network at any time by using the Remove button found in *Available Devices*. This is true even if they are not part of the network performing the remove operation. If there appears to be trouble joining a device to a network, it is a good idea to either perform a reset defaults on the device, or explicitly perform a removal procedure, prior to attempting to add the device to the existing network. This ensures the device is not currently configured for another network prior to adding the device to the desired network.

More information

For the latest version of this document and to view additional materials, open the URL below or scan the QR code on a device that can view PDFs.

MOST RECENT VERSION

ctrl4.co/Z-Wave-sg

MORE INFO ON Z-Wave

ctrl4.co/Z-Wave