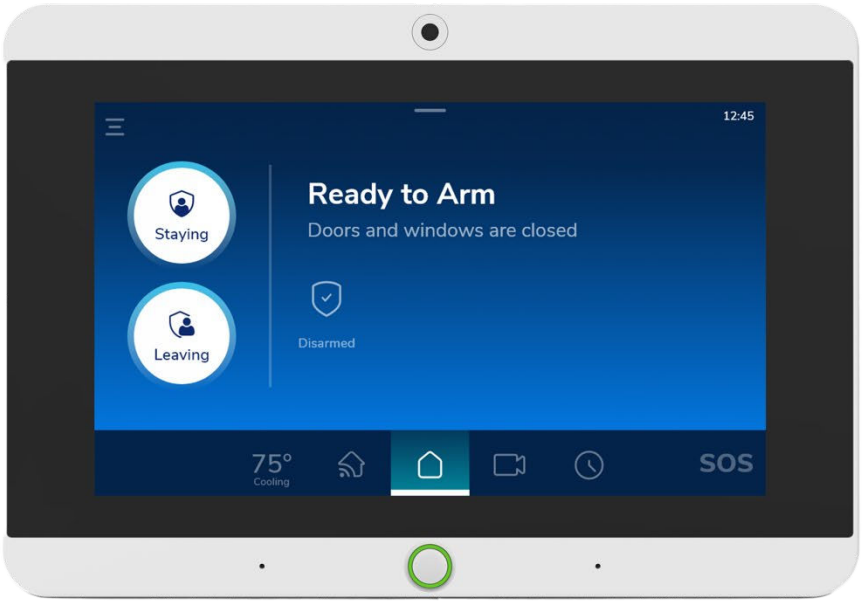
SyberSense Security System



Z-Wave Plus® User Manual

Rev. 17.4

Table of Contents

Supported Z-Wave Features

Your device is compatible with a range of Z-Wave® features that enhance its functionality and integration with other smart home devices.

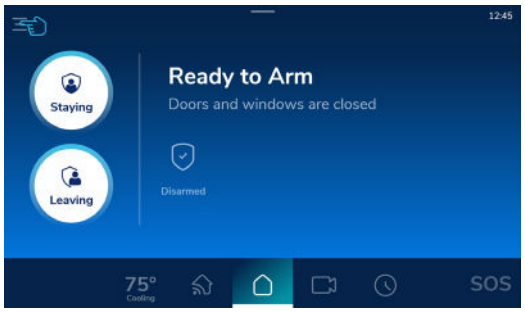
1. **Basic:** Facilitates simple on/off or open/close commands.
2. **Switch Binary:** Similar to the Basic class; used for binary control of devices like switches and outlets.
3. **Switch Multilevel:** Allows control over devices that support multiple levels, such as dimmer switches.
4. **Sensor Binary:** Reports binary sensor states like motion detection and door/window open/close status.
5. **Sensor Multilevel:** Reports sensor values with multiple levels, such as temperature and humidity.
6. **Meter:** Reports energy consumption or usage data.
7. **Thermostat Mode:** Sets the mode (cooling, heating, etc.) of a thermostat.
8. **Thermostat Setpoint:** Sets temperature setpoints in a thermostat.
9. **Scene Activation:** Triggers pre-configured scenes.
10. **Alarm:** Sends various types of alarm notifications, such as intrusion, smoke, etc.
11. **Door Lock:** Controls and monitors door locks.
12. **Association:** Facilitates direct device-to-device communication without a central hub.
13. **Configuration:** Configures parameters and settings on Z-Wave devices.
14. **Notification:** Sends various types of notifications or events.
15. **Central Scene:** Sends scene commands with additional information, such as the number of button clicks.
16. **Barrier Operator:** Controls barrier devices like garage doors and gates.
17. **Color Control:** Controls color-capable devices like RGB lights.
18. **Security:** Provides a secure communication framework for your devices.

Note: This product can be operated on any Z-Wave network with other Z-Wave certified devices from other manufacturers. All main operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

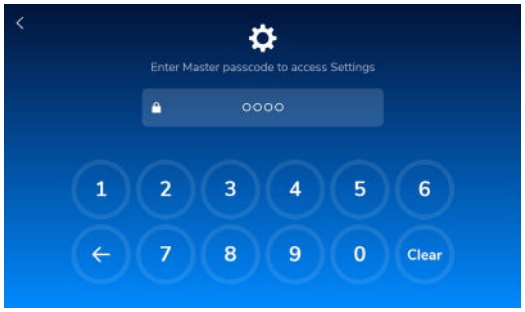
Z-Wave Device Inclusion

Note: In your Z-Wave network, products from different manufacturers and categories can seamlessly communicate, with non-battery powered nodes acting as repeaters to enhance connectivity regardless of the manufacturer.

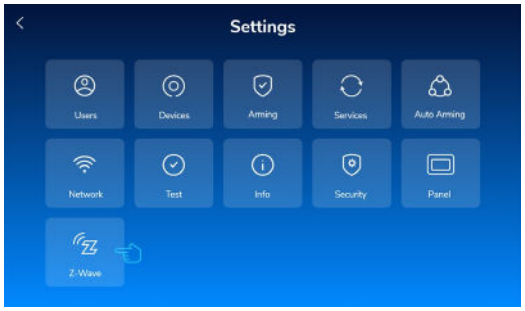
1. **Tap the Hamburger menu icon:** On your panel's main screen, locate and tap the Hamburger menu icon (which looks like three horizontal lines) to access your panel's settings.



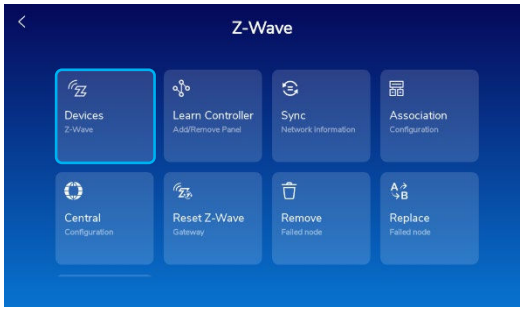
2. **Enter the Master passcode:** In the settings, you will be prompted to enter the Master passcode. Input your code to proceed. Remember to keep your passcode secure.



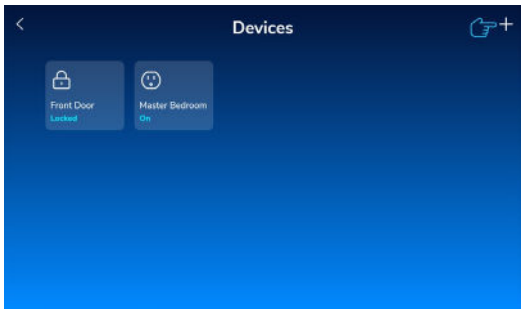
3. **Tap 'Z-Wave':** After successfully entering the Master passcode, you will be presented with a variety of options. Find and tap on the 'Z-Wave' option.



4. **Tap 'Devices':** Within the Z-Wave menu, locate and tap on the 'Devices' option.



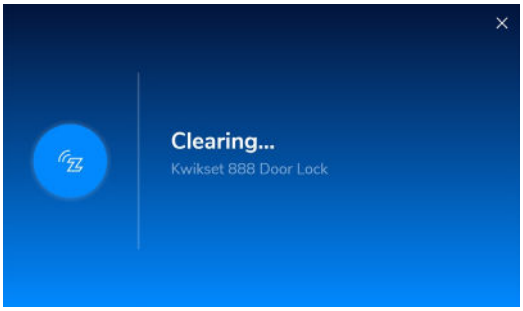
5. **Tap the '+' icon:** In the top right corner of the Devices screen, you will find a '+' icon. Tap this to begin the process of adding a new Z-Wave device.

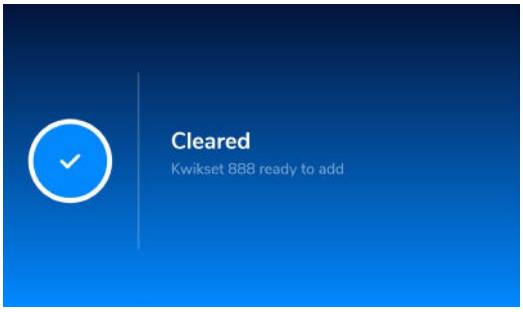


6. **Select 'New' or 'Used':** Now you'll need to specify the status of the device you're adding.
    - **If the device is new**, i.e., it has never been paired with another Z-Wave Controller, select 'New'.
    - **If the device is used**, i.e., it was previously paired with another Z-Wave Controller, select 'Used'.

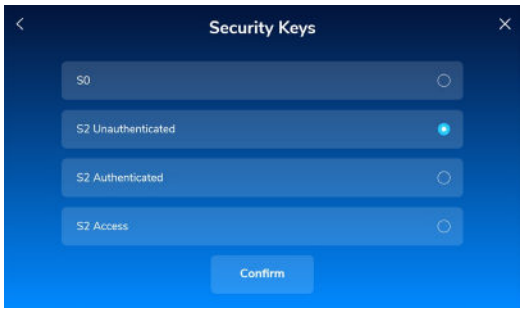
7. **Set the device in the right mode:**
    - **If you select 'New'**, follow the instructions provided with your Z-Wave device to place it into inclusion mode during the countdown. This allows the device to be recognized by the controller.

    - **If you select 'Used'**, follow the instructions provided with your Z-Wave device to place it into exclusion mode. This process removes any prior controller associations. After this step, place the device back into inclusion mode to initiate the pairing process.

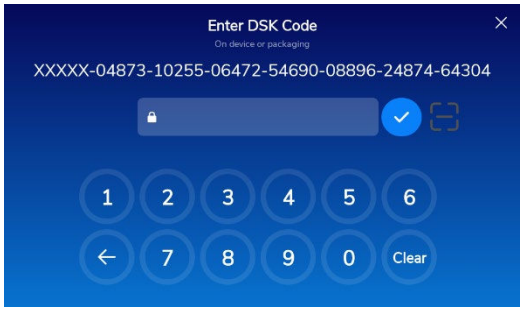




8. **Select Security Keys if prompted:** During the device inclusion process, the system may prompt the user to select security keys. This step is required when adding a Z-Wave device that supports secure communication, to complete secure enrollment and enable encrypted communication.



9. **Enter DSK code if prompted:** Some Z-Wave devices come with a DSK (Device Specific Key) for additional security. If your device has a DSK, you will be prompted to input this on the panel during the pairing process. Confirm the DSK is entered correctly before continuing.



Note: *Locate the Device Specific Key (DSK) for your S2 supported Z-Wave product on the device, its manual, or packaging. The DSK is essential for securely adding the device to a Z-Wave network. Contact the manufacturer if you need assistance.*

10. **Assign your device to a Room:** If the Z-Wave inclusion process is successful, you will be prompted to assign your new Z-Wave device to a room. Simply select your desired room from the available options to finalize the pairing process.

Z-Wave Device Exclusion

1. **Tap the Hamburger Menu Icon**: On your panel's main screen, locate and tap the Hamburger menu icon.

2. **Enter the Master Passcode**: In the settings menu, input your Master passcode when prompted.

3. **Select 'Z-Wave'**: Navigate to and tap on the 'Z-Wave' option in the settings.

4. **Tap 'Devices':** Within the Z-Wave menu, locate and tap on the 'Devices' option.

5. **To exclusion an online device from the panel**

   。**Place the panel in exclusion mode:** Tap the '+' icon on the upper right and click 'Used' button. The panel will enter the exclusion mode.

   。**Place the device in exclusion mode:** Follow the instructions provided with your Z-Wave device to place it into exclusion mode during the countdown. This allows the controller to recognize that you wish to remove the device.

   。**Confirm exclusion:** Once the controller has recognized the device in exclusion mode, it will exclude the device from the system. You should receive a notification or message confirming that the device has been successfully excluded.

Note: An offline device can be removed from the Z-Wave network through the control panel using the following steps:

。*Find and select the device:*

Scroll through the list of paired Z-Wave devices and select the device you want to remove.

。*Tap "Remove":*

Tap the "Remove" option to initiate the controller-side device removal process.

Learn Mode

Learn Mode on the panel is specifically designed for integrating the panel into an existing Z-Wave network, either as a secondary controller or as an inclusion controller. This mode enables the panel to join another network, either by being added to it or by excluding it from a different network.

Accessing Learn Mode

1. **Tap the Hamburger Menu Icon**: On your panel's main screen, locate and tap the Hamburger menu icon.

2. **Enter the Master Passcode**: In the settings menu, input your Master passcode when prompted.

3. **Select 'Z-Wave'**: Navigate to and tap on the 'Z-Wave' option in the settings.

4. **Select Learn Controller:** Within the Z-Wave menu, locate and select the 'Learn Controller' option.

Adding Panel as a Secondary Controller to Another Network

1. **Tap the Hamburger Menu Icon**: On your panel's main screen, locate and tap the Hamburger menu icon.

2. **Enter the Master Passcode**: In the settings menu, input your Master passcode when prompted.

3. **Select 'Z-Wave'**: Navigate to and tap on the 'Z-Wave' option in the settings.

4. **Activate Inclusion Mode on Primary Controller**: Ensure the primary controller of the target network is in inclusion mode.

5. **Select Learn Controller on Your Panel**: Within the Z-Wave menu, locate and select the 'Learn Controller' option.

6. **Enter DSK Code on Primary Controller**: The Device Specific Key (DSK) code of your panel will display. Enter this code on the primary controller to complete the integration.

Excluding Panel from Another Network

1. **Tap the Hamburger Menu Icon**: On your panel's main screen, locate and tap the Hamburger menu icon.

2. **Enter the Master Passcode**: In the settings menu, input your Master passcode when prompted.

3. **Select 'Z-Wave'**: Navigate to and tap on the 'Z-Wave' option in the settings.

4. **Activate Exclusion Mode on Primary Controller**: Set the primary controller of your current network to exclusion mode.

5. **Select Learn Controller on Your Panel**: This will initiate the exclusion of your panel from the current network.

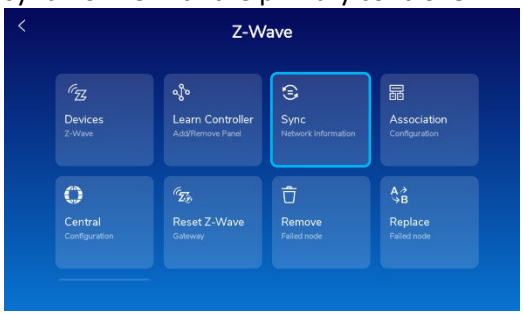
Syncing Network Information with Another Controller

1. **Tap the Hamburger Menu Icon**: On your panel's main screen, locate and tap the Hamburger menu icon.

2. **Enter the Master Passcode**: In the settings menu, input your Master passcode when prompted.

3. **Select 'Z-Wave'**: Navigate to and tap on the 'Z-Wave' option in the settings.

4. **Initiate Sync**: Within the Z-Wave settings, find and select the 'Sync' option to allow your panel to synchronize with the primary controller.



5. **Wait for Synchronization**: After selecting Sync, your panel will begin to communicate with the primary controller.

6. **Confirmation**: Once the transfer is complete, your panel will display a confirmation message, indicating that it is now up to date with the latest network information.

SmartStart

SmartStart enabled products can be added into a Z-Wave network by scanning the Z-Wave QR Code present on the product with a controller providing SmartStart inclusion. No further action is required and the SmartStart product will be added automatically within 10 minutes of being switched on in the network vicinity.

Including a SmartStart-Enabled Device into Z-Wave Network

1. **Tap the Hamburger Menu Icon:** On your panel's main screen, tap the Hamburger menu icon (three horizontal lines) to access your panel's settings.

2. **Enter the Master Passcode:** Input your Master passcode when prompted to access the Z-Wave settings.

3. **Tap 'Z-Wave':** In the settings menu, find and tap the 'Z-Wave' option.

4. **Tap 'Devices':** Within the Z-Wave menu, tap on the 'Devices' option.

5. **Tap the '+' Icon:** Tap the '+' icon in the top right corner of the Devices screen to add a new device.

6. **Select SmartStart Option:** Choose the SmartStart option to proceed with adding a SmartStart-enabled device.

7. **Scan the QR Code:** Scan the QR code on the SmartStart-enabled device or its packaging with your panel's camera. Alternatively, you have the option to manually enter the DSK code.

8. **Assign the Device to a Room:** After the QR code is scanned, you'll be prompted to assign the device to a room.

9. **Device is Added to the Provisioning List:** Your device will now be on the Provisioning List. It will be automatically integrated into your Z-Wave network within 10 minutes of being powered on and within range.

SmartStart Provisioning List

The Provisioning List is a feature within Z-Wave networks that holds information about SmartStart-enabled devices that are ready to be included in the network. Users can add devices to this list by scanning their QR codes, and once the devices are powered and within range, they are automatically included in the network. This list also allows users to manage and remove devices if they need to change their setup.

Accessing the Provisioning List

1. **Tap the Hamburger Menu Icon:** On your panel's main screen, locate and tap the Hamburger menu icon (three horizontal lines) to open the main menu.

2. **Enter the Master Passcode:** When prompted, input your Master passcode. This ensures that only authorized users can access and modify the system's settings.

3. **Tap 'Z-Wave':** In the settings menu, find and select the 'Z-Wave' option to enter the Z-Wave network settings.

4. **Select 'Provisioning List':** Within the Z-Wave settings, look for and tap on the 'Provisioning List'. This list displays SmartStart-enabled devices that have been scanned and registered. It shows the status of each device, indicating whether they are awaiting integration or already paired within your Z-Wave network.

Removing a SmartStart-Enabled Z-Wave Device from the Provisioning List

1. **Tap the Hamburger Menu Icon:** On your panel's main screen, tap the Hamburger menu icon (three horizontal lines) to access your panel's settings.

2. **Enter the Master Passcode:** Input your Master Passcode when prompted to access the Z-Wave settings.

3. **Tap 'Z-Wave':** In the settings menu, find and tap the 'Z-Wave' option.

4. **Select 'Provisioning List':** After accessing the Z-Wave menu, tap on the 'Provisioning List' to view the devices queued for inclusion.

5. **Locate the Desired Device:** In the Provisioning List, find the SmartStart-enabled device that you want to remove.

6. **Tap the Trash Icon:** Next to the device entry, tap the trash icon to initiate its removal from the list.

7. **Confirm the Device Removal**: If prompted, confirm that you want to remove the device from the Provisioning List to complete the process.

Remember, this action only removes the device from the Provisioning List. If the device is already included in your Z-Wave network, you'll need to follow the standard exclusion process or perform a factory reset on the device as per the manufacturer's guidelines to fully remove it from the network.

Controller DSK Code

Your security panel, serving as the Z-Wave Controller in your smart home setup, is assigned a unique Device Specific Key (DSK) code. This DSK code is essential for integrating your controller into a Z-Wave network. It functions as a unique identifier, for your controller, ensuring secure and authenticated communication within the network.

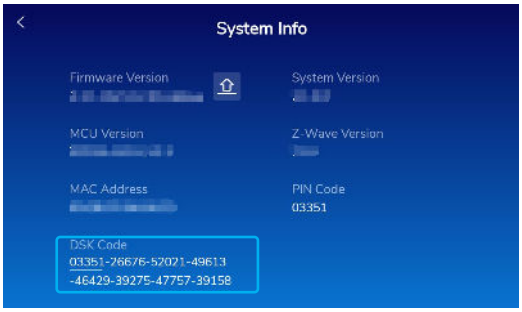
For the successful integration of your Z-Wave device, you will need the Device Specific Key (DSK) code. You can locate the DSK of your controller in the System Information section. Simply follow these steps:

1. **Tap the Hamburger Menu Icon:** On your panel's main screen, locate and tap the Hamburger menu icon.

2. **Enter the Master Passcode:** In the settings menu, input your Master Passcode when prompted.

3. **Select 'Info':** Navigate to and tap on the 'Info' option in the settings.

4. The DSK code for your product is listed next to 'DSK Code'.



Alternatively, the DSK code is also displayed on the screen after enabling Learn Mode.

Node Management

Node Management is an essential aspect of maintaining a robust and efficient network. This guide covers three key processes: Replace Failed Node, Remove Failed Node, and Node Rediscovery.

Node Rediscovery

Rediscovery is a process where you instruct your Z-Wave network to recheck and update what a specific device (node) can do. This is useful if you've added a new device, moved a device, or if a device isn't working as expected.

How to initiate Node Rediscovery

1. **Tap the Hamburger Menu Icon**: On your panel's main screen, locate and tap the Hamburger menu icon.

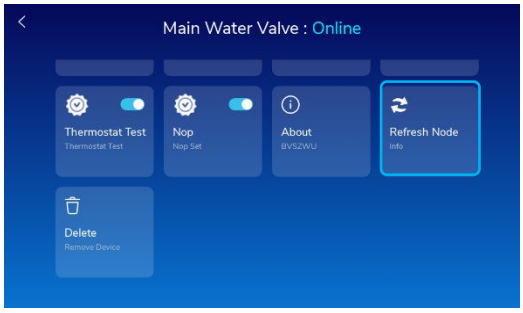
2. **Enter the Master Passcode**: In the settings menu, input your Master passcode when prompted.

3. **Select 'Z-Wave'**: Navigate to and tap on the 'Z-Wave' option in the settings.

4. **Tap Devices:** Find and tap on 'Devices' to see your Z-Wave device list.

5. **Select the Device:** Choose the device (node) you wish to rediscover.

6. **Tap Refresh Node:** Select 'Refresh Node' to update the device's information.



Note: The rediscovery process may take a few moments. During this time, the device may be unresponsive. Once the process is complete, the device should be fully integrated into your Z-Wave network with updated settings.

Remove Failed Node

This function is designed to identify and remove any nodes within your network that are no longer communicating or functioning properly. It's an essential tool for maintaining network integrity and performance. When a node fails and cannot be repaired or reconnected, this function allows you to cleanly remove it from the system's network.

Please be aware that performing this action will permanently remove the node from the network, and this action cannot be undone. However, you can re-add the device to the network, if necessary, in the future.

How to Remove a Failed Node

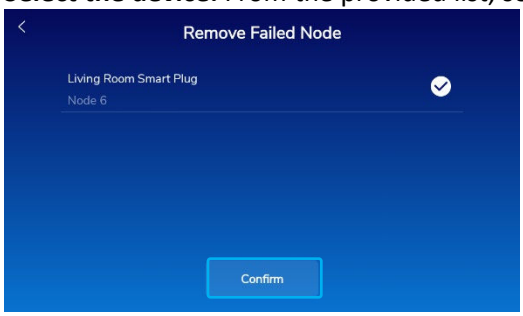
1. **Tap the Hamburger Menu Icon**: On your panel's main screen, locate and tap the Hamburger menu icon.

2. **Enter the Master Passcode**: In the settings menu, input your Master passcode when prompted.

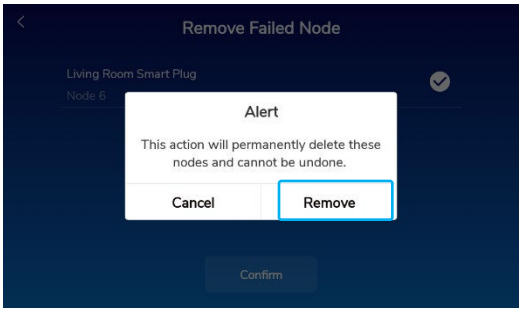
3. **Select 'Z-Wave'**: Navigate to and tap on the 'Z-Wave' option in the settings.

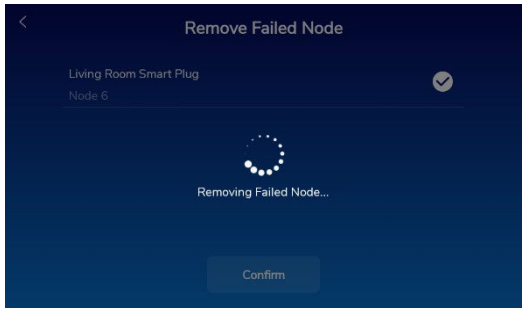
4. **Tap 'Remove':** Find and tap on 'Remove' to enter the Remove Failed Node menu.

5. **Select the device:** From the provided list, select the specific device you intend to remove.

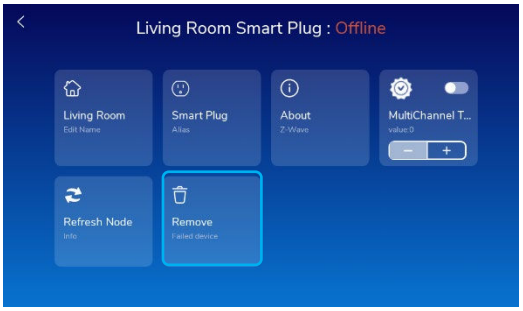


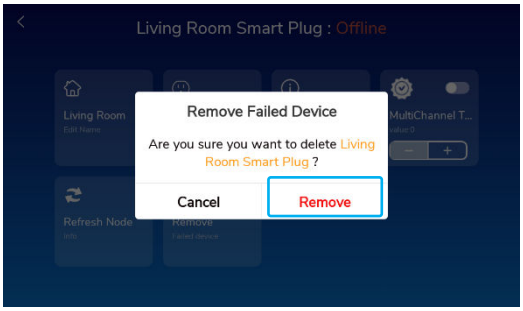
6. **Finalize the Removal:** Follow the on-screen prompts carefully to finalize the removal process successfully.





Note: While the device is offline, you may remove the failed node through its individual device settings page as shown below:





Replace Failed Node

This function is a Z-Wave network maintenance feature that allows a non-responsive node to be removed and replaced with a new device without rebuilding or re-including the entire network.

It is typically used when a device:
- is physically damaged
- has permanently lost power
- is no longer reachable
- was removed from the network without proper exclusion

The Replace Failed Node function preserves the existing network configuration, including node IDs and associations, ensuring minimal disruption to the Z-Wave network during device replacement.

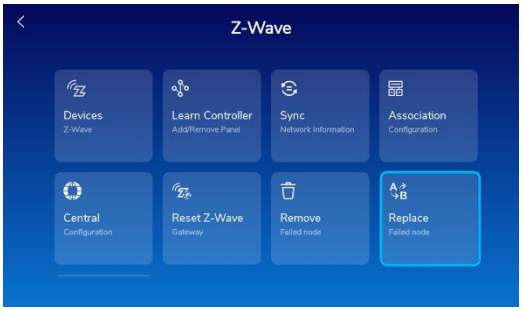
How to Replace a Failed Node

1. Tap the Hamburger Menu Icon: On your panel's main screen, locate and tap the Hamburger menu icon.

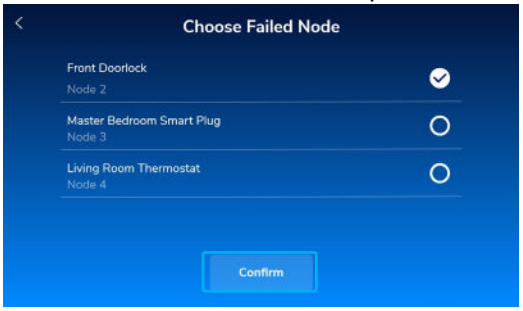
2. Enter the Master Passcode: In the settings menu, input your Master passcode when prompted.

3. Select 'Z-Wave': Navigate to and tap on the 'Z-Wave' option in the settings.

4. Tap 'Replace': Find and tap on 'Replace' to enter the Replace Failed Node menu.



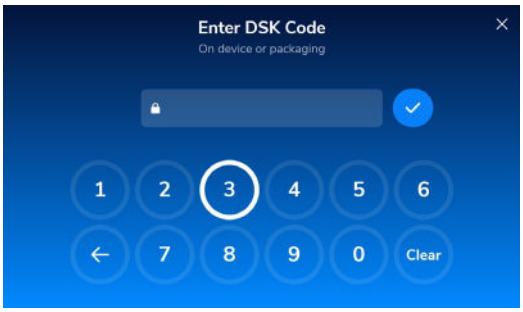
5. Select the device: From the provided list, select the specific device you intend to replace.



6. Include new Device: follow the instructions provided with your Z-Wave device to place it into inclusion mode during the countdown. This allows the device to be recognized by the controller.

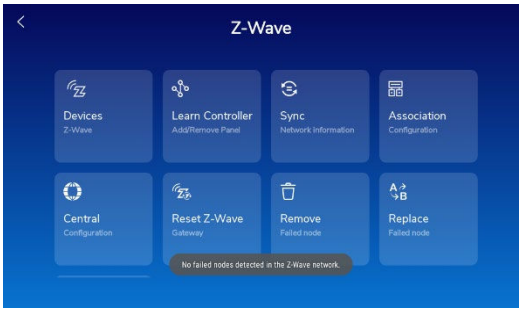
7. Enter DSK code if prompted: Some Z-Wave devices come with a DSK (Device Specific Key) for additional security. If your device has a DSK, you will be prompted to input this on the panel during the pairing process. Confirm the DSK is entered correctly before continuing.

Note: Locate the Device Specific Key (DSK) for your S2 supported Z-Wave product on the device, its manual, or packaging. The DSK is essential for securely adding the device to a Z-Wave network. Contact the manufacturer if you need assistance.



8. Assign your device to a Room: If the Z-Wave inclusion process is successful, you will be prompted to assign your new Z-Wave device to a room. Simply select your desired room from the available options to finalize the pairing process.

Note: You cannot access the "Remove Failed Node" tile unless there is at least one failed device on the gateway.



Factory Reset Z-Wave Gateway

Warning: Please be aware that resetting the Z-Wave Gateway will remove all connected Z-Wave devices from your system. This is a significant action that cannot be undone. You will need to manually re-add each device to the gateway once the reset is complete. If this gateway is being used as a secondary controller in the network, use this procedure to reset this gateway only if the primary controller is missing or otherwise inoperable Make sure you are certain before proceeding.

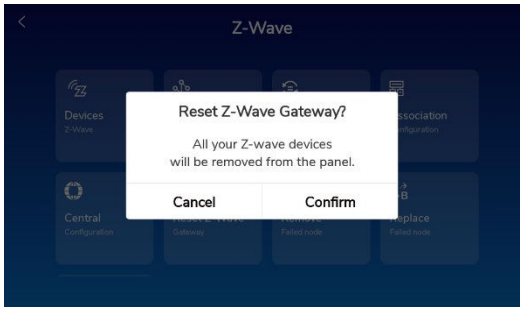
1. **Tap the Hamburger Menu Icon**: On your panel's main screen, locate and tap the Hamburger menu icon.

2. **Enter the Master Passcode**: In the settings menu, input your Master passcode when prompted.

3. **Select 'Z-Wave'**: Navigate to and tap on the 'Z-Wave' option in the settings.

4. **Tap 'Reset Z-Wave':** Within the Z-Wave menu, find and tap on the 'Reset Z-Wave' option.

5. **Confirm Reset:** You will be asked to confirm the network reset. Remember, this action will remove all Z-Wave devices from your system. If you are sure you want to proceed, confirm the reset.



6. **Waiting for the reset to complete:** The system will then begin the process of resetting the Z-Wave gateway. This can take a few minutes. Please do not disrupt the system during this time.

7. **Confirm completion:** Once the reset is complete, you will receive a notification or message confirming that your Z-Wave gateway has been reset.

Remember to follow each step, to ensure a successful gateway reset. After resetting the gateway, you can then proceed to re-add each of your Z-Wave devices using the device pairing guide.

Controlled Command Classes

This section outlines the supported controlled command classes for your Z-Wave devices, categorized into Application, Management, and Transport-Encapsulation Command Classes.

Application Command Class Control Definitions

1. Barrier Operator Command Class, Version 1
2. Basic Command Class, Version 1-2
3. Binary Switch Command Class, Version 1-2
4. Central Scene Command Class, Version 1-3
5. Door Lock Command Class, Version 1-4
6. Meter Command Class, Version 1-5
7. Multilevel Sensor Command Class, Version 1-11
8. Multilevel Switch Command Class, Version 1-4
9. Notification Command Class, Version 1-8
10. Thermostat Mode Command Class, Version 1-3
11. Thermostat Setpoint Command Class, Version 1-3
12. User Code Command Class, Version 1-2

Management Command Class Control Definitions

1. Association Command Class, Version 1-3
2. Association Group Information (AGI) Command Class, Version 1-3
3. Battery Command Class, Version 1
4. Device Reset Locally Command Class, Version 1
5. Firmware Update Meta Data Command Class, Version 1-6
6. Indicator Command Class, Version 1-3
7. Multi-Channel Association Command Class, Version 2-4
8. Version Command Class, Version 1-3
9. Wake-up Command Class, Version 1-2

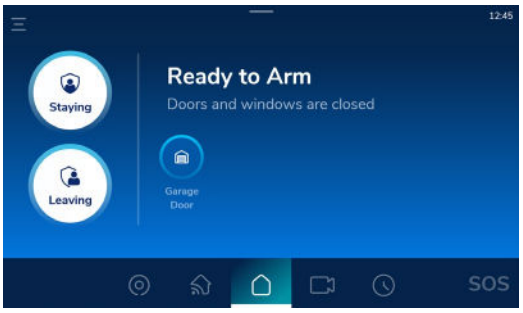
Transport-Encapsulation Command Class Control Definitions

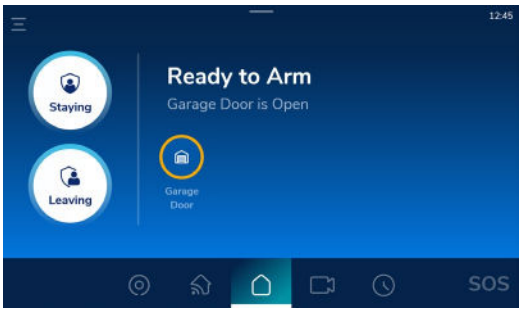
1. CRC-16 Encapsulation Command Class, Version 1
2. Multi-Channel Command Class, Version 3-4
3. Security 0 Command Class
4. Security 2 Command Class
5. Supervision Command Class, Version 1

Note: Not all Controlled Command Classes are represented with corresponding end-user interfaces. Some of these classes operate in the background to enhance device functionality and network performance without requiring direct user interaction.

Garage Door Management with Z-Wave Controller

System Overview:
Upon integrating a compatible Z-Wave Garage Door Controller with your main Controller, you will notice a dedicated garage icon on the home screen of the Controller interface. This icon not only simplifies door operation but also provides real-time status updates.





Status Indicators:

- **Closed Garage Door**: The icon is highlighted in blue, signifying the garage door is securely closed.
- **Open Garage Door**: The icon turns yellow, and a status message will be displayed, alerting you that the garage door is currently open.

Operation:
To operate the garage door, tap the garage icon on the home screen. This action sends a command through the Z-Wave network.

Barrier Operator Command Class:
The *Barrier Operator Command Class* provides a standardized method for your Controller to communicate with the garage door controller. It enables the Controller to:

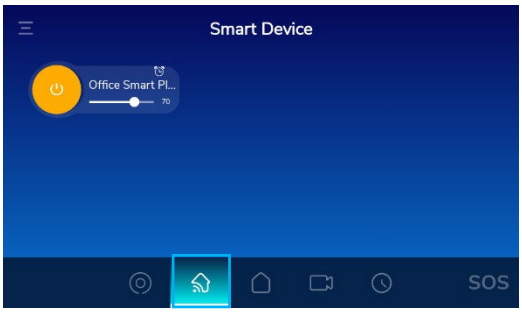
- Issue open and close commands to the barrier.
- Receive notifications regarding the barrier's current status.
- Ensure secure and reliable operation through encrypted signals.

Controlling Smart Plug Devices

Ensure your Z-Wave compatible Smart Plug is paired with your Controller to manage the device directly from the Control page.

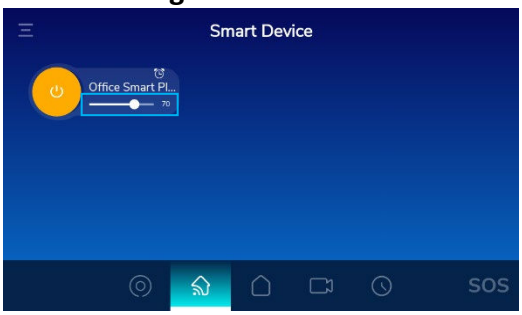
Access and Operation:

- **Control Page Access**: Select the Control icon on your Controller's home screen to access your connected Smart devices.



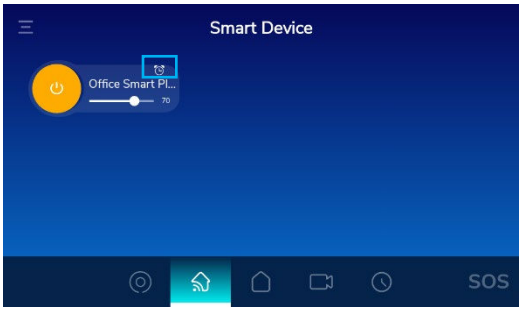
Dimming Functionality:

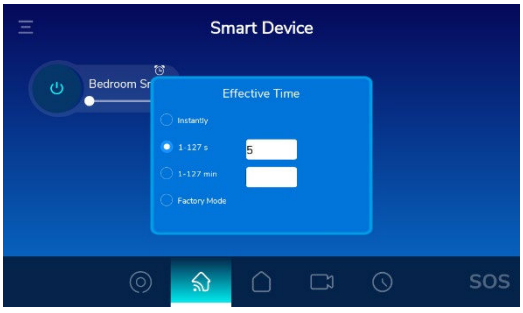
- **Brightness Adjustment**: Devices with Dimming/Brightness adjustment feature a slider beneath the device name. and the number next to the slider is current brightness.
    - **Increase Brightness**: Slide to the right to enhance the lighting.
    - **Decrease Brightness**: Slide to the left to reduce the lighting.



- **Effective Time**

The clock icon in the top-right corner of the device name is used to set the transition time for multi-level switches (such as dimmers) to change from the current level to the target level.

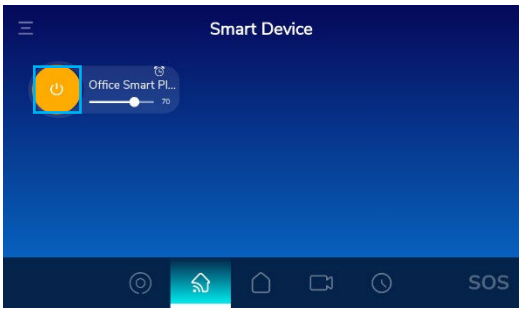




Instantly: Reaches the target level immediately (no fade, instant switch).
1~127s: Time in seconds; the value equals the number of seconds.
1~127min: Time in minutes.
Factory: Uses the device's factory default fade rate; the specific duration is determined by the device's own configuration.

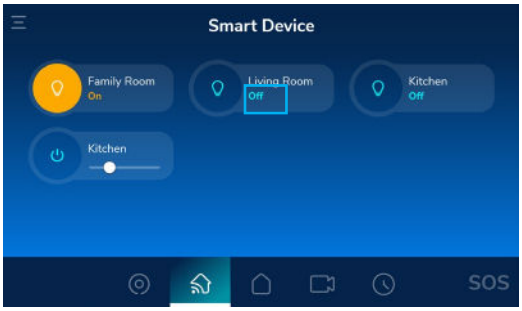
Power Control:

- **Device Toggle**: The icon next to the device name functions as an on/off switch.
    - **Device On**: A yellow highlighted icon denotes the device is active.
    - **Device Off**: A blue highlighted icon indicates the device is inactive.



Status Indicators:

- **Device Tile Notifications**: The status of the Smart Device, including alerts for non-responsiveness or low battery, is displayed on the device tile.



Smart Device Command Classes:

- **Binary Switch Command Class (Version 1-2)**: Provides on/off control, indicating power state with visual feedback.
- **Multilevel Switch Command Class (Version 1-4)**: Allows for the adjustment of the brightness level when controlling dimmable lighting.

Basic Command Control

The Basic Command Control function allows the controller to send Basic Command Class commands to a Z-Wave device in order to perform simple control and verification operations.

Through the Basic Command Class, the controller can issue basic ON / OFF or set value commands to a device without requiring knowledge of the device's specific functional command classes. This provides a standardized method for basic device control and interoperability testing.

Smart Device Command Classes:

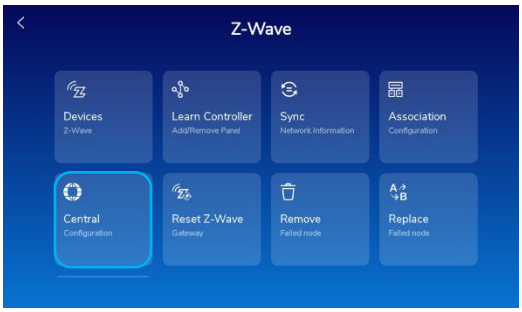
- **Basic Command Class (Version 1-2)**: Enables basic on/off functionality for the Smart Plug.

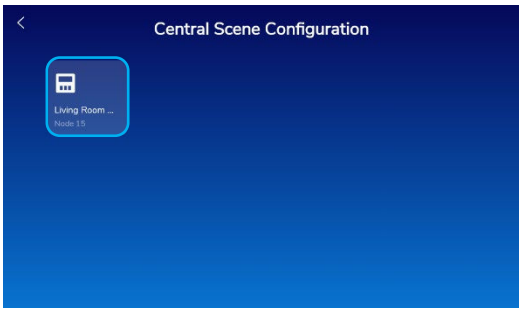
Understanding Central Scene Command Class

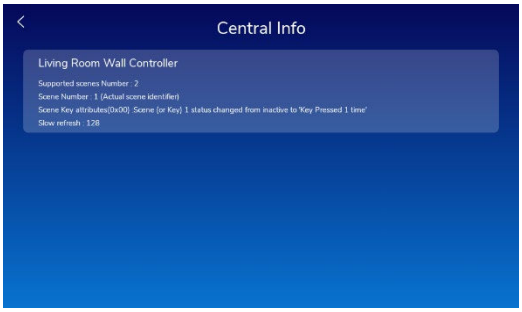
When integrating devices that support scene activation, the Controller provides a user-friendly interface for scene management.

Scene Interaction:

- **Scene Display**: The Controller will list the names and quantities of the scenes which are reported by the devices themselves.
    - **Scene Information**: Each scene will have its name displayed along with a number indicating the quantity or specific scene number.







Here are the detailed instructions for Central Info:
Supported scenes Number: maximum number of supported scenes.
Scene Number: Actual scene identifier
Scene Key attribute:

0x00: Scene (or Key) 1 status changed from inactive to 'Key Pressed 1 time',
0x01: Scene (or Key) 2 status changed from 'held down' to 'released',
0x02: Scene (or Key) 2 status changed to 'held down',
0x03: A key is pressed twice, and no more key presses follow,
0x04: Scene (or Key) 2 status changed to 'Key Pressed 3 times',
0x05: Scene status changed to 'Key pressed 4 times',
0x06: Scene status changed to 'Key pressed 5 times'

Slow refresh: Slow refresh of "Key Held Down" notification. Non-zero=enable; 0=disable.

Scene Configuration Limitations:

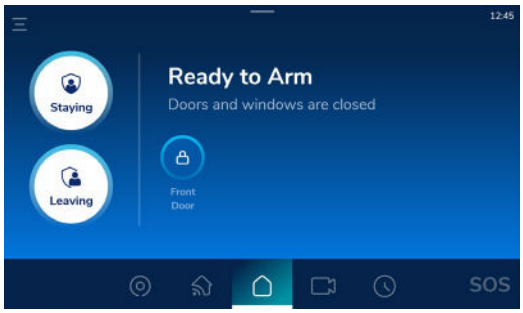
- **No Editing on Controller**: It is important to note that creating, editing, or deleting scenes cannot be done directly from the Controller interface.
    - Users looking to modify scene configurations will need to use the device's native application, compatible mobile application, or software designated by the manufacturer.

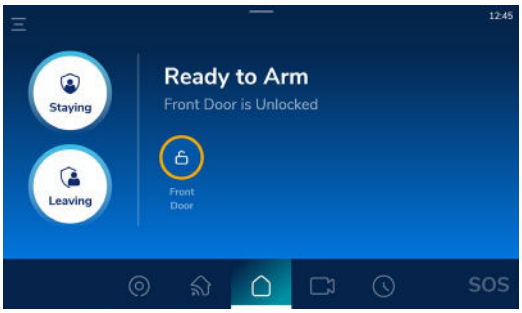
Smart Lock Integration and Control

With the successful pairing of a compatible Smart Lock to your Controller, you will gain immediate control over the locking mechanisms from the home screen.

Lock Icon and Status Indicators:

- **Icon Appearance**: A Lock icon will be displayed on the home screen to represent your Smart Lock.
    - **Locked Status**: The icon will feature a blue highlight signaling that the door is securely locked.
    - **Unlocked Status**: A yellow highlight around the icon indicates the door is unlocked, accompanied by a message on the home screen for clarity.



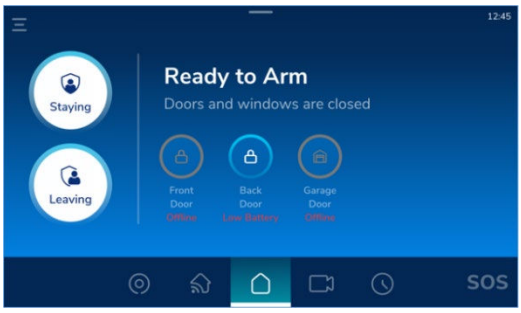


Operational Functionality:

- **Toggling Lock State**: Tap the Lock icon to alternate between locked and unlocked states.

Battery Level Monitoring:

- **Battery Status**: The current battery level of the Smart Lock is accessible on the device information page.



Door Lock Command Class:

- **Version 1-4**: This class enables the Controller to communicate lock commands to the Smart Lock, ensuring secure access control.

Smart Lock User Code Configuration

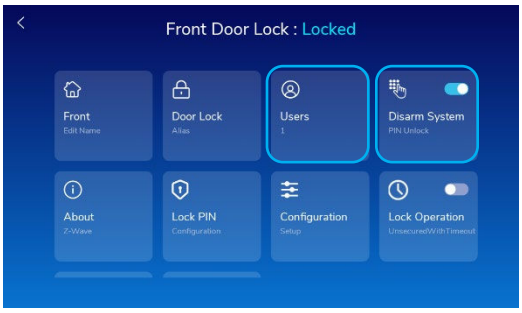
Integrating compatible Z-Wave Smart Locks with your Controller allows for enhanced security management, including user code configurations and system disarmament settings.

Smart Lock Integration:

- **Accessing Smart Lock Settings**:
  - Tap the hamburger icon to access the main menu.
  - Choose the Z-Wave Tile to view your Z-Wave network.
  - Select 'Devices' to see all connected Z-Wave devices.
  - Pick the Smart Lock device you wish to manage.

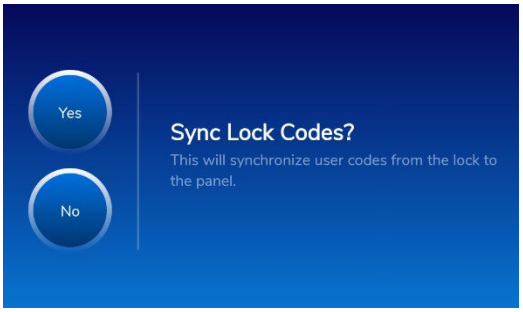
Configuration Options:

- **Disarming System**: Set your system to disarm automatically when the Smart Lock is unlocked while the system is armed.
- **Managing User Codes**: Add, edit, or remove user lock codes to control access.
  - Navigate to the 'Users' tile within the Smart Lock settings to modify stored user codes.
  - The number displayed under the “User” tile indicates how many User Codes have been synchronized from the lock.



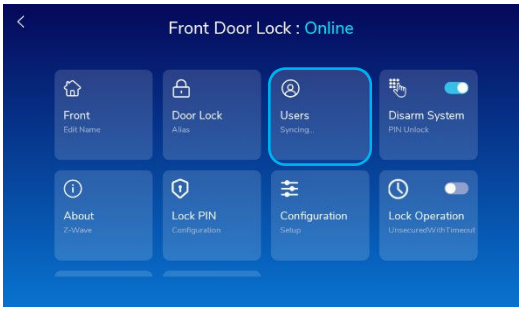
Sync Lock Codes (During Lock Inclusion)

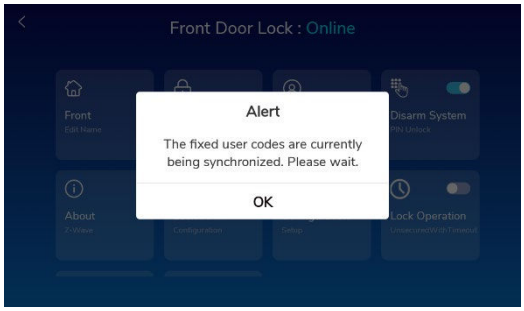
When adding a Door Lock device to the Z-Wave network, the panel will prompt the user to decide whether to synchronize lock user codes stored on the lock.
This option allows the user to choose between displaying only the User Codes already retrieved during device inclusion or performing a full synchronization of all User IDs supported by the lock.



Option 1: No – Do Not Sync Lock Codes
If the user selects No, no lock code synchronization process will be started.
In this case:

- The panel will display only the fixed User Codes that were already retrieved during the device inclusion process.
- These User Codes may take up to approximately 30 seconds to appear in the user interface after device inclusion is completed. During this time, the “Users” tile will display a “Syncing…” status.





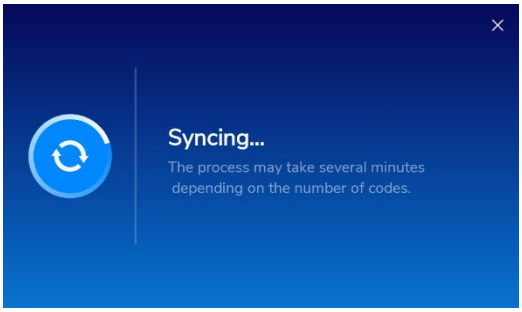
- Once available, the User Codes can be accessed directly without initiating any synchronization process.

Note: The displayed User Codes represent only the User Codes that were already present on the lock and successfully retrieved during inclusion.
Additional User Codes stored on the lock that were not read during inclusion will not be shown unless a full synchronization is performed.

Option 2: Yes – Sync Lock Codes
If the user selects Yes, the panel will start a full synchronization of all User IDs supported by the lock.

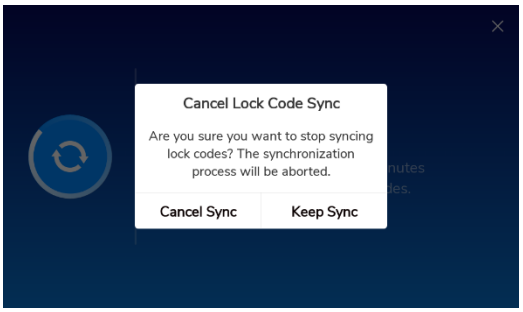
During synchronization:

- The user interface will clearly indicate that synchronization is in progress.
- User Codes will become available incrementally as they are successfully synchronized.
- The synchronization process may take 60 minutes, depending on the number of User IDs supported by the lock.



Interrupting Synchronization

The user may cancel the synchronization process at any time using the cancel option provided in the user interface.



If synchronization is stopped before completion:

- Only the User Codes that have been successfully synchronized up to that point will be displayed.

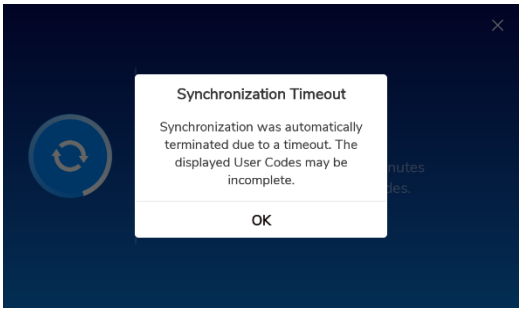
Note: Incomplete synchronization may result in partial User Code information being shown.

Synchronization Timeout

If the synchronization process exceeds the predefined timeout period (60 minutes), it will be automatically terminated by the system.

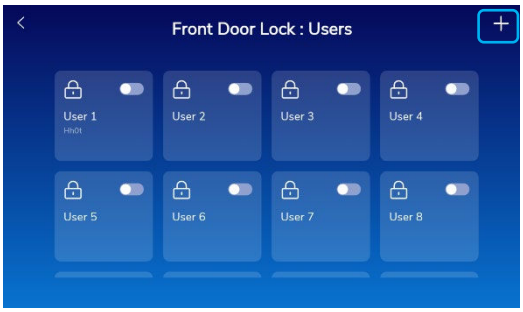
In this case:

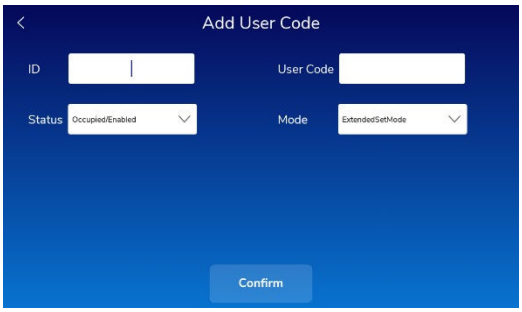
- The behavior is the same as for a manually canceled synchronization.
- Only the User Codes synchronized before termination will be available in the user interface.
- The user interface will indicate that synchronization did not complete successfully.



User Code Command Class:

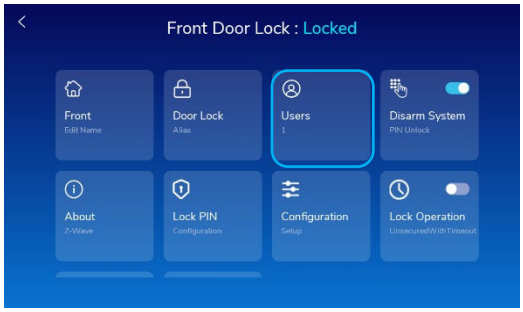
- **Version 1-2**: This command class provides the functionality to manage user codes on Smart Locks. It includes the ability to:
    - Program new user codes for access control.
        1. Navigate to the Smart Lock settings via Settings → Z-Wave → Devices.
        2. Click the 'Users' tile.
        3. Select '+' to configure a new Smart Lock PIN code.

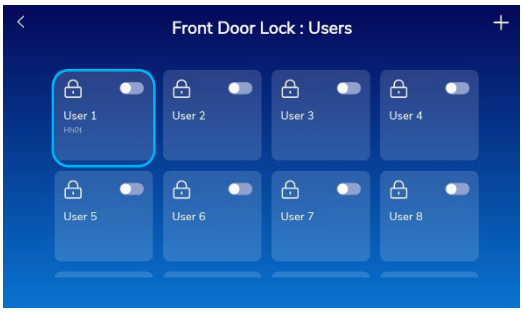


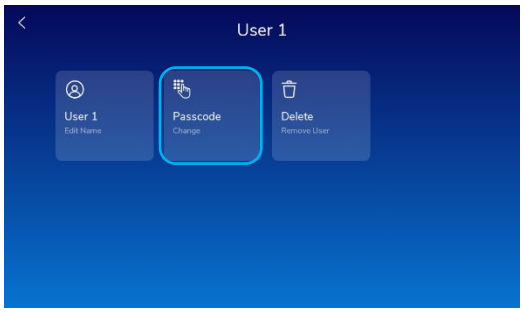


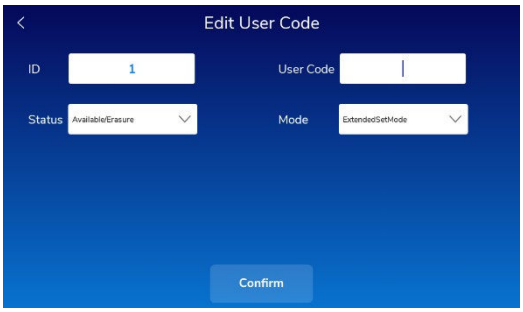
ID: User identifier.
Code: User code; minimum length = 4, maximum length = 10
Status: User id status.
0x00: Available/Erasure
0x01: Occupied/Enabled
0x02: Reserved by administrator (the user code is in use but disabled)
0x03: For messaging purposes only. It is used to relay notifications to a controlling application
0x04: Passage mode
Mode: 0x00(ExtendedSetMode), 0x01(UserCodeSetMode)

    - Edit existing codes for existing users.
        1. Navigate to the Smart Lock settings via Settings → Z-Wave → Devices.
        2. Click the 'Users' tile.
        3. Click the tile of the specific User ID you want to edit.
        4. Click the 'Passcode Change' to edit the code.

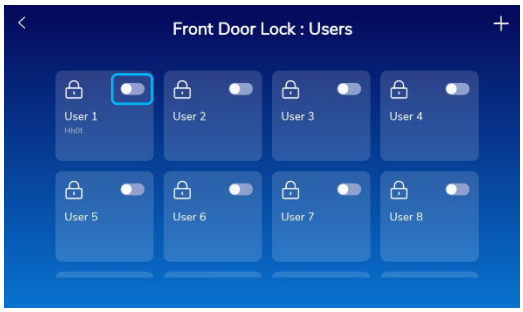




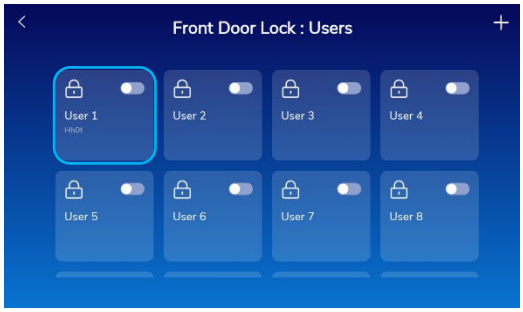


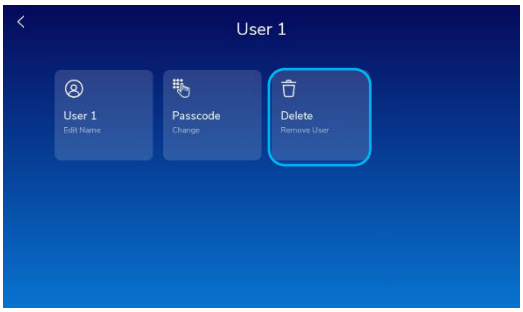


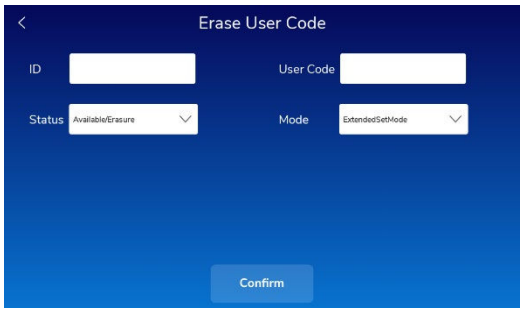
- Temporarily disable user codes.
  1. Navigate to the Smart Lock settings via Settings → Z-Wave → Devices.
  2. Click the ‘Users’ tile.
  3. Toggle the ON/OFF button to temporarily deactivate the user code.



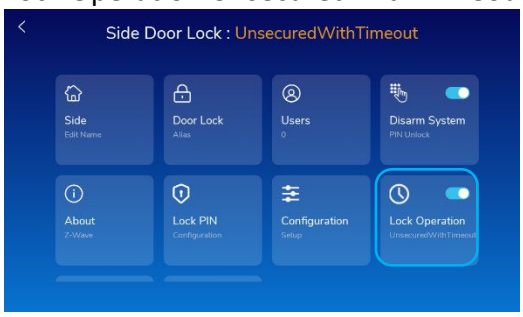
- Permanently remove user codes.
  1. Navigate to the Smart Lock settings via Settings → Z-Wave → Devices.
  2. Click the ‘Users’ tile.
  3. Select ‘Edit Icon’ to access the code details.
  4. Click the ‘Trash’ icon to remove the user code.





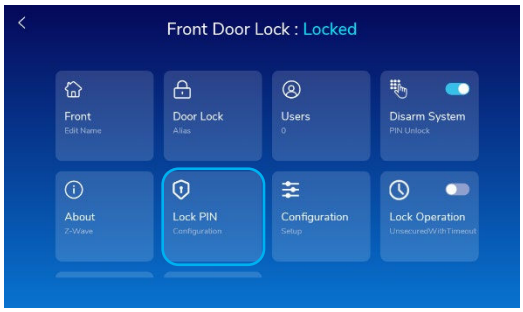


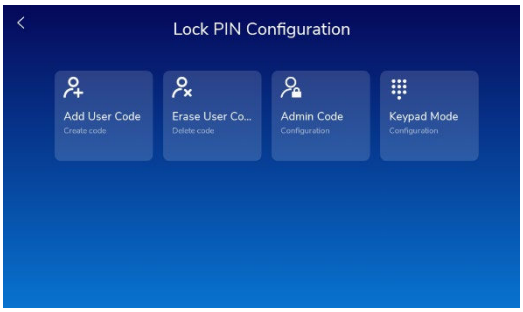
- Lock Operation Unsecured with Timeout



To test the "Unsecured with Timeout" status, toggle the switch above to enter this state.

- Lock PIN Configuration.





- Add User Code: Program new user codes for access control.
- Erase User Code: Permanently remove user code.
- Admin Code Configuration: set admin code.

Code: master code

Mode: 0x00(Disable), 0x01(Enable)

- Set Keypad Mode: set the user code keypad mode.

  Mode:

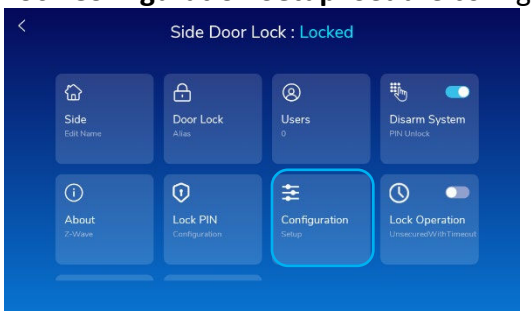
  0x00: Normal mode

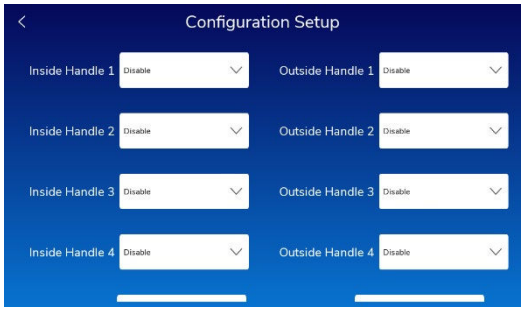
  0x01: Vacation mode

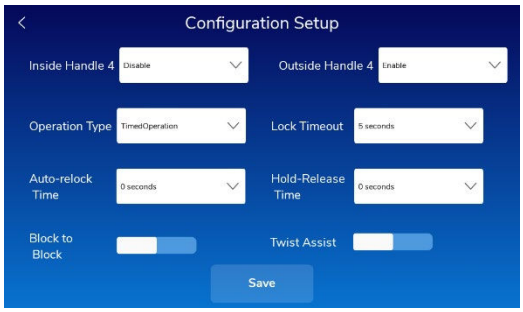
  0x02: Privacy mode

  0x03: Locked out mode

- **Lock Configuration Setup**: Set the configuration of the door lock device







Here are the detailed instructions for Configuration Setup:

- *Inside/Outside Door Handles Mode These mode bits indicate if the actual handle can open the door locally. The mode of the four inside and four outside door handles are encoded in insideDoorHandleMode and outsideDoorHandleMode as:*
  - *Bit 0: Handle 1*
  - *Bit 1: Handle 2*
  - *Bit 2: Handle 3*
  - *Bit 3: Handle 4*
  - *Values:*

    0: disabled; 1: enabled
- *Inside/outside Door Handles State These felds indicate if a door handle has been activated. The state of the four inside and four outside doorhandles are encoded in insideDoorHandleState and outsideDoorHandleState as follows.*
  - *Bit 0: Handle 1*

- *Bit 1: Handle 2*
- *Bit 2: Handle 3*
- *Bit 3: Handle 4*
- *Values.*

  0: inactive; 1: activated

Operation Type: Door lock operation type

0x01: Constant operation

0x02: Timed operation

Lock Timeout: Lock timeout in seconds.

Value: 0s, 5s, 10s, 15s, 20s, 30s, 40s, 50s, 59s

Auto-relock Time: Time setting in seconds for auto-relock functionality.

0 means the functionality is disabled.

Value: 0s, 5s, 10s, 15s, 20s, 30s, 40s, 50s, 59s

Hold-Release Time: Time setting in seconds for letting the latch retracted after the supporting node's mode has been changed to unsecured. Zero means the functionality is disabled.

Value: 0s, 5s, 10s, 15s, 20s, 30s, 40s, 50s, 59s

Block to Block: Indicate if the block-to-block functionality is enabled

Twist Assist: Indicate if the twist assist functionality is enabled

Z-Wave Meter Device Management

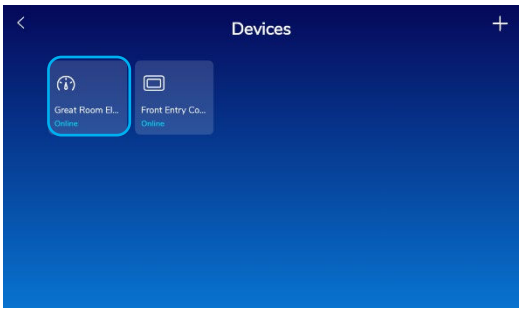
After successfully pairing a Z-Wave Meter, like a Water or Gas Meter, with your Controller, you can monitor and configure your device with precision.

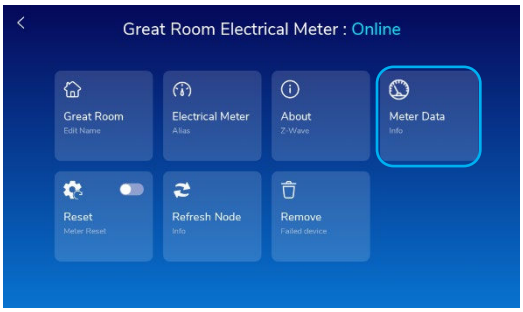
Accessing Device Data and Settings:

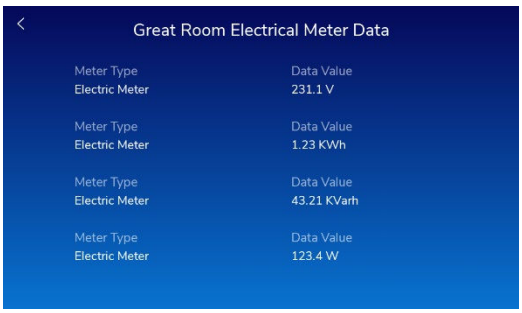
- **Menu Navigation**:
  - Tap the hamburger icon to access the main menu.
  - Choose the Z-Wave Tile to view your Z-Wave network.
  - Select 'Devices' to see all connected Z-Wave devices.
  - Pick the Meter device you wish to manage.

Device Settings Menu:

- **Configuration Access**: In the device settings menu, all supported configurations provided by the meter hardware will be displayed.
-







Meter Command Class:

- **Version 1-5**: This command class facilitates communication between the Controller and your Meter device, allowing the user to:
  - View real-time consumption data.
  - Access historical usage statistics.
  - Adjust device-specific settings as supported by the meter.

Managing Multilevel Sensor Devices

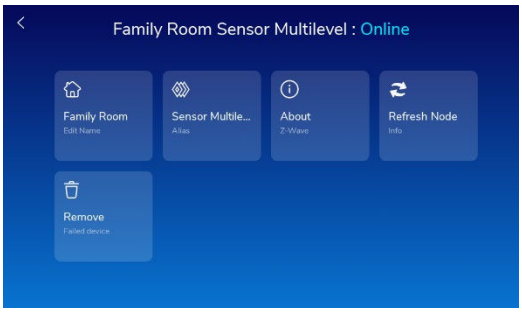
For users with Z-Wave multilevel sensors, pairing these devices with your Controller unlocks a range of data monitoring and device configuration options.

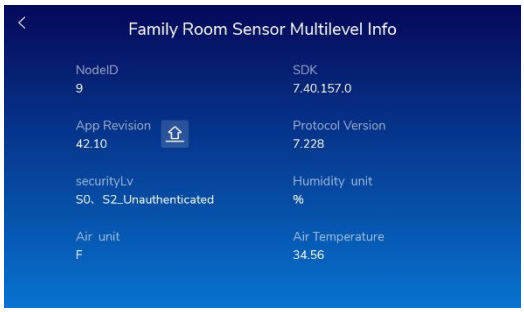
Device Access and Configuration:

- **Menu Navigation**:
  - Tap the hamburger icon to access the main menu.
  - Choose the Z-Wave Tile to view your Z-Wave network.
  - Select 'Devices' to see all connected Z-Wave devices.
  - Select the specific multilevel sensor device you wish to configure.

Sensor Settings Menu:

- **Configuration and Data Viewing**: In the sensor's settings menu, users will find all the supported configurations and data provided by the sensor.





Multilevel Sensor Command Class:

- **Version 1-11**: This command class is essential for the integration of multilevel sensors with the Controller. It allows the user to:
  - Access real-time readings from the sensor (such as temperature, humidity, light levels, etc.).
  - Customize sensor-specific settings as per the capabilities of the hardware.

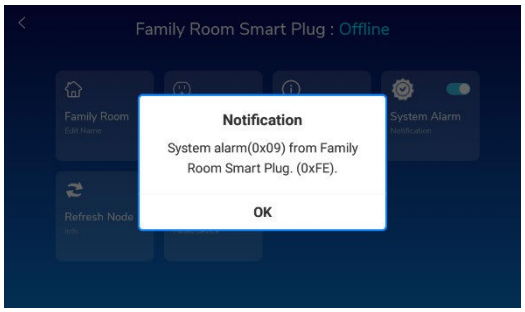
Understanding Notification Command Class

Overview:

- **Notification Functionality**: This command class allows your devices to send specific notifications and alerts to your Controller. These can include alerts from sensors, alarms, or any other event-based notifications.

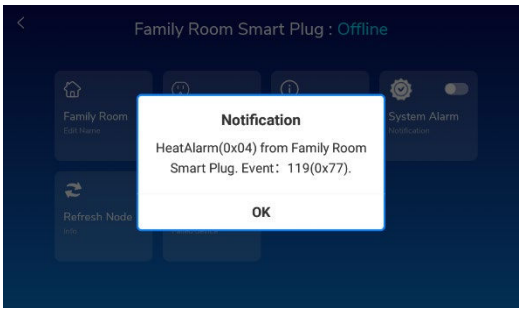
Receiving and Managing Notifications:

- **Viewing Notifications**: Notifications from your Z-Wave devices will be prominently displayed on your Controller's interface.



  - When you enable the 'System Alarm Notification' switch, you will receive the corresponding notifications.

- **Types of Notifications**: You might receive notifications for events like motion detection, door/window opening, smoke detection, or other sensor-based alerts, depending on the devices you have connected.



  - *HeatAlarm(0x04) is the Alarm type,*
  - *119(0x77) is the Event type.*

Configuring Notification Preferences:

- **Device-Specific Settings**: While the Notification Command Class handles the transmission of these alerts, specific notification settings can usually be adjusted within each device's individual settings menu.

- Navigate through the Controller interface to access the settings for a particular device and customize its notification parameters.

Notification Command Class:

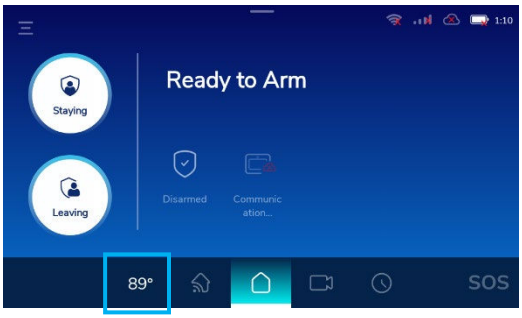
- **Version 1-8**: This version supports a wide range of notification types, ensuring comprehensive coverage of all your Z-Wave device alerts. It is designed to deliver timely and relevant information directly to your Controller, enhancing your home automation experience.

Thermostat Management with the Controller

Successfully pairing a compatible Thermostat with your Controller enables direct control and monitoring of your home temperature settings.

Home Screen Access:

- **Temperature Display**: A temperature reading from your Thermostat appears on the Controller's home screen after pairing.

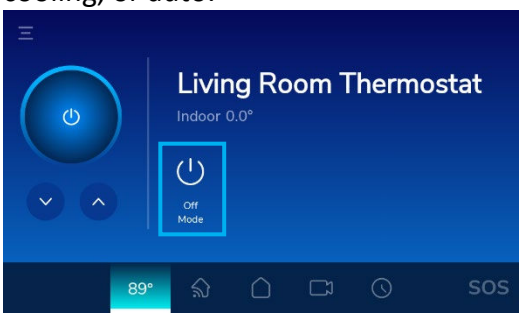


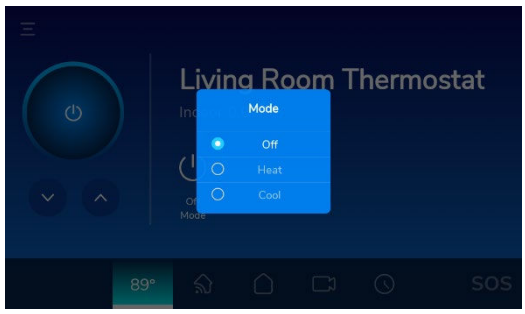
Thermostat Control:

- **Accessing Thermostat Settings**: Tap the temperature reading on the home screen to manage your Thermostat settings.

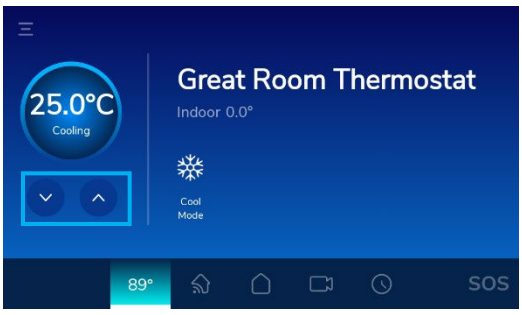
Adjustment Options:

- **Mode Setting**: Change the operational mode of your Thermostat, such as heating, cooling, or auto.

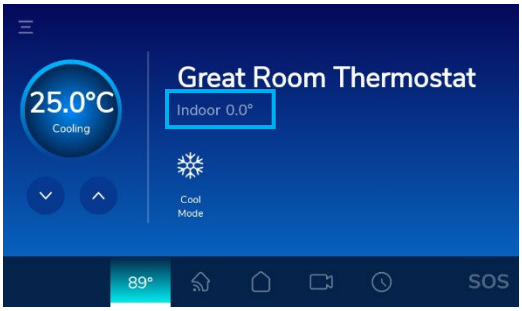




- **Temperature Setpoint**: Set or adjust the target temperature to suit your preference.



- **Current Temperature**: Set or adjust the target temperature to suit your preference.



The current room temperature detected by the device will be displayed under the Thermostat name. 0.0 indicates that the current room temperature has not yet been obtained.

Thermostat Command Class:

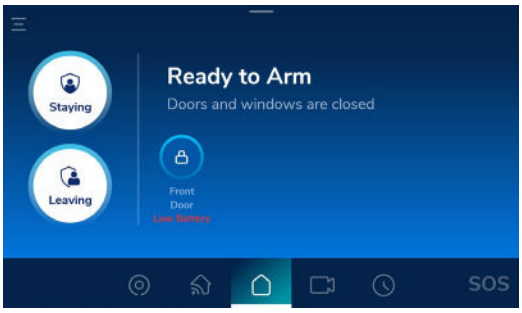
- **Thermostat Mode Command Class (Version 1-3)**: Enables mode changes of the Thermostat via the Controller.
- **Thermostat Setpoint Command Class (Version 1-3)**: Facilitates setting or adjusting the desired temperature.

Battery Management for Z-Wave Devices

Essential for monitoring the battery status of your Z-Wave compatible devices through the Controller.

Battery Status Indications:

- **Critical Alerts**: Important notifications like "Low Battery" will be prominently displayed on the Controller's home screen.



- **Battery Level Information**: To view the specific battery level of a device, navigate to that device's settings menu.

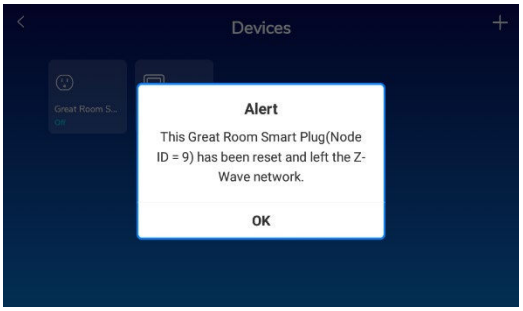
Battery Command Class:

- **Version 1**: This command class allows for the transmission of battery status data from the device to the Controller. It ensures that you are always informed about the battery life of your Z-Wave devices, enabling proactive maintenance and battery replacement.

Device Reset Locally

The Device Reset Locally Command Class is used to notify the primary controller when a Z-Wave device has been reset locally to its factory default state.

When a device performs a local reset, it sends a Device Reset Locally Notification to the primary controller via the Lifeline association group. This allows the controller to update the network state accordingly, such as removing the device from the Z-Wave network and clearing any related configuration, including associations.



This command class ensures that the controller maintains an accurate and consistent view of the network when devices are reset outside of the normal exclusion process.

Brief Overview:

- **Functionality**: Enables the local resetting of Z-Wave devices, restoring them to their original settings. This is particularly useful for troubleshooting or preparing a device for reconfiguration.
- **Usage**: Applicable when a device is malfunctioning or needs to be removed from the current Z-Wave network setup.

Device Reset Locally Command Class

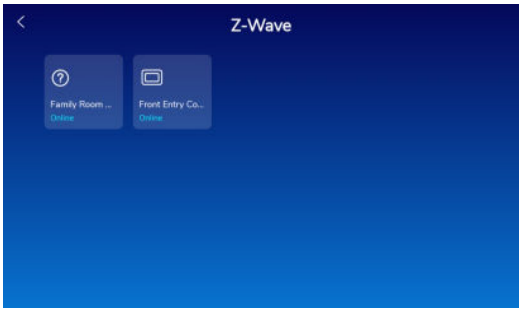
- Version 1: This Command Class is used to notify the primary controller when a Z-Wave device has been reset locally to its factory default settings. It allows the controller to update the network state accordingly, such as removing the device from the network or clearing related configuration and associations.

LED Indicator for Z-Wave Devices

Configure the LED indicators of your Z-Wave devices, providing visual feedback and status indications directly from your Controller.

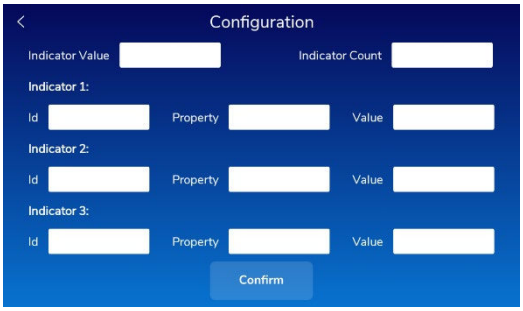
Accessing Indicator Settings:

- **Menu Navigation**:
  - Tap the hamburger icon on your Controller's main screen.
  - Choose the Z-Wave Tile to access your Z-Wave network.
  - Select 'Devices' to view all connected Z-Wave devices.
  - Pick the device you wish to manage.



Configuring LED Indicators:

- **Indicator Settings**:
  - Within the device settings, tap the 'Configuration' Tile.
  - Configure the LED Indicator settings as per your requirements.



Indicator Command Class:

Version 1-3: This command class version enables customization of the LED indicators on your Z-Wave devices, allowing for personalized visual cues and status indicators.

This product supports the Z-Wave Indicator Command Class (version 3).

A Z-Wave controller can identify the product by sending an Indicator Set command with Indicator ID 0x50 (Identify). When this command is received, the device activates a visible identification pattern (for example, flashing the status LED) for the duration specified in the Indicator Set command.

Multi-Channel for Z-Wave Devices

The gateway implements the Multi-Channel Command Class to support the management and control of Z-Wave devices that expose multiple endpoints. As a Z-Wave controller, the gateway can discover, representing, and interacting with endpoint-level functionalities of multi-channel devices within the network.

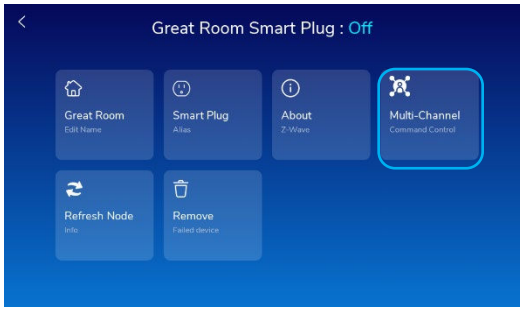
The gateway can query and retrieve endpoint information from multi-channel devices using the Multi-Channel Command Class. Each endpoint is identified by its endpoint ID and represented individually within the gateway for configuration and control purposes.

Setting Up Multi-Channel Devices:

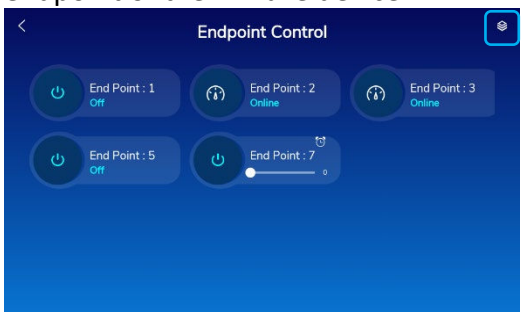
- **Menu Navigation**:
  - Tap the hamburger icon on your Controller's main screen.
  - Select the Z-Wave tile to access the Z-Wave network.
  - Select "Devices" to view all connected Z-Wave devices.
  - Select the device you want to configure.

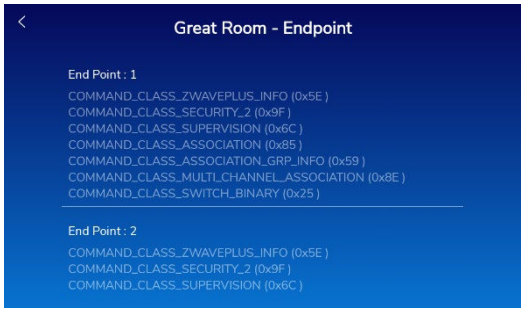
Configuring Device Channels:

- **Device Configuration**:
  - In the device settings, access the options related to multi-channel or endpoint configuration.

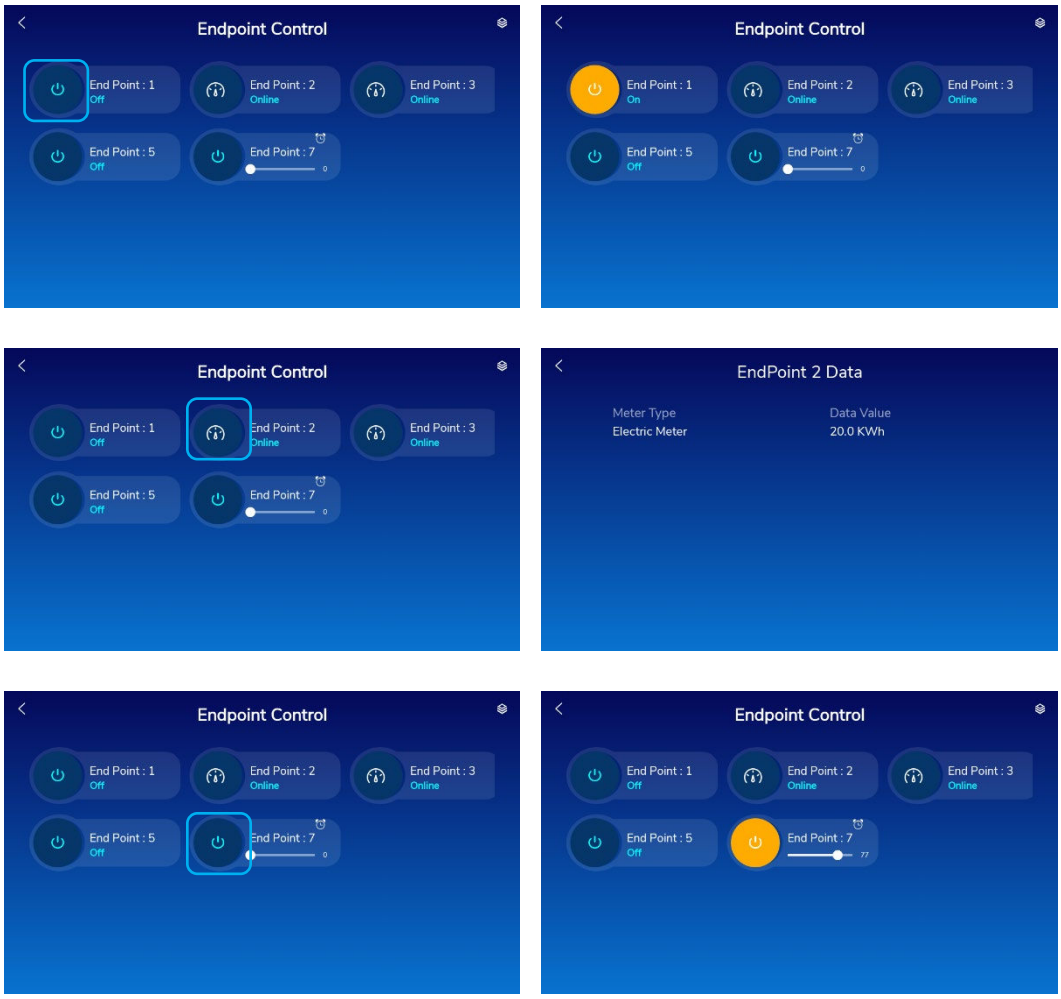


  - To understand the functions and configuration options available for each endpoint, and to provide an overview of the command classes supported by each endpoint of the Z-Wave device.





- Configure and customize the behavior of each channel (endpoint) supported by the selected Z-Wave device.



Note: The gateway supports endpoint-level association configuration through the Multi-Channel Association Command Class. This allows users or installers to configure direct communication between specific endpoints of Z-Wave devices. The gateway also provides configuration interfaces for managing endpoint-level behavior and associations.

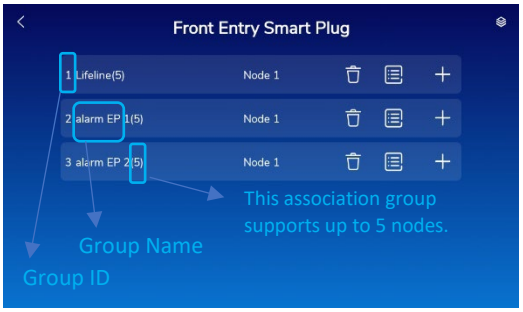
Multi-Channel Command Class:

- **Version 3-4**: This version of the command class provides the capability to individually address and control different channels of a multi-functional device, enhancing the flexibility and efficiency of your smart home setup.

Association Command Class

The Association feature allows direct communication between Z-Wave devices without routing commands through the primary controller. This peer-to-peer communication enables devices to send control commands directly to associated nodes. For example, a Z-Wave motion sensor can directly trigger a Z-Wave smart light to turn on when motion is detected.
Devices communicate through predefined association groups, which define how and to which nodes commands are sent within the Z-Wave network.

Association Group Definition and Capacity
The association groups supported by a Z-Wave device are predefined based on the device's capabilities and functional role within the network. The number and purpose of association groups may vary by device.
The panel supports association group management and allows up to 5 nodes to be assigned to each association group. The maximum number of nodes per group is device-specific and defined by the device implementation.



Lifeline Association Group Behavior

Association Group 1 is configured as the **Lifeline group** and is reserved for communication with the primary controller.
The DUT uses the Lifeline group to report device status and system-related notifications to the primary controller. Lifeline notifications are sent under the following conditions:

- When the DUT is powered on or initialized
- When the DUT is reset locally to factory default settings
- When significant system events occur (e.g., device reset or status changes)

Upon detecting that a device has been reset locally, the panel processes the Lifeline notification accordingly and updates the network state.

Control Panel and Configuration

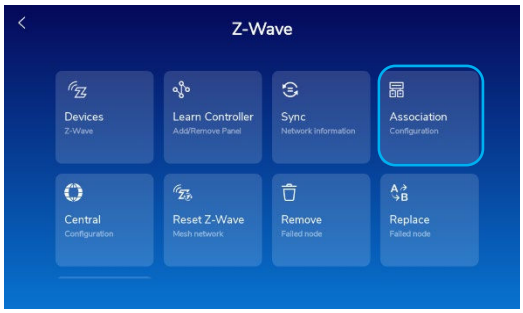
When a device is added to the Z-Wave network, the control panel identifies the association groups supported by the device and makes them available for configuration.
The association configuration interface provides the following information:

- Available Z-Wave nodes and their Node IDs for association setup
- A list of associated nodes and their basic information for configuration purposes

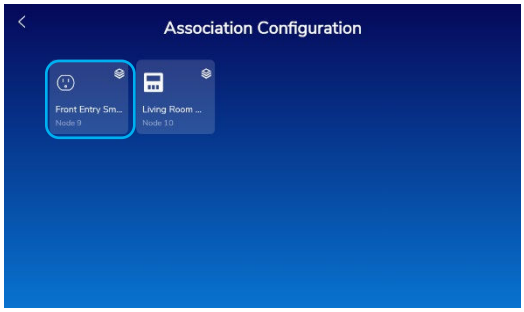
The Lifeline group (Group 1) is reserved for reporting device status and notifications to the primary controller and should not be modified.

Set Association

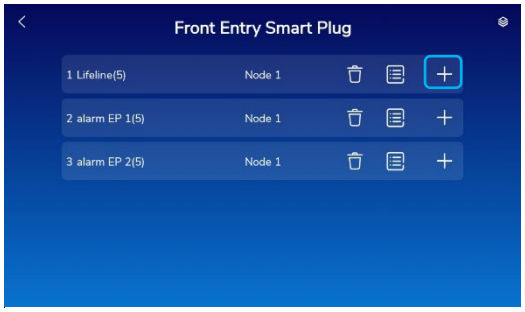
- Tap the hamburger icon on your Controller's main screen.
- Choose the Z-Wave Tile to enter your Z-Wave network.
- Select 'Association Configuration' to view all connected Z-Wave devices.



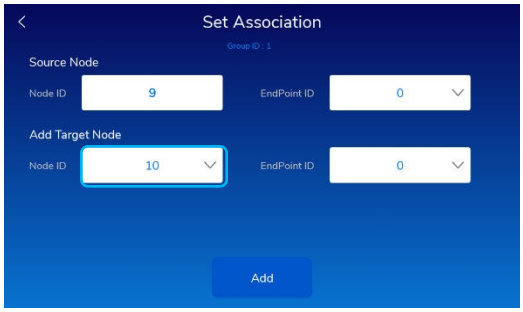
- Pick the device you wish to configure.



- In the individual device association list, tap the '+' to Set Association.



- Select the target node to be associated with the source node.



Note: Endpoint IDs are used only in Multi-Channel Association and are not applicable to standard Association.

- Click ‘Add’ to create the association.

Remove Association

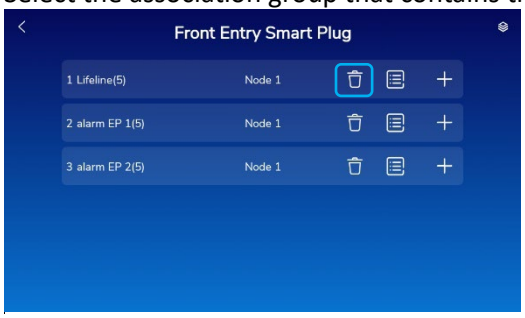
The Remove Association feature allows the source node to remove one or more associated nodes or endpoints from a specific association group. This action terminates direct communication between the source node and the specified target node(s) or endpoint(s).

For devices supporting the Multi-Channel Association Command Class, removal can be performed at the endpoint level. Standard Association supports node-level removal only.

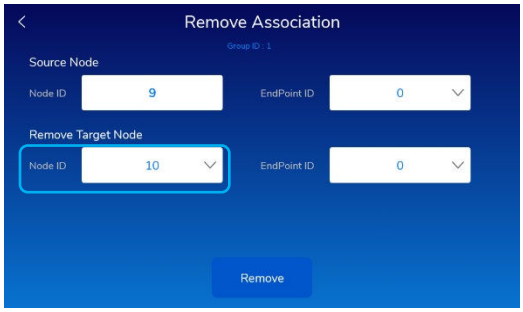
Usage of Remove Association is recommended for network maintenance, device replacement, or reconfiguration of associations.
The Lifeline Group (Group 1) is reserved for the primary controller and should not be modified by the user.

1. Select the Z-Wave device you wish to check by clicking on it.

2. Select the association group that contains the target node(s) or endpoint(s) to be removed.



3. Select the Target Node.

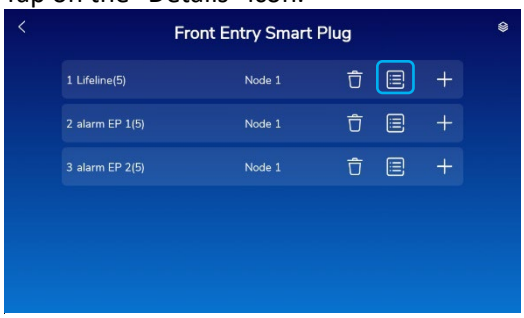


Note: Endpoint IDs are used only in Multi-Channel Association and are not applicable to standard Association.

4. Click the ‘Remove’’ button to confirm the removal.

View the Associated Command Classes of the device.

1. Select the Z-Wave device you wish to edit by clicking on it.
2. Tap on the "Details" icon.

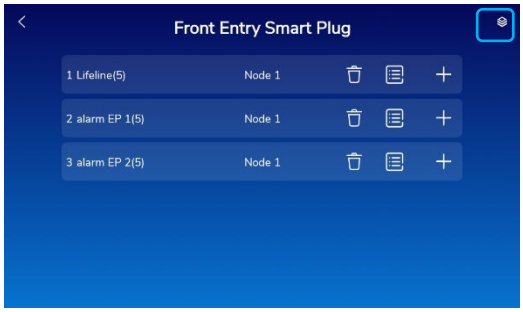


3. View Associated Command Class of the group.

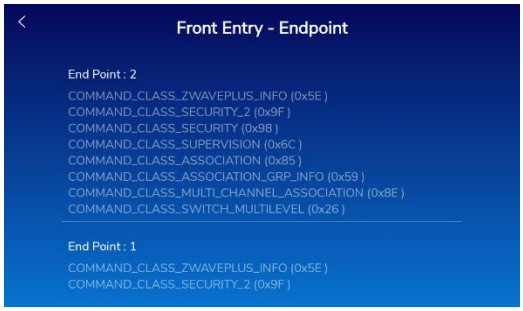
View the Endpoint details of the device

1. Select the Z-Wave device for which you would like to modify the group.

2. Tap on the "layer" icon on the upper right.



3. View Endpoint details.



Association Command Class (Version 1-3): This command class allows the creation and management of associations between Z-Wave devices, enabling direct node-to-node communication without routing commands through the primary controller. Devices can send control commands or event notifications to associated nodes, and Lifeline (Group 1) is used to report status and events to the primary controller.

Association Group Information (AGI) Command Class (Version 1-3): This command class provides detailed information about the association groups supported by a Z-Wave device. It allows controllers and applications to query the number of groups, maximum nodes per group, group profiles, and the function of each group. For multi-channel devices, endpoint-level information can also be provided.

Multi-Channel Association for Z-Wave Devices

The Multi-Channel Association feature extends standard association functionality by enabling direct communication between specific endpoints of Z-Wave devices. It allows commands to be sent from a source device or endpoint to a designated endpoint on a target device without routing through the primary controller.

This endpoint-level association is intended for devices that support multiple independently controllable functions, such as multi-gang switches, power strips, or control panels with multiple inputs or outputs. By associating specific endpoints, precise and efficient device interactions can be achieved.

Endpoint-Based Configuration
Devices that support the Multi-Channel Association Command Class define association groups that allow destinations to be specified at the endpoint level. Each association group may contain a combination of node-level and endpoint-level destinations, depending on the device capabilities.

The available endpoints and their associated functions are defined by the device implementation and may vary between different Z-Wave devices.

Panel Association Group Support

The panel supports the Z-Wave Association Command Class and provides a predefined association group for system reporting.

Supported Association Groups
Association Group 1 – Lifeline (used to report device status)

Max Nodes:
1 node

Behavior:
The panel sends commands to the Lifeline group under the following condition:

When the panel is reset locally to factory default settings

Configuration:
This association group is reserved for the primary controller and should not be modified.

The panel does not support any additional association groups.

Control Panel Integration

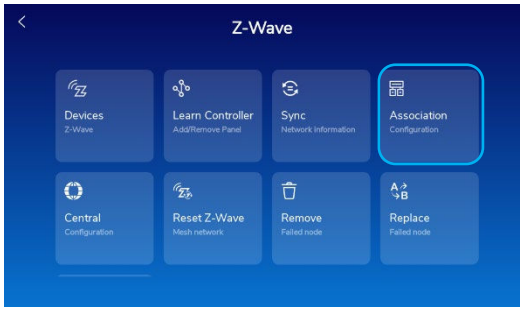
When a device supporting the Multi-Channel Association Command Class is added to the Z-Wave network, the control panel detects the available endpoints and supported multi-channel association groups, enabling endpoint-level configuration for supported devices.

Configuration

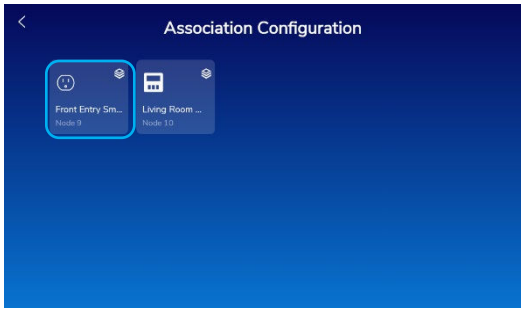
- The multi-channel association configuration displays available Z-Wave nodes and their endpoints for association setup.
- Devices may support one or more multi-channel association groups, depending on their capabilities.
- Each association group supports a device-specific number of destinations, where each destination may be a node or a specific endpoint.
- The Lifeline Group (Group 1), when applicable, is reserved for reporting device status and notifications to the primary controller and should not be modified.
- The user interface displays the list of associated nodes and endpoints and their basic information for configuration purposes.

Set Association

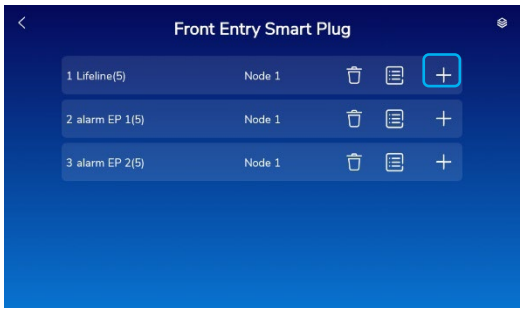
- Tap the hamburger icon on your Controller's main screen.
- Choose the Z-Wave Tile to enter your Z-Wave network.
- Select 'Association Configuration' to view all connected Z-Wave devices.



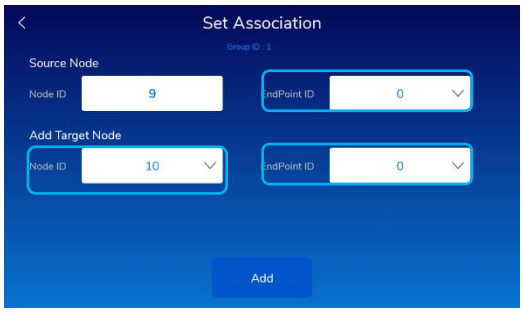
- Pick the device you wish to configure.



- In the individual device association list, tap the '+' to Set Association.



- Select the source endpoint ID, the target node, and the target endpoint ID to establish an association.



- Click ‘Add’ to establish the association between the selected source and target nodes and endpoints.

Remove Association

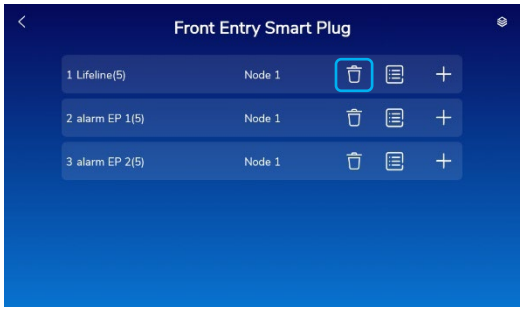
The Remove Association feature allows the source node to remove one or more associated nodes or endpoints from a specific association group. This action terminates direct communication between the source node and the specified target node(s) or endpoint(s).

For devices supporting the Multi-Channel Association Command Class, removal can be performed at the endpoint level. Standard Association supports node-level removal only.

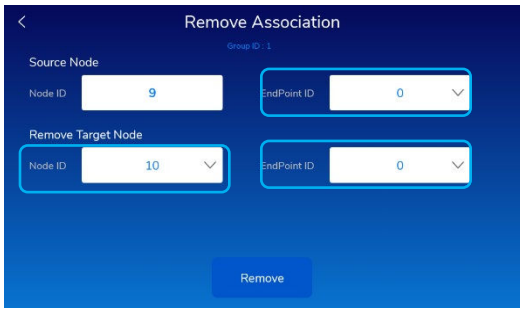
Usage of Remove Association is recommended for network maintenance, device replacement, or reconfiguration of associations.
The Lifeline Group (Group 1) is reserved for the primary controller and should not be modified by the user.

1. Select the Z-Wave device you wish to check by clicking on it.

2. Select the association group that contains the target node(s) or endpoint(s) to be removed.



3. Select the Source Endpoint and Target Node and Target Endpoint.



4. Click the ‘Remove’ button to confirm the removal of the selected association.

Multi-Channel Association Command Class:

- **Version 2-4**: This version of the command class supports the creation of multi-channel associations, allowing a single Z-Wave device to control and communicate with multiple endpoints or groups within your network.

Version Information for Z-Wave Devices

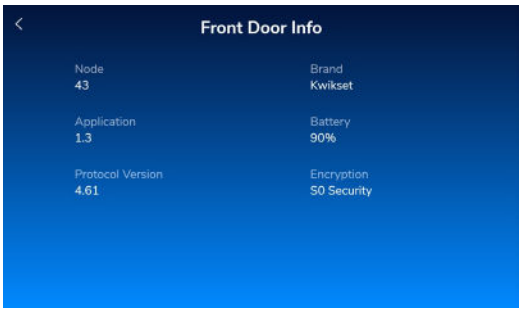
Designed to provide end users with essential information about their Z-Wave devices, including software and hardware versions.

Accessing Device Information:

- **Menu Navigation**:
  - Tap the hamburger icon on your Controller's main screen.
  - Choose the Z-Wave Tile to access your Z-Wave network.
  - Select 'Devices' to see all connected Z-Wave devices.
  - Pick the device you wish to review.

Viewing Device Details:

- **Device Information**:
  - In the device settings, tap the 'About' tile.
  - View vital data about the device, such as software version, hardware version, and other relevant information.



Version Command Class:

- **Version 1-3**: This command class allows users to access detailed version information of their Z-Wave devices, ensuring they are aware of the device's current firmware and hardware status.

Security 0 and 2 Command for Z-Wave Devices

The **Security 0 (S0)** and **Security 2 (S2)** Command Classes provide secure communication mechanisms within a Z-Wave network by enabling encryption and protection of command frames exchanged between devices.

These command classes are used to ensure confidentiality, integrity, and access control for Z-Wave communications, particularly for devices involved in security-sensitive operations.

Purpose and Usage
The Security 0 and Security 2 Command Classes are used to:

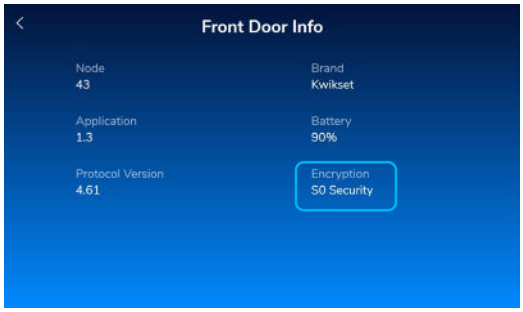
- Secure command transmission between Z-Wave devices
- Prevent unauthorized control and data interception
- Support secure device inclusion and lifecycle management
- Maintain interoperability across different generations of Z-Wave devices

Secure Inclusion and Key Management

During secure inclusion, the DUT negotiates the appropriate security level based on the capabilities of the joining device. One or more security keys may be granted to the device, and all subsequent secured communication is encapsulated using the negotiated security scheme.

To check the Encryption Levels:

- Tap the hamburger icon on your Controller's main screen.
- Choose the Z-Wave Tile to access your Z-Wave network.
- Select 'Devices' to see all connected Z-Wave devices.
- Pick the device you wish to review.
- Within the device settings, tap the **"Info"** tile to view the **Encryption** details and identify the security keys supported by the device.



Security 0 and 2 Command Class:

- **Security 0 and 2**: These command classes provide different levels of encryption, ensuring secure communication within your Z-Wave network. Security 2 offers a higher level of encryption compared to Security 0.

Compatibility

Unsupported Command Classes

Your product is compatible with Z-Wave S0 and S2 devices. However, please note that it does not support the following Command Classes:

- Security (COMMAND_CLASS_SECURITY)
- Network Management Basic (COMMAND_CLASS_NETWORK_MANAGEMENT_BASIC)
- Network Management Proxy (COMMAND_CLASS_NETWORK_MANAGEMENT_PROXY)
- Network Management Inclusion (COMMAND_CLASS_NETWORK_MANAGEMENT_INCLUSION)
- Network Management Installation Maintenance (COMMAND_CLASS_NETWORK_MANAGEMENT_INSTALLATION_MAINTENANCE)
- Firmware Update Meta Data (COMMAND_CLASS_FIRMWARE_UPDATE_MD)

Supported Command Classes

- APPLICATION STATUS
  Version: V1
- ASSOCIATION_GRP_INFO
  Version: V3
- ASSOCIATION
  Version: V3
- CRC_16_ENCAP
  Version: V1
- DEVICE_RESET_LOCALLY
  Version: V1
- FIRMWARE_UPDATE_MD
  Version: V5
- INCLUSION_CONTROLLER
  Version: V1
- INDICATOR
  Version: V3
- MANUFACTURER_SPECIFIC
  Version: V2
- MULTI_CHANNEL_ASSOCIATION
  Version: V4
- MULTI_CMD
  Version: V1
- NETWORK_MANAGEMENT_BASIC
  Version: V2
- NETWORK MANAGEMENT INCLUSION
  Version: V4
- NETWORK_MANAGEMENT_INSTALLATION_ MAINTENANCE
  Version: V4
- NETWORK_MANAGEMENT_PROXY
  Version: V4

- NODE_PROVISIONING
  Version: V1
- POWERLEVEL
  Version: V1
- SECURITY
  Version: V1
- SECURITY_2
  Version: V1
- SUPERVISION
  Version: V1
- TIME
  Version: V1
- TRANSPORT_SERVICE
  Version: V2
- VERSION
  Version: V3
- ZWAVEPLUS_INFO
  Version: V2