



# Crestron Home™ OS 3

Product Manual  
Crestron Electronics, Inc.

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# Introduction

The Crestron® Home™ OS 3 system for the CP4-R control processor is used to configure and control audio/video systems, lighting, shades, thermostats, door locks, and security systems for the entire home. Configure the system using the Crestron Home Setup app on an Apple® iPad® device or using the control processor's Xpanel interface.

Control the system using Crestron touch screens, touch screen remotes, keypads, and more. Additionally, system control can be performed using mobile devices, such as iPad devices, iPhone® devices, and iPod touch® devices.

**NOTE:** For a comprehensive list of devices that are supported by Crestron Home, refer "Works with Crestron Home" on page 247 or the Crestron Home product page at [www.crestron.com/CrestronHome](http://www.crestron.com/CrestronHome). Support for new devices is added to the system via firmware updates.

Use the Crestron Home app to listen to music in any room, share audio and video sources throughout rooms, and trigger environmental scenes within the Crestron Home network. The Crestron Home app raises or lowers the lights, sets the thermostat to an ideal temperature, and tunes in the media system to a favorite streaming service, all with the touch of a button. Crestron Home is designed to integrate with every Crestron system. The onboard ports on the CP4-R can be used to set up media, lights, shades, thermostats, and locks in minutes.

## NOTES:

- Crestron Home OS 3 is not available on the PYNG-HUB or CP3-R control processors. The features described in this document are available using the CP4-R only.
- For a general overview of the Crestron Home system, including supported devices, frequently asked questions, multimedia content, and tips and tricks, refer to OLH article 257 at [https://support.crestron.com/app/answers/detail/a\\_id/257/kw/257](https://support.crestron.com/app/answers/detail/a_id/257/kw/257).

# Product Features

Refer to the following chart to determine the device types and product features that are compatible with the Crestron Pyng OS 1, Crestron Pyng OS 2, and Crestron Home OS 3 operating systems.

**NOTE:** For a comprehensive list of devices that are supported by Crestron Home, refer "Works with Crestron Home" on page 247 or the Crestron Home product page at [www.crestron.com/CrestronHome](http://www.crestron.com/CrestronHome). Support for new devices is added to the system via firmware updates.

**Crestron Pyng OS 1, Pyng OS 2, and Crestron Home OS 3 Comparison Chart**

Feature Class	Feature	Pyng OS 1	Pyng OS 2	Crestron Home OS 3
Control Processor	Compatible Processor	PYNG-HUB	CP4-R CP3-R	CP4-R
Multi-Home Support	Multi-Home Support	No	No	Yes
Home and Room Images	Home and Room Images	No	No	Yes
iPad Split View	iPad Split View	No	No	Yes
Room Favorites	Room Favorites	No	No	Yes
Audio	Sonos® CONNECT™ Wireless Receivers	Yes	Yes	Yes
	Sonos CONNECT:AMP Devices	No	Yes	Yes
	All Sonos Speakers (including Sound Bars)	No	Yes	Yes
Audio Grouping	Yes	Yes	Yes	
	Simple Audio Source Sharing	Hybrid Grouping of Sonos and Sonnex	Hybrid Grouping of Sonos and Sonnex	
Crestron Distribution Amplifiers	Yes	Yes	Yes	

Crestron Pyng OS 1, Pyng OS 2, and Crestron Home OS 3 Comparison Chart

Feature Class	Feature	Pyng OS 1	Pyng OS 2	Crestron Home OS 3
	Remote Media Control (Mobile device using a cellular network) <sup>1</sup>	Yes	Yes	Yes Source selection and Basic Control
Video	Custom TV Presets (Favorites)	No	Yes	Yes <sup>2</sup>
	Handheld Remotes	No	Yes	Yes
	Source Control	No	Yes	Yes
	Display Control	No	Yes	Yes
	A/V Receivers	No	Yes	Yes
	DigitalMedia™ Devices	No	Yes	Yes
	DM NVX™ Devices	No	Yes	Yes
	Remote Media Control (Mobile device using a cellular network) <sup>1</sup>	Yes	Yes	Yes
MyCrestron Dynamic DNS Service	Automatic Backups	Yes	Yes	Yes
	Monitoring	Yes	Yes	Yes
	Lighting Preconfiguration	Yes	Yes	Yes
Lighting	Lighting	Yes	Yes	Yes
Climate	Thermostats	Yes	Yes	Yes
	BACnet Thermostats	No	No	Yes
Shades	Shades	Yes	Yes	Yes

<sup>1</sup>Remote media control is performed when a mobile device is not on the local Wi-Fi® network. For example, the mobile device is connected to a cellular network and is disconnected from the local Wi-Fi network.

<sup>2</sup>Custom TV presets are not supported.

**Crestron Pyng OS 1, Pyng OS 2, and Crestron Home OS 3 Comparison Chart**

Feature Class	Feature	Pyng OS 1	Pyng OS 2	Crestron Home OS 3
Security	Door Locks	Yes	Yes	Yes
	Security Systems	Yes	Yes	Yes
Sensors	Sensors	Yes	Yes	Yes
Keypads	Keypads	Yes	Yes	Yes
Touch Screens	Touch Screens	Yes	Yes	Yes
Cameras	2N® Door Stations	No	Yes	Yes
	Streaming Cameras	No	Yes	Future Release <sup>1</sup>
Editing	Scene Editing	Yes	Yes	Future Release
	Scheduling	Yes	Yes	Future Release
Quick Actions	Per Room Quick Actions	No	No	Yes
	Whole House Quick Actions	Yes	Yes	Yes
Multi-Language Support	End-User Interface	Yes	Yes	Future Release
	Setup App	Yes	Yes	Yes
Mobile Platform Support	iOS® Phones	Yes	Yes	Yes
	iOS Tablets	Yes	Yes	Yes
	Android™ Phones	Yes	Yes	Future Release
	Android Tablets	Yes	Yes	Future Release
	PC	Yes	Yes	Future Release

<sup>1</sup>Cameras cannot be viewed using the Crestron Home App. Cameras are still accessible using the Pyng OS 2 App. TSW-xx60 series touch screens can be placed in Smart Graphics mode to view the camera.

Refer to the following chart to view the features of the [PYNG-HUB](#), [CP3-R](#), and [CP4-R](#) control processors. Refer to their product pages at [www.crestron.com](http://www.crestron.com) for complete details.

#### Control Processor Feature Chart

		Control Processor		
Feature Class	Feature	PYNG-HUB	CP3-R	CP4-R
Operating System	Crestron Home OS 3	No	No	Yes
	Pyng OS 2	No	Yes	Yes
	Pyng OS 1	Yes	No	No
Gateways	Wireless Communications	infiNET EX®	infiNET EX®	infiNET EX®
	Built-in Gateways	1	0	0
	External Gateways	5	15	15
	Devices per Gateway	50	50	50
	Total Wireless Devices	300	750	750
Connectors	IR Ports	0	8	8
	RS-232/-422/-485	0	3	3
	Relays	0	8	8
	Digital I/O Ports & Analog In	0	8	8
	Net	Yes	Yes	Yes
	LAN	Yes	Yes	Yes
RAM and CPU	RAM	256 MB	1 GB	2 GB
	CPU	AM3352	i.MX53	i.MX6
	Clock speed	600 MHz	1 GHz	1 GHz
	Cores	1	1	4

# Maximum System Configuration

Refer to the following chart to determine the maximum number of devices or components that may be added to the Crestron Home system. These system maximums are tested and have been guaranteed to work with the CP4-R.

For a complete list of devices that are supported by Crestron Home visit [www.crestron.com/crestronhome](http://www.crestron.com/crestronhome).

**Crestron Home OS Maximum System Size Chart**

Type	Quantity
Touch Screens or TSR-310s	24
Apps in Home	10
Remotes (HR series)	24
Remotes per Room	2
Keypads	120
Active Audio Groups	4
Max Rooms in 1 Audio Group	20
Crestron Speaker Zones	32
Audio Sources	24
Sonos Speaker Zones or Players	16
Video Sources	32
Video Zones	32
Displays in a Room	1
Shades/Drapes	100
Lighting Loads	300
Thermostats	32
Security Systems	1
Locks	6
Streaming Cameras	10
Sensors	32
AVRs	6

# Configuration Software

The Crestron Home system can be configured using the Crestron Home Setup app on an iPad device or using the control processor's Xpanel.

## Crestron Home Setup App

Crestron Home Setup app is used to configure the Crestron Home system. The Crestron Home Setup app is available from the App Store® online store and may be downloaded onto an Apple iOS® device such as an iPad.

To download the Crestron Home Setup app:

### NOTES:

- An Apple ID is required to download the Crestron Home Setup app. Refer to <https://support.apple.com/kb/HT2731> for help with setting up an Apple ID.
- For a comprehensive list of iOS® hardware and software versions that are compatible with Crestron Home, refer to OLH article 5655 at [https://support.crestron.com/app/answers/detail/a\\_id/5655](https://support.crestron.com/app/answers/detail/a_id/5655).

1. Tap the **App Store** icon  on the iPad device home screen.
2. Tap the search field, and enter the search term "Crestron Home Setup."
3. Tap **Search**.
4. Tap the **Crestron Home Setup** app icon .
5. Follow the prompts to download and install the app to the device.

## Crestron XPanel Setup

The Crestron Home system may also be configured on a personal computer using the CP4-R's built-in web XPanel interface. The user interface is identical to the Crestron Home Setup app. To access the configuration screens, enter the IP address (or hostname) of the control processor into a web browser.

**NOTE:** If the CP4-R is assigned an IP address over DHCP, use the Device Discovery Tool in Crestron Toolbox™ software to discover the device and its IP address. For more information on configuring XPanel Web user interface settings, refer to "Web Settings" on page 155.

# Upgrade Pyng OS 2 to Crestron Home OS 3

Upgrade to Crestron Home OS 3 to access the latest responsive user interface from Crestron. Upgrading from Pyng OS 2 to Crestron Home OS 3 is a simple process. The system must be running on a CP4-R control processor with Pyng OS 2 firmware version 2.003.0021 or later.

## NOTES:

- The CP3-R control processor running Pyng OS 2 cannot be upgraded to Crestron Home OS 3. To upgrade, the system data must be transferred to a CP4-R using a deploy code. For details, refer to "Transfer Data between Hardware" on page 339.
- The PYNG-HUB control processor running Pyng OS 1 cannot be upgraded to Crestron Home OS 3.

To upgrade to Crestron Home, perform the following procedures:

1. "Upgrade the Operating System" on page 9.
2. "Enable the User Interface Device Password" on page 12.
3. "Update the Firmware for Connected Devices" on page 14.
4. "Pair User Interface Devices" on page 16.

## Upgrade the Operating System

### CAUTIONS:

- Record the serial number of the CP4-R prior to upgrading. The serial number is case sensitive. This is especially important if upgrading the CP4-R remotely as you will not be able to access the serial number later.
- Updating to Crestron Home places the CP4-R into secure mode. To log in, use the following username and password:

**Username:** Admin

**Password:** The serial number of the CP4-R (case sensitive)

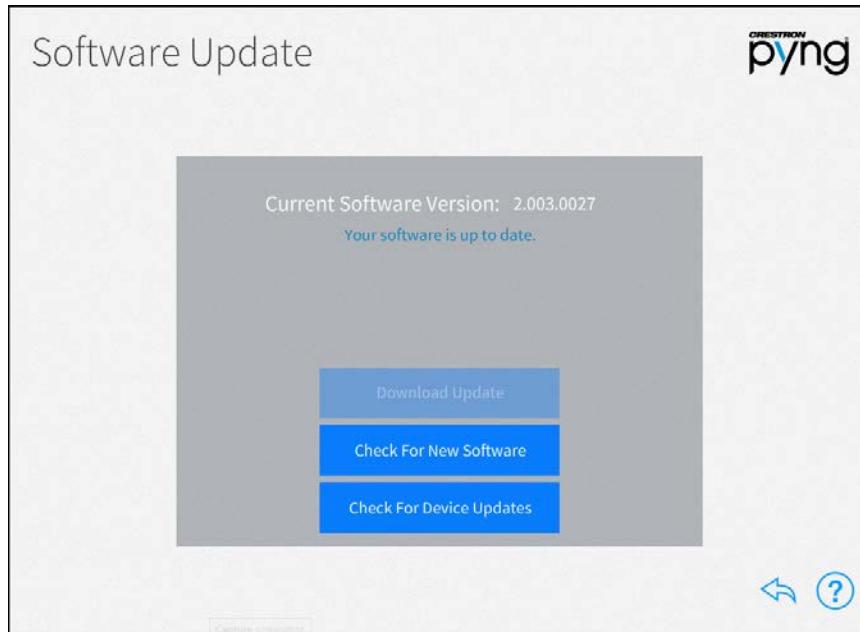
- If security was enabled before the upgrade, use the credentials set previously to log in.

### NOTES:

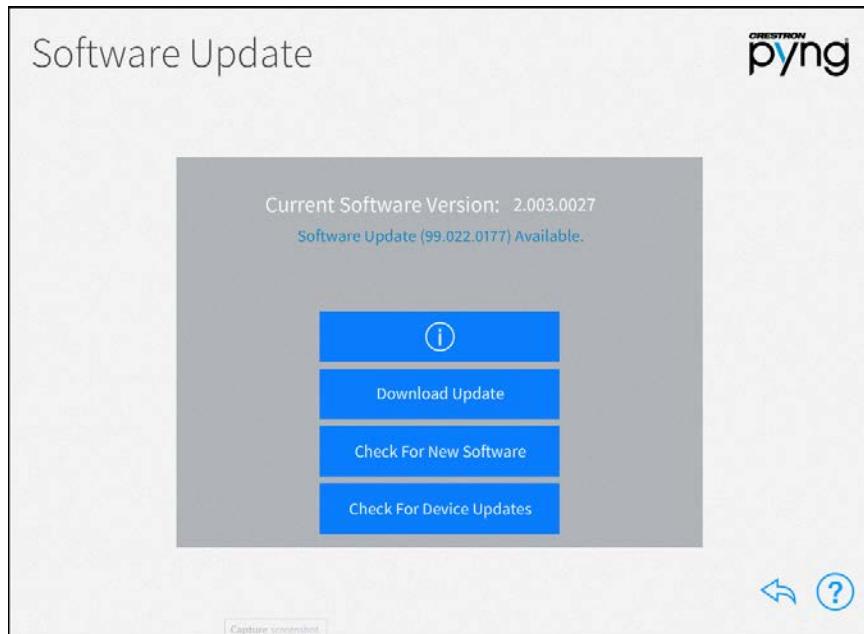
- Do not perform the upgrade while the end-user is using the system.
- The software update may take up to 30 minutes to complete.

To update to Crestron Home:

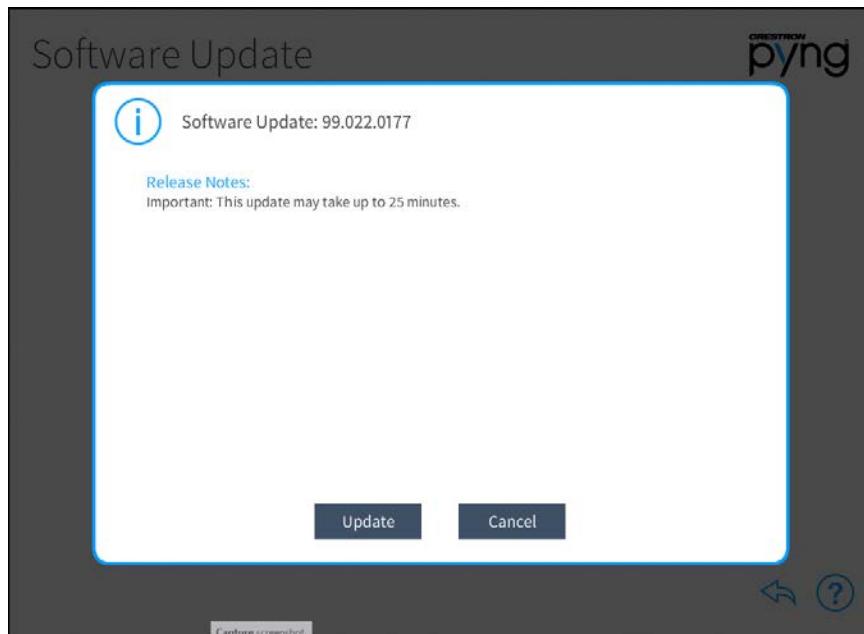
1. Tap the gear button  on the bottom right of the **Setup** screen to display the **Installer Settings**.
2. Tap **Check for Updates**. The **Software Update** screen displays.



3. Tap **Check for New Software**. The system scans for available software updates and displays the available update.



4. Tap the **i** button to review the software release notes.
5. Tap **Download Update**. A confirmation dialog appears.
6. Tap **Download** to download the update. The CP4-R downloads the latest firmware. The download may take several minutes. The update does not install automatically.
7. Tap **Update Software**. A confirmation dialog is shown along with the release notes.



8. Tap **Update**. The software update is applied. When the software update is complete, the CP4-R reboots.

**CAUTION:** Communication with the CP4-R will be lost several times during the software update. Do not power down the CP4-R during the software update.

9. When the CP4-R reboots, enter the Crestron Home Setup app (or open the XPanel using a web browser). The **Device Administration** page displays.

The screenshot shows the 'Device Administration' sign-in page. It features a light gray header with the title 'Device Administration'. Below the header are two input fields: 'Username' and 'Password', each with a placeholder text ('Username' and 'Password' respectively) and a small blue icon on the left. Underneath these fields is a checkbox labeled 'Remember my username'. At the bottom of the page is a large blue rectangular button with the white text 'Sign In' in the center. Below the 'Sign In' button, there is a small line of fine print: '© 2019 Crestron Electronics, Inc.', 'Privacy Statement', and 'Crestron Unified Communication Software License Agreement'.

10. Enter the username and password and then tap **Sign In**.

**Username:** Admin

**Password:** The serial number of the CP4-R

**NOTE:** If security was enabled before the upgrade, use the credentials set previously to log in.

**NOTE:** To ensure that all devices are properly recognized by the CP4-R, restart all IP devices on the network.

## Enable the User Interface Device Password

The User Interface Device Password must be enabled before attempting to connect a user interfaces devices such as TSW-xx60 series touch screens and iOS devices.

The User Interface Device Password is entered on the user interface device when pairing to the Crestron Home system.

### About Crestron Home Passwords

The Crestron Home system uses several passwords to allow access to different areas of the Crestron Home system.

#### NOTES:

- Create passwords using any combination of letters, numbers and symbols (ASCII-standard characters only). Accents and accented characters are not supported.
- All passwords must be unique.

Crestron Home Setup app passwords:

- **Admin Password:** Allows full access to the setup and configuration screens on the Crestron Home system.
- **Advanced User Password:** Allows limited access to the setup and configuration screens on the Crestron Home system.

Crestron Home App password:

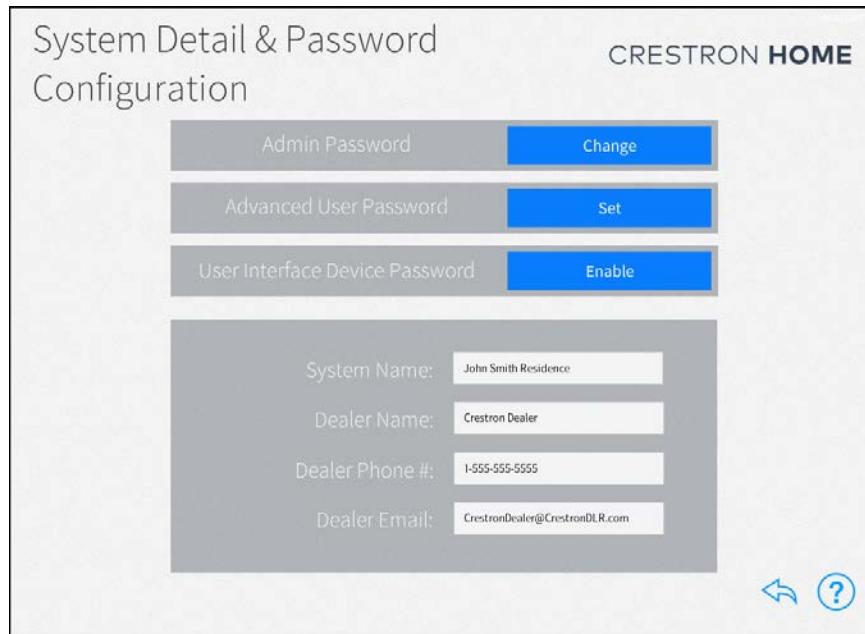
- **User Interface Device Password:** Allows user interface devices, such as iOS and Touch Panel devices, to join the Crestron Home system. If the User Interface Password is not set, user interface devices will be unable to connect to the Crestron Home system.

## Set the User Interface Device Password

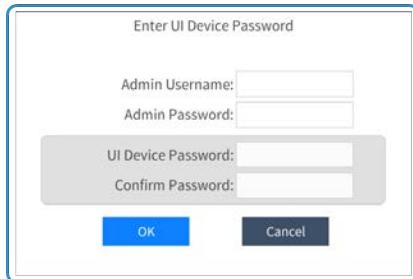
To set the User Interface Device Password:

1. Tap the gear button  on the bottom right of the **Setup** screen to display the **Installer Settings** screen.
2. Tap **System Detail & Password Configuration**. The **Installer Settings - System Configuration** screen displays.

3. Tap **System Info & Passwords**. The **System Detail & Password Configuration** screen displays.



4. Tap **Enable**. The **Enter UI Device Password** dialog displays.



5. Enter the required passwords for the **Admin Username**, **Admin Password**, the **UI Device Password** fields, and then confirm the user interface device password in **Confirm Password** field.
6. Tap **OK** to continue or **Cancel** to exit without saving changes.

## Update the Firmware for Connected Devices

To ensure the best system performance, update the firmware for all devices that are connected to the system.

### NOTES:

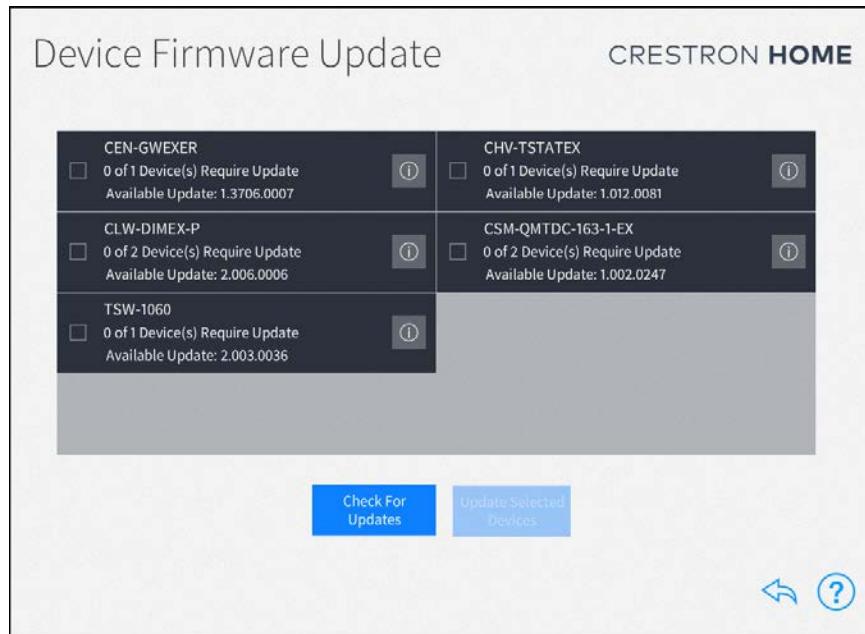
- TSW-xx60 series touch screens must be running the latest firmware in order to display the Crestron Home app.
- To enable the Crestron Home app on the TSW-xx60 series touch screen, refer to "Pair User Interface Devices" on page 265.

To scan the devices connected to the Crestron Home system for available updates:

1. Tap **Check for Device Updates**. Crestron Home scans the connected devices for available updates. Once the scan is complete, the **Device Firmware Update** screen presents a list of devices with recommended firmware updates.

### NOTES:

- To rescan the update server for new device firmware updates, tap **Check For Updates**.
- To view release notes for the firmware update, tap the information button ⓘ next to the device.



2. Tap the check box next to a device to select the device to receive a firmware update.
3. Tap **Update Selected Devices** to perform firmware updates for the selected devices.

**NOTE:** If the TSW-xx60 series touch screen was previously discovered and added to the

Crestron system during "Step 2: Pair Devices" on page 40, it will now appear as "TSW-xx60(Legacy)" in the Crestron Home system. The TSW-xx60 series touch screen can be safely removed from the system. Refer to "Step 2: Pair Devices" on page 40 for details.

## Pair User Interface Devices

Use the Crestron Home app to add TSW-xx60 series touch screens and iOS devices to the system. The process authenticates devices to ensure they are allowed to join the system.

**NOTE:** The Crestron Home app is available from the App Store® online store and may be downloaded onto an Apple iOS® device such as an iPhone or iPad.

To download the Crestron Home app:

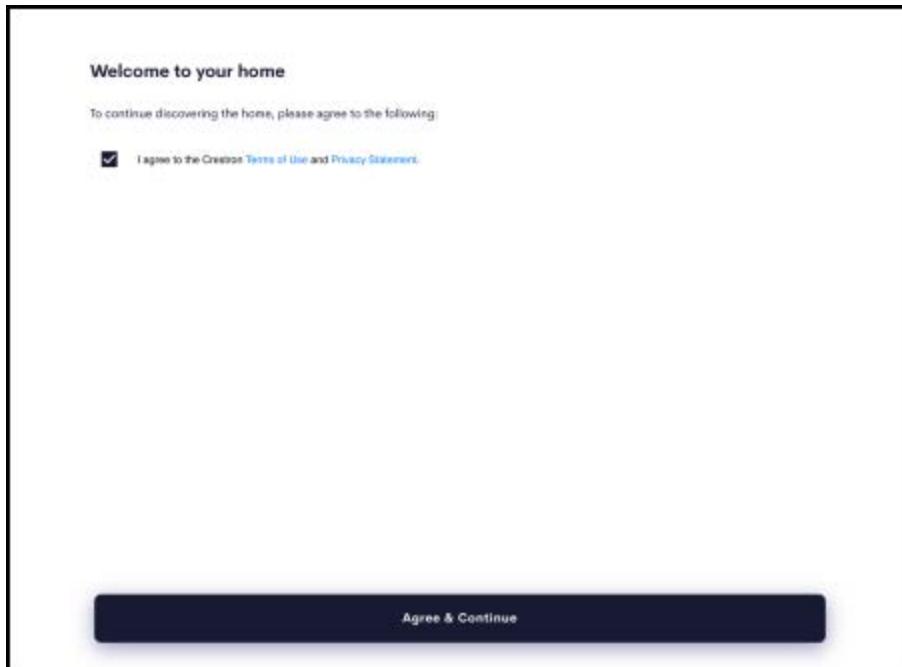
**NOTE:** For a comprehensive list of iOS® hardware and software versions that are compatible with Crestron Home, refer to OLH article 5655 at [https://support.crestron.com/app/answers/detail/a\\_id/5655](https://support.crestron.com/app/answers/detail/a_id/5655).

1. Tap the **App Store** icon  on the iPad device home screen.
2. Tap the search field, and enter the search term "Crestron Home."
3. Tap **Search**.
4. Tap the **Crestron Home** app icon .
5. Follow the prompts to download and install the app to the device.

## Connect an iOS Device

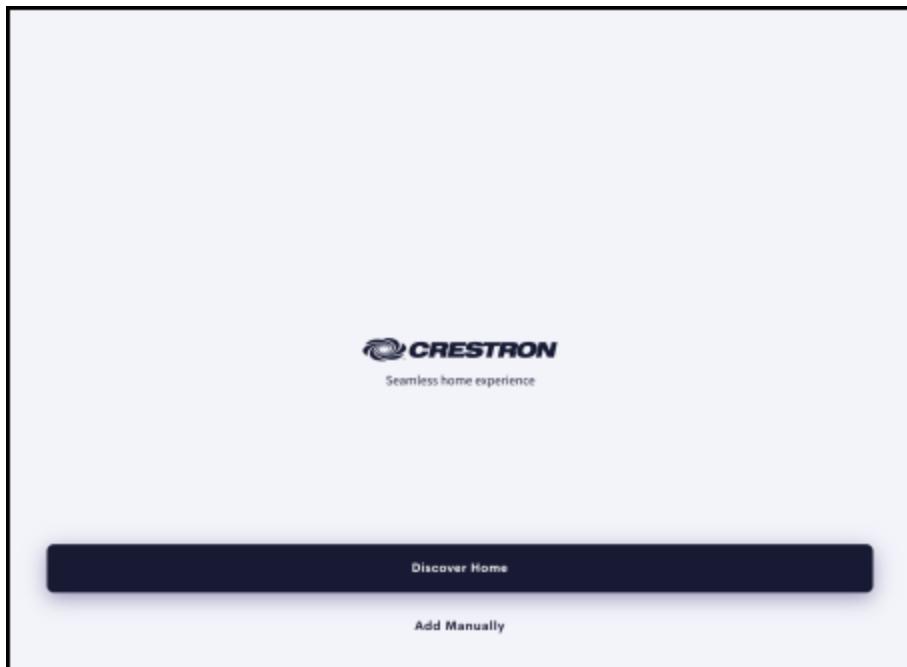
To connect an iOS device:

1. Tap  to open the Crestron Home app. The landing page is displayed.
2. The first time the Crestron Home app is opened, the **Welcome to your home** screen is displayed. Tap **Terms of Use** and **Privacy Statement** to read the terms of use and privacy information.



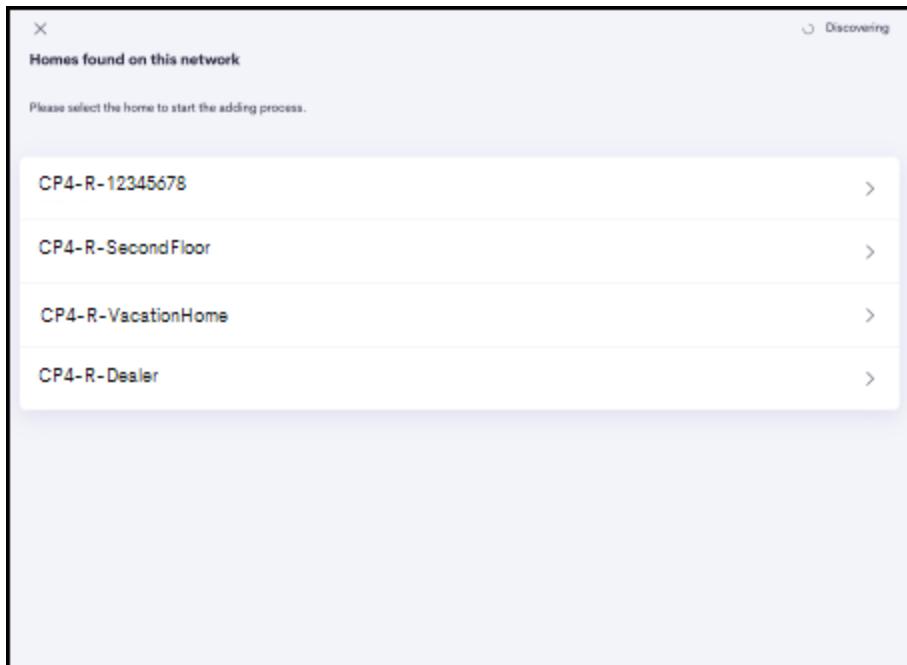
3. To accept the terms, tap the box next to I agree to the Crestron Terms of Use and Privacy Statement.

4. Tap **Agree & Continue** to proceed. The landing page is displayed.

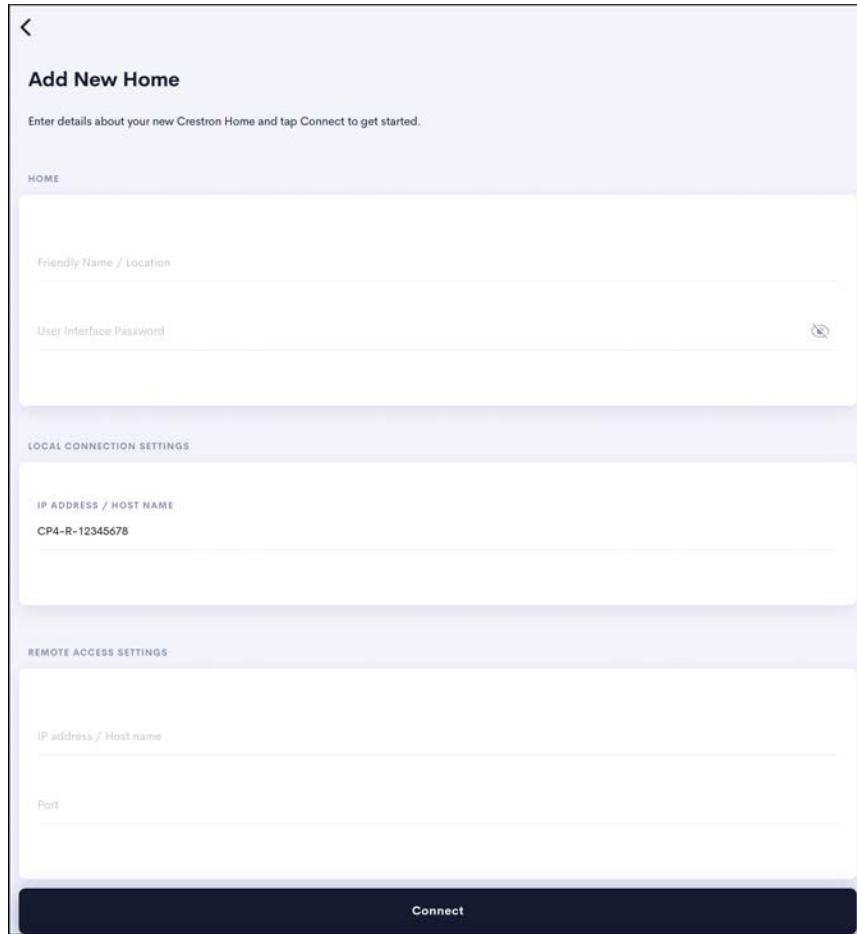


5. Tap **Discover Home** to scan the network for the CP4-R. The **Homes found on this network** screen is displayed and shows the list of available CP4-Rs on the network. The Hostname and IP Address for each CP4-R is displayed.

**NOTE:** The iOS device and the CP4-R must be on the same wireless network for the device to be found.



6. Tap on the home you would like to connect to. The **Add New Home** screen is displayed.



7. Enter the following information for **HOME**, **LOCAL CONNECTION SETTINGS**, and **REMOTE ACCESS SETTINGS** on the **Add New Home** screen:

#### **HOME:**

- **Friendly Name / Location:** Enter a name or location of the CP4-R. The name will be used to identify the CP4-R on the My Homes screen.
- **User Interface Password:** Enter the User Interface Password. For details, refer to "Enable the User Interface Device Password" on page 12 and "System Detail & Password Configuration" on page 138.

**NOTE:** After three unsuccessful login attempts, the IP address of the device is blocked from joining the Crestron Home system for 1 hour. Other devices are allowed to join during this period.

To change the login attempts and lockout time and to clear the blocked IP(s) from the CP4-R, establish a USB connection between a PC and the CP4-R using a USB cable. Use Crestron Toolbox™ software (Text Console tool) to issue the following commands:

- To change the number of unsuccessful login attempts, issue the SETLOGINAttempts command.
- To change the amount of time that a user is locked out, issue the SETLOCKOUTTIME command.
- To clear the blocked IP(s) from the system, issue the REMBLOCKEDip command.

#### **LOCAL CONNECTION SETTINGS:**

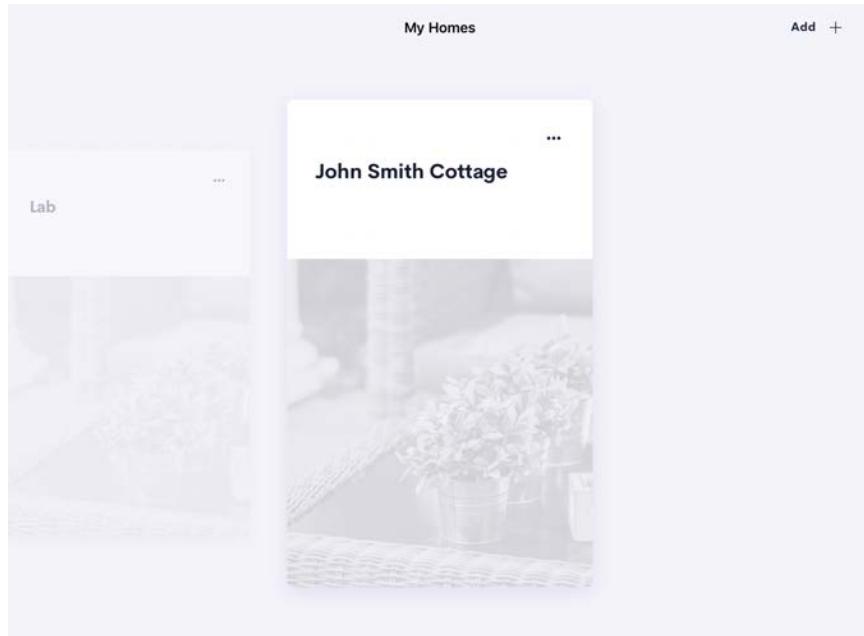
- **IP ADDRESS / HOST NAME:** The Host name is entered by the system during discovery.

#### **REMOTE ACCESS SETTINGS:**

**NOTE:** To configure the system for remote access (outside of the home using a cellular network), refer to "Enable Remote System Access" on page 321.

- **IP address / Host name:** Enter the IP address or the Host name of the CP4-R to enable remote access.
- **Port:** Enter the port to access the system. The default port is 50001.

8. Tap **Connect** to add the iOS device to the Crestron Home system. If the information is valid, the **My Homes** screen is displayed.



## Connect a TSW-xx60 Series Touch Screen

**NOTE:** The TSW-xx60 series touch screen must be using firmware version 2.05.xx or higher.

To connect a TSW-xx60 Series touch screen:

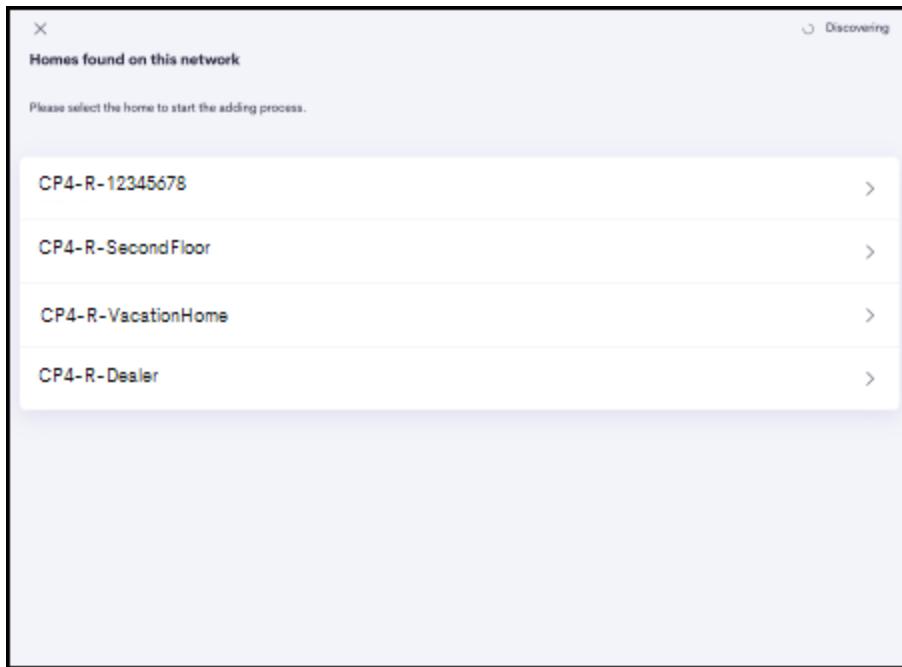
1. Enter the touchscreen settings on the touchscreen itself or from the touchscreen's web page.
  - a. From the Touch Screen:
    - I. Place five fingers on the display and hold for 15 seconds.
    - II. Tap **Application Selection** to bring up the **Application Selection** screen.
    - III. Tap **Crestron Home**.
    - IV. Tap **Confirm Selection**. The touch screen reboots with the Crestron Home application running and then displays the landing page.

b. From the Touch Screen's Web Page:

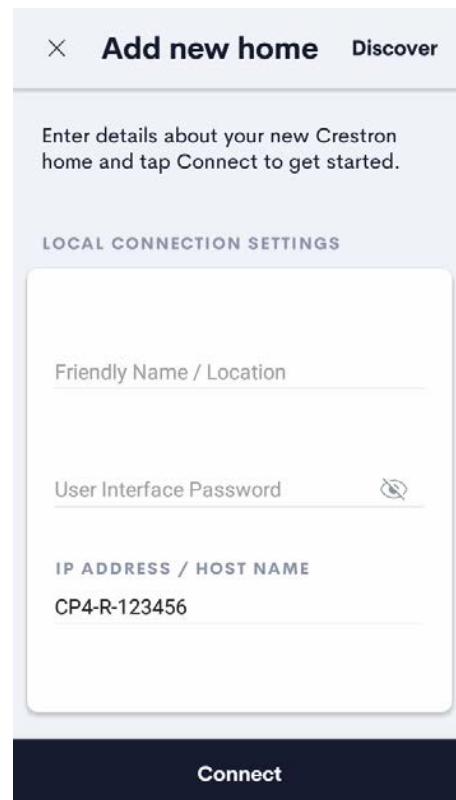
- I. Enter the IP address or host name of the touch screen into a web browser.
- II. Click **Settings** and then **Applications**.
- III. Select **Crestron Home** from the **Application Mode** drop-down.
- IV. Click **Save Changes**. A pop-up dialog is displayed stating that the touch screen must be rebooted for the new application to take effect. Click **Yes** to reboot the touch screen now or **No** to reboot the touch screen later. The touch screen reboots with the Crestron Home application running and then displays the landing page.



2. Tap **Discover Home** to scan the network for the CP4-R. The **Homes found on this network** screen is displayed and shows the list of available CP4-Rs on the network. The Hostname and IP Address for each CP4-R is displayed.



3. Tap on the home you would like to connect to. The **Add New Home** screen is displayed.



4. Enter the following information for the **LOCAL CONNECTION SETTINGS** on the **Add New Home** screen:

- **Friendly Name / Location:** Enter a friendly name or location of the CP4-R. The name is displayed on the TSW and will be used to identify the CP4-R on the My Homes screen.
- **User Interface Password:** Enter the User Interface Password. For details, refer to "Enable the User Interface Device Password" on page 12 and "System Detail & Password Configuration" on page 138.

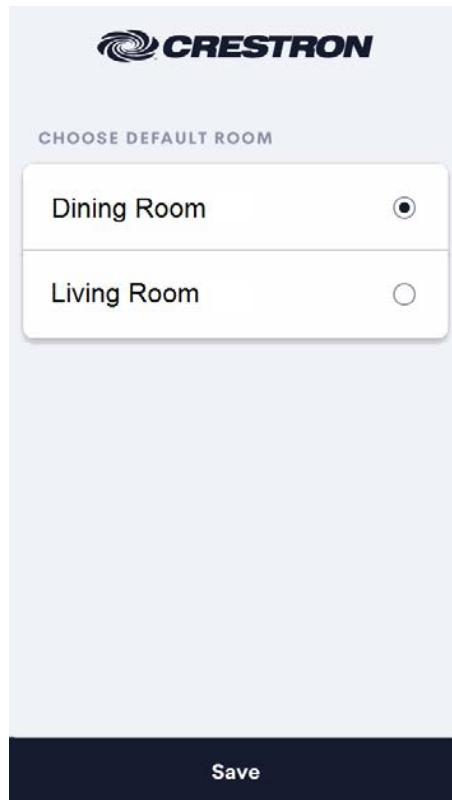
**NOTE:** After three unsuccessful login attempts, the IP address of the device is blocked from joining the Crestron Home system for 1 hour. Other devices are allowed to join during this period.

- To change the number of unsuccessful login attempts, issue the `SETLOGINAttempts` command.
- To change the amount of time that a user is locked out, issue the `SETLOCKOUTTIME` command.
- To clear the blocked IP(s) from the system, issue the `REMBLOCKEDip` command.

- **IP ADDRESS / HOST NAME:** The Host name is entered by the system during discovery.

5. Tap **Connect** to add the touch screen to the Crestron Home system.

- When prompted, select the room that the touch screen is in and then tap **Save**.



- If successfully added to the system, the touch screen displays the **Home** screen.
- Press the "Home" hard key on the TSW-xx60 series touch screen to display the **Room** screen.

# Setup

Set up the Crestron Home system after all of the Crestron Home devices and the CP4-R control processor have been installed and connected to the local network. For more information on installing and connecting the CP4-R, refer to the CP4-R Quick Start (Doc.8415) at [www.crestron.com/manuals](http://www.crestron.com/manuals).

## Set Up the Crestron Home System

Once the Crestron Home Setup app is downloaded and installed, system setup takes place entirely through the app.

### NOTES

- Ensure that the iPad device, personal computer, and the CP4-R are placed on the same subnet prior to setup.
- To access help screens that explain each setup screen and to view instructional videos, tap the help  button. The iPad device or personal computer must be connected to the internet to access videos.
- To return to a previous screen, tap the **BACK** button (<).

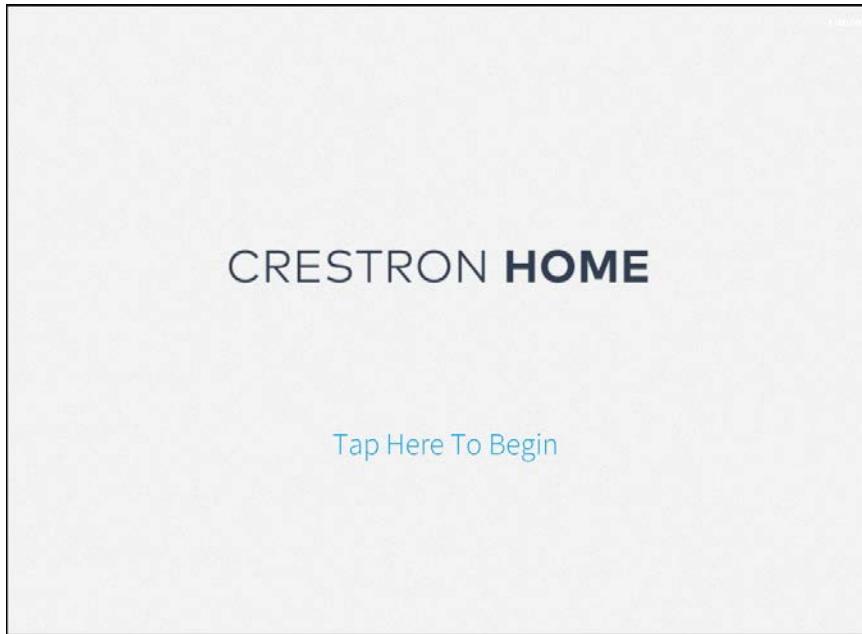
To set up the Crestron Home system:

1. Tap the Crestron Home Setup app icon  on the iPad device home screen.

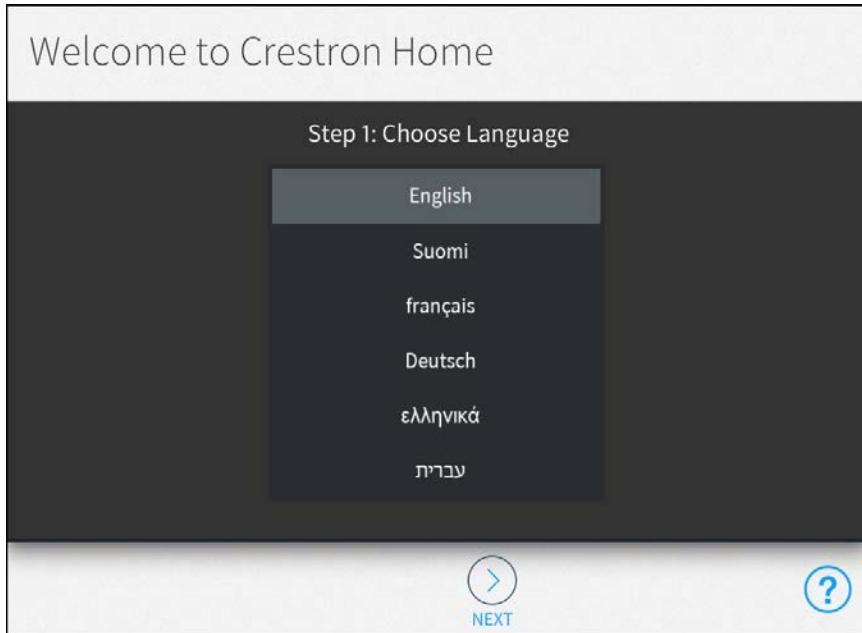
**NOTE:** If using Crestron Xpanel, enter the IP address or hostname into a web browser.

2. The Crestron Home Setup app connects to the CP4-R automatically. A splash screen is displayed.

**NOTE:** If the Crestron Home Setup app does not connect to the CP4-R automatically, enter the CP4-R's hostname and tap **Connect**. The default hostname for a CP4-R is "CP4-R-xxxxxxx," where xxxxxxxx is the last eight digits of the device's MAC address (excluding punctuation). The MAC address label is located on the bottom or rear of the device.



3. Tap the **Tap Here to Begin** text. The **Step 1: Choose Language** screen is displayed.



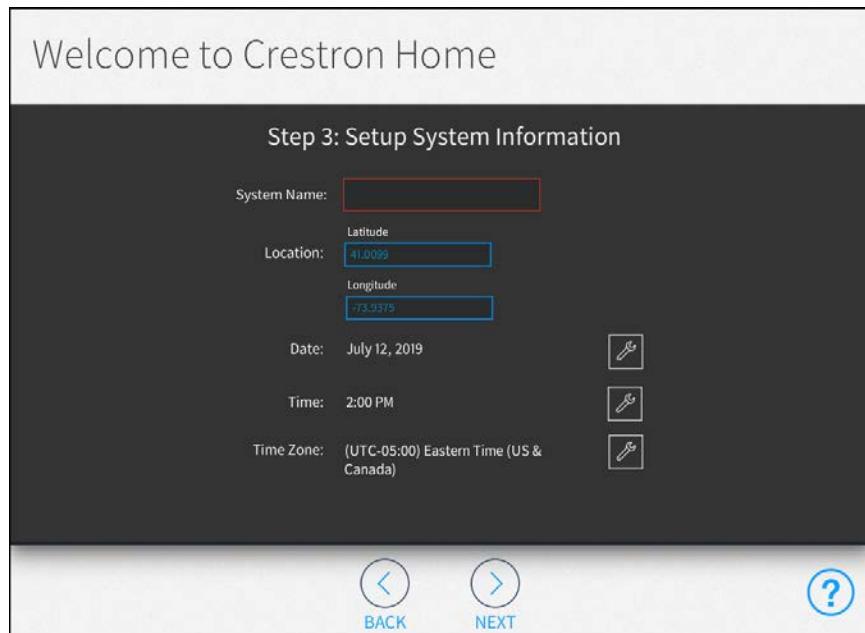
4. Select the language that will be displayed by the system.
5. Tap the **NEXT** button (>). The **Step 2: Select System Type** screen is displayed.



6. Tap the **Create New System** radio button and then tap the **NEXT** button (>). The **Step 3: Setup System Information** screen is displayed.

**NOTES:**

- To import a system that was configured using the myCrestron offline configuration service, tap the **Import System Using Deployment Code** radio button and then tap the **NEXT** button (>). For details, refer to myCrestron Offline Configuration.
- To transfer system data from a CP3-R to a CP4-4, or from a dealer's CP4-R to a customer's CP4-R, tap the **Import System Using Deployment Code** radio button and then tap the **NEXT** button (>). For details, refer to "Transfer Data between Hardware" on page 339.



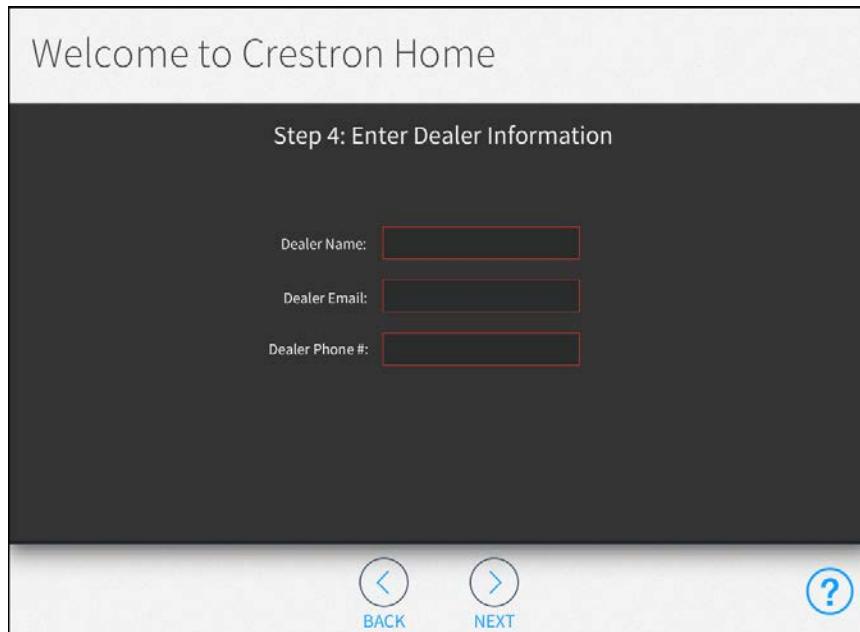
7. Enter the following system information:

- **System Name:** Enter a descriptive system name (for example, "Smith Residence").
- **Location:** Enter the latitude and longitude of the system.

**NOTE:** If setting up the Crestron Home system with an iPad device, tap the **Synchronize with iPad** button to synchronize the time zone, longitude, and latitude automatically with the iPad device's location services.

- **Date:** Tap the wrench button  to display spinners for selecting the month, day, and year.
- **Time:** Tap the wrench button  to display spinners for selecting the hour and minute buttons, and for selecting **AM** or **PM**.
- **Time Zone:** Tap the wrench button  to display a menu for selecting the time zone used by the system.

8. Tap the **NEXT** button (>). The **Step 4: Enter Dealer Information** screen is displayed.

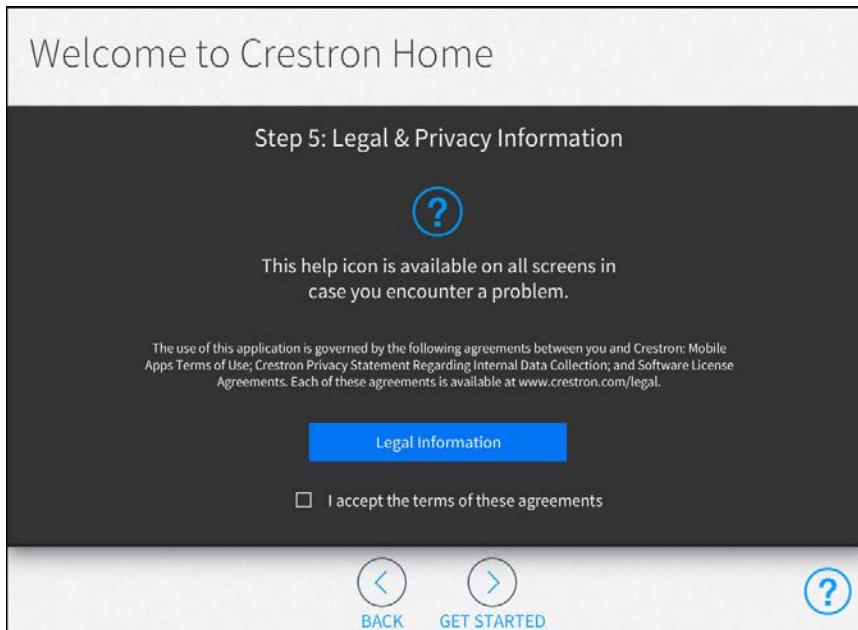


9. Enter the dealer information:

**NOTE:** Confirm that the dealer information is entered correctly. This information is needed to place custom engraving orders through the Crestron Home system.

- **Dealer Name:** Enter the Crestron dealer responsible for the installation.
- **Dealer Email:** Enter the email address of the Crestron dealer responsible for the installation.
- **Dealer Phone #:** Enter the phone number of the Crestron dealer responsible for the installation.

10. Tap the **NEXT** button (>). The **Step 5: Legal & Privacy Information** screen is displayed.



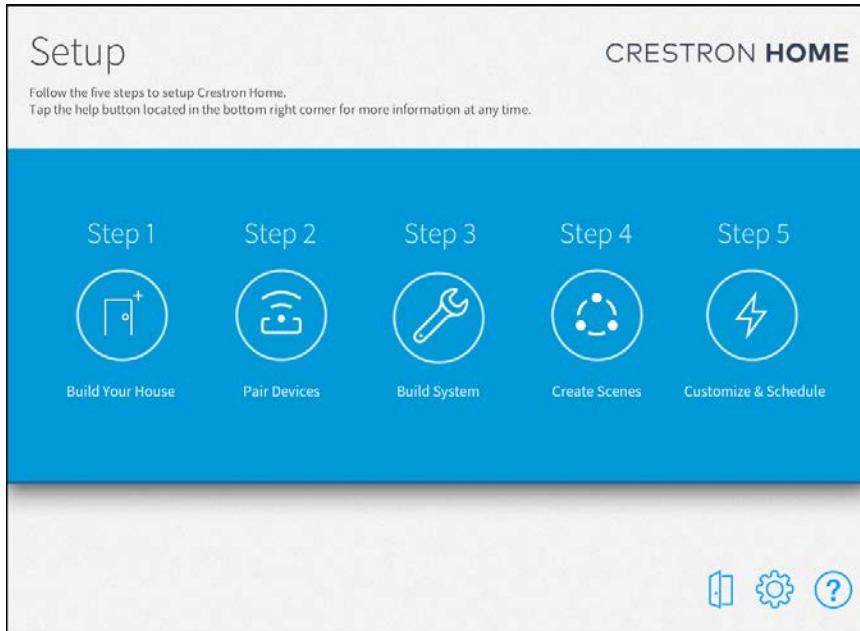
11. Tap **Legal Information** to review the legal information regarding the use of the Crestron Home application.
12. Tap the **I accept the terms of the agreement** check box to accept the legal agreement.
13. Tap the **Get Started** button (>) to complete the initial setup procedure. The main **Setup** screen is displayed.

# Create a New Crestron Home System

To set up a Crestron Home system, simply follow the five steps listed below. Perform each step by tapping its respective button on the **Setup** screen. Each configuration step is described in the sections that follow.

- "Step 1: Build Your House" on page 35
- "Step 2: Pair Devices" on page 40
- "Step 3: Build System" on page 71
- "Step 4: Create Scenes" on page 81
- "Step 5: Customize & Schedule" on page 99

**NOTE:** To access the installer setup screens, use the Crestron Home Setup app or a Crestron Xpanel. For details, refer to "Configuration Software" on page 7



The menu button  on the bottom of the setup screens allows quick navigation throughout the setup screens. Tap the menu button  to show or hide the menu.

## Setup Screen Menu Buttons

Menu Button	Setup Page
	Build House
	Pair Devices

## Setup Screen Menu Buttons

Menu Button	Setup Page
	Shade Groups
	Source Routes
	Light Scenes
	Shade Scenes
	Media Scenes
	Climate Scenes
	Actions & Events
	Scheduler
	Thermostats

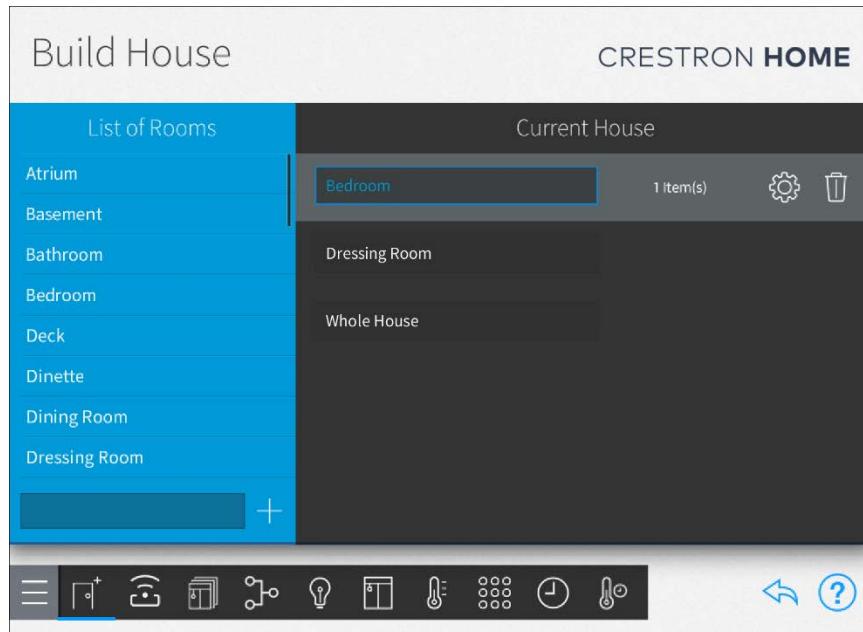
While configuring the Crestron Home system:

Icon	Description
	Displays a dialog box that explains screen functions and features and provides links to tutorial videos.
	Displays the <b>Installer Settings</b> screen to configure advanced Crestron Home system settings. For more information on the <b>Installer Settings</b> screen, refer to "Create a New Crestron Home System" on the previous page.
	Exit installer configuration mode and to enter the user interface. For more information about the user interface, refer to "Crestron Home OS 3 User Interface" on page 209.

## Step 1: Build Your House

The first step is to build your house. During this step you will add all of the rooms in the house to the Crestron Home system. The build your house step also allows rooms to be grouped and to enable or disable voice control for each room.

Tap the **Build Your House** button on the **Setup** screen or the Build House button  on the setup menu to display the **Build House** screen.



**NOTE:** The **Build House** screen also displays the number of devices in each room.

### Add a Room to the House

1. Select a predefined room name from the **List of Rooms** menu. The room name displays in the lower-left text box.

**NOTE:** Room names must be unique. The system rejects the new room if the room has the same name as one that has already been added.

2. If necessary, modify the room name in the lower-left text box.
3. Tap the plus button (+). The room is added to the house and displayed in the **Current House** menu.

## Edit a Room Name

To edit the room name:

1. Select the room from the **Current House** menu.
2. Tap the room name to display a text box.
3. Use the on-screen keyboard to edit the room name.

## Delete a Room

To delete a room:

1. Select the room from the **Current House** menu.
2. Tap the trashcan button  next to the room name.

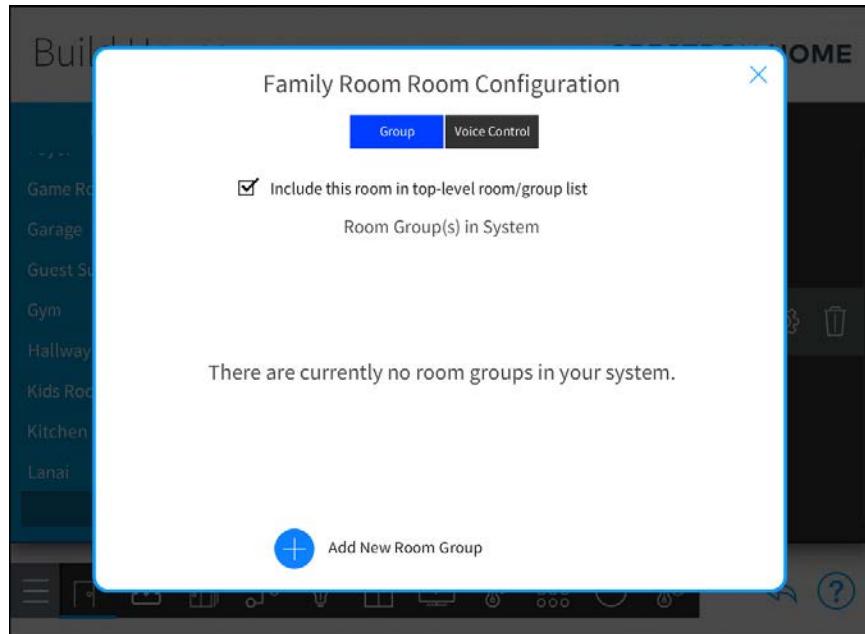
## Room Groups

Room groups allow a room to be included in the top-level room/group list in the user control interface. A room can be added to any room group and can be added to multiple room groups.

### Create a Room Group

To create a Room Group:

1. Select the room from the Current House menu.
2. Tap the gear button  next to the room name. The **Room Configuration** dialog box opens with the **Group** tab open.
3. Tap the plus button (+) next to **Add New Room Group**. A dialog appears to enter the name of the room group.



4. Enter a descriptive name for the room group, and then tap **OK**.

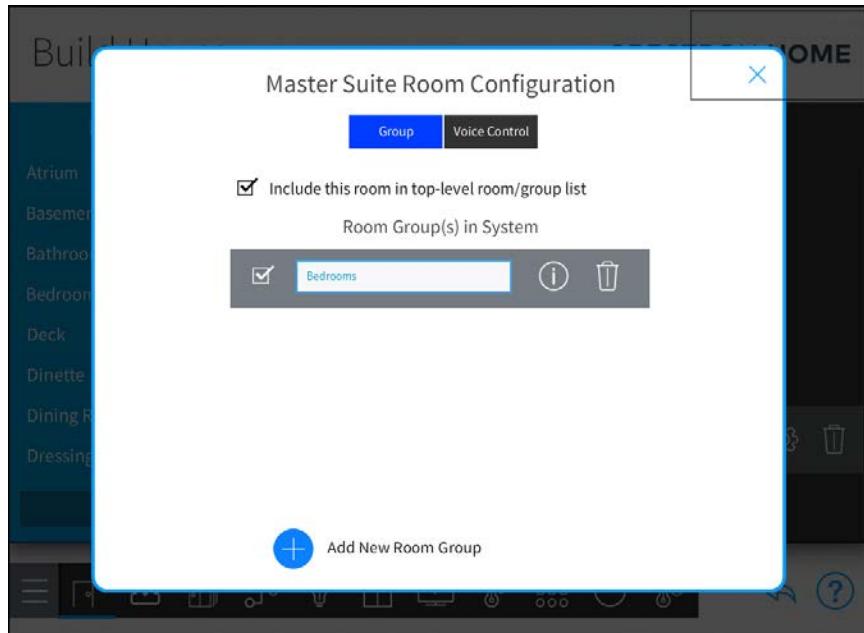
#### Add a Room to a Room Group

To add a room to a room group:

1. Select the room from the Current House menu.
2. Tap the gear button  next to the room name. The **Room Configuration** dialog box opens with the **Group** tab open.

3. Select the room group(s) to add the room to the group.

**NOTE:** To view all of the rooms added to the room group, tap the information button .



### Rename a Room Group

To rename a room group:

1. Select the room from the **Current House** menu.
2. Tap the gear button  next to the room name. The **Room Configuration** dialog box opens with the **Group** tab open.
3. Tap the room group name, and then use the on-screen keyboard to edit the room name.

### Delete a Room Group

To delete a room group:

**NOTE:** Deleting a room group does not delete the assigned rooms from the system.

1. Select the room from the **Current House** menu.
2. Tap the gear button  next to the room name. The **Room Configuration** dialog box opens with the **Group** tab open.
3. Tap the trashcan button  to delete the room group.

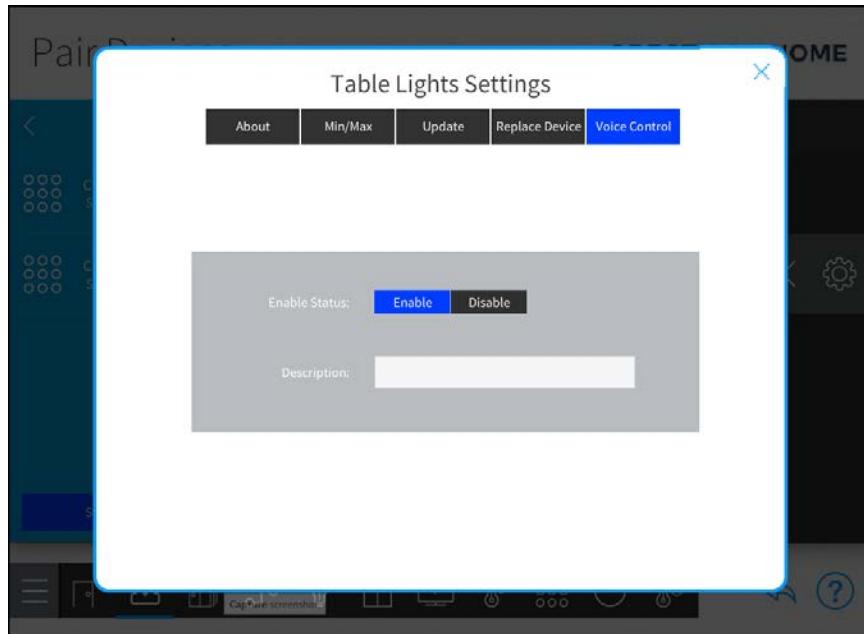
Select the check box at the top of the **Room Configuration** dialog box to add or remove the room from the top-level room list that is displayed in user control mode. A checked box indicates that the room is included in the top-level room list.

## Enable or Disable Voice Control

**NOTE:** Voice control services must be enabled prior to using voice control services with Crestron Home. For more information about setting up voice control on the Crestron Home system, refer to "Voice Control Settings" on page 156.

To enable or disable voice control for a room:

1. Select the room from the **Current House** menu.
2. Tap the gear button  next to the room name. The **Room Configuration** dialog box opens.



3. Tap the **Voice Control** tab.
4. Tap **Enable** to enable voice control or **Disable** to disable voice control for the room.
5. Enter a description for the device.
6. Tap the **x** button to return to the **Build House** screen.

To return to the previous screen, tap the back arrow button .

## Step 2: Pair Devices

The second step is to pair devices with the Crestron Home system. During this step you will add all of the devices to the system. Devices are then added to the rooms created during Step 1: Build Your House. Use the **Pair Devices** screen to pair devices with the Crestron Home system.

Tap the **Pair Devices** button on the **Setup** screen or the **Pair Devices** button  on the setup menu to display the **Pair Devices** screen.

**NOTE:** For a comprehensive list of devices that are supported by Crestron Home, refer to the Crestron Home product page at [www.crestron.com/pyng](http://www.crestron.com/pyng). Support for new devices is added to the system via firmware updates.

The following device types can be paired with the Crestron Home system:

- "Crestron infiNET EX Devices" on page 42
- "Crestron Wired and Wi-Fi Devices" on page 47
- "Sonos Devices" on page 52
- "Third Party Devices" on page 55
- "Other Devices" on page 61

### NOTES:

- To add Crestron touch screen user-interface device to the Crestron Home system, such as a TSW-xx60 series touch screen, refer to the procedure in "Pair User Interface Devices" on page 265.
- To use a TSW-xx60 series touch screen in Smart Graphics mode, add it to the Crestron Home system using the procedure outlined in this section.



## Crestron infiNET EX Devices

### Pair Crestron infiNET EX Devices

**NOTE:** For best practices regarding the installation and setup of Crestron RF (radio frequency) products, refer to the Installation and Setup of Crestron RF Products Best Practices Guide (Doc. 6689) at [www.crestron.com/manuals](http://www.crestron.com/manuals).

To pair Crestron infiNET EX devices with the Crestron Home system:

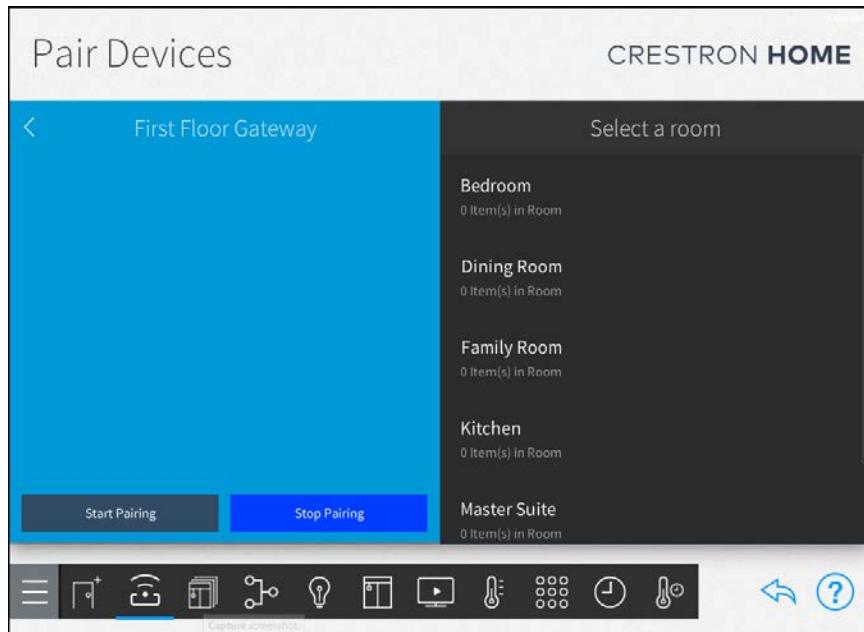
1. Select **Crestron infiNET EX** from the **Device Types** menu.



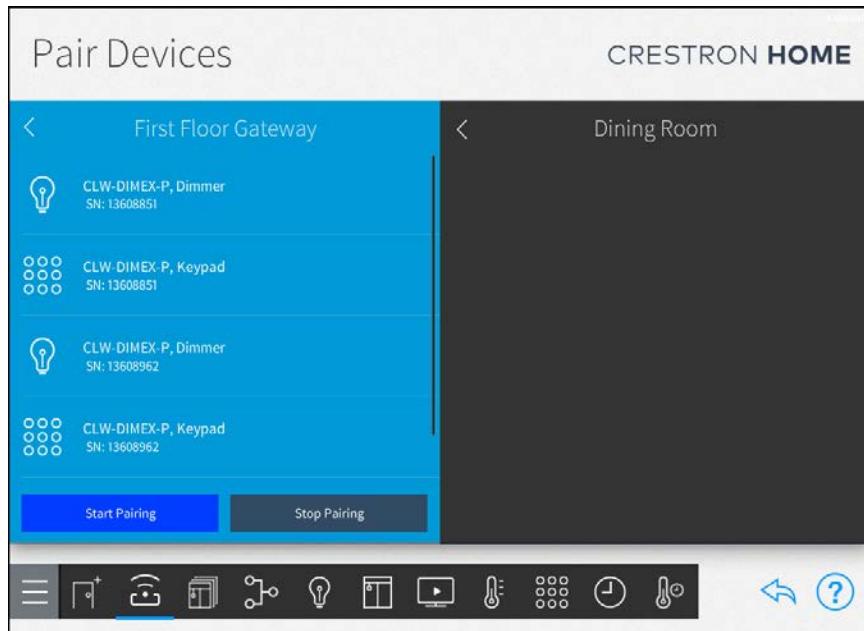
2. Select a wireless gateway from the **Select Gateway Below** menu.

**NOTE:** A wireless gateway, such as the CEN-GWEXER, must be installed and configured on the network prior to pairing devices. For more information, refer to the gateway documentation.

3. Tap **Start Pairing** to place the selected gateway into acquire mode.



4. Place the infiNET EX wireless device(s) into acquire mode as described in the device documentation. When the device is acquired, it is displayed in the **Pair Devices** screen.

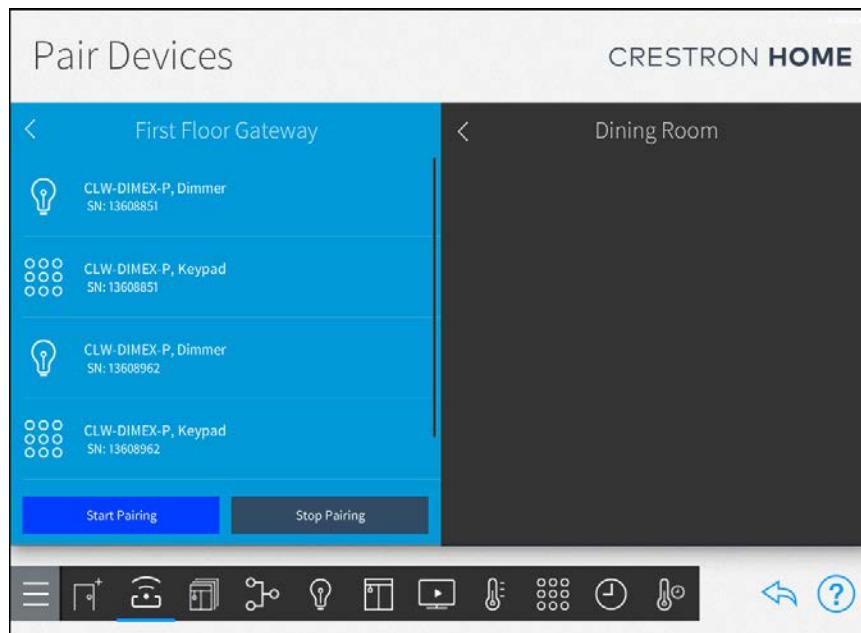


5. Repeat Step 4 until all infiNET EX devices are acquired.
6. Tap **Stop Pairing** to remove the selected gateway from acquire mode.

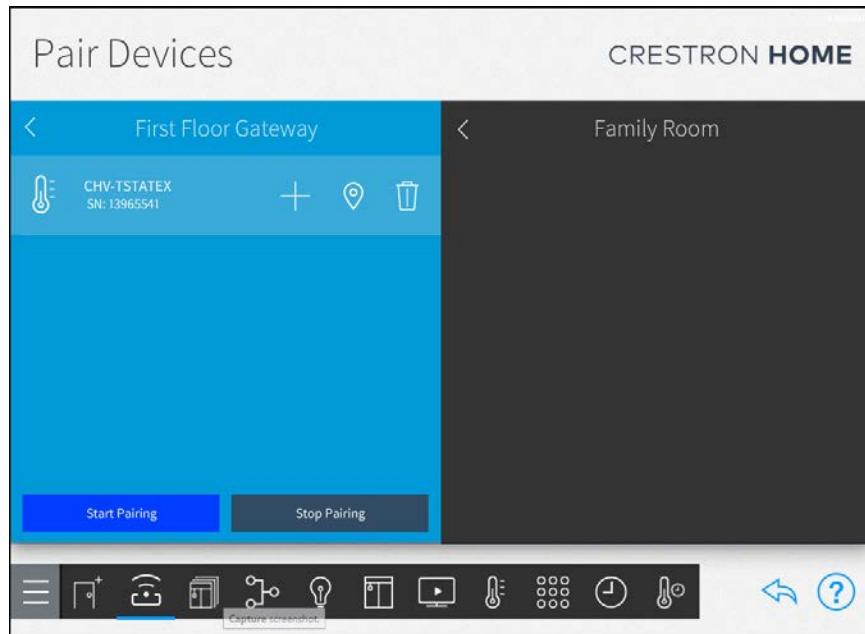
## Add an infiNET EX Device to a Room

To add an infiNET EX device to a room:

1. Select the room where the device is installed from the **Select a room** menu.



2. Select the device from the wireless gateway's menu, and then tap the plus button (+) to add the device to the room.



#### NOTES:

- To identify the location of a device (if supported), tap the button. The device will flash its LED or screen to identify its location.
- To identify paired TSR-310 handheld remotes using the locator feature, ensure that the TSR-310 is awake and placed on its charging dock before tapping the location button.

3. Enter a descriptive name for the device in the text field that is displayed, and then tap **OK**. The device is added to the room and displayed on the right side of the screen.



#### Delete Crestron infiNET EX Devices from the Gateway

**NOTE:** The device must be reacquired if it needs to be added back to the system.

To delete Crestron infiNET EX devices from the gateway:

1. Tap the device that you would like to delete.
2. Tap the trashcan button  to delete the device from the gateway.
3. Tap **OK** to delete the device

#### Remove an infiNET EX Device from a Room

**NOTE:** For most devices, removing the device from a room does not remove it from the entire system.

To remove an infiNET EX device from a room:

1. Select a device in the room that you would like to remove.
2. Tap the back arrow (<) next to a wireless device to remove the device from the room.  
The device is added back to the gateway menu that was used to pair the device.

## Crestron Wired and Wi-Fi Devices

### Pair Wired and Wi-Fi Network Devices

To pair wired and Wi-Fi® network devices with the Crestron Home system, including DM® switchers, DM-RMC series room controllers, and DM NVX™ devices:

**NOTE:** After a TSW-xx60 series touch screen or compatible handheld remote is added to the system, the Crestron Home user interface is loaded to the device.

1. Select **Crestron Wired and Wi-Fi** from the **Device Types** menu.

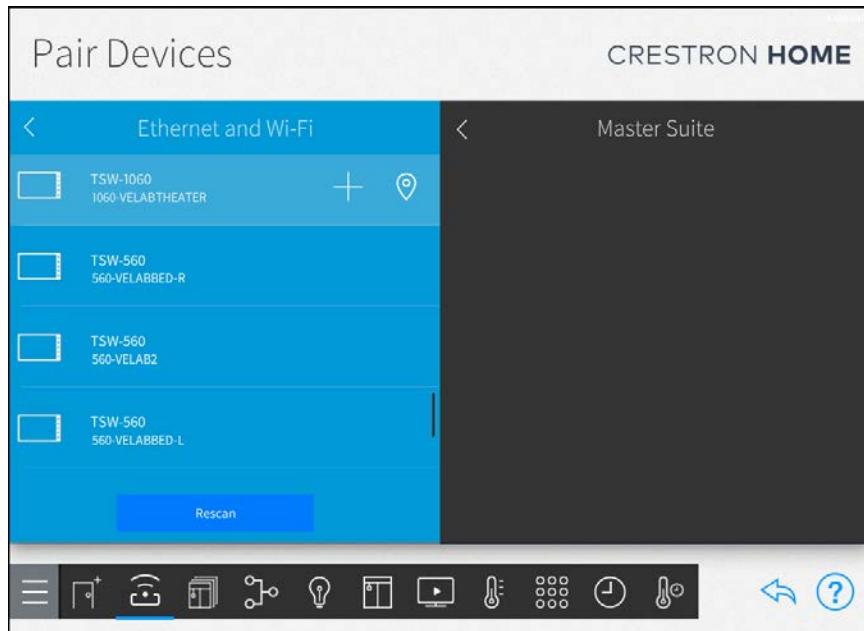


2. Select **Ethernet and Wi-Fi** or **Internal Cresnet Gateway** from the **Crestron Wired and Wi-Fi** menu. The system scans the network for unpaired devices.



3. Discovered devices display underneath the wired network on the **Pair Devices** screen.

**NOTE:** If necessary, tap **Rescan** to rescan the selected network for any unpaired wired devices.



## Add a Wired or Wi-Fi Device to a Room

To add a wired or Wi-Fi device to a room:

1. Select the room where the device is installed from the **Select a room** menu.
2. Select the device from the wired connection menu.



**NOTE:** If adding a wired device with connected outputs, such as a SWAMP series audio expander or a DM-MD series video switcher, tap the device (represented by a folder icon) to view all of the available outputs that may be added to a room.



3. Tap the plus button (+) to add the device to the room selected in step 1.

**NOTE:** Tap the location button  to turn on the location feature for the device (if supported), which is used to locate the device in the room.

4. Enter a descriptive name for the device in the text field that is displayed, and then tap **OK**. The device is added to the room and displayed on the right side of the screen.



#### NOTES:

- For DM NVX devices, select whether the device will be configured as a receiver (audio input or output) or as a transmitter (audio input or output).
- After adding a DM NVX device, a pop-up dialog box is displayed that prompts the user to enter the device username and password. Enter the required credentials, and then tap **OK**. For new DM NVX devices, the default username and password are both "admin."
- For more information on configuring a DM NVX device on the network, refer to [https://support.crestron.com/app/answers/answer\\_view/a\\_id/5861/loc/en\\_US](https://support.crestron.com/app/answers/answer_view/a_id/5861/loc/en_US).

## Remove a Wired or Wi-Fi Device from a Room

To remove a wired or Wi-Fi device from a room:

1. Select a device in the room that you would like to remove.
2. Tap the back arrow (<) next to a wireless device to remove the device from the room.  
The device is removed from the room and is added back to the **Ethernet and Wi-Fi** menu.

**NOTE:** For most devices, removing the device from a room does not remove it from the entire system.

Tap the back arrow (<) next to a wired connection name to return to the **Crestron Wired and Wi-Fi** menu.

Tap the back arrow (<) next to **Crestron Wired and Wi-Fi** to return to the **Device Types** menu.

## Sonos Devices

### NOTES:

- All Sonos devices must be discovered and configured using the Sonos app prior to pairing them with the Crestron Home system.
- For best practices, troubleshooting, and general information regarding integrating Sonos devices within the Crestron Home system, refer to "Sonos and Crestron Home Integration" on page 276.

### Pair Sonos Devices

To pair Sonos devices with the Crestron Home system:

**NOTE:** If necessary, tap **Rescan** to rescan the network for unpaired Sonos devices.

1. Select **Sonos** from the **Device Types** menu. The system scans the local network for any Sonos devices.



2. Discovered Sonos devices display underneath the **Sonos** menu.

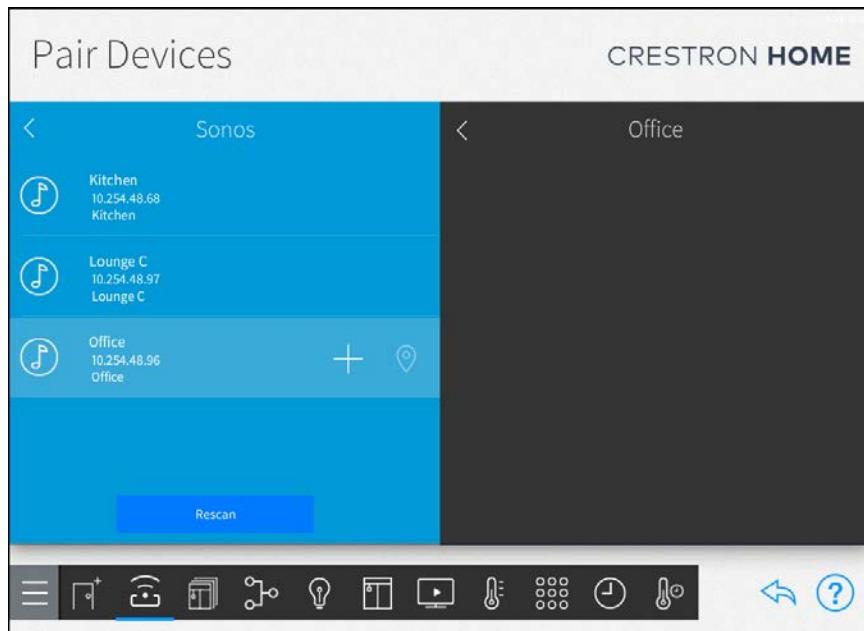


### Add a Sonos Device to a Room

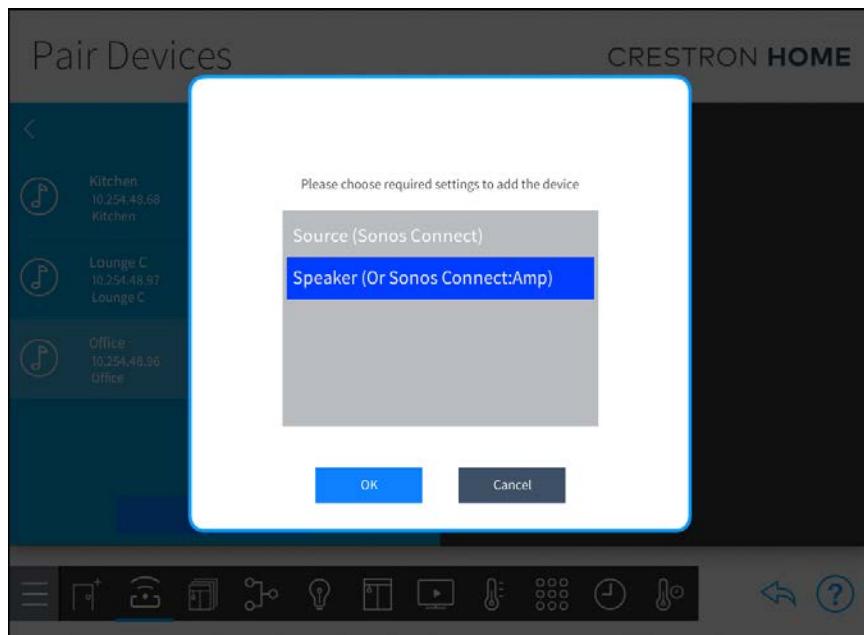
To add a Sonos device to a room:

**NOTE:** If necessary, tap **Rescan** to rescan the network for unpaired Sonos devices.

1. Select the room where the device is installed from the **Select a room** menu.
2. Tap the plus button (+) next to the Sonos device name.



3. Use the pop-up menu to select whether the Sonos device is a source (CONNECT) or a speaker (One™, PLAY:1®, PLAY:3®, CONNECT, PLAY:5®, CONNECT:AMP, Sonos Beam™, PLAYBAR®, PLAYBASE® devices).



4. Tap **OK**. The Sonos device is added to the room.

#### Remove a Sonos Device from a Room

To remove a Sonos device from a room:

1. Select a device in the room that you would like to remove.
2. Tap the back arrow (<) next to the device to remove the device from the room. The device is removed from the room and is added back to the **Sonos** menu.

**NOTE:** For most devices, removing the device from a room does not remove it from the entire system.

Tap the back arrow (<) next to **Sonos** to return to the **Device Types** menu.

## Third Party Devices

Third-party devices, such as streaming players, Blu-ray players, televisions, and cable boxes that are manufactured by other companies, can be added to the system. When the Third Party Devices screen is opened, the Crestron Home system downloads the Crestron Certified Drivers that are currently available for third-party devices.

### NOTES:

- If the third-party device is not shown in the device list, a custom device driver can be created and then loaded onto the CP4-R. The device can be added to the system after the driver is recognized. For details, refer to "Create and Upload a Custom Device Driver" on page 295.
- If a third-party device driver is used, the media controls for the device must be created manually and uploaded to the CP4-R. For more information, refer to "Create and Upload a Custom Device Driver" on page 295.
- Only devices with discrete on and off commands should be paired with the system. If, for example, a device with an auto-off timer is paired with the system, the device may turn itself off while the room remains on. This behavior causes the device to power on and become out of sync with the room after the room is powered off.



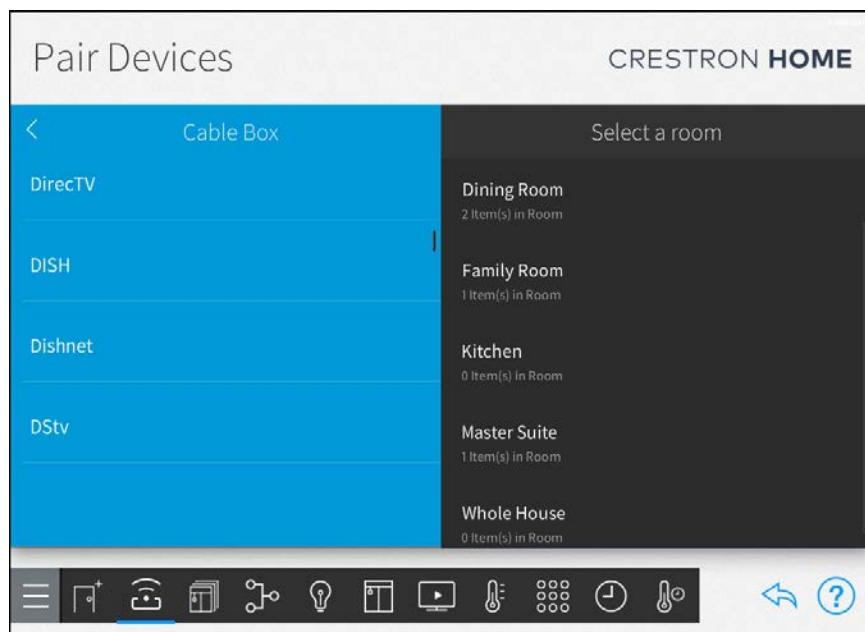
## Add a Third-Party Device to a Room

To add a third party device to a room:

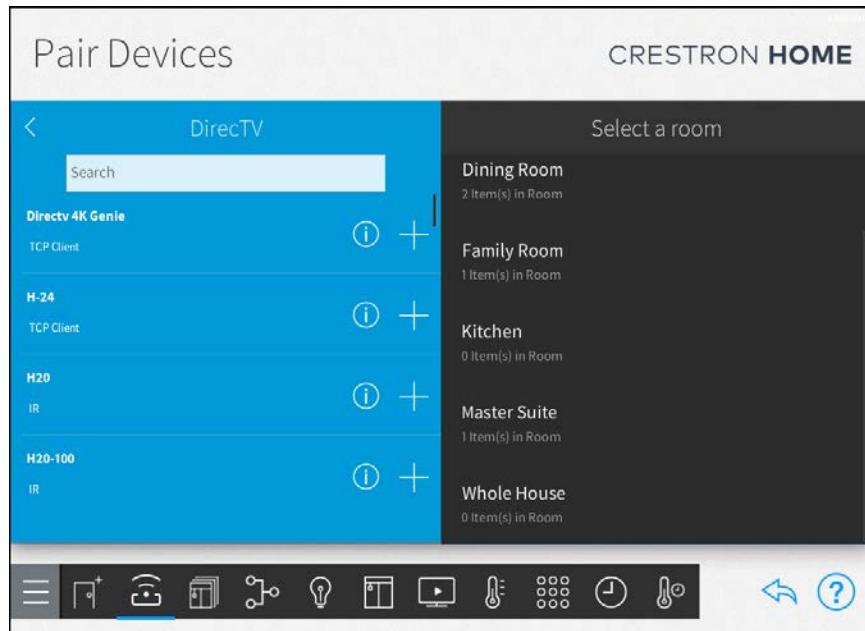
1. Select **Third Party** from the **Device Types** menu.



2. Select the room where the device is installed from the **Select a room** menu.
3. Select the device type from the **Third Party Devices** menu and then select the device manufacturer.



4. Tap the plus button (+) next to the appropriate device model. The device driver downloads from the cloud (if it has not been already downloaded).

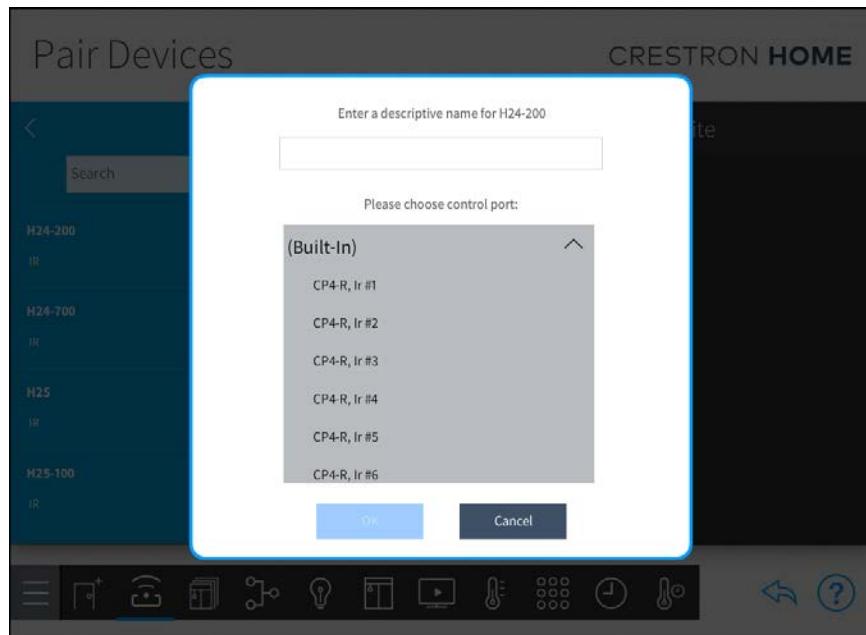


**NOTE:** When a device is added to the system using a Crestron Certified Driver, the device driver does not update automatically in the system when a new version is released in the cloud. For instructions on installing an updated Crestron Certified device driver, refer to "Update Crestron Certified Drivers" on page 329.

5. Enter a descriptive name for the device in the pop-up dialog box that is displayed.

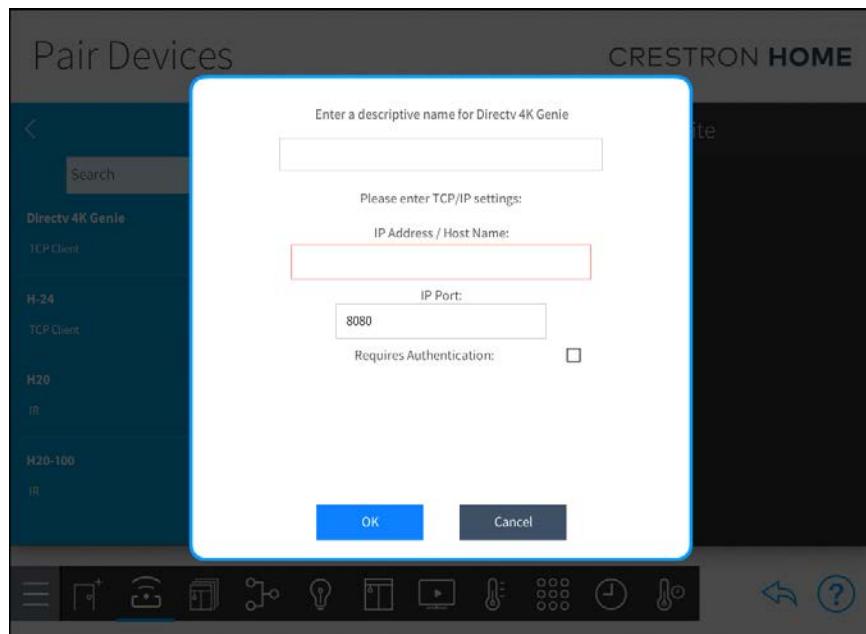
6. Configure the provided transport settings used for device communication:

- For IR, serial, and CEC-controlled devices, select a control port from the list of available ports.

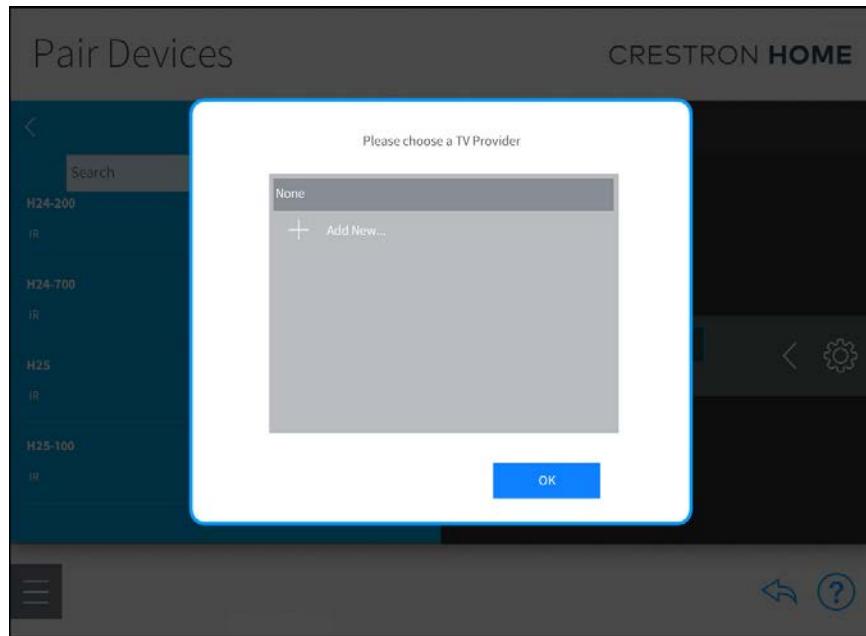


**NOTE:** IP devices must be configured with a static IP address. The system will no longer be able to detect the device if its IP address changes.

- For TCP client devices, enter the device IP address or hostname, IP port, and authentication credentials (if required).



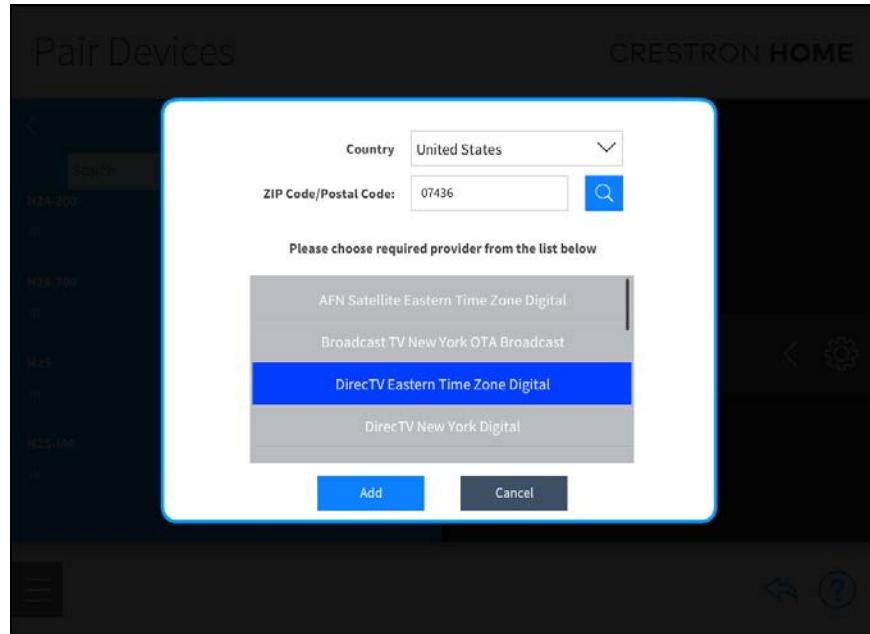
- For **cable boxes**, select a television provider from the list if it has already been added for another cable box, or tap + **Add New** to add a new provider.



- Add a new television provider (if necessary):
  - a. Select a country and a zip/postal code to display a list of available providers.

- b. Select a provider from the list, and then tap **Add**. A screen displays showing the list of cable providers that are in the system

**NOTE:** If the cable provider is not listed, a custom cable provider file must be created and uploaded to the CP4-R. For more information, refer to "Create and Upload a Custom Television Provider" on page 324.



7. Tap **OK**. The third party device is added to the room.

#### Remove a Third Party Device from a Room

To remove a third party device from a room:

1. Select a device in the room that you would like to remove.
2. Tap the back arrow (<) next to the device to remove the device from the room. The device is removed from the room and is added back to the **Third Party** menu.

**NOTE:** For most devices, removing the device from a room does not remove it from the entire system.

Tap the back arrow (<) next to **Third Party Devices** to return to the **Device Types** menu.

## Other Devices

### NOTES:

- Uncontrolled and relay-controlled devices must be connected to the appropriate hardware in order to function properly in the system. Set up and test connections for applicable devices in the device's settings screen.
- The status of controlled devices is not reported by the system. The device status must be verified manually.

Select **Other** from the **Device Types** menu to pair other devices with the Crestron Home system, including uncontrolled A/V devices, relay-controlled devices, and sensor devices.

### Add an Other Device to a Room

To add an other device to a room:

1. Select **Other** from the **Device Types** menu.



2. Select the room where the device is installed from the **Select a room** menu.
3. Select the device type from the **Other** menu, and tap the plus button (+).
4. Enter a descriptive name for the device.
5. Tap **OK**. The device is added to the room.

## Remove an Other Device from a Room

To remove an other device from a room:

1. Select a device in the room that you would like to remove.
2. Tap the back arrow (<) next to the device to remove the device from the room. The device is removed from the room and is added back to the **Other** menu.

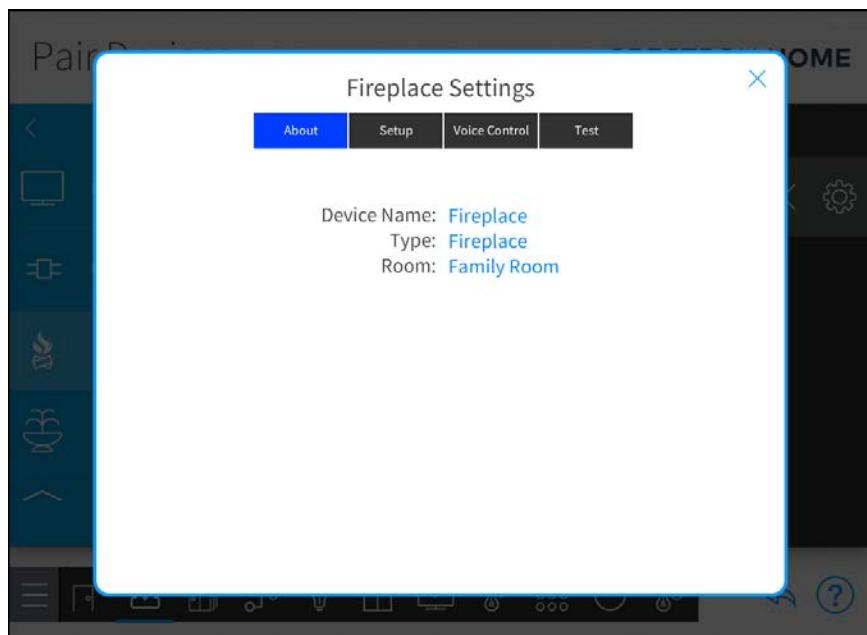
Tap the back arrow (<) next to **Other** to return to the **Device Types** menu.

## Configure a Relay-Controlled Device

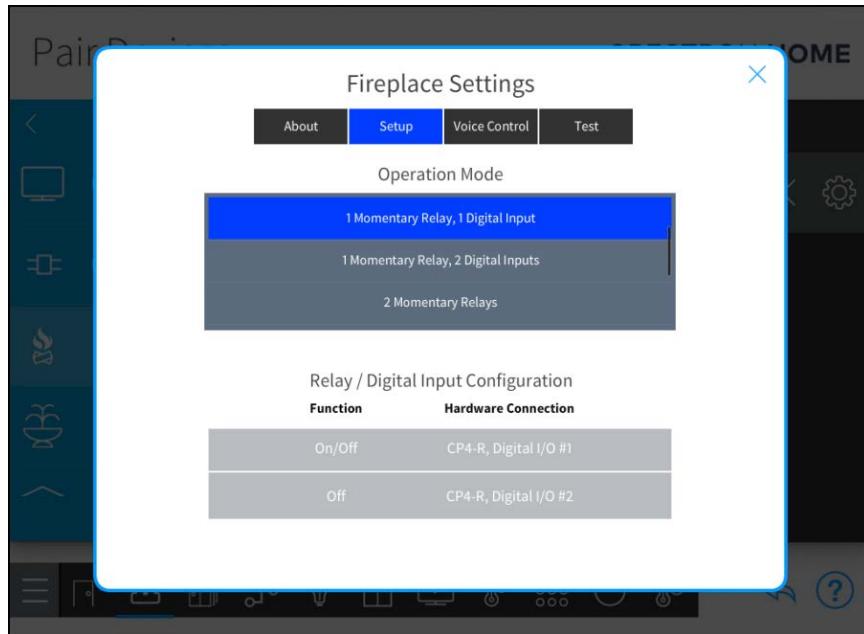
To configure a relay-controlled device with the Crestron Home system:

**NOTE:** The relay device must be installed in the room and wired to the relay port of a paired control device in order to function properly. For more information, refer to the relay device's documentation.

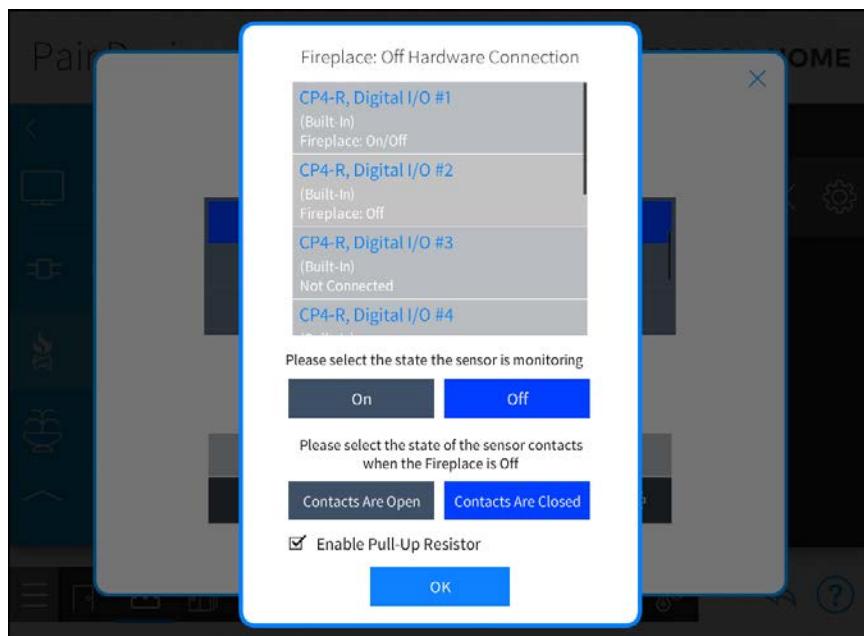
1. Select the room where the relay device is installed from the **Select a room** menu.
2. Tap the gear button  next to the relay device. The Settings dialog box for the relay device is displayed.



3. Tap the **Setup** tab. The device settings screen is displayed.



4. Choose the appropriate relay behavior from the **Operation Mode** menu:
  - **Momentary:** The controlled device is set (turned on) or reset (turned off) by a relay command, and remains in the selected state for a set duration.
  - **Latching:** The controlled device is set or reset by a relay command, and remains in the selected state until an inverse command is sent.
5. Select a relay connection from the **Relay / Digital Input Configuration** menu.
6. Tap the gear button  next to a relay or input to set a hardware connection for the selected behavior.



**NOTE:** The appropriate devices must be added to the system prior to configuring a hardware connection.

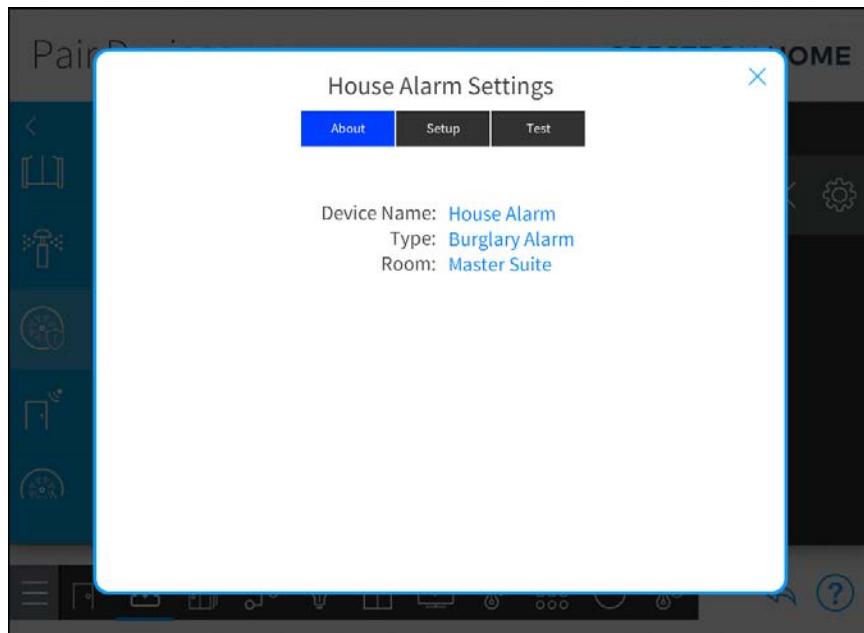
- a. Select the appropriate input port from the provided options.
  - b. If applicable, select the sensor monitoring state (**On** or **Off**).
  - c. If applicable, select the sensor contact states when turning off the relay device (**Contacts Are Open** or **Contacts Are Closed**).
  - d. Tap the check box next to **Enable Pull-Up Resistor** to enable or disable using a pull-up resistor for the hardware connection. A checked box indicates an enabled pull-up resistor.
7. Tap the **Test** tab to view and test the configured relay behavior(s). The hardware connection for the relay behavior(s) must be configured before they may be tested.

## Configure a Sensor Device

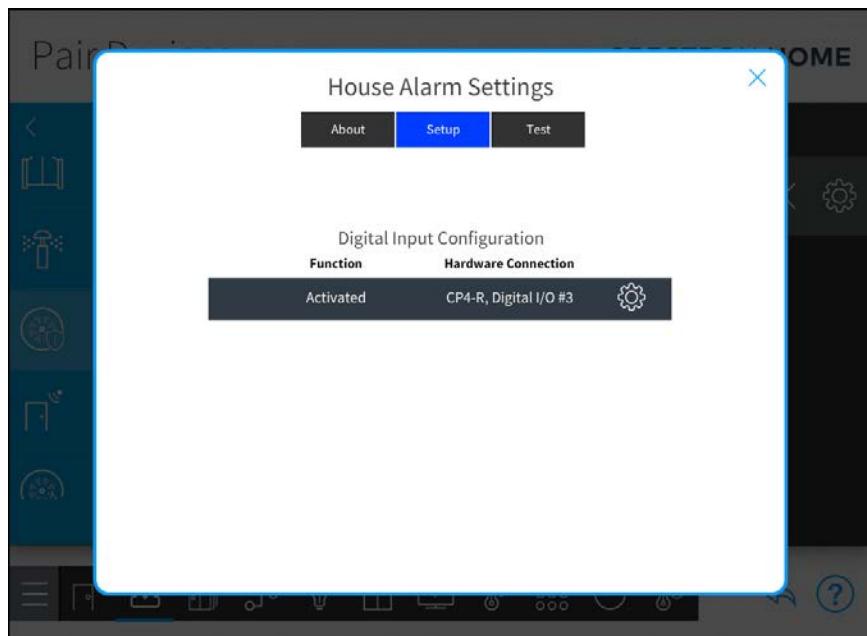
To configure a sensor device with the Crestron Home system:

**NOTE:** The sensor device must be installed in the room and wired to a paired control device in order to function properly. For more information, refer to the sensor device documentation.

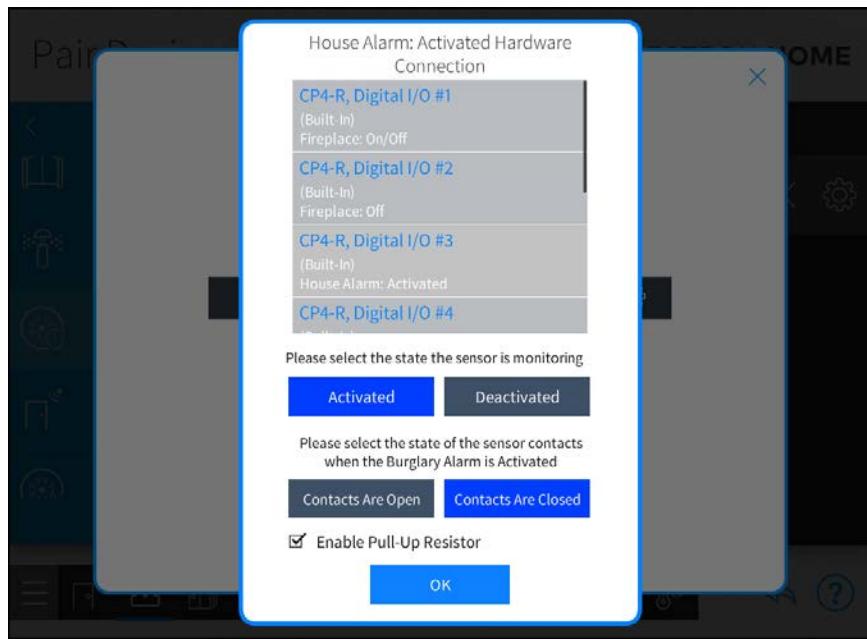
1. Select the room where the sensor device is installed from the **Select a room** menu.
2. Tap the gear button  next to the sensor device. The Settings dialog box for the sensor device is displayed.



3. Tap the **Setup** tab.



4. Select a device function from the **Digital Input Configuration** menu.
5. Tap the gear button  next to an input to set a hardware connection for the selected function.



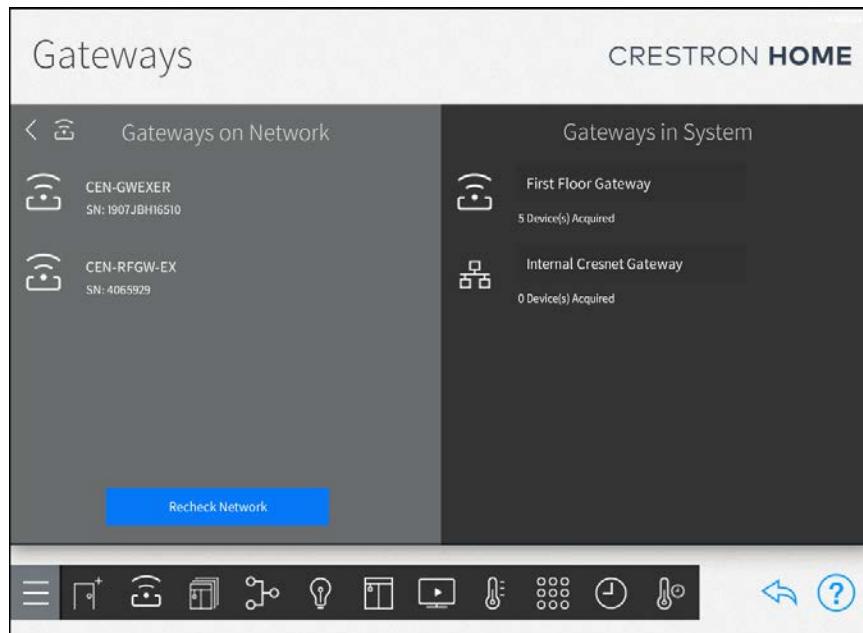
**NOTE:** The appropriate devices must be added to the system prior to configuring a hardware connection.

- a. Select the appropriate input port from the provided options.
  - b. If applicable, select the sensor monitoring state (**On** or **Off**).
  - c. If applicable, select the sensor contact states when turning off the sensor device (**Contacts Are Open** or **Contacts Are Closed**).
  - d. Tap the checkbox next to **Enable Pull-Up Resistor** to enable or disable using a pull-up resistor for the hardware connection. A checked box indicates an enabled pull-up resistor.
6. Tap the **Test** tab to view and test the configured device function(s). The hardware connection for the device function(s) must be configured before they may be tested.

## Manage Device Gateways

Up to 15 gateways can be added to the Crestron Home system. Each gateway can have a maximum of 50 paired devices.

Tap **Manage Gateways** in the **Device Types** menu to scan the local network for any gateways that may be added to the Crestron Home system. Discovered gateways appear under the **Gateways on Network** menu. If necessary, tap **Recheck Network** to rescan the network for available gateways.



### Add a Gateway to the System

To add a gateway to the system:

1. Tap **Manage Gateways** in the **Device Types** menu. The local network is scanned for gateways that can be added to the Crestron Home system. Discovered gateways appear under the **Gateways on Network** menu.

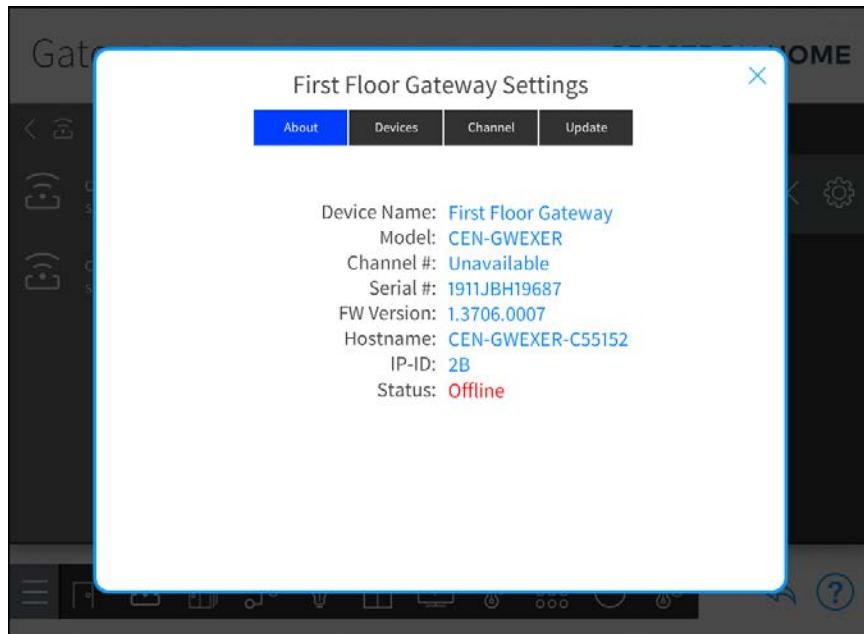
**NOTE:** If necessary, tap **Recheck Network** to rescan the network for available gateways.

2. Tap the plus button (+) next to a discovered gateway to add it to the system.

### Configure the Gateway

Configure the gateway settings after it has been added to the system

1. Select the gateway from the **Gateways in System** menu.
2. Tap the gear button  next to the gateway name to display a Settings dialog box.



3. Configure the following settings:

- **About:** Tap to view various gateway settings, including the gateway name, model, serial number, firmware version, and network status. Additionally, the assigned RF channel is displayed for wireless gateways.
- **Devices:** Tap to view all devices acquired to the gateway. The device name, serial number, device components (such as keypad or dimmer) and their locations in the house, and the network status are displayed for each device.
- **Channel:** Tap to view and configure the RF channel assigned to the gateway. For more information about assigning an RF channel, refer to the gateway's documentation.
- **Update:** Tap to view available updates for the gateway. The current and available firmware versions are displayed. Tap **Check for Update** to check for available updates. Tap **Update** to update the firmware.

## Remove a Gateway from the System

**NOTE:** Removing a gateway also removes all devices acquired by that gateway.

To remove a gateway from the system:

1. Select the gateway that you would like to remove.
2. Tap the back arrow (<) next to the gateway to remove it from the room. The gateway is removed from the room and is added back to the **Other** menu.

## Step 3: Build System

The third step is to build the system. During this step you will configure shade groups and source routes. Use the **Build System** screen to group multiple shade motors together and to configure audio and video source routing behavior for the Crestron Home system.

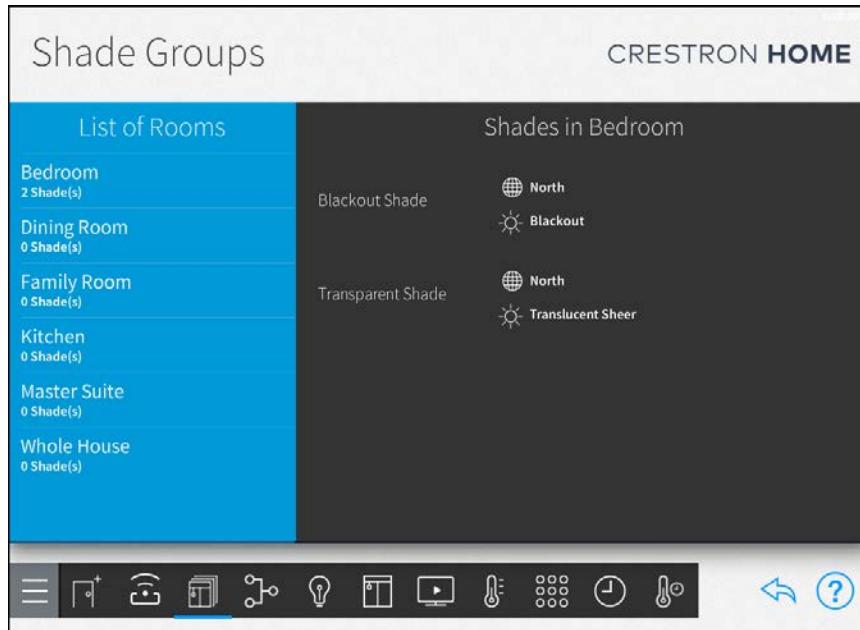
Tap the **Build System** button on the **Setup** screen to display the **Build System** screen.



### Shade Groups

Use the **Shade Groups** screen to group multiple shade motors together. When shade motors are grouped, all shade motors for an entire window are controlled as one. Shade motors that have the same fabric type and that are installed on the same window may be grouped.

Tap the **Setup Shade Groups** button on the **Build System** screen or the **Shade Groups** button on the setup menu to display the **Shade Groups** screen.



Select a room from the **List of Rooms** menu to view all of the shade motors configured for that room. The user-defined name, the direction the associated window is facing, and the fabric type are displayed for each shade motor.

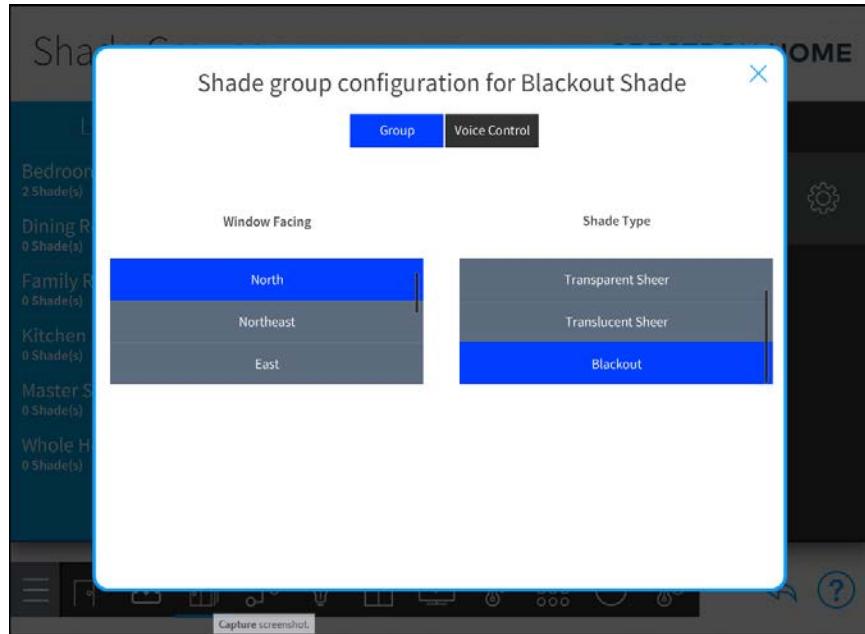
Shade motors that share the same window facing direction, the same fabric type, or both are grouped together automatically. From this point forward, the shade groups will appear in the configuration steps instead of the individual motors.

#### NOTES:

- Shade groups do not span across multiple rooms. However, multiple shade groups in different rooms may be controlled at the same time using shade scenes, actions, and events.
- Shade motors may be grouped by window facing direction only, fabric type only, or both window facing direction and fabric type.

To view and edit shade motor settings:

1. Select the shade motor from the **Shades in [Room]** menu.
2. Tap the gear button  next to the motor name. The **Shade group configuration** dialog box is displayed.

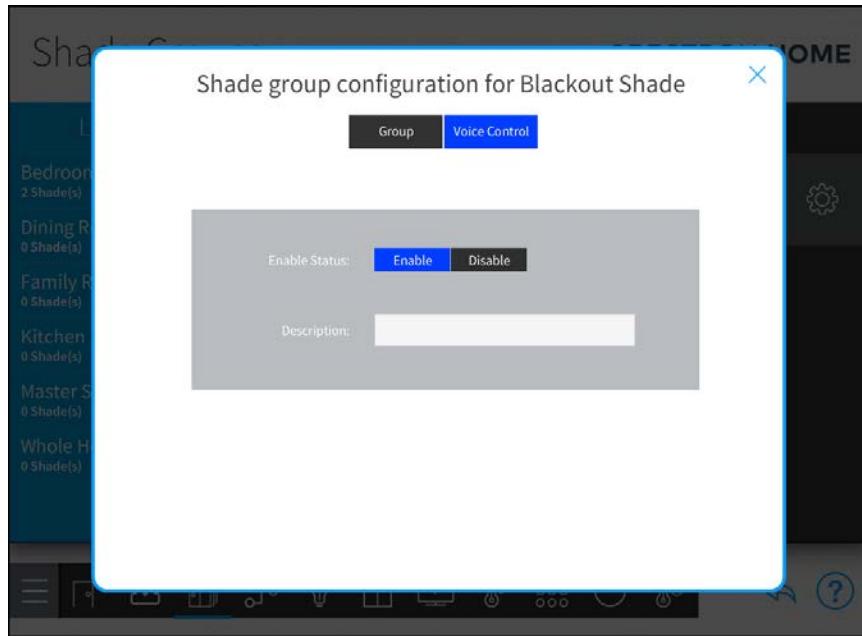


Tap the **Group** tab to change the window facing direction and the fabric type for the shade motor.

The following configuration options are provided:

- **Window Facing:** Select the direction that the shade motor's associated window is facing.
- **Shade Type:** Select the fabric type of the shade controlled by the shade motor.

Tap the **Voice Control** tab to enable or disable the ability to control the shade motor with voice control services (if enabled for the system).



**NOTE:** For more information on configuring voice control for the Crestron Home system, refer to "Voice Control Settings" on page 156.

The following configuration options are provided:

- **Enable Status:** Select whether voice control is enabled or disabled for the shade motor.
- **Description:** Enter a description for the voice control command that appears in the voice control application.

Tap **Save** on the **Group** tab to save any changes.

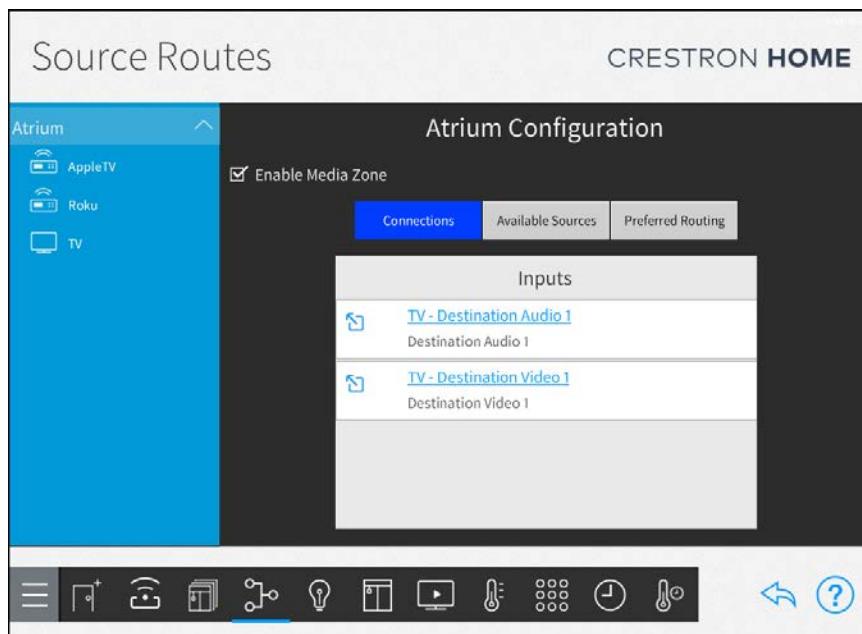
On the **Shade Groups** screen, tap the back arrow button to return to the **Build System** screen.

## Source Routes

Use the **Source Routes** screen to configure audio and video source routing behavior for the Crestron Home system.

Media sources and content items may be routed to the appropriate endpoints in one or more rooms across the system. Rooms may also be defined as media zones so that the room's media sources may be controlled from the user control interface.

Tap the **Source Routes** button on the **Build System** screen or the **Source Routes** button  on the setup menu to display the **Source Routes** screen.



### NOTES:

- The  button to the left of an input channel name navigates to the input device's source routing selections.
- The  button to the right of an output channel name navigates to the output device's source routing selections.

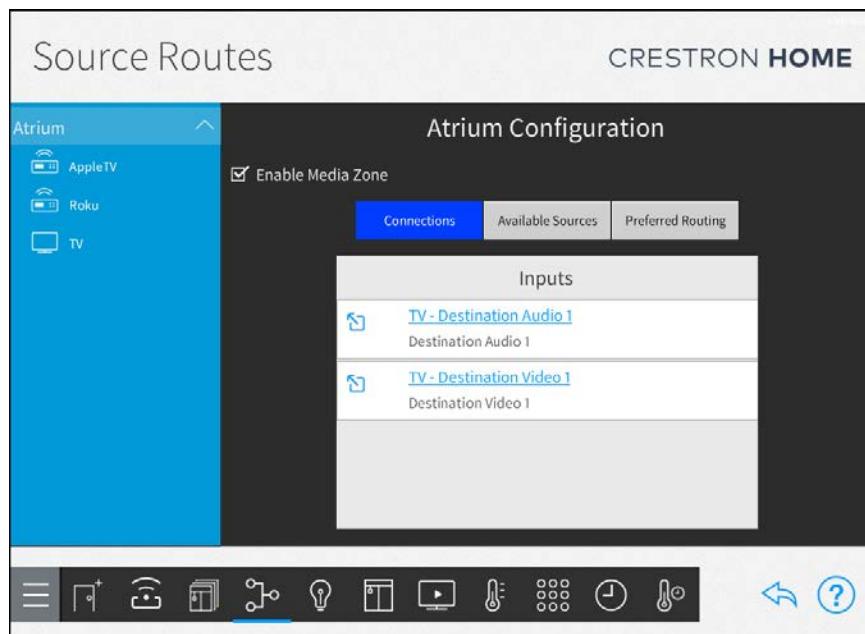
## Enable or Disable a Media Zone

To allow source routing and to display components in the user interface, configure rooms as media zones. When enabled as a media zone, the room may be selected from the user control interface. Actions and events may also be configured for the media zone.

Rooms configured as media zones may be controlled by the TSR-310 user interface. For more information, refer to the Performance UI for TSR-310 Operations Guide (Doc. 8410) at [www.crestron.com/manuals](http://www.crestron.com/manuals).

To enable a room as a media zone:

1. Select a room from the left screen menu.
2. Tap the check box next to Enable Media Zone to enable or disable the room as a media zone. A filled checkbox indicates that the room is enabled as a media zone.

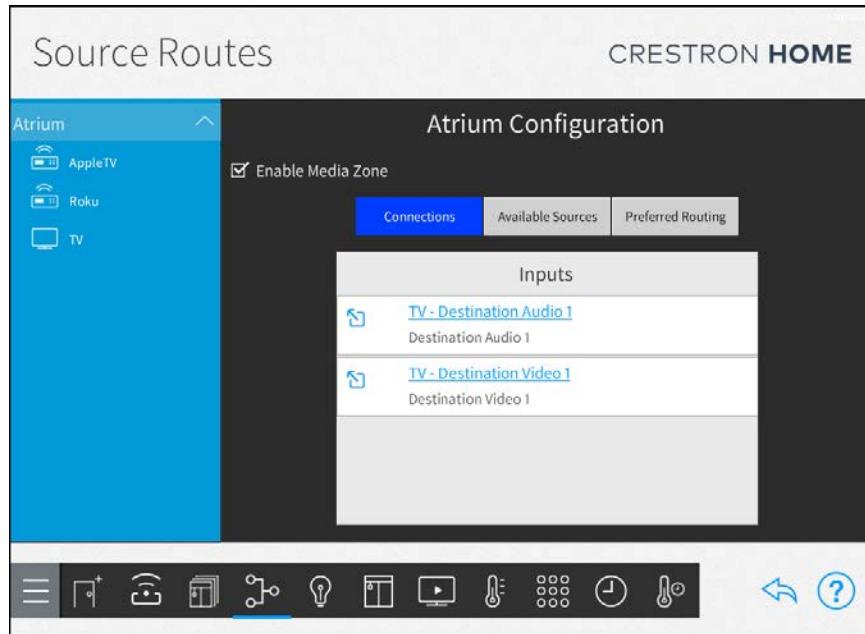


## Configure Source Routes

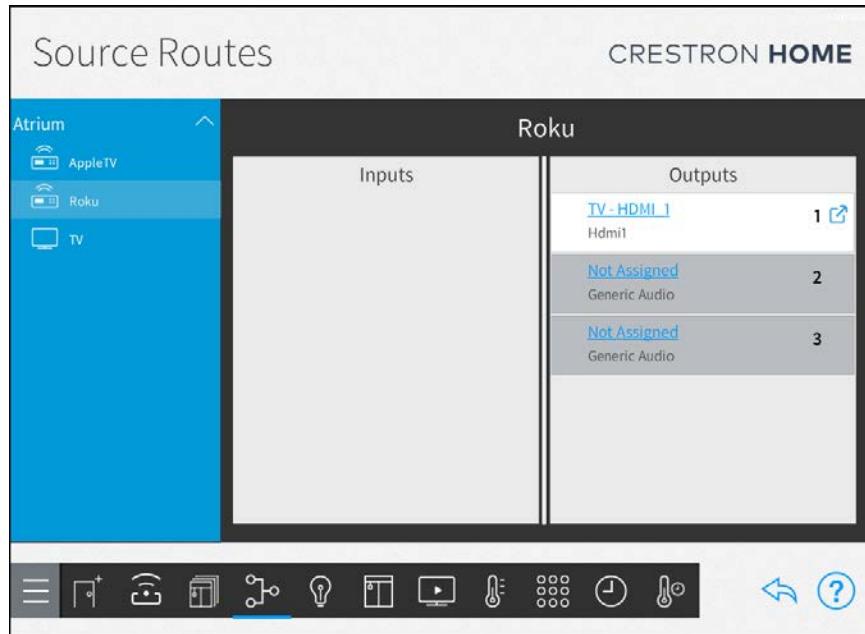
To configure source routing behavior for a media device:

1. Select a room from the left screen menu. The media devices that are in the room are shown below the room name.

**NOTE:** The **Connections** tab displays the media device inputs that are available for the room. Tap an input name to select a different input.



2. Select a media device from the provided options. The input and output channels for the media device are displayed, as well as any device ports that have been assigned to a channel.



3. Assign an input source:
  - a. Tap an input channel from the **Inputs** list. The available sources are displayed.
  - b. Select the source that is connected to the input.

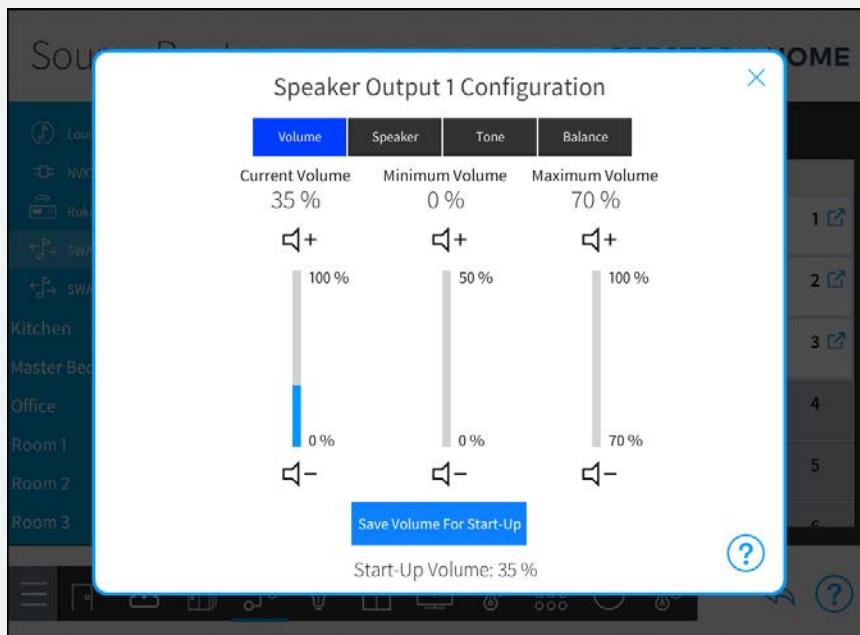
4. Assign an output source:

- a. Tap an output channel from the **Outputs** list. The available sources are displayed.
- b. Select the device that the output is connected to.

**NOTE:** Observe the following points when configuring source routes:

- If two media sources are routed to a DM NVX device (via the Input 1 and Input 2 ports), they may not be used at the same time. For example, if switching from Input 1 to Input 2 in a media zone, all media zones where Input 1 is selected switch to Input 2.
- CEC devices must be routed manually to the HDMI® input that matches the control port that was assigned to the device.
- If the audio signal for a video source is routed to a SWAMP audio expander endpoint, the video will display but no audio will be heard. This behavior occurs because the SWAMP device is warming up and is corrected within a few seconds.

Tap the gear button  next to an audio input or output channel to edit settings for the speaker channel.



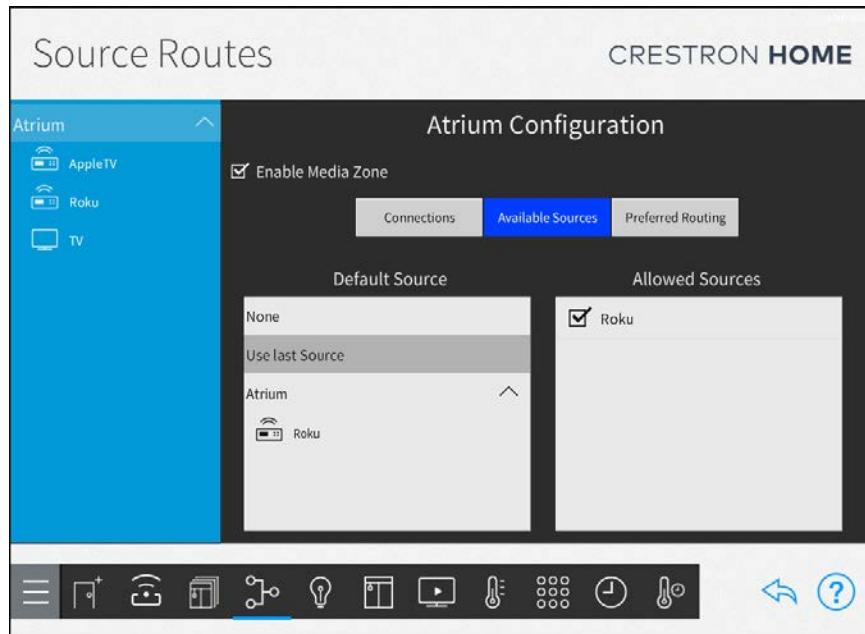
**NOTE:** The audio outputs of certain Crestron audio expanders may be bridged or bussed by assigning two output channels to the same speaker output, and tapping the gear button  next to one of the outputs. A dialog box is displayed asking whether the outputs should be bridged or bussed. For more information, refer to the device documentation at [www.crestron.com/manuals](http://www.crestron.com/manuals).

## Set the Default Source and Allowed Sources

The default source is the source that is shown for the room on the user control interface. The allowed sources are the media devices in the room that can be selected on the user control interface.

To set the default source and the allowed sources:

1. Select a room from the left screen menu.
2. Tap **Available Sources**. A list of all media sources in the room is displayed.



3. Select the **Default Source**. The source that is selected is displayed on the user control interface when selected. The default source can also be None or Use last Source.
  - None: No source is displayed by default. A blank screen is displayed.
  - Use last Source: The source that was last used is displayed.
4. Select the **Allowed Sources**. Tap the checkbox next to a source name to enable or disable the source from appearing as a selectable item in the user control interface for the room. A filled check box indicates that the source may be selected for the room.

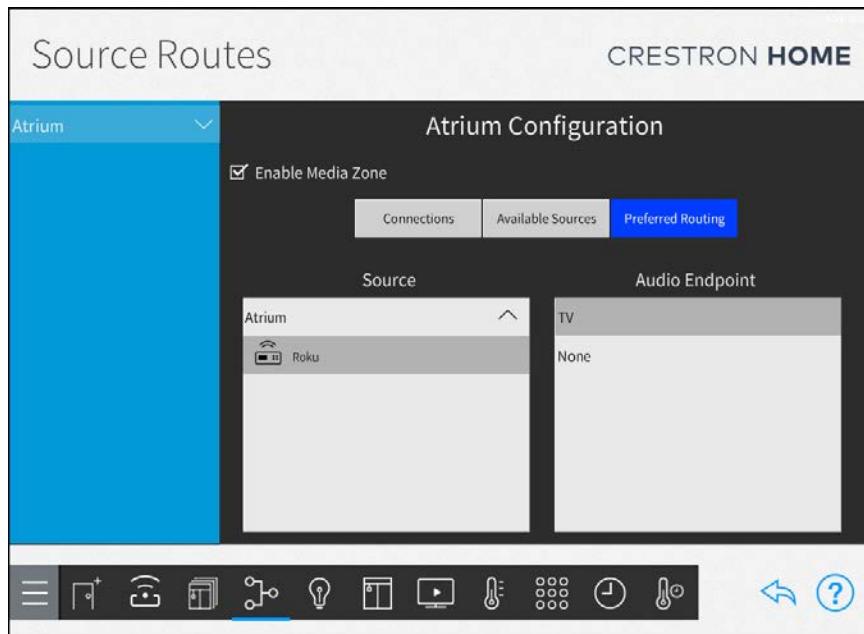
**NOTE:** Tap and hold a media source in the Allowed Sources menu until it turns green to move it up or down in the menu. The order of the Allowed Sources menu matches the order that the media sources appear in the user control interface.

## Set the Preferred Routing

The **Preferred Routing** tab sets the preferred audio endpoint in the room for each media source.

To set the preferred routing:

1. Select a room from the left screen menu.
2. Tap **Preferred Routing**. A list of all media sources and audio end points is displayed.



3. Select a media source from the **Source** list and then select the audio endpoint that should play the audio from the **Audio Endpoint** list. Repeat this process for all media sources.

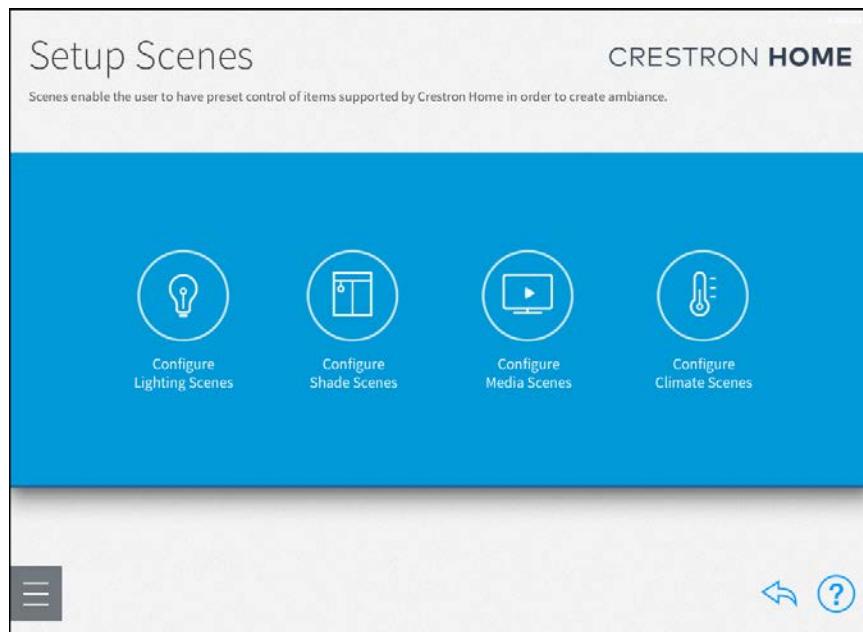
To return to the previous screen, tap the back arrow button .

## Step 4: Create Scenes

The fourth step is to create scenes for the house. Scenes are a programmed set of actions that can be recalled by the user interface. During this step you will configure lighting scenes, shade scenes, media scenes, and climate scenes. For example, a lighting scene called Party may be programmed to dim the lights in the house or a shade scene called Privacy may be programmed to close all of the shades in the house. Use the **Setup Scenes** screen to create and configure scenes for the Crestron Home system.

Tap the **Create Scenes** button on the **Setup** screen to display the **Setup Scenes** screen.

### Setup Scenes Screen



Scenes are recalled from a user interface device such as a touch screen, remote, keypad, time of day action, or mobile device. To program buttons and create events that recall scenes, refer to "Step 5: Customize & Schedule" on page 99.

**NOTE:** Each room may contain up to 24 scenes for each scene type. (For example, a room may contain up to 24 lighting scenes, up to 24 shade scenes, and so forth.)

To return to the previous screen, tap the back arrow button .

## Light Scenes

Use the **Light Scenes** screen to create lighting scenes for one or more rooms or for the entire house.

Lighting scenes are used to set predefined light levels for multiple lighting loads. By default, the Crestron Home system creates **All On** and **All Off** scenes for all rooms with a lighting load. Additionally, an **All On** and **All Off** scene is created for the Whole House room when a lighting load is added to the system.

Tap the **Configure Lighting Scenes** button on the **Setup Scenes** screen or the Light Scenes button  on the setup menu to display the **Light Scenes** screen.

### Light Scenes Screen

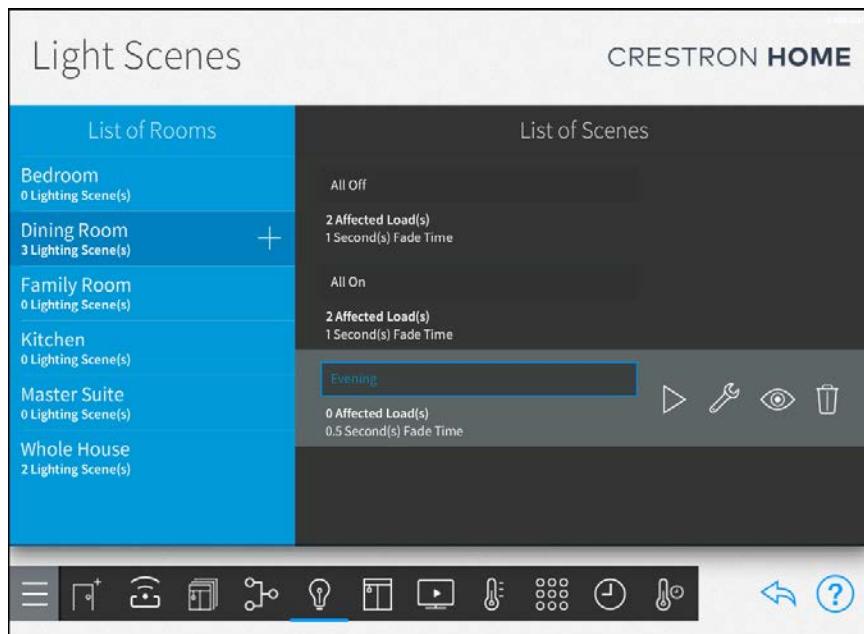


## Create a New Lighting Scene

**NOTE:** When a scene is created, the current light state is saved as the scene setting and will be recalled by the scene. To adjust the levels, tap the wrench button  next to the lighting scene name.

To create a new lighting scene:

1. Select a room from the **List of Rooms** menu, and then tap the plus button (+) next to the room name. A dialog box for the scene name is displayed.



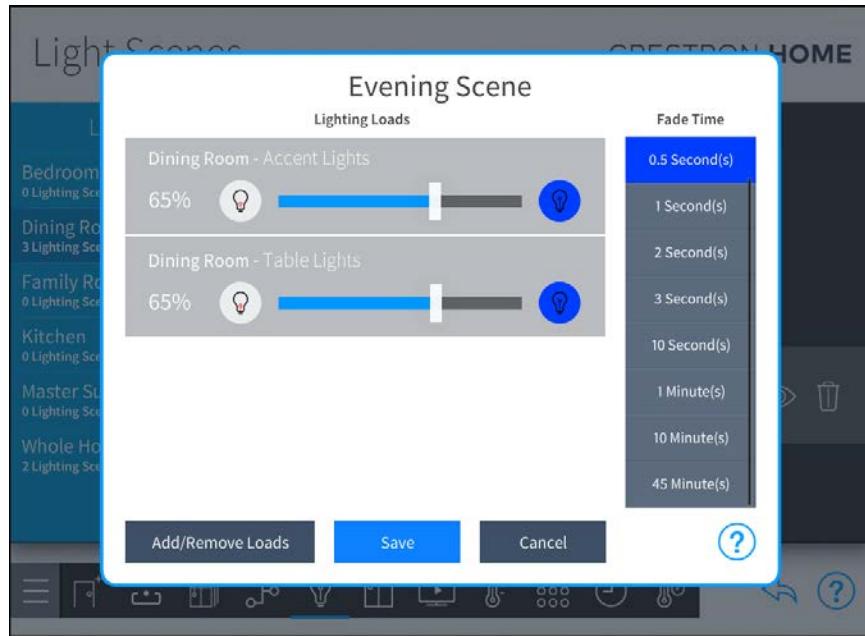
2. Enter a descriptive name for the lighting scene in the dialog box that is displayed, and then tap **OK**. The new lighting scene is added to the room under the **List of Scenes** menu.

## Configure a Lighting Scene

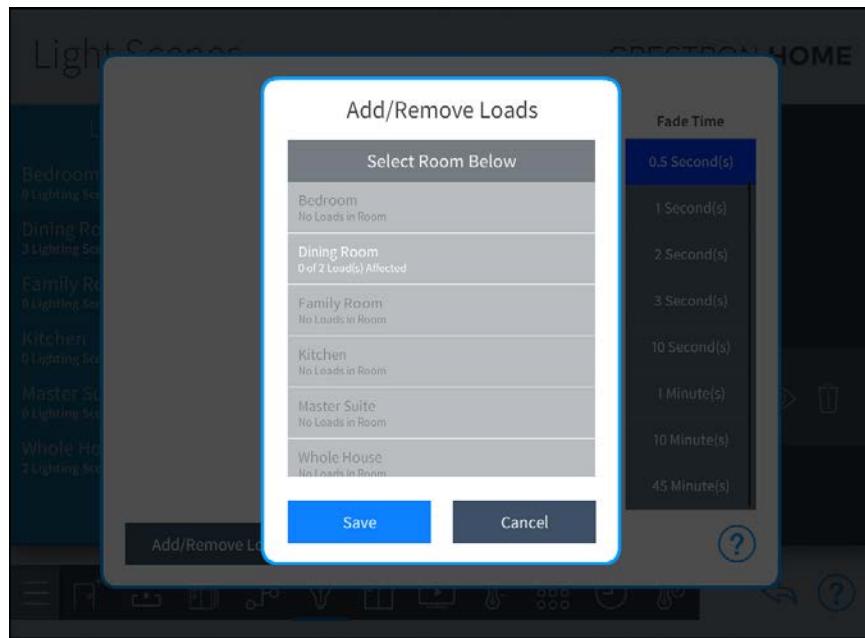
A lighting scene may be configured and tested after it has been added to the system. Use the **List of Scenes** menu to select a lighting scene for configuration.

To configure a lighting scene:

1. Tap the wrench button  next to the lighting scene name. The scene configuration screen opens.



2. Tap Add/Remove Loads . The Add/Remove Loads dialog is displayed.



3. Select a room from Select Room Below and then tap the check box next to the lighting loads that should be controlled in the lighting scene.

**NOTE:** The lighting loads can be from the same room or from different rooms in the house.

4. Configure the lighting scene:

- **Lighting Loads:** Use the provided controls to adjust the brightness levels for any lighting loads that have been added to the scene. Lighting loads are adjusted in real time.
  - Tap the left lightbulb button  to turn off a lighting load (0%).
  - Tap the right lightbulb button  to set a lighting load to its maximum brightness (100%).
  - Use the slider to adjust the brightness level incrementally for lighting loads with dimmers.

**NOTE:** Lighting loads may also be adjusted using the dimmers or switches configured to control the lighting load. The load levels are updated in real-time in the Crestron system.

- **Fade Time:** Select the duration that a lighting scene fades in after being recalled and fades out after the scene is completed.

5. Tap **Save** to save any changes or **Cancel** to discard the changes.

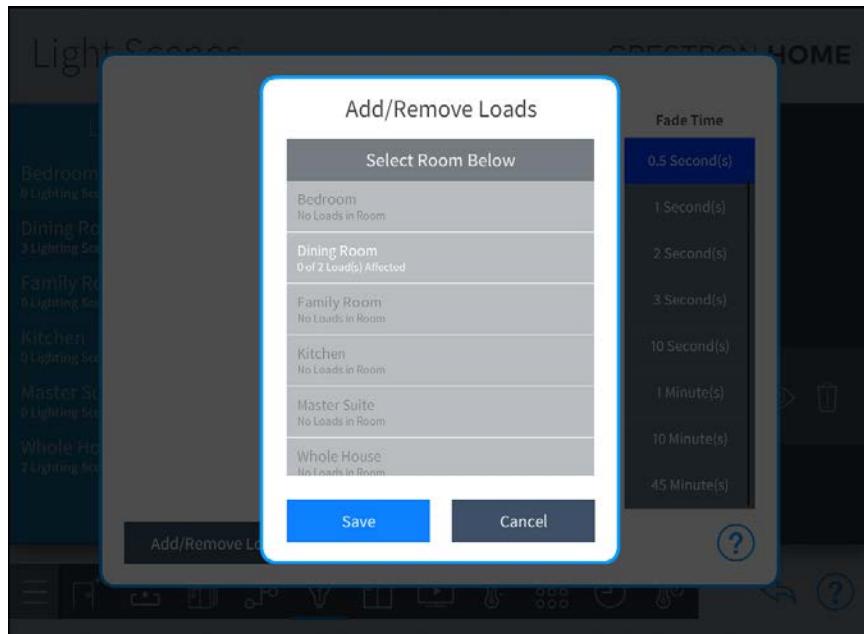
#### Add or Remove a Lighting Load from a Scene

A scene can contain all devices that are located in a room or only a few devices. A scene can also contain a lighting load that is located in different rooms in the house.

To add or remove a lighting load from the scene:

1. Tap the wrench button  next to the lighting scene name. The scene configuration screen opens.
2. Tap **Add/Remove Loads**. The **Add/Remove Loads** dialog is displayed.

3. Select a room from Select Room Below and then tap the check box next to the lighting loads that should be controlled in the lighting scene.



4. Tap **Save** to save any changes or **Cancel** to discard the changes.

**NOTE:** Adjust the lighting scene as necessary. Refer to the "Configure a Lighting Scene" section above.

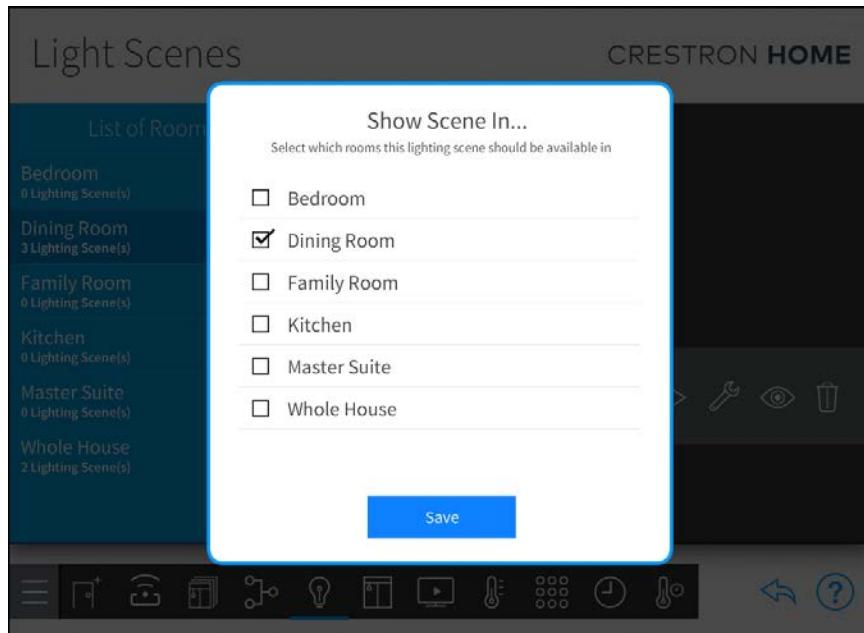
#### Display Lighting Scenes in Different Rooms

The lighting scene can be configured so that it is available in different rooms around the house. When the scene is displayed in a different room, it can be recalled by a user interface device that is located in any of the selected rooms.

To display lighting scenes in other rooms:

1. Tap the eye button next to a lighting scene name. The **Show Scene In...** dialog box is displayed.

2. Tap the check box next to a room name to make the lighting scene visible in that room. A filled check box indicates that the lighting scene is visible and may be recalled from a control device in the room (such as a touch screen).



3. Tap **Save** to save any changes.

### Delete a Light Scene

To delete a light scene:

1. Select a room from the **List of Rooms** menu and then select the scene to delete.
2. Tap the trashcan button  to delete the light scene. A confirmation dialogue is shown.
3. Tap **OK** to delete the light scene or **Cancel** to keep the light scene.

To return to the previous screen, tap the back arrow button .

## Shade Scenes

Use the **Shade Scenes** screen to create shade scenes for one or more rooms or for the entire house.

Shade scenes are used to set predefined levels for multiple shade groups. By default, the Crestron Home system creates **All Open** and **All Closed** scenes for all rooms with a shade group. Additionally, an **All Open** and **All Closed** scene is created for the Whole House room when a shade motor is added to the system.

Tap the **Configure Shade Scenes** button on the **Setup Scenes** screen or the **Shade Scenes** button  on the setup menu to display the **Shade Scenes** screen.

### Create a New Shade Scene

**NOTE:** When a scene is created, the current shade state is saved as the scene setting and will be recalled by the scene. To adjust the levels, tap the wrench button  next to the shade scene name.

To create a new shade scene:

1. Select a room from the **List of Rooms** menu, and then tap the plus button (+) next to the room name. A dialog box for the scene name is displayed.



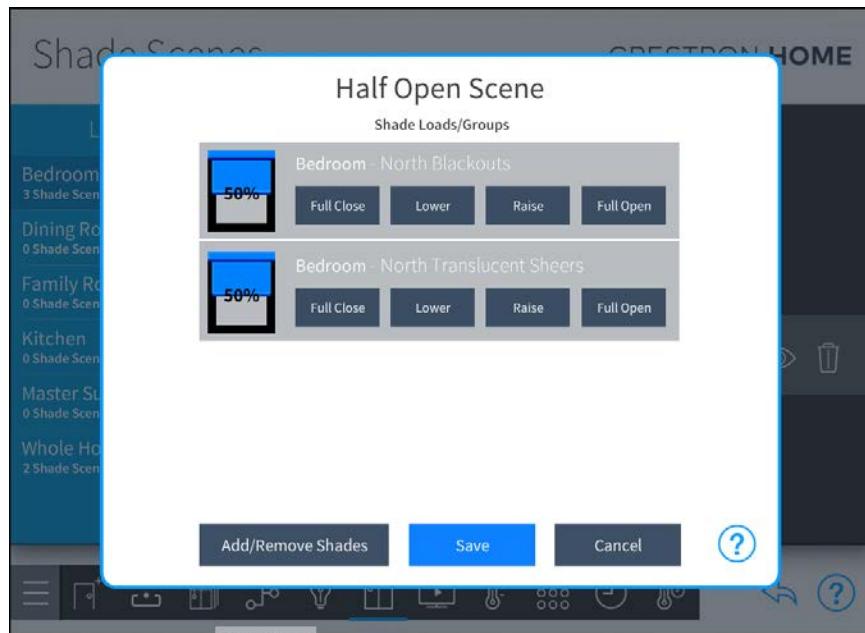
2. Enter a descriptive name for the shade scene in the dialog box that is displayed, and then tap **OK**. The new shade scene is added to the room under the **List of Scenes** menu.

## Configure a Shade Scene

A shade scene may be configured and tested after it has been added to the system. Use the **List of Scenes** menu to select a shade scene for configuration.

To configure a shade scene:

1. Tap the wrench button  next to the shade scene name. A notice is displayed stating that the shade scene will be recalled upon entering the scene configuration dialog box. Tap **OK** to display the dialog box or tap **Cancel** to cancel. The scene configuration screen opens.



2. Tap **Add/Remove Loads**. The **Add/Remove Loads** dialog is displayed.
3. Select a room from **Select Room Below** and then tap the check box next to the shade that should be controlled in the shade scene.

**NOTE:** The shades can be from the same room or from different rooms in the house.

4. Configure the shade scene:
  - **Raise** or **Lower**: Tap to raise or lower the shade incrementally.
  - **Full Open** or **Full Close**: Tap to open or close the shade fully.

### NOTES:

- Shade loads may also be adjusted using the shade motor controls or using keypads configured to control the shade motors.
- The icon to the left of each shade load shows the percentage that the shade group is open in real time.

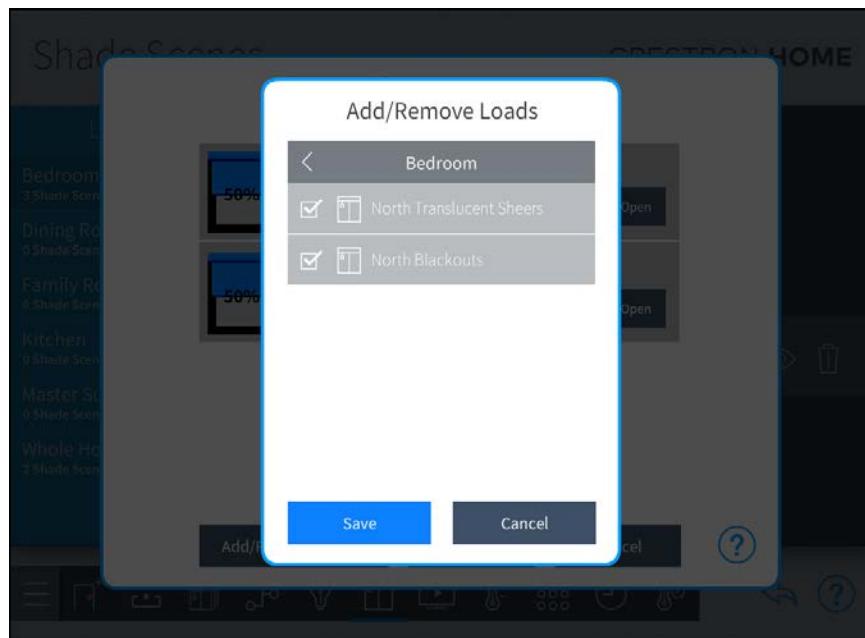
5. Tap **Save** to save any changes or **Cancel** to discard the changes.

## Add or Remove a Shade from a Scene

A scene can contain all devices that are located in a room or only a few devices. A scene can also contain a shade that is located in different rooms in the house.

To add or remove a shade from the scene:

1. Tap the wrench button  next to the lighting scene name. The scene configuration screen opens.
2. Tap **Add/Remove Loads**. The **Add/Remove Loads** dialog is displayed.
3. Select a room from **Select Room Below** and then tap the check box next to the shade that should be controlled in the shade scene.



4. Tap **Save** to save any changes or **Cancel** to discard the changes.

**NOTE:** Adjust the shade scene as necessary. Refer to the "Configure a Shade Scene" section above.

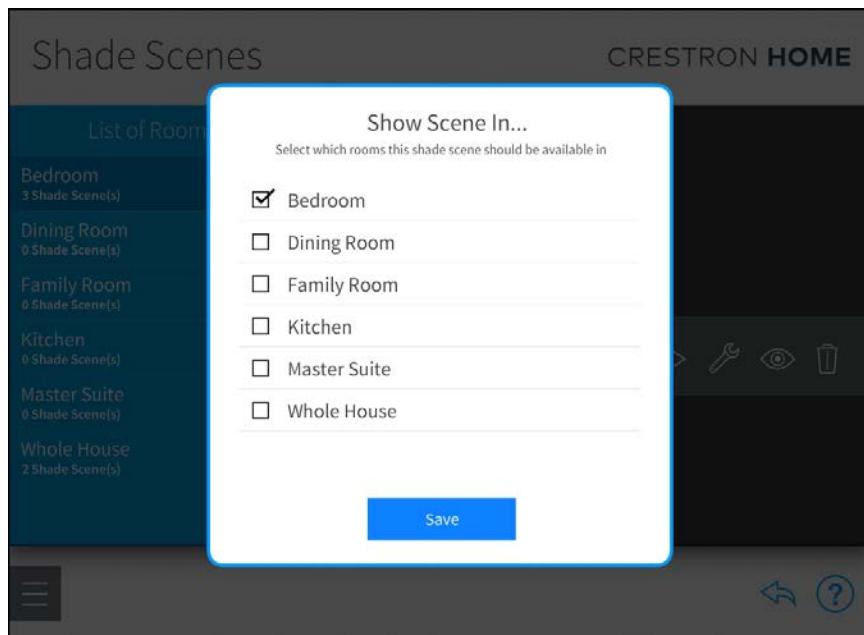
## Display Shade Scenes in Different Rooms

The shade scene can be configured so that it is available in different rooms around the house. When the scene is displayed in a different room, it can be recalled by a user interface device that is located in any of the selected rooms.

To display shade scenes in other rooms:

1. Tap the eye button  next to a shade scene name. The **Show Scene In...** dialog box is displayed.

2. Tap the check box next to a room name to make the shade scene visible in that room. A filled check box indicates that the shade scene is visible and may be recalled from a control device in the room (such as a touch screen).



3. Tap **Save** to save any changes.

### Delete a Shade Scene

To delete a shade scene:

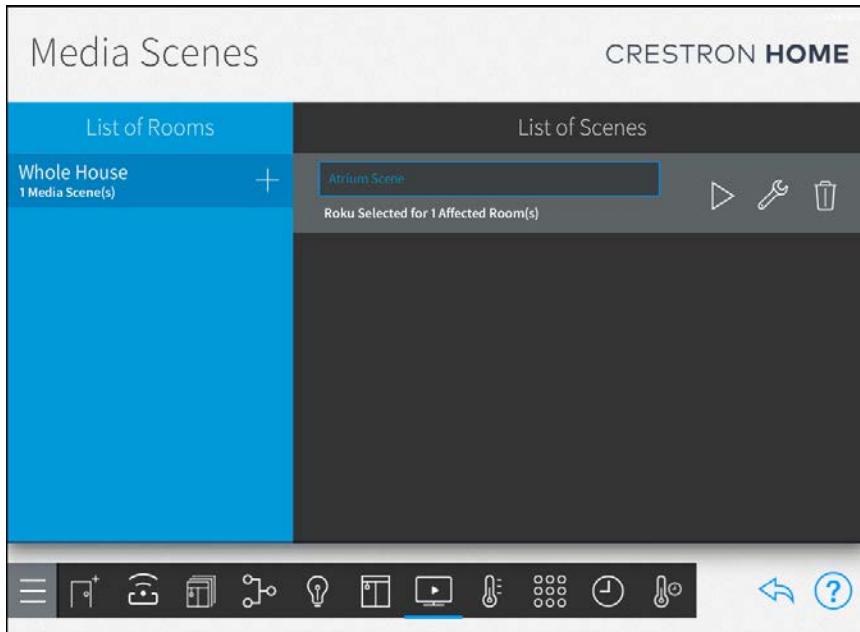
1. Select a room from the **List of Rooms** menu and then select the scene to delete.
2. Tap the trashcan button to delete the shade scene. A confirmation dialogue is shown.
3. Tap **OK** to delete the shade scene or **Cancel** to keep the shade scene.

To return to the previous screen, tap the back arrow button .

## Media Scenes

Use the Media Scenes screen to create media scenes for the entire house. Media scenes are used to control source routing and on/off behavior for various media zones in the home.

Tap the **Configure Media Scenes** button on the **Setup Scenes** screen or the Media Scenes button  to display the **Media Scenes** screen.



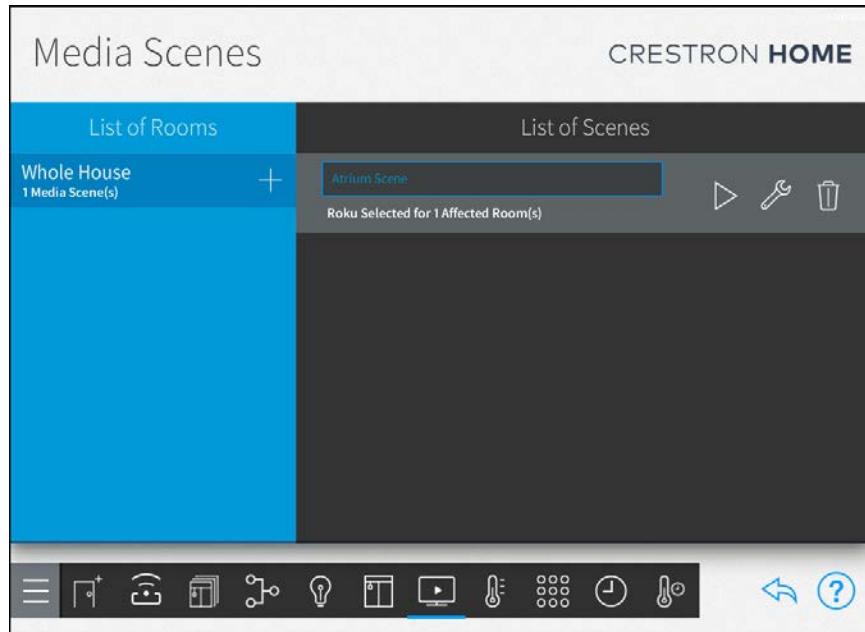
Tap the play button  to recall the media scene in real time.

### Create a New Media Scene

**NOTE:** When a scene is created, the current media state is saved as the scene setting and will be recalled by the scene. To adjust the levels, tap the wrench button  next to the media scene name.

To create a new media scene:

1. Select a room from the **List of Rooms** menu, and then tap the plus button (+) next to the room name. A dialog box for the scene name is displayed.



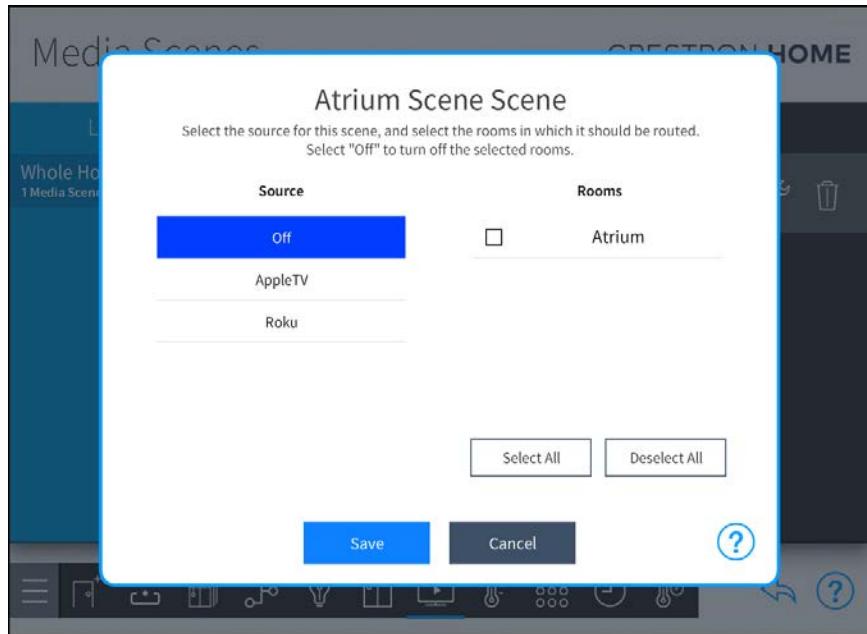
2. Enter a descriptive name for the media scene in the dialog box that is displayed, and then tap **OK**. The new media scene is added to the room under the **List of Scenes** menu.

## Configure a Media Scene

A media scene may be configured and tested after it has been added to the system. Use the **List of Scenes** menu to select a media scene for configuration.

To configure a media scene:

1. Tap the wrench button  next to the media scene name. The scene configuration screen opens.



2. Configure the media scene:

- **Source:** Swipe up or down to select the media source or favorite that will be added to the scene. Select **Off** to have the scene turn off all media sources for the selected rooms.
- **Rooms:** Swipe up or down to select the room(s) in which the media source will be routed when the scene is triggered. A filled checkbox to the left of the room name indicates that the room is selected.

**NOTE:** A room must be configured as a media zone before it can be selected for a media scene. For more information, refer to "Media Scenes" on page 92.

- **Select All:** Selects all available rooms.
- **Deselect All:** Deselects all available rooms.

3. Tap **Save** to save any changes or **Cancel** to discard the changes.

## Delete a Media Scene

To delete a media scene:

1. Select a room from the **List of Rooms** menu and then select the scene to delete.
2. Tap the trashcan button  to delete the media scene. A confirmation dialogue is shown.
3. Tap **OK** to delete the media scene or **Cancel** to keep the media scene.

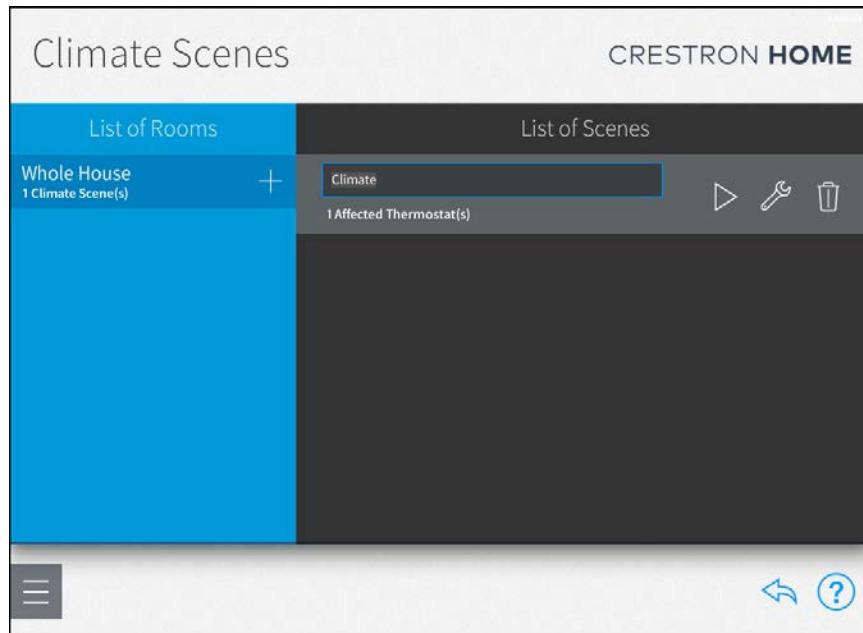
To return to the previous screen, tap the back arrow button .

## Climate Scenes

Use the **Climate Scenes** screen to create climate scenes for thermostats that have been added to the system.

Climate scenes are used to set predefined temperature set points or modes for a thermostat. Climate scenes are ideal for changing the HVAC system parameters during specified times of day.

Tap the **Configure Climate Scenes** button on the **Setup Scenes** screen or the Climate Scenes button  on the setup menu to display the **Climate Scenes** screen.



### Create a New Climate Scene

**NOTE:** When a scene is created, the current thermostat state is saved as the scene setting and will be recalled by the scene. To adjust the levels, tap the wrench button  next to the climate scene name.

To create a new climate scene:

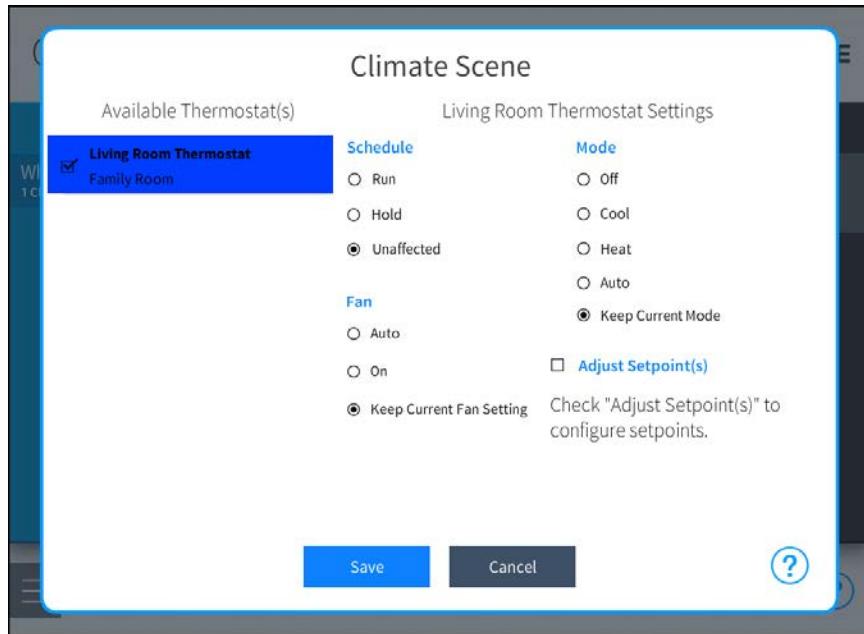
1. Select a room from the **List of Rooms** menu, and then tap the plus button (+) next to the room name. A dialog box for the scene name is displayed.
2. Enter a descriptive name for the climate scene in the dialog box that is displayed, and then tap **OK**. The new climate scene is added to the room under the **List of Scenes** menu.

## Configure a Climate Scene

A climate scene may be configured and tested after it has been added to the system. Use the **List of Scenes** menu to select a climate scene for configuration.

To configure a climate scene:

1. Tap the wrench button  next to the climate scene name. The scene configuration screen opens.



2. Configure the climate scene:

- **Available Thermostats:** Tap the check box next to one or more thermostats in the **Available Thermostat(s)** menu to add the thermostats to the climate scene. A filled check box indicates that the thermostat is added to the scene. Tap on a thermostat to configure its behavior within the scene.
- **Schedule:** Select one of the following scheduling options:

**NOTE:** If the thermostat schedule is running because **Run** or **Unaffected** was triggered by the scene, the next scheduled climate event will overwrite the climate scene's set points.

- **Run:** Starts the thermostat schedule.
- **Hold:** Stops the thermostat schedule.
- **Unaffected:** The scene does not alter the current thermostat schedule.
- **Fan:** Select one of the following fan behavior options:
  - **Auto:** Turns on and off the fan automatically.
  - **On:** Turns on the fan.
  - **Keep Current Fan Setting :** The scene does not alter the fan setting.
- **Mode:** Select one of the following thermostat modes:
  - **Off:** The scene turns the thermostat off.
  - **Cool:** The scene sets the operating mode to cool.
  - **Heat:** The scene sets the operating mode to heat.
  - **Auto:** The scene sets the operating mode to auto.
  - **Keep Current Mode:** The scene does not alter the current thermostat mode.
- **Adjust Setpoint(s):** If this checkbox is selected, the scene adjusts the set points for Heat , Cool , and Auto  modes to the chosen temperature values. Select the temperature set point for each mode from the appropriate spinner menu.

3. Tap **Save** to save any changes or **Cancel** to discard the changes.

#### Delete a Climate Scene

To delete a climate scene:

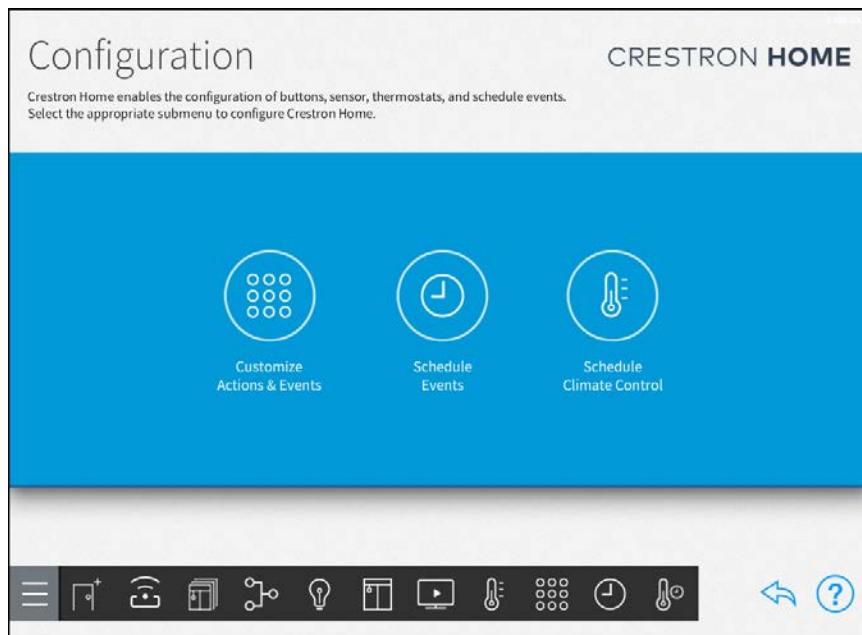
1. Select a room from the **List of Rooms** menu and then select the scene to delete.
2. Tap the trashcan button  to delete the climate scene. A confirmation dialogue is shown.
3. Tap **OK** to delete the climate scene or **Cancel** to keep the climate scene.

To return to the previous screen, tap the back arrow button .

## Step 5: Customize & Schedule

The fifth step is to customize and schedule actions and events for the house. Use the **Configuration** screen to create and schedule system events that are triggered when a button is pressed, an occupancy sensor detects motion, a door is locked, an alarm is deactivated, and more. Events can be scheduled based on time of day, including the current sunrise or sunset times and climate control scenes can be scheduled to occur throughout the day.

Tap the **Customize & Schedule** button on the **Setup** screen to display the **Configuration** screen.

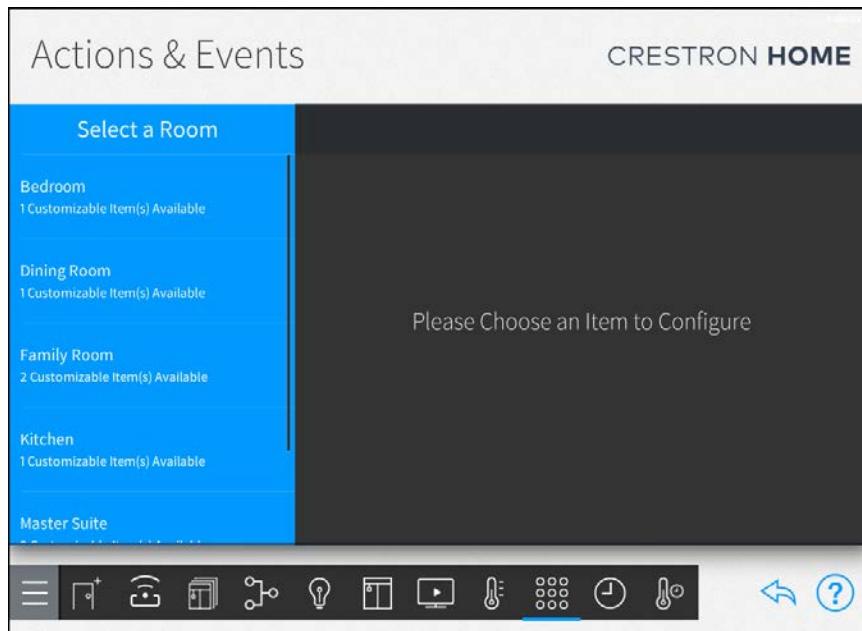


To return to the previous screen, tap the back arrow button .

## Customize Actions & Events

Use the Actions & Events screen to configure the behavior of remotes and keypads, occupancy sensors, door locks, security systems, remote system events, media zone events, and quick actions. Scenes and other actions may be programmed to occur when a button is pressed or a system event is triggered.

Tap the **Customize Actions & Events** button on the **Configuration** screen or the Actions & Events button  on the setup menu to display the **Actions & Events** screen.



**NOTE:** The same basic configuration settings are provided for each item, although some settings are added or removed for different device types and models. Refer to the following sections for specific information on each configurable device.

To select an item for configuration:

1. Select the room that contains the item from the **Select a Room** menu.
2. Select the item to configure from the menu on the right. A configuration screen for the device is displayed.

Tap the back arrow button  to return to the **Configuration** screen.

## Configure Keypads

To configure a keypad, identify the color, button layout, button labels (engraving), and button actions.

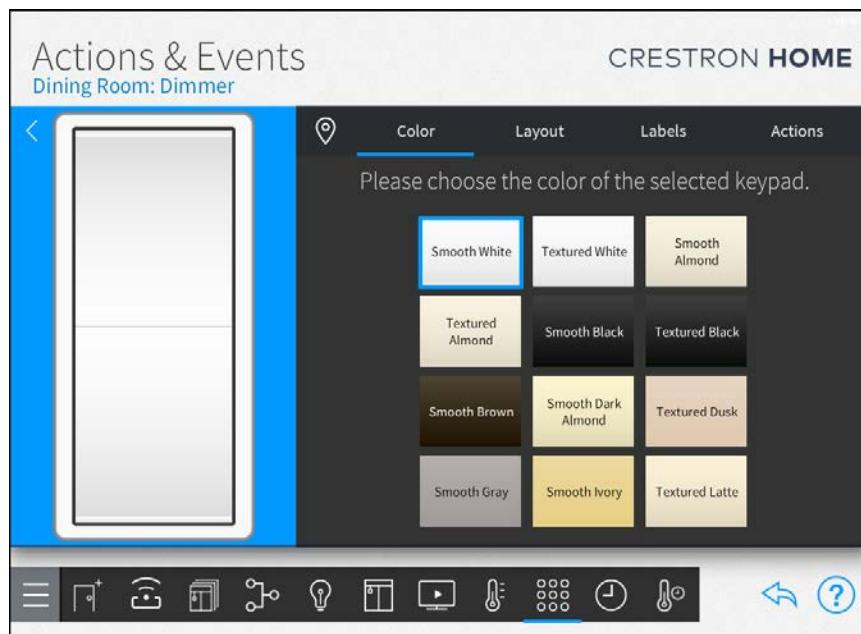
**NOTE:** Tap the location button  to turn on the location feature for the keypad (if supported), which may be used to locate the device in the room.

### Select the Keypad Color

When custom-engraved keypad buttons are ordered through MyCrestron, the button color is generated automatically based on the selected color.

**NOTE:** Confirm that the keypad color selected with the Color tab matches the actual keypad color before ordering custom-engraved buttons.

1. Tap the **Color** tab to set the keypad color.

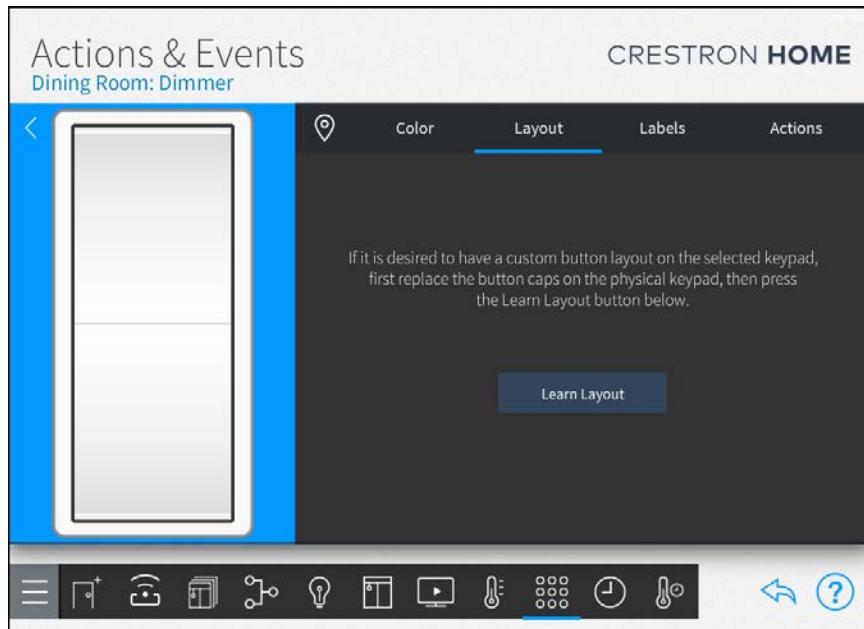


2. Tap a color to choose the color of the selected keypad.

## Configure the Keypad Button Layout

**NOTE:** Install the custom buttons on the keypad prior to making this selection.

1. Tap the **Layout** tab to set the button layout.



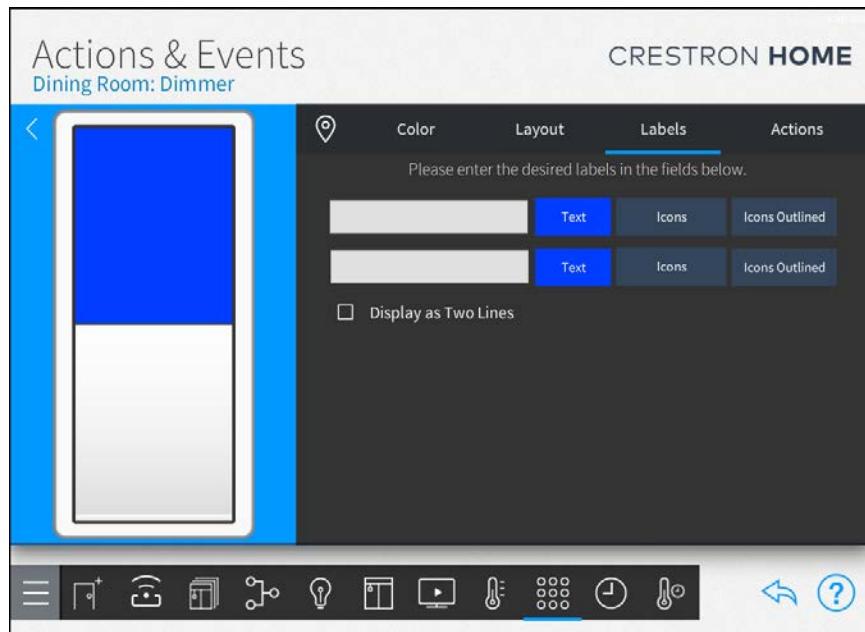
2. Tap **Learn Layout**.
3. Follow the instructions on the screen to set the new layout for the keypad.
4. Tap **Done**.

## Assign Custom Labels (Engraving) to the Keypad Buttons

### NOTES:

- For more information on ordering custom labels using the MyCrestron service, refer to "Step 5: Customize & Schedule" on page 99.
- The layout for the keypad must be set before labeling the keypad buttons.

1. Tap the **Labels** tab.



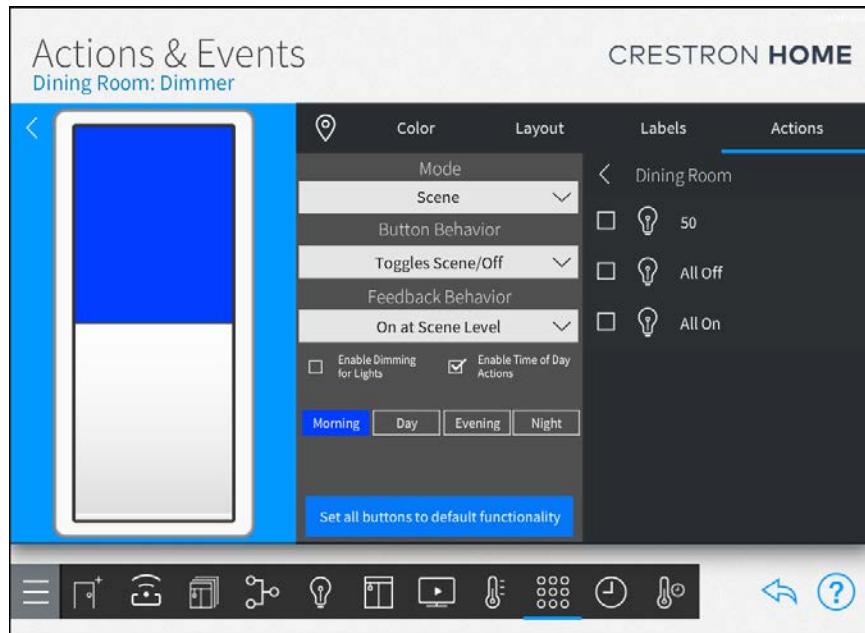
2. Select a button to label.
3. Label the button using text, icons, or icons outlined. A combination of text and icons can be used to label each button. To display the labels on two lines, check the box next to **Display as Two Lines**.
  - **Text:** Enter custom text to display on the button.
  - **Icons:** Use the on-screen icons to display on the button. Icons are filled in with a solid color.
  - **Icons Outlined:** Use the on-screen icons to display on the button. Icons Outlined are not filled in with a solid color.

**NOTE:** Icons and icons outlined options cannot be mixed on the same button.

## Configure the Keypad Actions:

**NOTE:** Horizon™ keypads provide additional settings, such as backlight customization, that are configured using the keypad and not through Crestron Home. For more information, refer to the HZ-KPCN Installation Guide (Doc. 8285) at [www.crestron.com/manuals](http://www.crestron.com/manuals).

1. Tap the **Actions** tab to program the keypad buttons to recall scenes and other actions.



2. The following configuration options are provided:

- Use the left screen panel to select the keypad button that will be associated with an action. Tap the desired button to select it.
- Use the center panel to select the type of action that will be associated with the keypad button and to configure action-related behavior.

**NOTE:** Other configuration options may be provided depending on the selected mode.

- **Mode:** Select the type of action that is recalled by pressing the keypad button (such as "Scene").
  - **Button Behavior:** (Available when **Scene** or **Lighting Load** is selected for **Mode**) drop-down menu to set the keypad button behavior for recalling the selected action.
  - **Feedback Behavior:** (Available when **Scene** is selected for **Mode**) Sets the feedback behavior for recalling the scene. Options for Scene include **On at Scene Level** and **On When any Light On**.
  - **Enable Dimming for Lights:** (Available when **Scene** is selected for **Mode**) Press and hold the button to raise or lower the lights.
  - **Enable Time of Day Actions:** (Available when **Scene** is selected for **Mode**) Enables different scenes to be recalled based on the time of the day. Set a scene for Morning, Day, Evening, and Night.
  - **Set all buttons to default functionality:** Restores the keypad buttons to their default functionality.
- Use the right screen panel to associate an action with the keypad button.

**NOTES:**

The same action or scene may be assigned to multiple keypad buttons.

Multiple actions or scenes may also be assigned to the same keypad button.

- Use the **Select Room Below** menu to select the room that contains the desired action or scene.
- Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.
- Tap the check box next to an action to add or remove that action from the keypad button. A checked box indicates that the action is set to occur when the button is pressed.
- Tap the back arrow (<) next to the room name to return to the **Select Room Below** menu.

**NOTE:** Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the **Select Room Below** menu.

## Configure Remotes

Use the remote configuration screen to configure remote button colors and layout, to create custom remote button labels, and to program remote buttons to recall scenes and other actions.

**NOTE:** Tap the location tab  to turn on the location feature for the remote (if supported), which may be used to locate the device in the room.

Select a remote from the **Select an Item** menu to display a configuration screen for the remote.

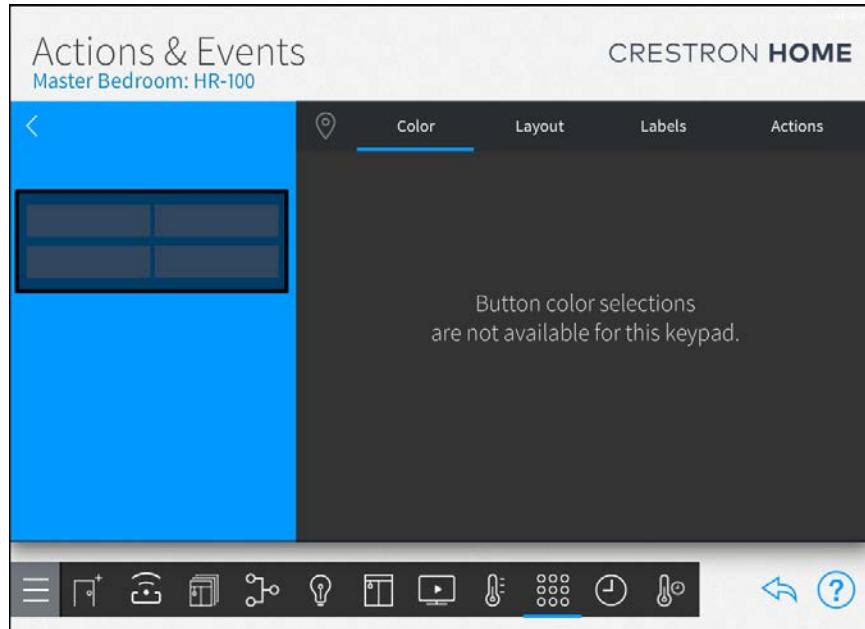
### Select the Remote Color

When custom-engraved buttons are ordered through MyCrestron, the button color is generated automatically based on the selected color.

**NOTE:**

- Confirm that the color selected with the Color tab matches the actual remote color before ordering custom-engraved buttons.
- Color selection is not available for all remotes.

1. Tap the **Color** tab to set the color.

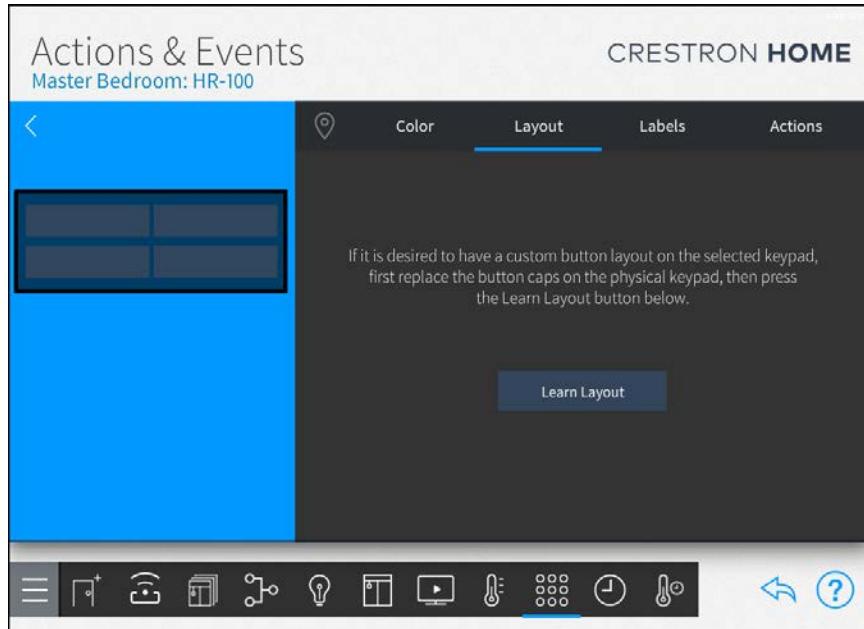


2. Tap a color to choose the color of the selected remote.

## Configure the Remote Button Layout

**NOTE:** Install the custom buttons on the remote prior to making this selection.

1. Tap the **Layout** tab to set the button layout.



2. Tap **Learn Layout**.
3. Follow the instructions on the screen to set the new layout for the keypad.
4. Tap **Done**.

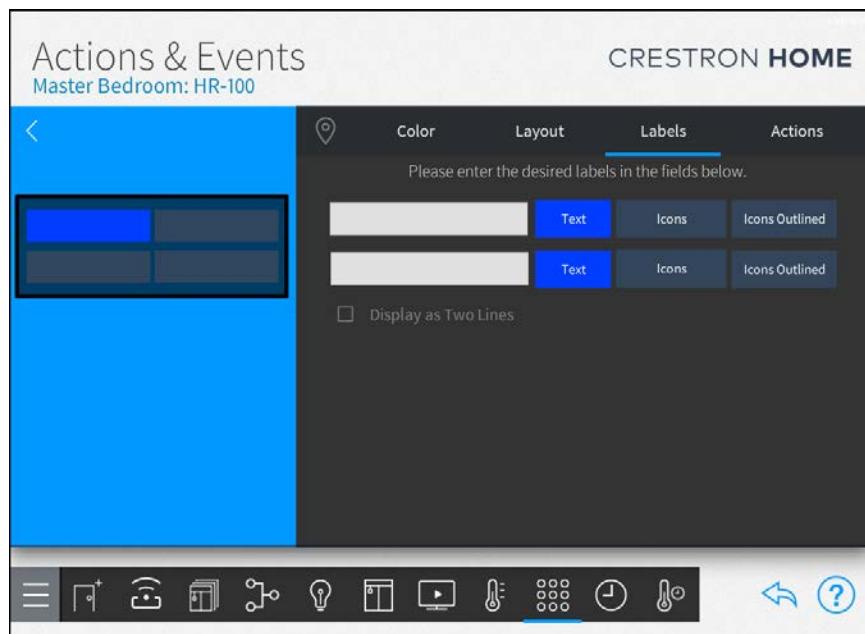
## Assign Custom Labels (Engraving) to the Remote Buttons

Create custom text labels for the remote buttons.

Each line item represents a corresponding button on the remote. The selected button lights blue on the onscreen remote while it is being edited.

**NOTE:** The layout for the remote must be set before labeling the buttons.

1. Tap the **Labels** tab.



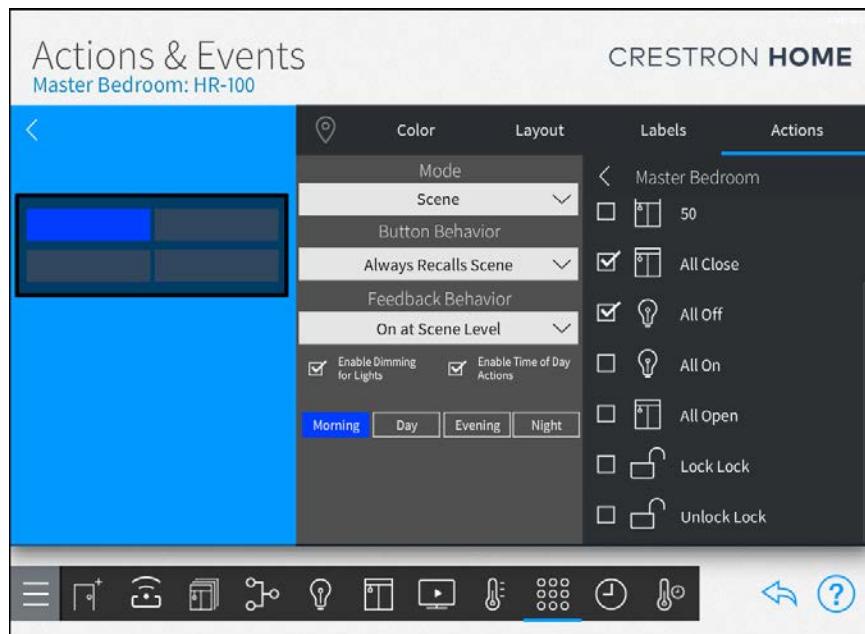
2. Select a button to label.
3. Label the button using text, icons, or icons outlined. A combination of text and icons can be used to label each button. To display the labels on two lines, check the box next to **Display as Two Lines**. Tap the check box next to **Use Pre-Labeled Button** if a button with an existing label will be used.
  - **Text:** Enter custom text to display on the button.
  - **Icons:** Use the on-screen icons to display on the button. Icons are filled in with a solid color.
  - **Icons Outlined:** Use the on-screen icons to display on the button. Icons Outlined are not filled in with a solid color.

**NOTE:** Icons and icons outlined options cannot be mixed on the same button.

## Configure the Remote Actions:

Program the remote buttons to recall scenes and perform other actions.

1. Tap the **Actions** tab.



2. The following configuration options are provided:

- Use the left screen panel to select the remote button that will be associated with an action. Tap the desired button to select it.
- Use the center panel to select the type of action that will be associated with the button and to configure action-related behavior.

**NOTE:** Other configuration options may be provided depending on the selected mode.

- **Mode:** Select the type of action that is recalled by pressing the button (such as "Scene").
  - **Button Behavior:** (Available when a compatible selection is made for **Mode**) A drop-down menu to set the button behavior for recalling the selected action.
  - **Feedback Behavior:** (Available when **Scene** is selected for **Mode**) Sets the feedback behavior for recalling the scene. Options for Scene include **On at Scene Level** and **On When any Light On**.
  - **Enable Dimming for Lights:** (Available when **Scene** is selected for **Mode**) Press and hold the button to raise or lower the lights.
  - **Enable Time of Day Actions:** (Available when **Scene** is selected for **Mode**) Enables different scenes to be recalled based on the time of the day. Set a scene for Morning, Day, Evening, and Night.
  - **Set all buttons to default functionality:** Restores the buttons to their default functionality.
- Use the right screen panel to associate an action with the button.

**NOTES:**

- The same action or scene may be assigned to multiple buttons.
- Multiple actions or scenes may also be assigned to the same button.
- Use the **Select Room Below** menu to select the room that contains the desired action or scene.
- Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.
- Tap the check box next to an action to add or remove that action from the keypad button. A checked box indicates that the action is set to occur when the button is pressed.
- Tap the back arrow (<) next to the room name to return to the **Select Room Below** menu.

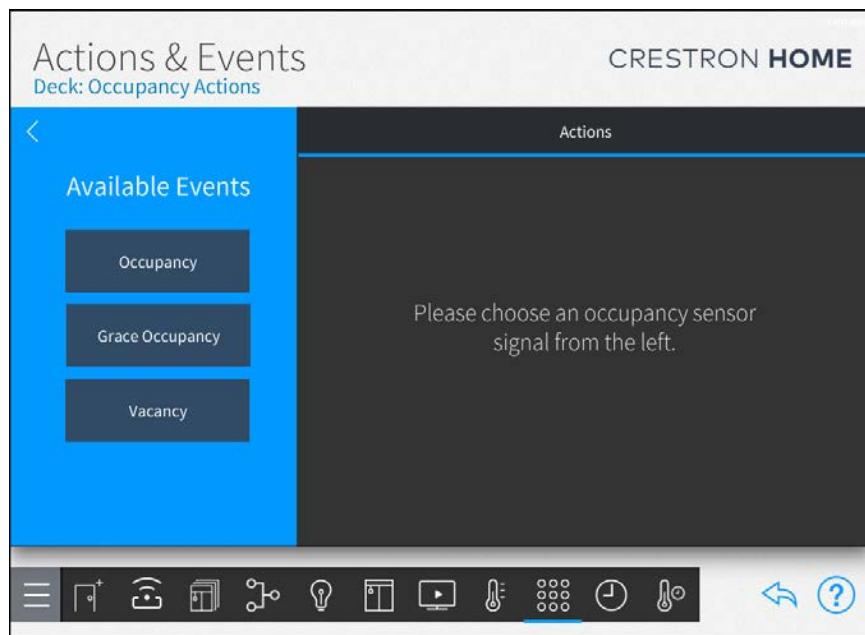
**NOTE:** Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the **Select Room Below** menu.

### Configure Occupancy Sensors

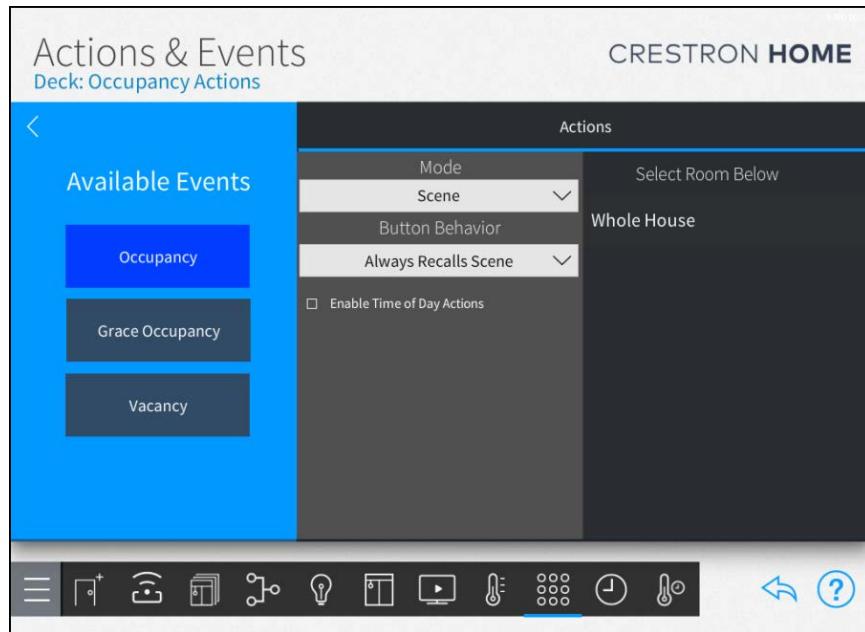
Configure the occupancy sensor to associate scenes and other actions with occupancy events.

Select an occupancy sensor from the **Select an Item** menu to display a configuration screen for the occupancy sensor.

1. Tap the **Occupancy**, **Grace Occupancy**, or **Vacancy** button.



2. The following configuration options are provided:



- Use the center panel to select the type of action that will be associated with the button and to configure action-related behavior.

**NOTE:** Other configuration options may be provided depending on the selected mode.

- **Mode:** Select the type of action that is recalled by the occupancy event (such as "Scene").
- **Button Behavior:** (Available when a compatible selection is made for **Mode**) A drop-down menu to set the occupancy event behavior for recalling the selected action.
- **Enable Time of Day Actions:** (Available when **Scene** is selected for **Mode**) Enables different scenes to be recalled based on the time of the day. Set a scene for Morning, Day, Evening, and Night.
- Use the right screen panel to associate an action with the occupancy event.

#### NOTES:

- The same action or scene may be assigned to multiple occupancy events.
- Multiple actions or scenes may also be assigned to the same occupancy event.
- Use the **Select Room Below** menu to select the room that contains the desired action or scene.

- Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.
- Tap the check box next to an action to add or remove that action from the occupancy event. A checked box indicates that the action is set to occur during the occupancy event.
- Tap the back arrow (<) next to the room name to return to the **Select Room Below** menu.

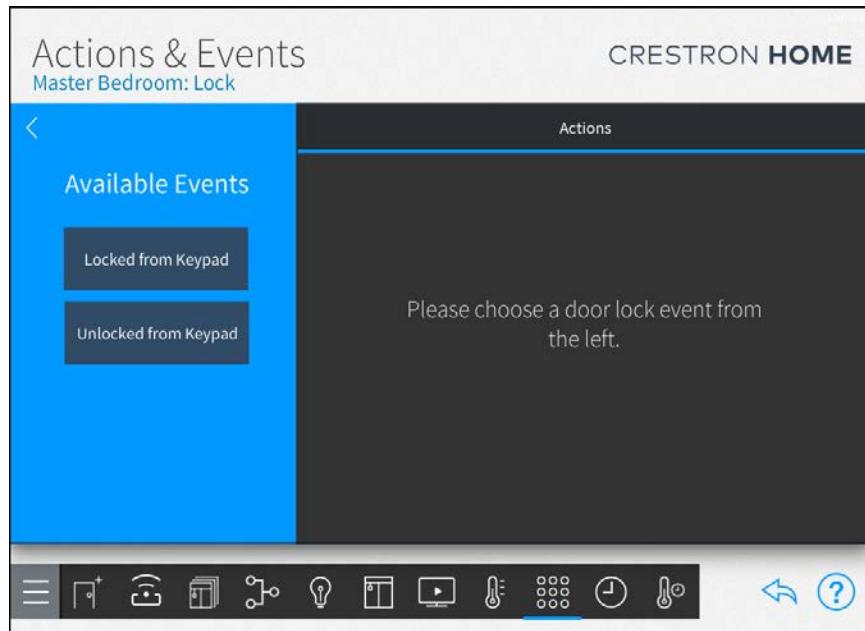
**NOTE:** Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the **Select Room Below** menu.

### Configure a Door Lock

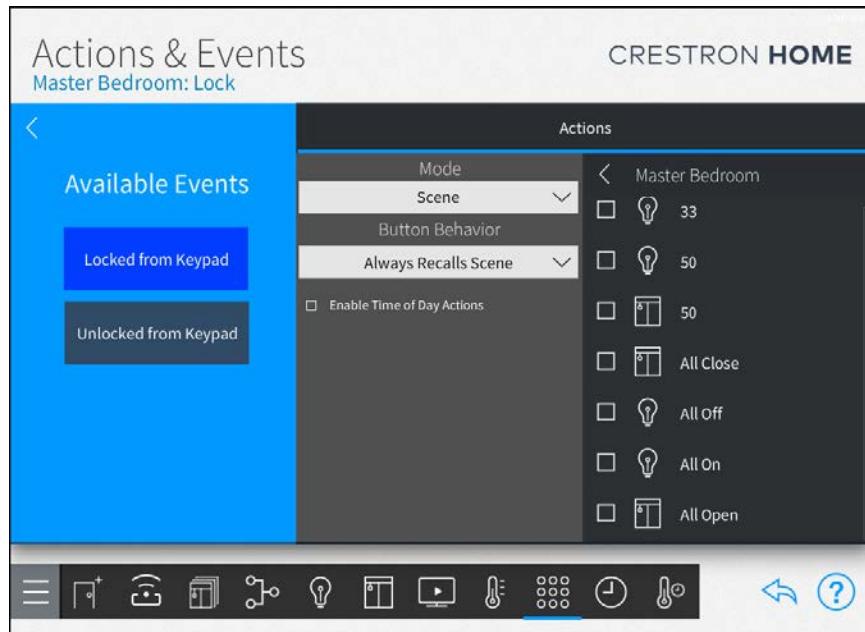
Use the door lock configuration screen to associate scenes and other actions with door lock events.

Select a door lock from the **Select an Item** menu to display a configuration screen for the door lock.

1. Tap an **Available Events** button.



2. The following configuration options are provided:



- Use the center panel to select the type of action that will be associated with the door lock event and to configure action-related behavior.

**NOTE:** Other configuration options may be provided depending on the selected mode.

- **Mode:** Select the type of action that is recalled by the door lock event (such as "Scene").
- **Button Behavior:** (Available for compatible selection is selected for **Mode**) A drop-down menu to set the door lock event behavior for recalling the selected action.
- **Enable Time of Day Actions:** (Available when **Scene** is selected for **Mode**) Enables different scenes to be recalled based on the time of the day. Set a scene for Morning, Day, Evening, and Night.
- Use the right screen panel to associate an action with the door lock event.

#### NOTES:

- The same action or scene may be assigned to multiple door lock events.
- Multiple actions or scenes may also be assigned to the same door lock event.
- Use the **Select Room Below** menu to select the room that contains the desired action or scene.

- Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.
- Tap the check box next to an action to add or remove that action from the door lock event. A checked box indicates that the action is set to occur during the door lock event.
- Tap the back arrow (<) next to the room name to return to the **Select Room Below** menu.

**NOTE:** Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the **Select Room Below** menu.

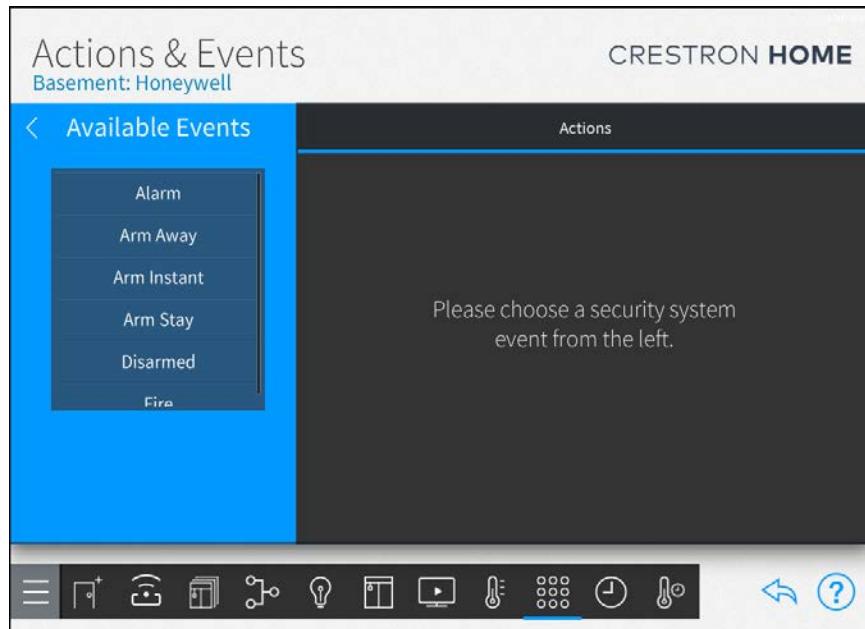
### Configure Security Systems

Use the security system configuration screen to associate scenes and other actions with security events.

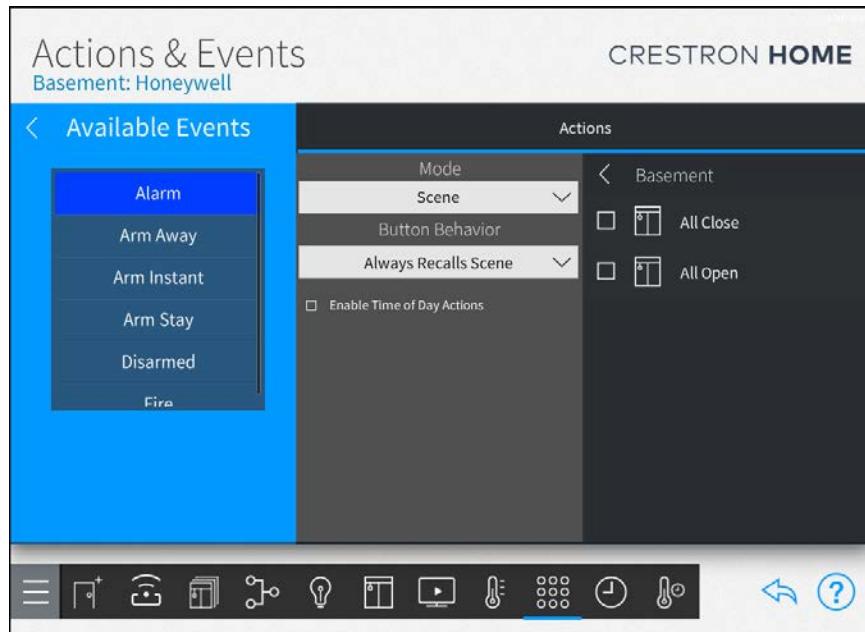
**NOTE:** Security systems must be connected to a PYNG-CONNECT-COM device before they may be discovered by the Crestron Home system. For more information, refer to the PYNG-CONNECT-COM DO Guide (Doc. 7697) at [www.crestron.com/manuals](http://www.crestron.com/manuals).

Select a security system from the **Select an Item** menu to display a configuration screen for the security system.

1. Tap an **Available Events** button.



2. The following configuration options are provided:



- Use the center panel to select the type of action that will be associated with the security event and to configure action-related behavior.

**NOTE:** Other configuration options may be provided depending on the selected mode.

- **Mode:** Select the type of action that is recalled by the security event (such as "Scene").
- **Button Behavior:** (Available for compatible selection is selected for **Mode**) A drop-down menu to set the security event behavior for recalling the selected action.
- **Enable Time of Day Actions:** (Available when **Scene** is selected for **Mode**) Enables different scenes to be recalled based on the time of the day. Set a scene for Morning, Day, Evening, and Night.
- Use the right screen panel to associate an action with the security event.

#### NOTES:

- The same action or scene may be assigned to multiple security events.
- Multiple actions or scenes may also be assigned to the same security event.
- Use the **Select Room Below** menu to select the room that contains the desired action or scene.

- Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.
- Tap the check box next to an action to add or remove that action from the event. A checked box indicates that the action is set to occur during the security event.
- Tap the back arrow (<) next to the room name to return to the **Select Room Below** menu.

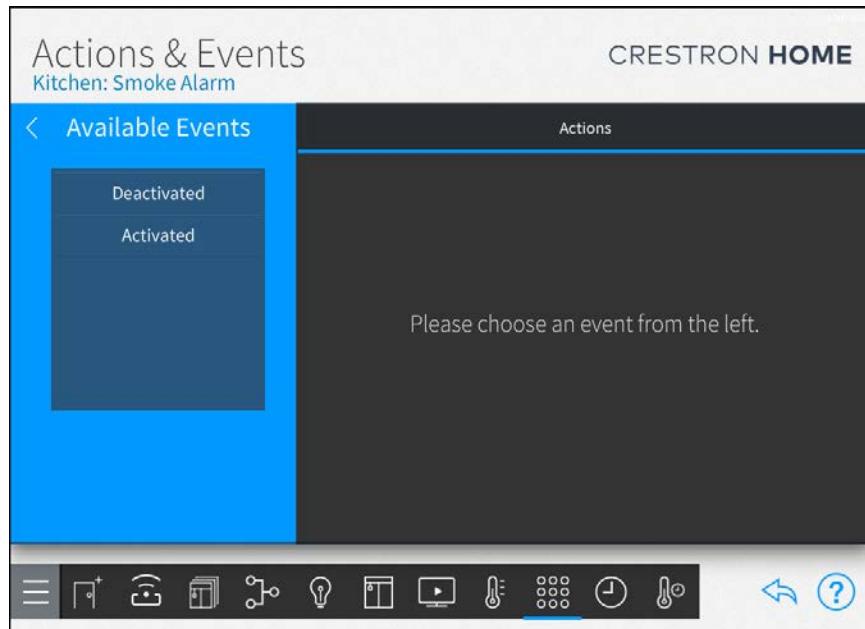
**NOTE:** Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the **Select Room Below** menu.

### Configure Alarms

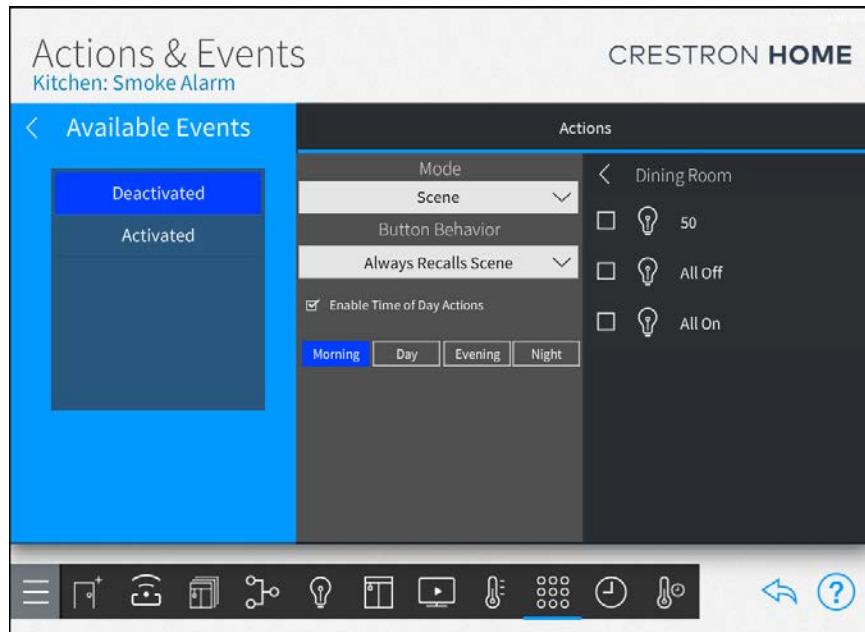
Use the alarm configuration screen to associate scenes and other actions with alarm events.

Select an alarm device from the **Select an Item** menu to display a configuration screen for the alarm.

1. Tap an **Available Events** button.



2. The following configuration options are provided:



- Use the center panel to select the type of action that will be associated with the alarm event and to configure action-related behavior.

**NOTE:** Other configuration options may be provided depending on the selected mode.

- **Mode:** Select the type of action that is recalled by the alarm event (such as "Scene").
- **Button Behavior:** (Available for compatible selection is selected for **Mode**) A drop-down menu to set the alarm event behavior for recalling the selected action.
- **Enable Time of Day Actions:** (Available when **Scene** is selected for **Mode**) Enables different scenes to be recalled based on the time of the day. Set a scene for Morning, Day, Evening, and Night.
- Use the right screen panel to associate an action with the alarm event.

#### NOTES:

- The same action or scene may be assigned to multiple alarm events.
- Multiple actions or scenes may also be assigned to the same alarm event.
- Use the **Select Room Below** menu to select the room that contains the desired action or scene.

- Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.
- Tap the check box next to an action to add or remove that action from the event. A checked box indicates that the action is set to occur during the alarm event.
- Tap the back arrow (<) next to the room name to return to the **Select Room Below** menu.

**NOTE:** Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the **Select Room Below** menu.

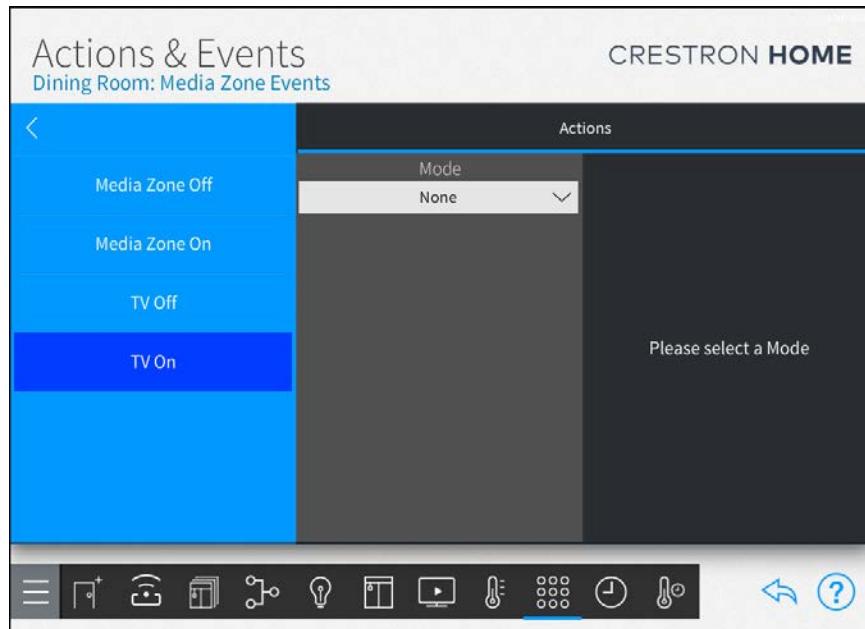
### Configure Media Zones

Use the media zone configuration screen to associate scenes and other actions with media zone events.

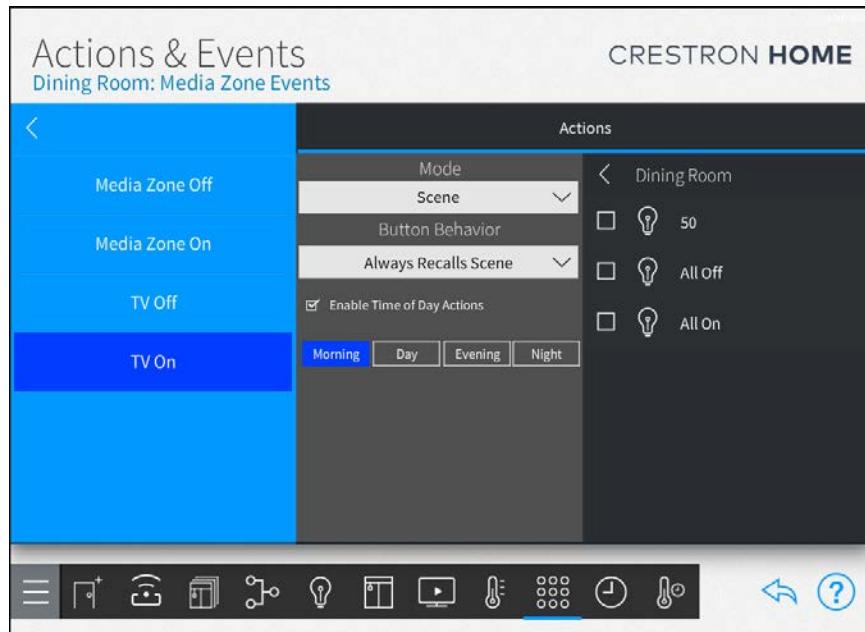
**NOTE:** For more information on configuring media zones, refer to "Enable or Disable a Media Zone" on page 76.

Select an media zone from the **Select an Item** menu to display a configuration screen for the media zone.

1. Tap an **Available Events** button.



2. The following configuration options are provided:



- Use the center panel to select the type of action that will be associated with the media zone event and to configure action-related behavior.

**NOTE:** Other configuration options may be provided depending on the selected mode.

- **Mode:** Select the type of action that is recalled by the media zone event (such as "Scene").
- **Button Behavior:** (Available for compatible selection is selected for **Mode**) A drop-down menu to set the media zone event behavior for recalling the selected action.
- **Enable Time of Day Actions:** (Available when **Scene** is selected for **Mode**) Enables different scenes to be recalled based on the time of the day. Set a scene for Morning, Day, Evening, and Night.
- Use the right screen panel to associate an action with the media zone event.

#### NOTES:

- The same action or scene may be assigned to multiple media zone events.
- Multiple actions or scenes may also be assigned to the same media zone event.
- Use the **Select Room Below** menu to select the room that contains the desired action or scene.

- Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.
- Tap the check box next to an action to add or remove that action from the event. A checked box indicates that the action is set to occur during the media zone event.
- Tap the back arrow (<) next to the room name to return to the **Select Room Below** menu.

**NOTE:** Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the **Select Room Below** menu.

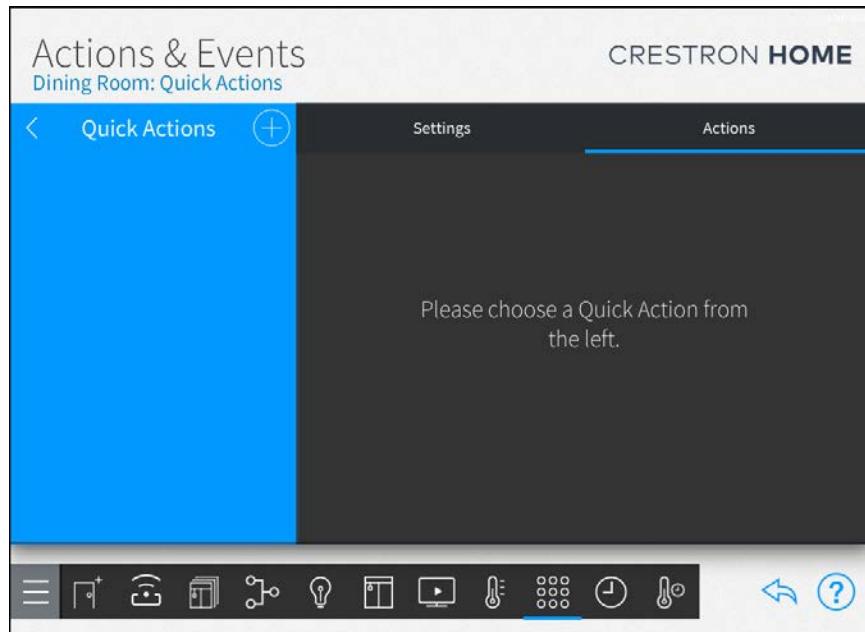
### Configure Quick Actions

Use the Quick Action button configuration screen to configure macro button settings and to associate scenes and other actions with macro buttons.

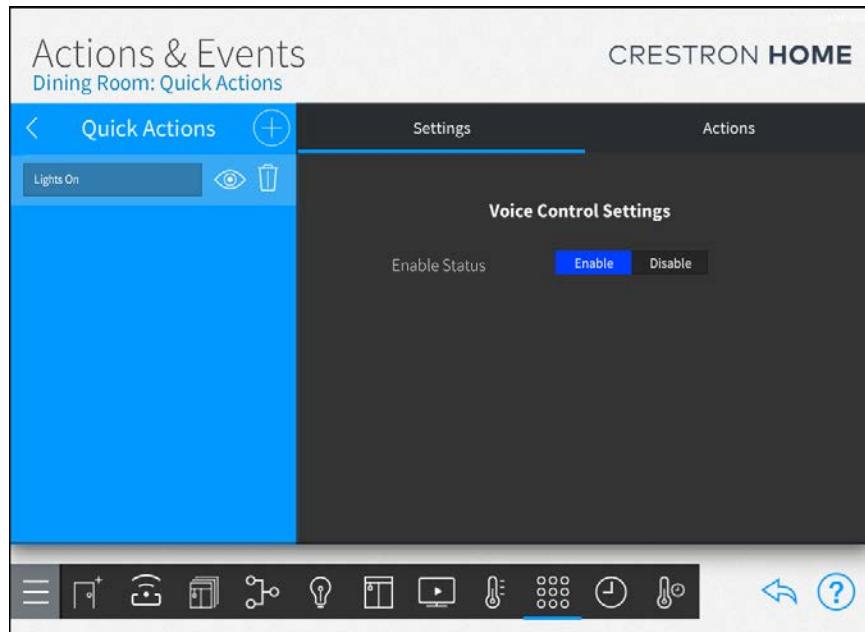
**NOTE:** The Crestron Home system supports up to 20 quick actions per room. The Whole House room supports up to 20 quick actions.

Select **Quick Actions** from the **Select an Item** menu to display a configuration screen for the Quick Action.

1. Tap a **Quick Actions** button.



2. Tap the **Settings** tab to configure basic settings for macro buttons.

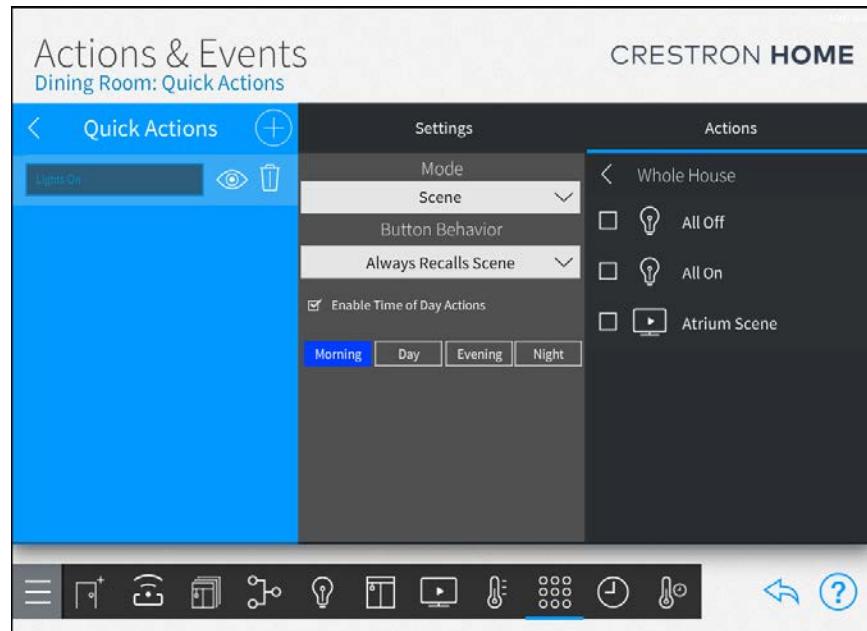


3. The following configuration options are provided:

- Use the right screen panel to configure settings for the selected Quick Action button.
  - Enter a new Quick Action button name or edit the existing Quick Action button name in the text box at the top of the screen.
  - Tap **Enable** or **Disable** next to **Enable Status** to enable or disable the ability to trigger the Quick Action button with voice control.

**NOTE:** For more information on configuring voice control for the Crestron Home system, refer to "Voice Control Settings" on page 156.

4. Tap the **Actions** tab to associate scenes and other actions with the Quick Action button.



5. The following configuration options are provided:

- Use the center panel to select the type of action that will be associated with the Quick Action button and to configure action-related behavior.

**NOTE:** Other configuration options may be provided depending on the selected mode.

- Use the **Mode** drop-down menu to select the type of action that is recalled when the Quick Action button is triggered (such as "Scene").
- If a compatible mode is selected, use the **Button Behavior** drop-down menu to set the Quick Action button behavior for recalling the selected action.
- If **Scene** is selected for **Mode**, tap the check box next to **Enable Time of Day Actions** to enable setting actions based on the time of day.
- Use the right screen panel to associate an action with the Quick Action button.

**NOTE:** The same action or scene may be assigned to multiple Quick Action buttons. Multiple actions or scenes may also be assigned to the same Quick Action button.

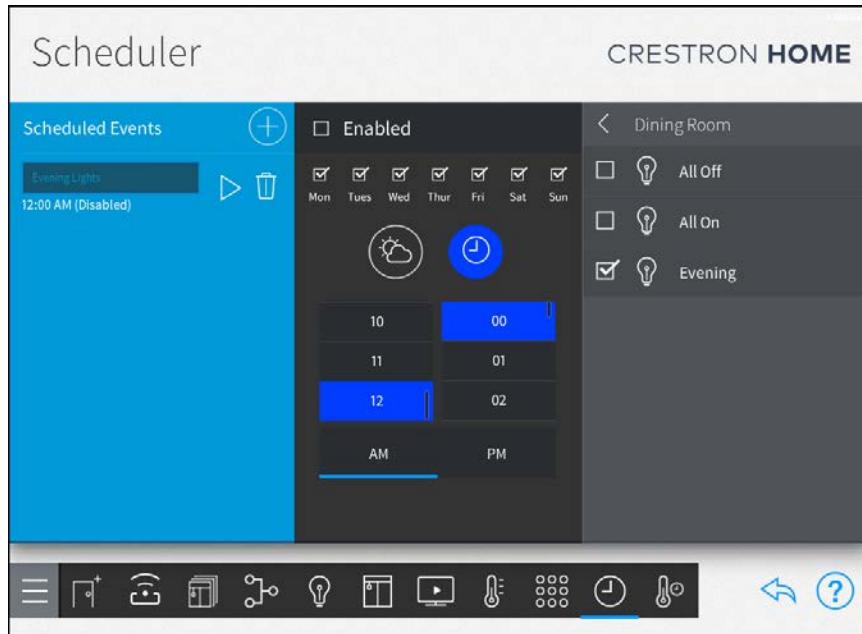
- Use the **Select Room Below** menu to select the room that contains the desired action or scene.
- Tap on a room name to display a list of actions that may be selected for the room. The type of action that is displayed is set using the **Mode** drop-down menu in the center panel.
- Tap the check box next to an action to add or remove that action from the Quick Action button. A checked box indicates that the action is set to occur when the Quick Action button is triggered.
- Tap the back arrow (<) next to the room name to return to the **Select Room Below** menu.

**NOTE:** Only rooms that contain selectable actions appear on the **Select Room Below** menu. Once an action is selected from a room, the room name is shown with blue text in the **Select Room Below** menu.

## Scheduler

Use the **Scheduler** screen to schedule events that recall one or more scenes at specific times and days of the week.

Tap the **Schedule Events** button on the **Configuration** screen or the Scheduler button  on the setup menu to display the **Scheduler** screen.



To recall the scenes that are scheduled to be triggered by the event, tap the play button ▶ next to the event name.

#### Create a New Scheduled Event

To create a new scheduled event:

1. Tap the plus button (+) next to **Scheduled Events**.
2. Enter a descriptive name for the event.
3. Tap **OK**. The new event is displayed in the **Scheduled Events** menu.

#### Configure a Scheduled Event

To configure an existing scheduled event:

- **Enabled:** Check the box to enable the event and add it to the system schedule.

**NOTE:** New events are disabled by default.

- **Day of Week:** Tap the appropriate check boxes above each day of the week to select the days that the event will occur. A filled check box indicates that the event is scheduled to occur on the associated day.
- **🕒:** Schedule the event to occur at a specific time of day. Set the time using the provided spinner menus.
- **🕒:** Schedule the event to occur at a time relative to sunrise or sunset (calculated by date and time zone). Select whether the event should occur at sunrise or sunset and then set when the event should occur relative to the sunrise or sunset time.

**NOTE:** To adjust the default times for sunrise and sunset, navigate to **Installer Settings > System Configuration > System Settings**, and then tap the wrench button  on the **Current Times of Day** panel. For more information, refer to "Current Time and Date" on page 133.

- **Select Room Below:** Select a room from the menu, and then select the scene(s) that will be triggered by the event.

**NOTE:** Only rooms that contain scenes display on the **Select Rooms Below** menu. Any room with a selected scene is shown with blue text on the **Select Rooms Below** menu.

### Delete a Scheduled Event

To delete a scheduled event:

1. Tap an event in the **Scheduled Events** menu.
2. Tap the trashcan button  next to the event name.
3. Tap **OK** to delete the event or tap **Cancel** to cancel any changes.

To return to the previous screen, tap the back arrow button .

## Thermostats

Use the **Thermostat** screen to view and schedule events for the thermostats in the Crestron system.

The available thermostats are listed under **Select a Thermostat** and the list of available thermostat events are listed under **List of Scheduled Events**. Each thermostat event provides the time and days that it is scheduled to occur, as well as its cooling and heating set points.

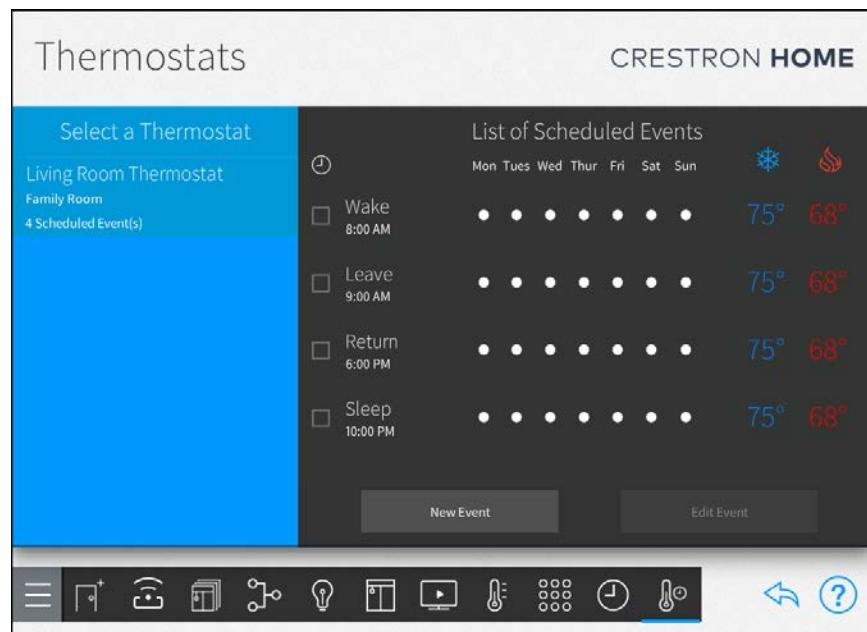
When a thermostat is added to the Crestron system, events are created for "Sleep," "Wake," "Leave," and "Return." These events are disabled by default. To enable them, tap the event's check box to the left of the event name. A filled check box indicates that the scene is enabled.

Tap the **Schedule Climate Control** button on the **Configuration** screen or the **Thermostats**  button on the setup menu to display the **Thermostats** screen.

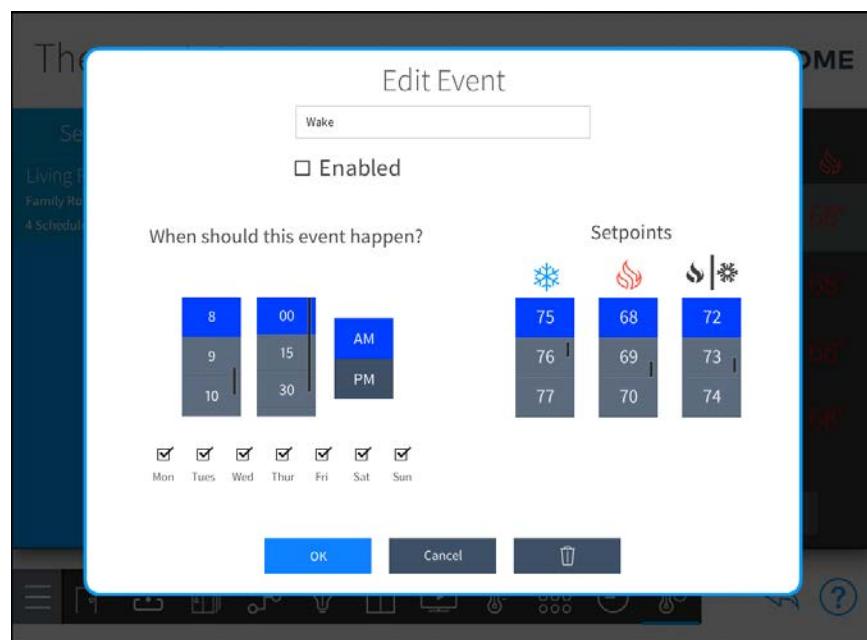
### Create a New Thermostat Event

To create a new scheduled thermostat event:

1. Select a thermostat from the **Select a Thermostat** menu. The list of scheduled events for the selected thermostat is displayed.



2. Tap **New Event**. The **Edit Event** dialog box is displayed.



3. Configure the following event settings:

- **Event Name:** Enter a descriptive name for the event in the text box at the top of the dialog box using the on-screen keyboard.
- **Enable Event:** Tap the check box next to **Enabled** to enable the event and add it to the thermostat schedule. New events are disabled by default.
- **Set the Time:** Set the time that the thermostat event should occur using the provided spinner menus.

- **Select the Days:** Tap the check box above each day of the week to select the days that the thermostat event should occur. A filled check box indicates that the event is scheduled to occur on the associated day.
  - **Select the Setpoints:** Select the temperature set points for cooling , heating , and auto  modes using the appropriate spinner menu.
4. Tap **OK** to save the thermostat event or tap **Cancel** to cancel any changes.

### Configure a Thermostat Event

To configure an existing thermostat event:

1. Select a thermostat from the **Select a Thermostat** menu. The list of scheduled events for the selected thermostat is displayed.
2. Select a thermostat event from the **List of Scheduled Events**.
3. Tap **Edit Event** to display the **Edit Event** dialog box.
4. Configure the following event settings:
  - **Event Name:** Enter a descriptive name for the event in the text box at the top of the dialog box using the on-screen keyboard.
  - **Enable Event:** Tap the check box next to **Enabled** to enable the event and add it to the thermostat schedule. New events are disabled by default.
  - **Set the Time:** Set the time that the thermostat event should occur using the provided spinner menus.
  - **Select the Days:** Tap the check box above each day of the week to select the days that the thermostat event should occur. A filled check box indicates that the event is scheduled to occur on the associated day.
5. Tap **OK** to save the thermostat event or tap **Cancel** to cancel any changes.

### Enable or Disable a Thermostat Event

To enable or disable an existing thermostat event, tap the check box next to the event name. A filled check box indicates that the scene is enabled.

### Delete a Thermostat Event

To delete an existing thermostat event:

1. Select a thermostat from the **Select a Thermostat** menu. The list of scheduled events for the selected thermostat is displayed.
2. Select a thermostat event from the **List of Scheduled Events**.
3. Tap **Edit Event** to display the **Edit Event** dialog box.
4. Tap the trashcan button  to delete the event.
5. Tap **OK** to save the thermostat event or tap **Cancel** to cancel any changes.

To return to the previous screen, tap the back arrow button .

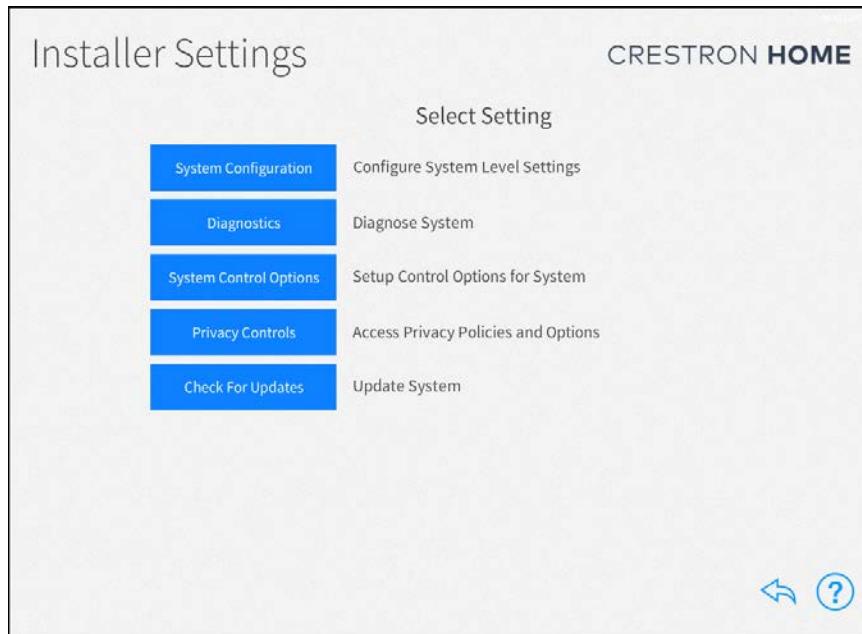
# System Settings - Installer

Use the **Installer Settings** screen to configure the settings for the Crestron Home system and the CP4-R.

To enter the **Installer Settings** screen, tap the gear button  on the bottom right of the **Setup** screen.

The following items can be configured from the **Installer Settings** screen.

- **System Configuration:** Configure system settings, system information and passwords, Ethernet settings, and MyCrestron services. This selection also provides an option for resetting the CP4-R to its factory default settings. For details, refer to "System Settings" on page 132.
- **Diagnostics:** Configure various settings for the Crestron Home system and the CP4-R. For details, refer to "Diagnostics" on page 147.
- **System Control Options:** Set up a MyCrestron account, to adjust the XPanel web server settings, to configure voice control settings, and to update the web API authentication token. For details, refer to "System Control Options" on page 152.
- **Privacy Controls:** View and edit privacy settings for collecting system information. For details, refer to "Privacy Controls" on page 162.
- **Check for Updates:** Check for and download software updates for the Crestron Home system and for connected devices. For details, refer to "Software Update" on page 163.



Tap the help button  on any of the **Installer Settings** screens to display dialog boxes that explain the screen functions and features and provide links to tutorial videos. (The iPad or setup device must be connected to the network to access videos.)

To return to the previous screen, tap the back arrow button .

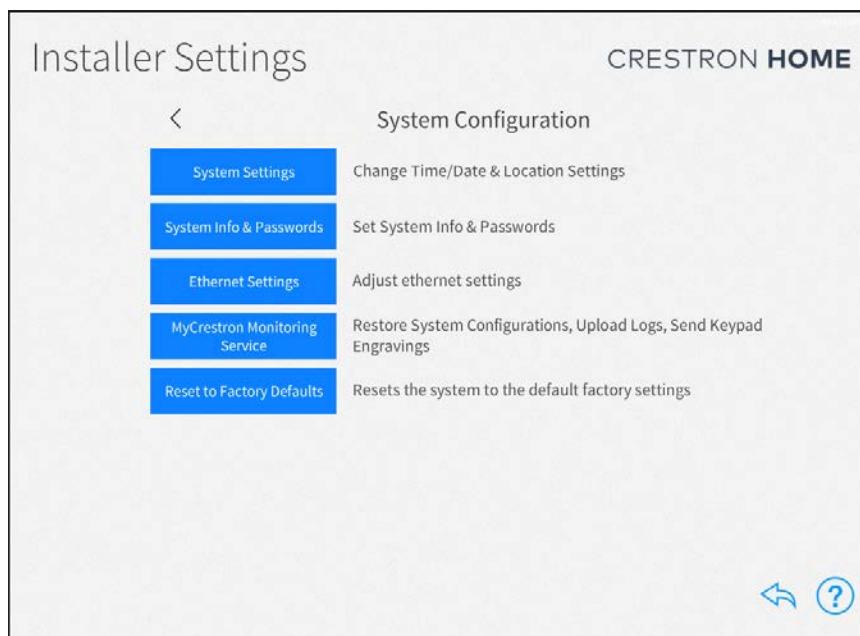
## System Configuration

Use the **Installer Settings - System Configuration** screen to configure various Crestron Home system settings:

- **System Settings:** Configure the time and date, location settings, time of day settings, and the system language. For details, refer to "System Settings" on page 132.
- **System Info & Passwords:** Configure the system information and to change the system passwords. For details, refer to "System Detail & Password Configuration" on page 138.
- **Ethernet Settings:** Configure and view the Ethernet settings for the CP4-R. For details, refer to "Ethernet Settings" on page 141.
- **MyCrestron Monitoring Service:** To obtain a registration code for registering the CP4-R with a MyCrestron domain and to access various MyCrestron services. For details, refer to "MyCrestron Services" on page 144.
- **Reset to Factory Defaults:** Resets the CP4-R to its factory default settings. For details, refer to "Reset to Factory Defaults" on page 146.

To enter the **System Configuration** screen:

1. Tap the gear button  on the bottom right of the **Setup** screen.
2. Tap **System Configuration**. The **Installer Settings - System Configuration** screen is displayed.



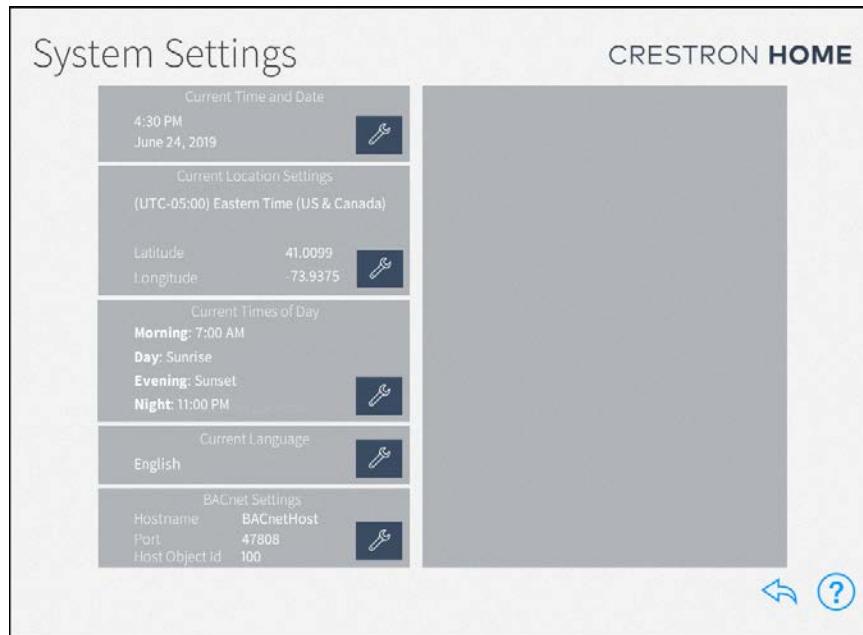
To return to the **Installer Settings** screen, tap the back arrow .

To return to the previous screen, tap the back arrow button .

## System Settings

Use the **System Settings** screen to configure the time and date, the location settings, the current times of day used for events, the system language, and the BACnet Settings.

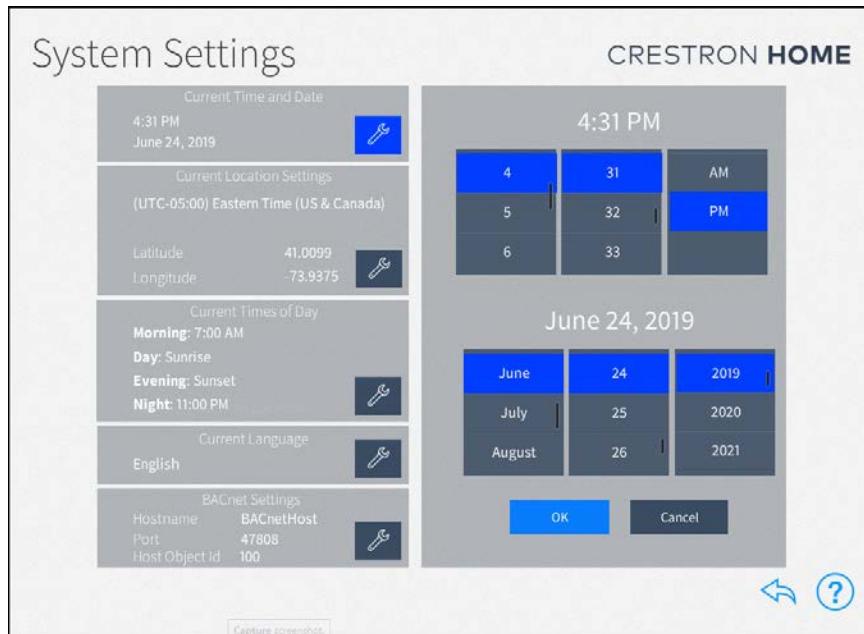
To configure the System Settings, tap **System Settings** on the **Installer Settings - System Settings** screen.



## Current Time and Date

To set the current time and date:

1. Tap the wrench button  next to **Current Time and Date**.



2. Use the spinner menus to set the hour and minute and **AM** or **PM**.
3. Use the spinner menus to set the month, day, and year.
4. Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

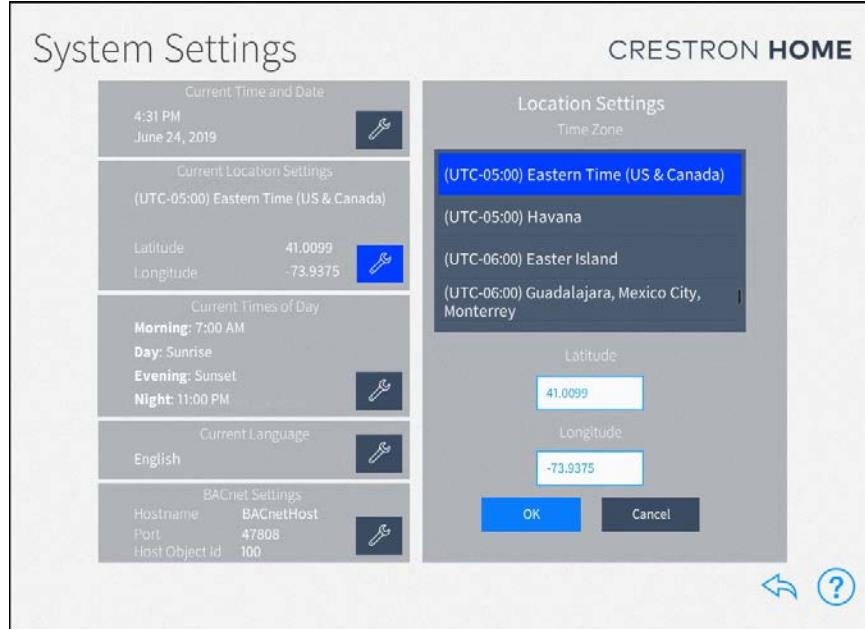
To return to the previous screen, tap the back arrow button .

## Current Location Settings

To set the Location Settings:

**NOTE:** If configuring the system with an iPad, tap **Synchronize with iPad** to synchronize the time zone, longitude, and latitude with the iPad device's location services.

1. Tap the wrench button  next to **Current Location Settings**.



2. To set the time zone, select the location in the **Time Zone** field.
3. If necessary, the latitude and longitude can be fine-tuned. Adjust the latitude in the **Latitude** field and adjust the longitude in the **Longitude** field.
4. Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

To return to the previous screen, tap the back arrow button .

## Current Times of Day

Times of day are used to trigger different actions and events within the system when the preset clock time is reached. The Morning and Night Times of Day are static times that occur at the same time every day. The Day and Evening Times of Day are based on sunrise and sunset times and change during the course of the year.

To set the Morning and Night times.

1. Tap the wrench button  next to Current Times of Day.



2. Tap **Morning** or **Night**, and then set the time.
  - **Morning:** When the homeowner typically wakes up.
  - **Night:** When the homeowner typically goes to sleep.
3. Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

To set the Day and Evening times:

1. Tap the wrench button  next to Current Times of Day.
2. Tap **Day** or **Evening**, and then set the time.
  - **Day:** How long before or after sunrise (calculated by date and time zone) the Day preset occurs.

**NOTE:** In some cases (such as in the summer months), the time set for the Day preset may occur before the time set for the Morning preset. In these cases, any actions or events set for the Morning preset do not occur.

3. Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

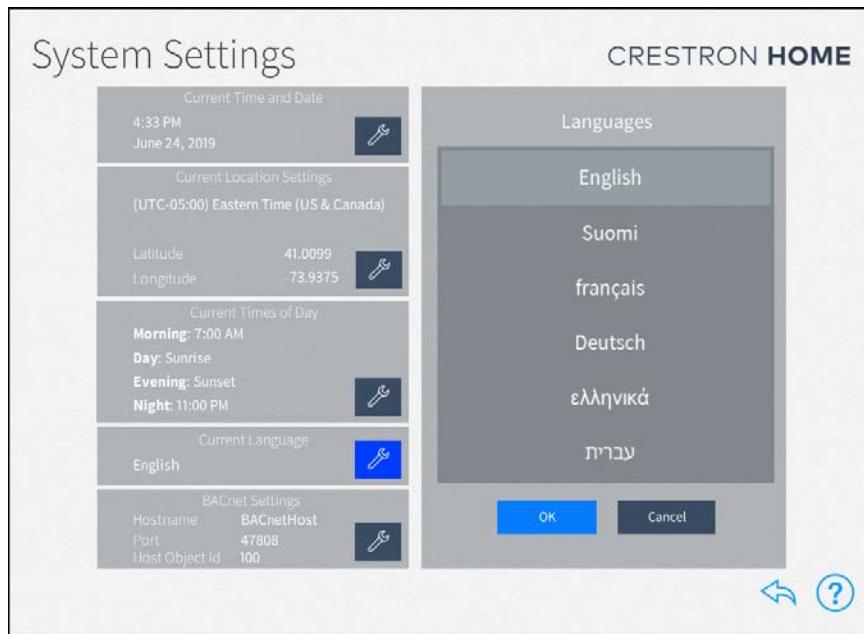
To return to the previous screen, tap the back arrow button .

### Current Language

The Current Languages screen sets the language that is used in the setup app and the user interface devices.

To set the language:

1. Tap the wrench button  next to **Current Language**.



2. Select the system language from the menu provided under **Languages**.
3. Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

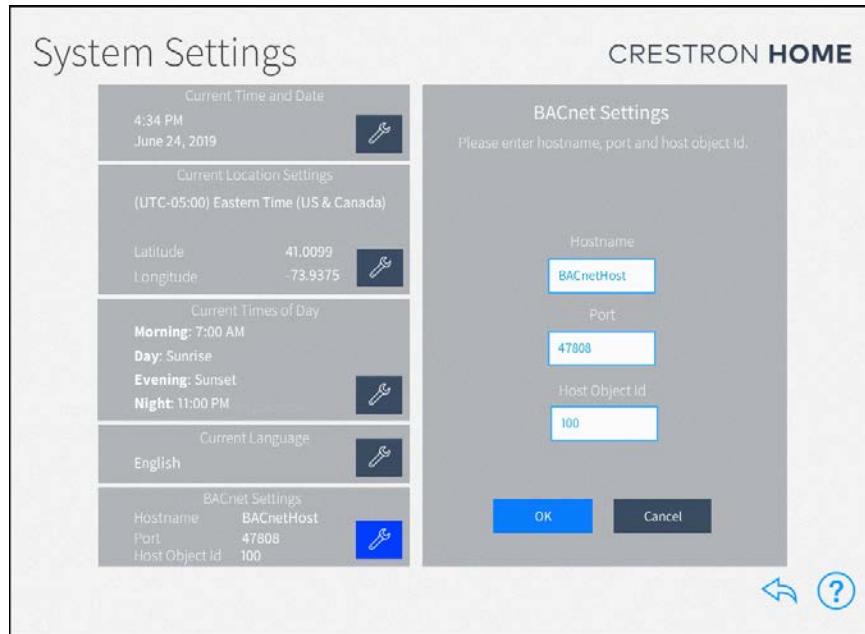
To return to the previous screen, tap the back arrow button .

### BACnet Settings

The **BACnet Settings** screen sets the information that is used for the BACnet.

To set the BACnet settings:

1. Tap the wrench button  next to **BACnet Settings**. The **BACnet Settings** screen displays.



2. Configure the following settings:
  - **Hostname:** Enter the HostName for the BACnet system.
  - **Port:** Enter the port for the BACnet system.
  - **Host Object Id:** Enter the host object id for the BACnet system.
3. Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

To return to the previous screen, tap the back arrow button .

## System Detail & Password Configuration

Use the **System Detail & Password Configuration** screen to update the system information and to change the Advanced User Password and Admin password used to access the configuration screens.

### About Crestron Home Passwords

The Crestron Home system uses several passwords to allow access to different areas of the Crestron Home system.

#### NOTES:

- Create passwords using any combination of letters, numbers and symbols (ASCII-standard characters only). Accents and accented characters are not supported.
- All passwords must be unique.

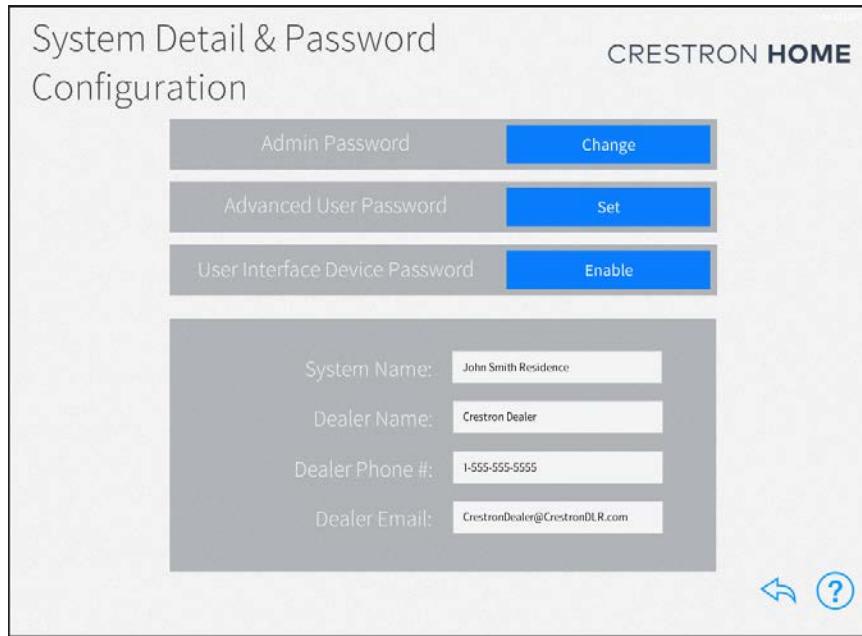
Crestron Home Setup app passwords:

- **Admin Password:** Allows full access to the setup and configuration screens on the Crestron Home system.
- **Advanced User Password:** Allows limited access to the setup and configuration screens on the Crestron Home system.

Crestron Home App password:

- **User Interface Device Password:** Allows user interface devices, such as iOS and Touch Panel devices, to join the Crestron Home system. If the User Interface Password is not set, user interface devices will be unable to connect to the Crestron Home system.

Tap **System Info & Passwords** on the **Installer Settings - System Configuration** screen to display the **System Detail & Password Configuration** screen.



### Change the Admin Password

The Admin password is used to allow access to set up and configure the CP4-R. The default username is "admin" and the default password is the serial number of the CP4-R.

To change the Admin password:

1. Tap **Change** to set a new Admin password. A pop-up dialog box is displayed.
2. Enter a new password.
3. Tap **OK** to confirm the change to the password.

**CAUTION:** Once an admin password is set, installer configuration mode may not be accessed without entering the password. If the admin password is lost, all Crestron Home system passwords must be reset by issuing the command `resetpyngpasswords` via the Text Console tool in Crestron Toolbox.

### Set or Change the Advanced User Password

To change the Advanced User password:

1. Tap **Set** to set the Advanced User password or **Change** to change to Advanced User password. A pop-up dialog box is displayed.
2. Enter the **Admin Username** and **Admin Password** and then enter the new **Advanced User** password.
3. Tap **OK** to confirm the password.

**NOTE:** The Admin Password and the Advanced User Password may not be the same.

### Remove the Advanced User Password

To remove the Advanced User password, tap **Remove**, and then tap **OK**.

## Set or Change the User Interface Device Password

The User Interface Device Password is the password that is used to connect to iOS and TSW-xx60 series touch panels. If the User Interface Device Password is not set, iOS and TSW-xx60 series touch panels will not be able to connect to the Crestron Home system.

To change the User Interface Device Password:

1. Tap **Enable** to set the User Interface Device Password or **Change** to change to User Interface Device Password. The **Enter UI Device Password** dialog displays.



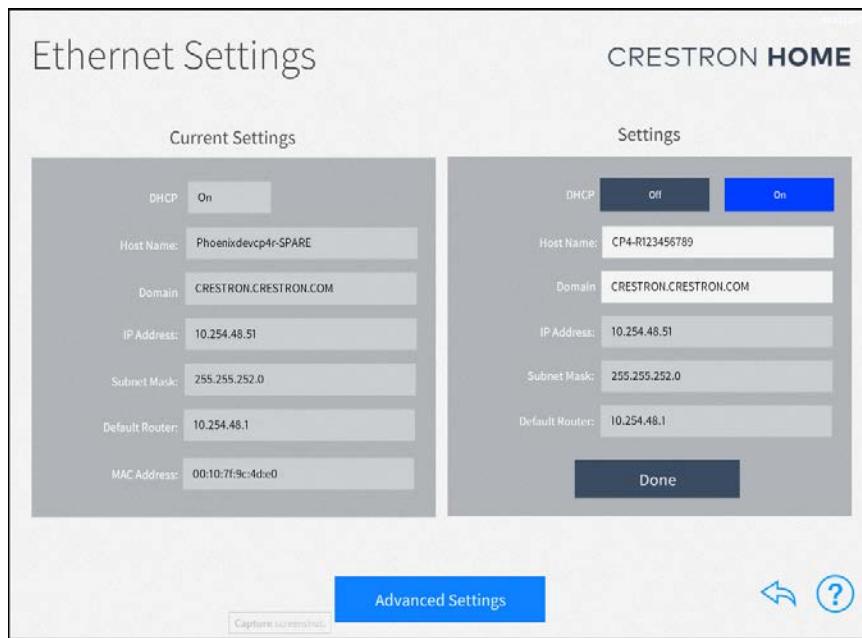
2. Enter the required passwords for the **Admin Username**, **Admin Password**, the **UI Device Password** fields, and then confirm the user interface device password in **Confirm Password** field.
3. Tap **OK** to continue or **Cancel** to exit without saving changes.

To return to the previous screen, tap the back arrow button .

## Ethernet Settings

Use the **Ethernet Settings** screen to view and modify the Ethernet settings for the CP4-R.

To configure the Ethernet settings, tap **Ethernet Settings** on the **Installer Settings - System Configuration** screen.



The **Current Settings** panel displays the following Ethernet settings:

- **DHCP:** Reports whether DHCP (Dynamic Host Configuration Protocol) is turned on or off.
- **Host Name:** The CP4-R hostname.
- **Domain:** The CP4-R domain name.
- **IP Address:** The CP4-R IP address.

**NOTE:** If a static IP address is set for the CP4-R, a DNS server must also be set to generate the IP address. DNS servers may be added or edited by tapping Advanced Settings.

- **Subnet Mask:** The CP4-R subnet mask address.
- **Default Router:** The default gateway router address.
- **MAC Address:** The CP4-R unique MAC (Media Access Control) address.

The following Ethernet settings may be edited in the **Settings** panel.

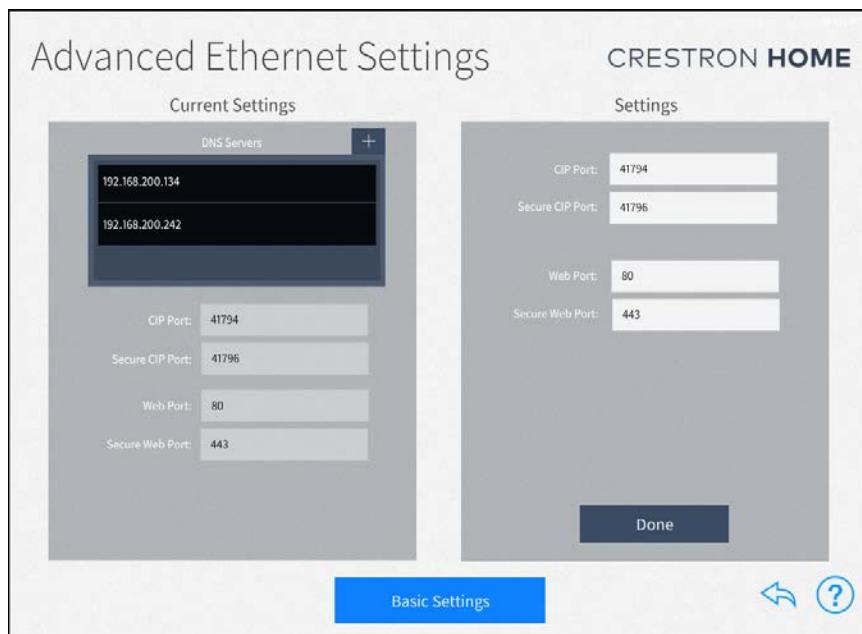
- **DHCP:** Tap **On** to turn DHCP on, or tap **Off** to turn DHCP off.

**NOTE:** If DHCP is turned on, the device IP address, the subnet mask, and the default router settings may not be changed manually.

- **Host Name:** Enter the CP4-R hostname.
- **Domain:** Enter the CP4-R domain name used for connection.
- **IP Address:** If DHCP is turned off, enter the CP4-R IP address.
- **Subnet Mask:** If DHCP is turned off, enter the CP4-R subnet mask address.
- **Default Router:** If DHCP is turned off, enter the default gateway router IP address.

After making any changes to the Ethernet settings, tap **Done**. A dialog box is displayed to confirm the changes. Tap **OK** to save the changes and to reboot the device using the new Ethernet settings. Tap **Cancel** to cancel the changes.

Tap **Advanced Settings** at the bottom of the screen to display the **Advanced Ethernet Settings** screen.



Use the **Advanced Ethernet Settings** screen to view and modify advanced Ethernet settings. This screen is also used to configure authentication for the device.

The following Ethernet settings may be viewed in the Current Settings panel.

- **DNS Servers:** The DNS (Domain Name Servers) servers that are used to generate IP addresses for the CP4-R.
  - Tap the plus button (+) at the top of the **DNS Servers** menu to display a dialog box for entering a new DNS server IP address.
  - Enter the new DNS server address in the provided text field.
  - Tap **OK** to save the new DNS server or tap **Cancel** to cancel the addition.
- **CIP Port:** The CIP (Crestron Internet Protocol) port number for the CIP routing protocol.
- **Secure CIP Port:** The secure CIP port number for the CIP routing protocol.

- **Web Port:** The web port number for the hypertext transfer protocol.
- **Secure Web Port:** The secure web port number for the hypertext transfer protocol.

The following Ethernet settings may be edited in the **Settings** panel.

- **CIP Port:** Enter the CIP port number for the CIP routing protocol.
- **Secure CIP Port:** Enter the secure CIP port number for the CIP routing protocol.
- **CTP Port:** Enter the CTP port number for the CTP routing protocol.
- **Secure CTP Port:** Enter the secure CTP port number for the CTP routing protocol.
- **Web Port:** Enter the web port number for the hypertext transfer protocol.
- **Secure Web Port:** Enter the secure web port number for the hypertext transfer protocol.

After making any changes to the advanced Ethernet settings, tap **Apply**. A dialog box is displayed confirming whether the changes should be submitted. Tap **OK** to save the changes and to reboot the device using the new advanced Ethernet settings. Tap **Cancel** to cancel the changes.

Tap **Basic Settings** to return to the main **Ethernet Settings** screen.

To return to the previous screen, tap the back arrow button .

#### Update the System Information

The system information is used to describe the name of the system and to provide information about the dealer that set up the system. Enter all of the information:

**NOTE:** Ensure that the dealer information is kept up to date, as this information is needed to place custom engraving orders through the Crestron Home system.

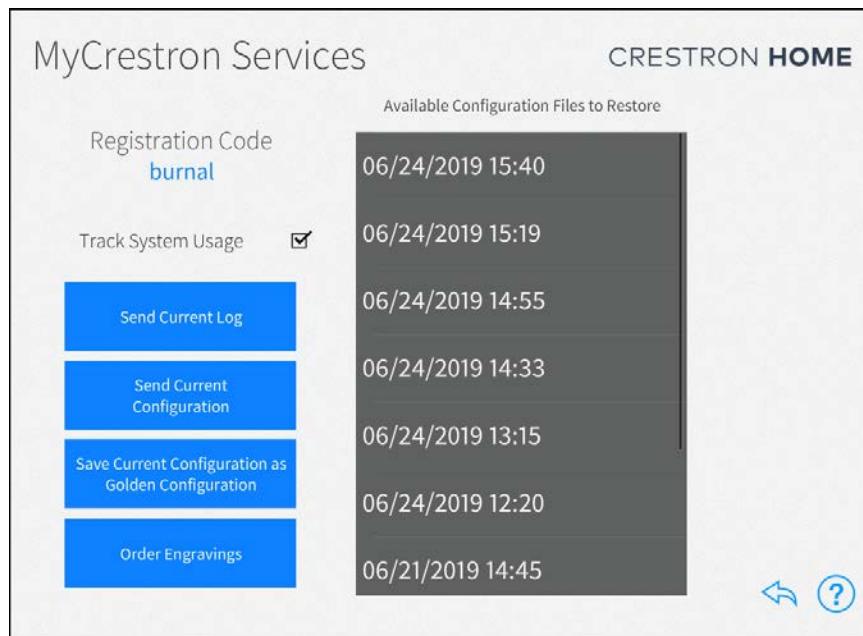
- **System Name:** Enter a descriptive system name (for example, "Smith Residence").
- **Dealer Name:** Enter the Crestron dealer responsible for the system installation.
- **Dealer Phone #:** Enter the phone number of the Crestron dealer responsible for the system installation.
- **Dealer Email:** Enter the email address of the Crestron dealer responsible for the system installation.

## MyCrestron Services

Use the **MyCrestron Services** screen to manage saved configuration files, to send message logs to the cloud, and to order custom engravings. A registration code is also provided for registering the Crestron Home system with a MyCrestron account.

For more information on registering the Crestron Home system with a MyCrestron account, refer to "MyCrestron Services" above.

To configure the MyCrestron Services, tap **MyCrestron Monitoring Services** on the **Installer Settings - System Configuration** screen.



### Track System Usage

Check or uncheck to enable or disable tracking the Crestron Home system usage through MyCrestron.

#### Send Current Log

Sends the current message log file to MyCrestron. A dialog is displayed, tap **OK** to send the current message log file or tap **Cancel** to cancel.

#### Send Current Configuration

Sends the current system configuration settings to MyCrestron. A dialog is displayed, tap **OK** to send the current configuration or tap **Cancel** to cancel.

## Save Current Configuration as Golden Configuration

Saves the current configuration as a golden configuration and then sends the configuration to MyCrestron. A dialog is displayed, tap **OK** to save the current configuration as the golden configuration and send the configuration to MyCrestron or tap **Cancel** to cancel.

### NOTES:

- A golden configuration is indicated by a star icon next to the configuration in the **Available Configuration Files to Restore** menu.
- A golden configuration should only be made to preserve a system that is properly working. It may be used to repair known, working system states.
- The golden configuration will always be available for restore. It will not be deleted from MyCrestron routine backups that are made by the system.

## Order Engravings

Orders any custom engravings that are created in the system. A dialog is displayed, tap **OK** to order the engraving or tap **Cancel** to cancel.

### NOTES:

- The system must be registered to a MyCrestron account to order engravings.
- An email that contains all of the information needed to order the engravings is generated and sent to the integrator. This information is generated based on the button layouts configured during the Actions & Events step.
- The dealer information must be entered correctly and up to date in order to ensure that the order is processed correctly. For more information, refer to "MyCrestron Services" on the previous page.

## Restore a Previous System Configuration:

The Crestron Home system records the system configuration settings periodically and saves them in configuration files, which are sorted by time and date. If an issue arises with the system, the system may be restored to an earlier working configuration. Golden Configurations always appear the top of the **Available Configuration Files to Restore** list.

1. Identify a known working configuration file from the **Available Configuration Files to Restore** menu.

**NOTE:** Golden configurations are indicated by a star icon.

2. Tap the configuration file that you wish to restore. The configuration file begins to download and then installs on the system.

To return to the previous screen, tap the back arrow button .

## Reset to Factory Defaults

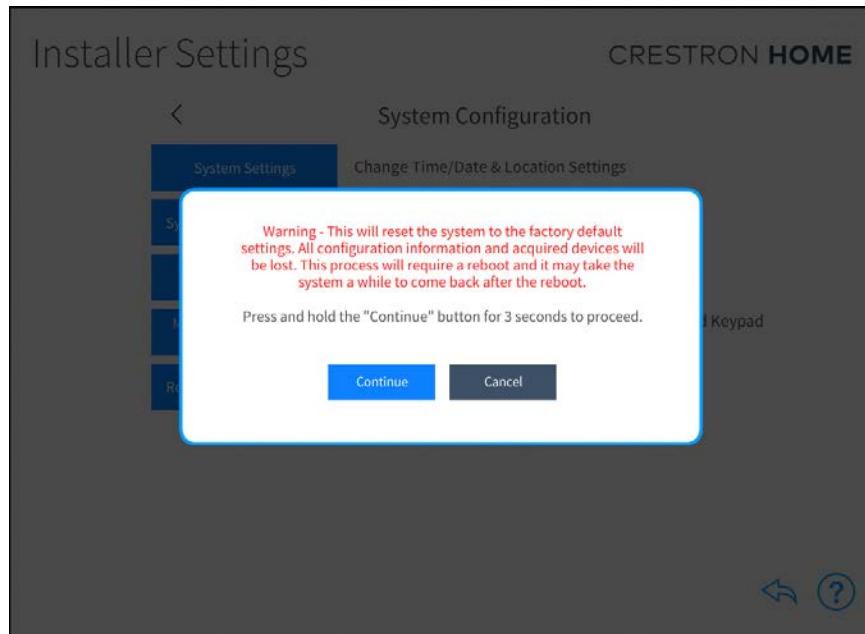
To reset the CP4-R to its factory default settings:

1. Tap **Reset to Factory Defaults**. A confirmation dialog appears.

### NOTES:

- All configured settings and all devices that are paired with the CP4-R are erased during a factory restore.
- Tap **Cancel** to cancel the factory restore and to return to the **Installer Settings - System Configuration** screen.

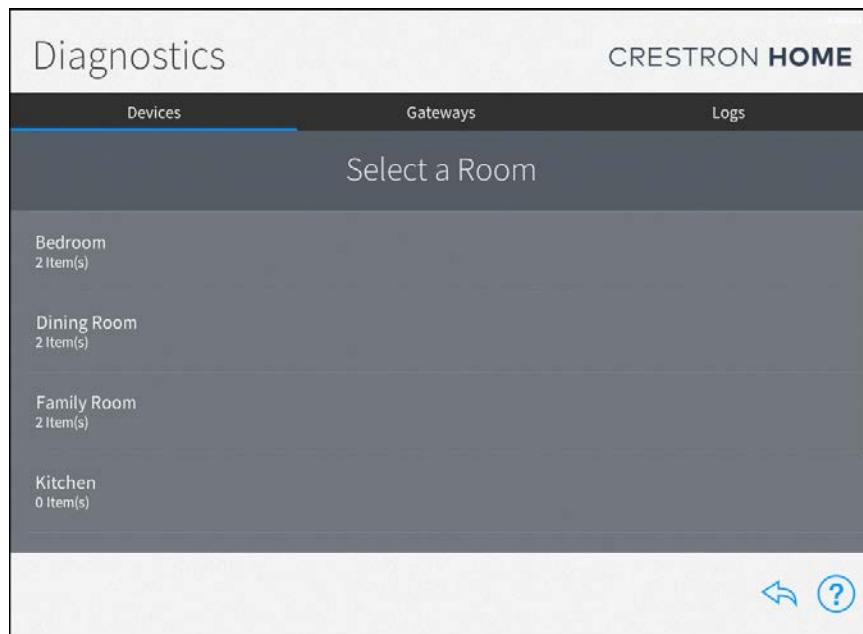
2. Press and hold the **Continue** button for three seconds. The factory default settings are applied to the CP4-R. The CP4-R reboots after the restore process is complete.



## Diagnostics

Use the **Diagnostics** screen to troubleshoot devices and gateways connected to the system and to view system message logs.

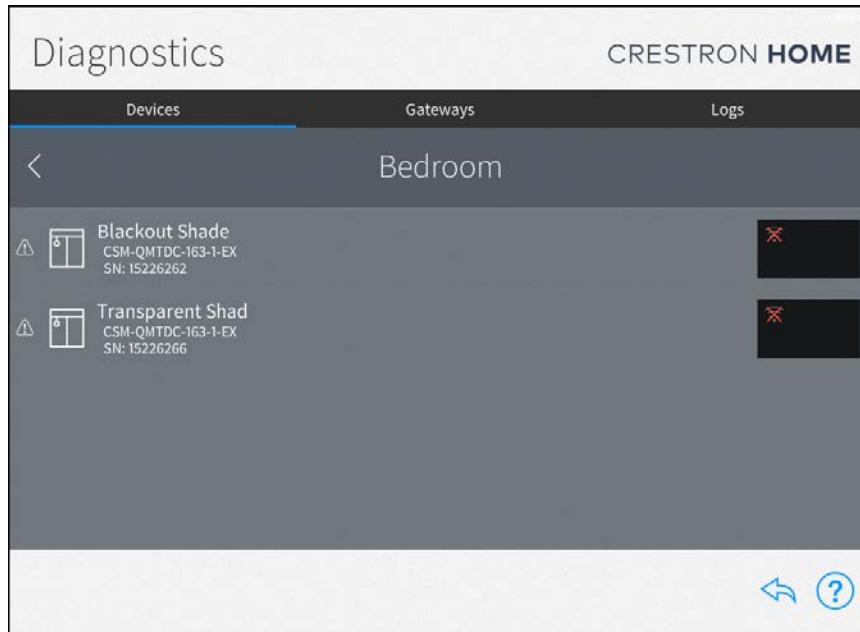
To view the **Diagnostics** screen, tap **Diagnostics** on the **Installer Settings - System Configuration** screen.



### Devices

Tap the **Devices** tab to view all of the network devices that are paired with the Crestron Home system, organized by room. Each device reports its network status, firmware status, whether it is included in a scene, and whether it is affected by a scheduled event.

Select a room from the list to view the status of the devices configured for the room.



The following status information is provided for each device in the room:

Icon	Description
	The wireless device is online and detected by the system.
	The wired device is online and detected by the system.
	The wireless device is offline or not detected by the system.
	The wired device is offline or not detected by the system.
	A network connection cannot be determined or if the device is being scanned.
	A serial device is functioning and is associated with a COM port in the system.
	A serial device is functioning but is not associated with a COM port.
	An IR device is functioning and is associated with an IR port in the system.
	An IR device is functioning but is not associated with an IR port.
	A CEC device is functioning and is associated with a CEC port in the system.
	A CEC device is functioning but it not associated with a CEC port in the system.
	The device is part of a scene.
	The device is running an outdated firmware version that is not supported by the system.



The device is battery-operated and has low battery power.



The system detects an issue with the device.

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**NOTE:** Devices that are not connected to the network, such as relay-controlled devices and uncontrolled audio sources, do not display any network connection information.

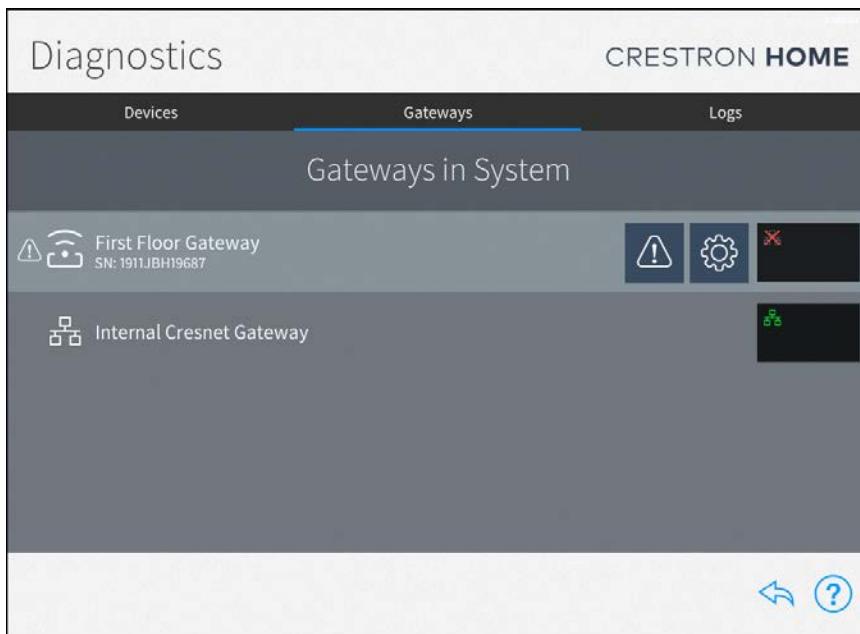
To view and modify device settings, tap the gear button next to the device.

To view the scene(s) that a device is in, tap the scene button next to the device.

To view an issue that is found with a device, tap the warning button next to the device.

## Gateways

Tap the **Gateways** tab to view all of the gateways that are paired with the Crestron Home system. The **Gateways** tab also provides an option for viewing the system of paired Sonos devices. Each gateway reports its network and firmware status.



The following status information is provided for each gateway:

Icon	Description
	The gateway is online and detected by the system.
	The gateway is offline or not detected by the system.
	The gateway is running an outdated firmware version that is not supported by the system.
	The system detects an issue with the gateway

The following additional status information is provided for the **Sonos System** gateway:

**NOTE:** For more information on troubleshooting the Sonos system, refer to "Sonos and Crestron Home Integration" on page 276.

Icon	Description
	The Sonos system has discovered devices from multiple households after a device from one household has been paired.
	The Sonos system is not detected by the Crestron Home system.
	The Sonos system is disabled.
	A paired Sonos device is not detected by the Crestron Home system.

To view and modify device settings, tap the gear button next to the device.

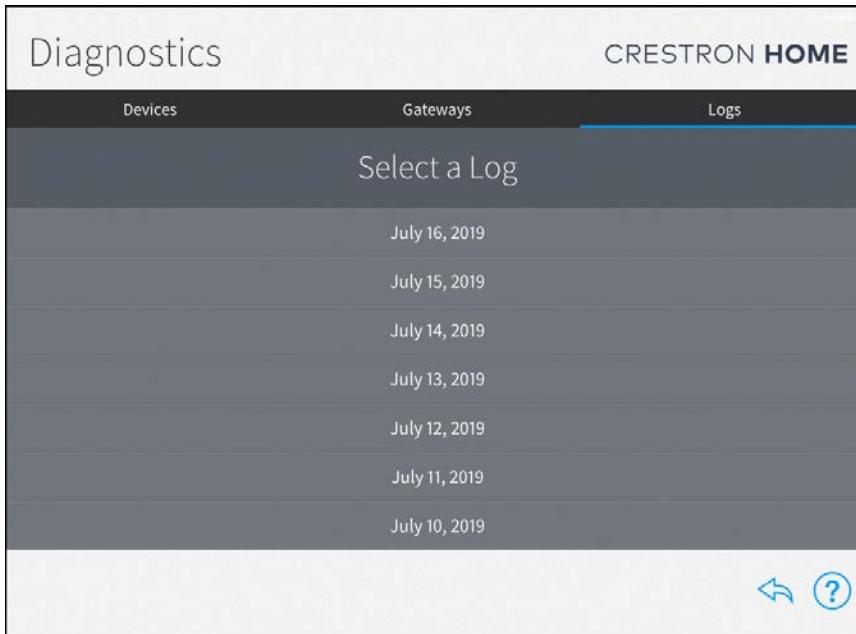
To view and modify gateway settings and to view all devices paired to the gateway, tap the gear button next to a gateway.

If an issue is found with a gateway, tap the warning button next to the device to view more information about the issue.

## Logs

The message logs display all of the actions that have occurred in the Crestron Home system during a specified date and time range.

Tap the **Logs** tab on the top of the screen to view the message logs for the entire system, organized by day and time. Each item in the message log includes a time stamp, a recorded event description, and a message level indicating whether the item is general information or an error.



**NOTE:** An SD card must be loaded into the **MEMORY** slot on the rear of the CP4-R to store log files.

To navigate the message logs:

- Select a date from the **Select a Log** menu.
- Tap the left and right arrow buttons (< and >) at the top of the screen to move forward and backward through logs for each day (starting with the current day).
- Swipe up or down through the list of times on the far left of the screen to view the logs for a specific time range (broken down into one-hour intervals).
- If more than one page of the log is available for the selected time range, use the left and right arrow buttons (< and >) at the bottom of the page to move forward or backward through the log pages.

To return to the previous screen, tap the back arrow button .

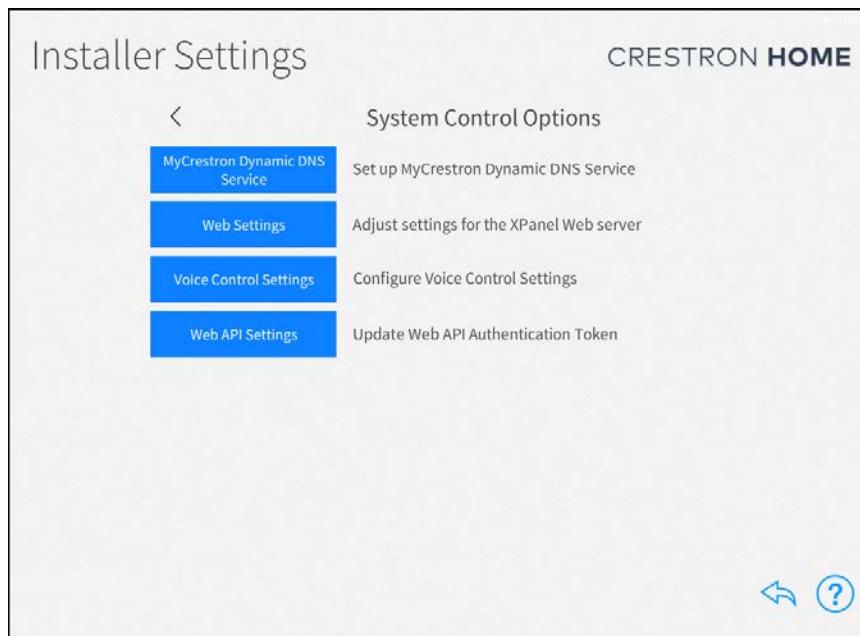
## System Control Options

Use the **Installer Settings - System Control Options** screen to configure various options for system control:

- **MyCrestron Dynamic DNS Service:** Register the Crestron Home system with a MyCrestron domain and to view the current MyCrestron registration status. For details, refer to "MyCrestron Settings" on page 153.
- **Web Settings:** Configure the settings for the web XPanel interface. For details, refer to "Web Settings" on page 155.
- **Voice Control Settings:** Set up voice control service to work with the Crestron Home system. For details, refer to "Voice Control Settings" on page 156.
- **Web API Settings:** Update the web API authentication token for the Crestron Home system. For details, refer to "Web API Settings" on page 161.

To enter the **System Control Options** screen:

1. Tap the gear button  on the bottom right of the **Setup** screen.
2. Tap **System Control Options**. The **Installer Settings - System Control Options** screen is displayed.



To return to the previous screen, tap the back arrow button .

## MyCrestron Settings

Use the **MyCrestron Settings** screen to enable remote access to the Crestron Home system through the MyCrestron Dynamic DNS service.

**NOTE:** A MyCrestron domain name must be registered at [www.mycrestron.com](http://www.mycrestron.com) prior to registering the system with MyCrestron.

To configure the MyCrestron dynamic DNS service, tap **MyCrestron Dynamic DNS Service** on the **Installer Settings - System Control Options** screen.

### Register a Domain Name with the MyCrestron.com Dynamic DNS Service

To register a domain through the MyCrestron.com Dynamic DNS Service page:

1. Navigate to [www.mycrestron.com](http://www.mycrestron.com) using a Web browser.
2. Click the **Register Domain** button. The Add a new Subdomain page displays.
3. Enter the required information in the Add a new Subdomain page.
  - **Domain Name:** The subdomain name that will be used for remote access to the system. The domain name is a subdomain of mycrestron.com, for example, the domain name "JohnSmithCottage" will use the URL JohnSmithCottage.mycrestron.com for remote access to the system.

**NOTE:** A message is displayed if the domain name is already in use.

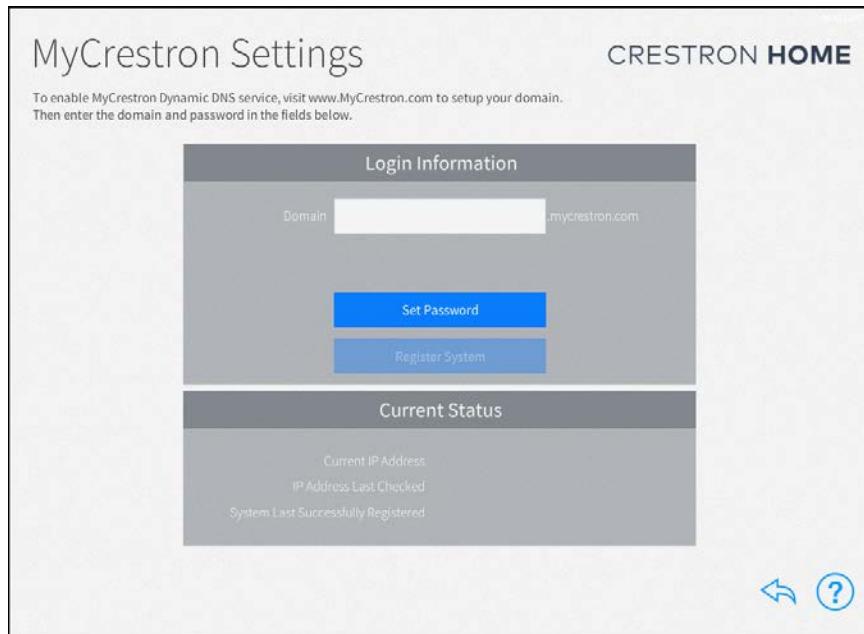
- **Domain Password:** The password used to protect the system from access by others. For example, it prevents someone from updating the IP Address of the subdomain.
- **Project Name:** The descriptive name of the project.
- **Customer Name:** The name of the customer.
- **Notes:** Information that may be important in the future and help differentiate different systems for the same customer.

4. Click the **Submit** button to register the system.

## Pair the Crestron Home system with the MyCrestron Domain Name

To register the Crestron Home system with a MyCrestron account:

1. Enter the Login Information:



- **Domain:** Enter the MyCrestron subdomain in the **Domain** text box.
  - **Set Password:** Tap **Set Password** and then enter the password that was created for the subdomain.
2. Tap **Register System**. A success message is displayed when the system is successfully registered with the MyCrestron.com domain name and the System Last Successfully Registered date updates in the Current Status panel.

### Current Status

The **Current Status** panel displays the following information:

- **Current IP Address:** Displays the IP address associated with the MyCrestron account domain name
- **IP Address Last Checked:** Displays the date and time that the MyCrestron account IP address was last checked
- **System Last Successfully Registered:** Displays the date and time that the Crestron Home system was last successfully registered to a MyCrestron account

To return to the previous screen, tap the back arrow button .

## Web Settings

Use the **Web Settings** screen to enter a domain and port for accessing the CP4-R's built-in web XPanel interface. The following XPanel settings may be edited:

To configure the web settings, tap **Web Settings** on the **Installer Settings - System Control Options** screen.

Enter the following information:



- **Domain:** Enter the XPanel web domain.
- **Port(s):** Enter the XPanel web port(s).

**NOTE:** For most applications, set **Domain** to "\*" and set **Port(s)** to "41794,41796". For more information on advanced web XPanel configurations, refer to OLH article 5793 at [www.crestron.com/onlinehelp](http://www.crestron.com/onlinehelp).

To return to the previous screen, tap the back arrow button .

## Voice Control Settings

Use the **Voice Control Settings** page to pair the Crestron Home system with an Amazon® software Alexa™ voice services account or the Google® software Google Assistant™ voice services account.

**NOTE:** When using Amazon voice control services, no more than 300 voice enabled devices can be added to the Crestron Home system.

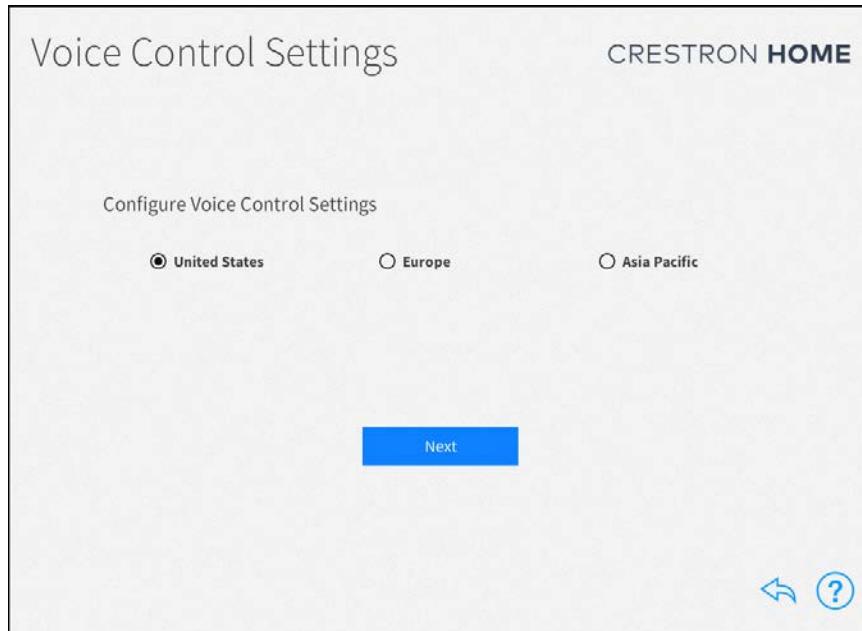
Tap **Voice Control Settings** on the **Installer Settings - System Control Options** screen to display the **Voice Control Settings** screen.

### Enable Voice Control Services

To configure voice control settings for the Crestron Home system:

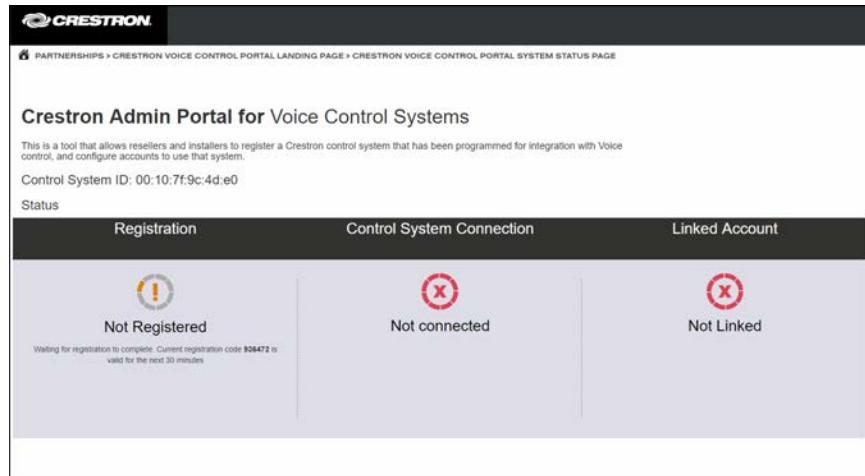
1. Select the location of the Crestron Home system (**United States**, **Europe**, or **Asia Pacific**) and then tap **Next**.

**NOTE:** Voice control via the TSR-310 is applicable only to systems that are registered in the United States region at this time.

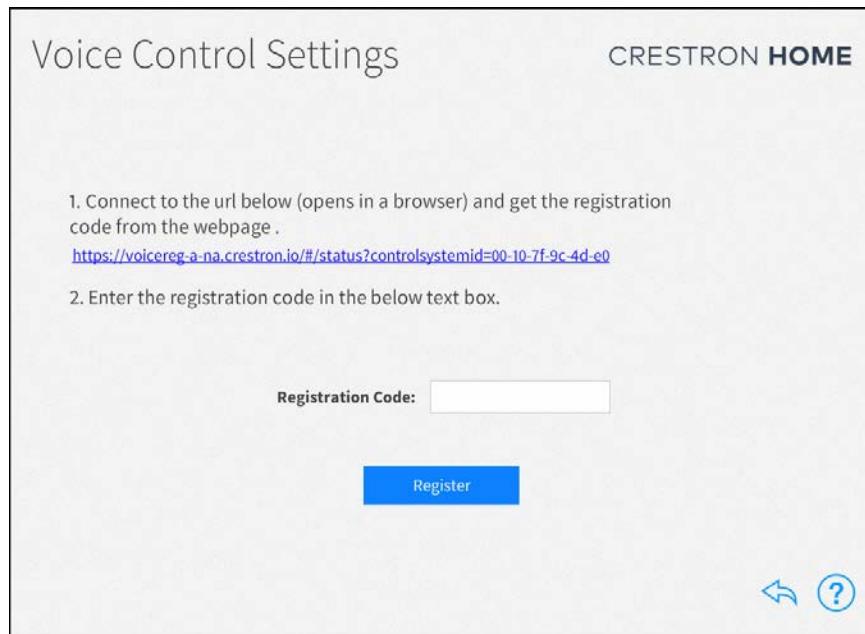


2. Tap the URL provided on the screen to open the Crestron Admin Portal for Voice Control Systems for the selected region.

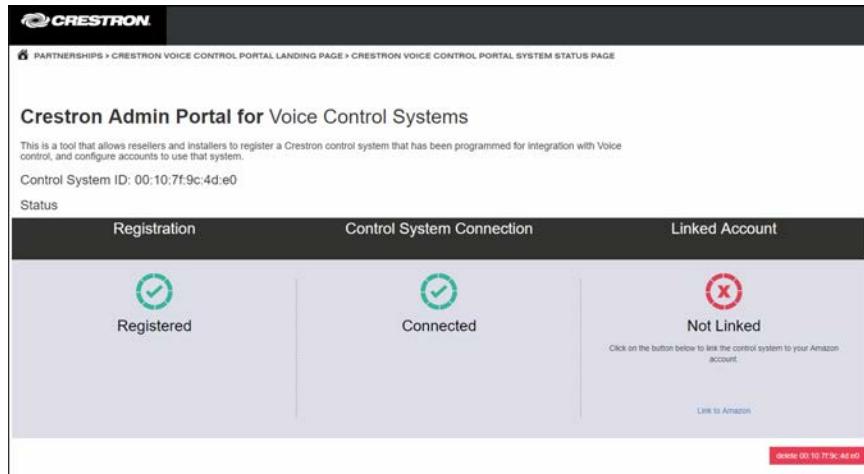
**NOTE:** If Google Assistant will be used as the voice services provider, enter "[https://voicereg-g-na.crestron.io/#/status?controlsystemid=\[MacAddress\]](https://voicereg-g-na.crestron.io/#/status?controlsystemid=[MacAddress])" into a web browser instead, where [MacAddress] is the CP4-R MAC address.



3. If the device is not registered, record the six-digit registration code provided under the **Registration** section.
4. Enter the registration code in the **Registration Code** field on the **Voice Control Settings** screen.



5. Tap **Register**. If the registration credentials are valid, a dialog box is displayed stating that the registration was successful. Tap **OK** to continue.
6. A dialog box is displayed stating that the homeowner's Alexa or Google Assistant account must be linked to the Crestron Home system. Tap the **Registration Portal** link to display the **Crestron Admin Portal for Voice Control Systems** page in the web browser.



**NOTE:** To unlink the CP4-R from the voice services provider, tap **delete** [MAC Address] (red button) at the bottom right of the page. The registration process must be completed again to relink the CP4-R with the voice services provider.

7. Tap the link at the bottom of the **Linked Account** section. A dialog box for entering the voice provider account credentials is displayed.
8. Enter the credentials for the voice provider account. If the registration process is successful, the **Linked Account** status changes to Linked.

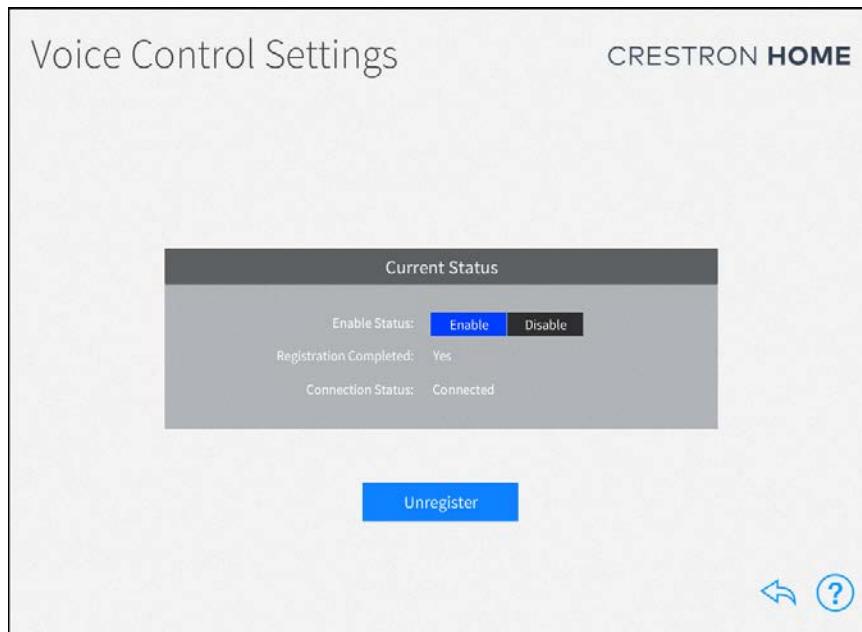
**NOTE:** If the control system is registered with an Amazon account, a dialog box is displayed asking whether the linked account is for a smart home or for an Alexa for Business (AWS) account. Tap **Smart Home** to use the control system with a residential Amazon account. Alexa for Business accounts are not supported by the TSR-310.

9. The **Voice Control Settings** screen displays once the Crestron Home system is registered with a voice services account. The **Voice Control Settings** screen provides selections for viewing and configuring voice control settings.

## Configure Voice Control Services

Once the Crestron Home system is registered with a voice services account, the **Voice Control Settings** screen provides selections for viewing and configuring voice control settings.

The following settings may be viewed and configured:



- **Enable Status:** Tap **Enable** or **Disable** to enable or disable voice control, respectively, for the system.
  - **Enable:** The system connects to and processes commands from the voice recognition service.
  - **Disable:** The system disconnects from the voice control service. Voice control commands will no longer be processed.
- **Registration Completed:** Indicates whether or not the system is registered with the voice recognition service.

- **Connection Status:** Indicates the connection state between the system and the voice control service. If the system is enabled but unable to connect to the service, additional details are provided in the message logs.

#### NOTES:

- When the **Connection Status** does not display as "Connected," the system is unable to connect to the voice control service. To fix this, navigate to the registration portal and delete the control system from the portal.
- If the system is registered and connected, but voice commands are not working, ensure that Crestron is enabled on the voice service provider's app.

### Remove Voice Control Services

To remove voice control services from the Crestron Home system.

1. Tap **Unregister..**. The registration credentials are cleared from the system and the voice control administration portal.
2. Tap **OK** in the dialog box that is displayed to unregister from voice control services, or tap **Cancel** to cancel unregistering the system.

#### NOTES:

- To enable or disable control of a specific room or load, navigate to the **Voice Control** tab in the configuration settings for the room or load. Loads without a **Voice Control** tab are not compatible with voice control.
- To enable voice services on a TSR-310 that has been added to the Crestron Home system, refer to the Performance UI for TSR-310 Operations Guide (Doc. 8410) at [www.crestron.com/manuals](http://www.crestron.com/manuals).

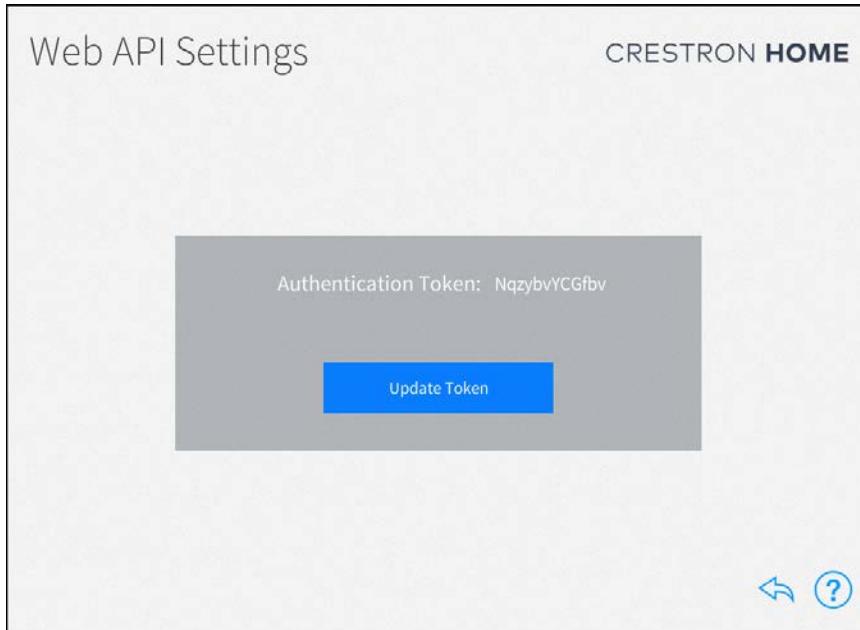
To return to the previous screen, tap the back arrow button .

## Web API Settings

Use the **Web API Settings** screen to view and update the Web API (Application Programming Interface) authentication token used to access the Crestron Home system's REST API interface. Refer to the Crestron Virtual Control REST API (Doc. 8314A) at [www.crestron.com/manuals](http://www.crestron.com/manuals) for additional information.

Tap **Web API Settings** on the **Installer Settings** screen to display the **Web API Settings** screen.

Tap **Update Token** to display a dialog box asking whether the authentication token should be updated. Tap **OK** to update the token or **Cancel** to cancel the update.



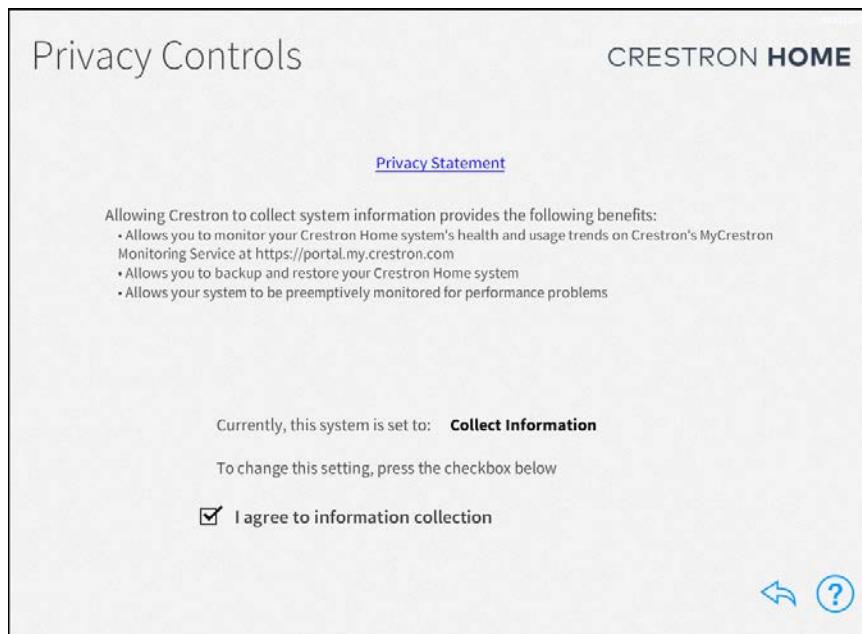
To return to the previous screen, tap the back arrow button .

## Privacy Controls

Use the **Privacy Controls** screen to view the privacy statement and to enable or disable the collection of information. Collecting information allows you to monitor your Crestron Home's system performance, view usage trends, submit and restore backups using MyCrestron.

To view and configure the privacy controls, tap **Privacy Controls** on the **Installer Settings - System Configuration** screen.

To enable or disable the collection of system information, tap the check box next to **I agree to information collection**. Checking the box indicates that Crestron will collect information about the system.



To return to the previous screen, tap the back arrow button .

## Software Update

Use the **Software Update** screen to check for and download software updates for the Crestron Home system and for connected devices. System updates must be initiated manually.

**NOTE:** When a software update is available, a pop-up notification on the user interface and setup pages is displayed. Software downloads may be initiated from this notification or from the **Software Update** screen.

To enter the **Software Update** screen:

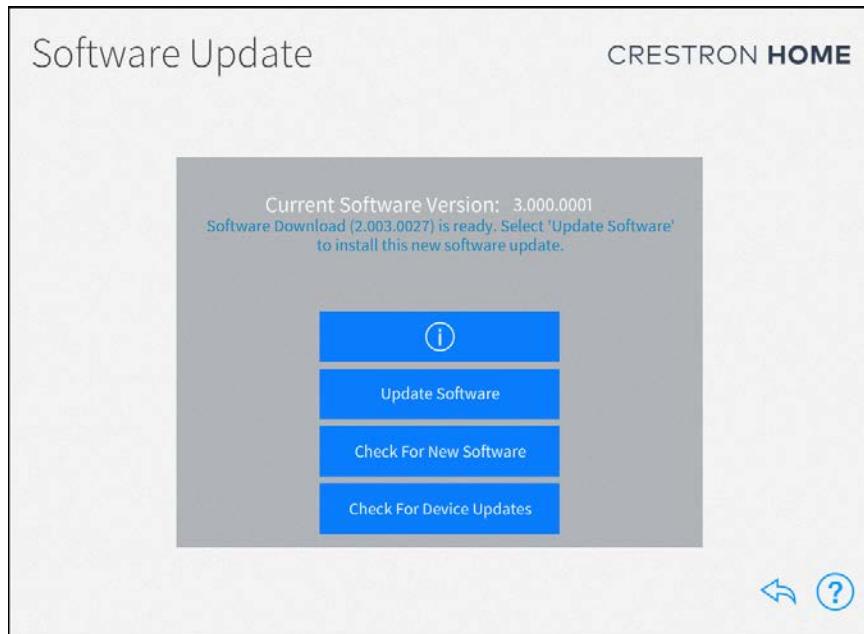
1. Tap the gear button  on the bottom right of the **Setup** screen.
2. Tap **Software Update**. The **Installer Settings - Software Update** screen is displayed.

### Update Software

To check for new updates and update the software for Crestron Home system:

**NOTE:** A software update may take up to 30 minutes to complete, and the CP4-R reboots several times throughout the update process. Therefore, updates should be performed when the system is not in use.

1. Tap **Check for Updates**. The **Software Update** screen displays.



2. Tap **Check for New Software**. The system scans for available software updates and displays the available update.
3. Tap the **i** button to review the software release notes.

4. Tap **Download Update**. A confirmation dialog appears.
  5. Tap **Download** to download the update. The CP4-R downloads the latest firmware. The download may take several minutes. The update does not install automatically.
  6. When the download is complete, tap **Update Software**. A confirmation dialog is shown along with the release notes.
  7. Tap **Update**. The software begins to update. The CP4-R reboots when the software update is complete.
- CAUTION:** Communication with the CP4-R will be lost several times during the software update. Do not power down the CP4-R during the software update.
8. When the CP4-R reboots, enter the Crestron Home Setup app (or open the XPanel using a web browser). The **Device Administration** page displays.

The screenshot shows a 'Device Administration' sign-in page. It features two input fields: 'Username' and 'Password'. Below these is a checkbox labeled 'Remember my username'. At the bottom is a large blue 'Sign In' button with a magnifying glass icon. At the very bottom of the page, there is small text: '© 2019 Crestron Electronics, Inc.', 'Privacy Statement', and 'Crestron Unified Communication Software License Agreement'.

9. Enter the username and password and then tap **Sign In**.

## Check for Device Updates

To scan the devices connected to the Crestron Home system for available updates:

1. Tap **Check for Device Updates**. Crestron Home scans the connected devices for available updates. Once the scan is complete, the **Device Firmware Update** screen presents a list of devices with recommended firmware updates.

### NOTES:

- To rescan the update server for new device firmware updates, tap **Check For Updates**.
- To view release notes for the firmware update, tap the information button ⓘ next to the device.

## Device Firmware Update

CRESTRON HOME

CEN-GWEXER <input type="checkbox"/> 0 of 1 Device(s) Require Update Available Update: 1.3706.0007	CHV-TSTATEX <input type="checkbox"/> 0 of 1 Device(s) Require Update Available Update: 1.012.0081
CLW-DIMEX-P <input type="checkbox"/> 0 of 2 Device(s) Require Update Available Update: 2.006.0006	CSM-QMTDC-163-1-EX <input type="checkbox"/> 0 of 2 Device(s) Require Update Available Update: 1.002.0247
TSW-1060 <input type="checkbox"/> 0 of 1 Device(s) Require Update Available Update: 2.003.0036	

Check For  
Updates

Update Selected  
Devices



2. Tap the check box next to a device to select the device to receive a firmware update.
3. Tap **Update Selected Devices** to perform firmware updates for the selected devices.

**NOTE:** TSW-xx60 series touch screen running Smart Graphics mode will appear as "TSW-xx60(Legacy)" while TSW-xx60 series touch screen running Crestron Home will appear as "TSW-xx60."

To return to the previous screen, tap the back arrow button .

# Enduser Configuration

The user setup screens provide the homeowner with advanced options to customize their Crestron Home system.

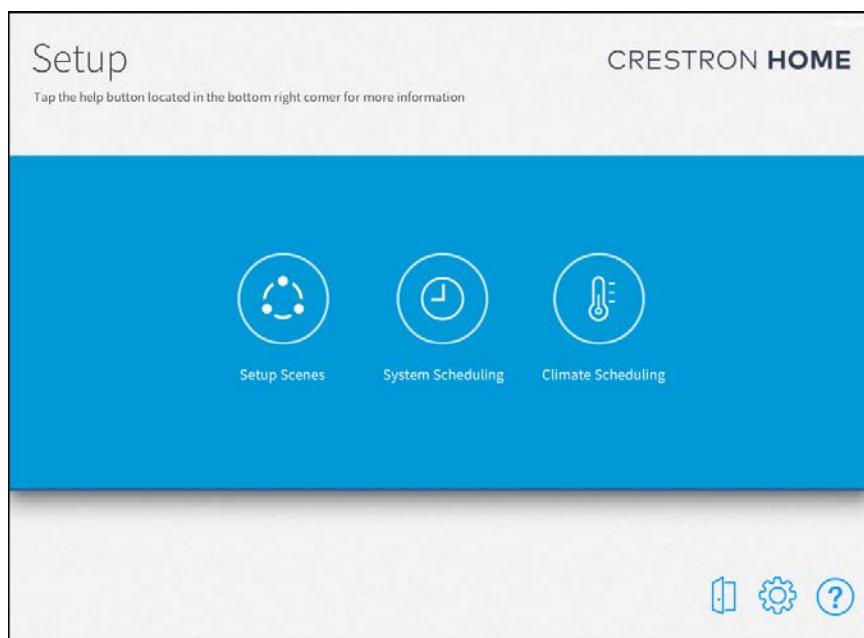
To access the user setup screens while in user control mode:

1. On the home screen, select **Settings** from the collapsible side menu.
2. Enter the username and password when prompted, and then tap **OK**.

**Username:** advanceduser

**Password:** Set by the dealer. Contact your dealer for details.

3. Tap **OK**.



While configuring the Crestron Home system:

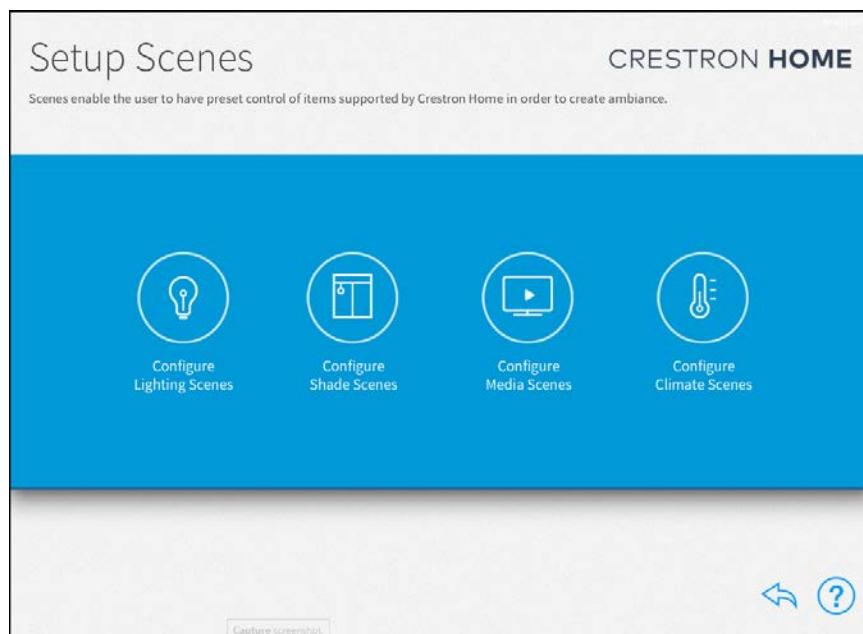
Icon	Description
?	Displays a dialog box that explains screen functions and features and provides links to tutorial videos.
⚙️	Displays the <b>User Settings</b> screen to configure advanced Crestron Home system settings. For more information on the <b>User Settings</b> screen, refer to "System Settings - End User" on page 190.
🚪	Exit user configuration mode and to enter the user interface. For more information about the user interface, refer to "Crestron Home OS 3 User Interface" on page 209.

## Setup Scenes

Use the **Setup Scenes** screen to create and configure scenes for the Crestron Home system, including lighting scenes, shade scenes, and climate scenes.

Scenes are preset configurations for different device types that create a specific ambiance when recalled. Scenes may be recalled from keypads, from touch screens, and from scheduled events.

Tap the **Setup Lighting & Shading Scenes** button on the user **Setup** screen to display the **Setup Scenes** screen.



**NOTE:** Each room may contain a maximum of 24 scenes for each scene type. For example, a room may contain up to 24 lighting scenes, up to 24 shade scenes, and so forth.

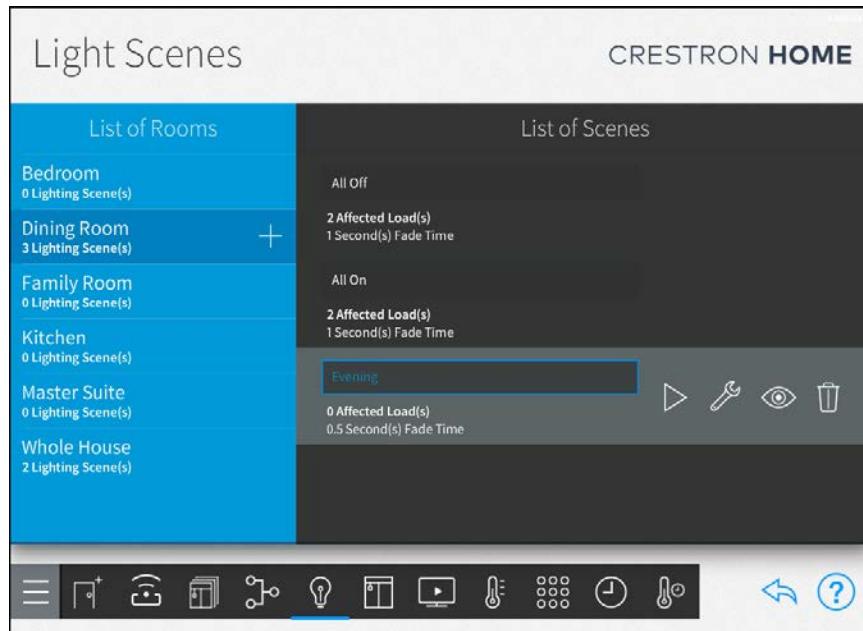
To return to the previous screen, tap the back arrow button .

## Light Scenes

Use the **Light Scenes** screen to create lighting scenes for one or more rooms or for the entire house.

Lighting scenes are used to set predefined levels for multiple lighting loads. By default, the Crestron Home system creates **All On** and **All Off** scenes for every room with a lighting load. Additionally, **All On** and **All Off** scenes are created automatically for the whole house after the first lighting load has been added to the system.

Tap the **Configure Lighting Scenes** button on the **Setup Scenes** screen or the Light Scenes button  on the setup menu to display the **Light Scenes** screen.



## Create a New Lighting Scene

**NOTE:** When a scene is created, the current light state is saved as the scene setting and will be recalled by the scene. To adjust the levels, tap the wrench button  next to the lighting scene name.

To create a new lighting scene:

1. Select a room from the **List of Rooms** menu, and then tap the plus button (+) next to the room name. A dialog box for the scene name is displayed.



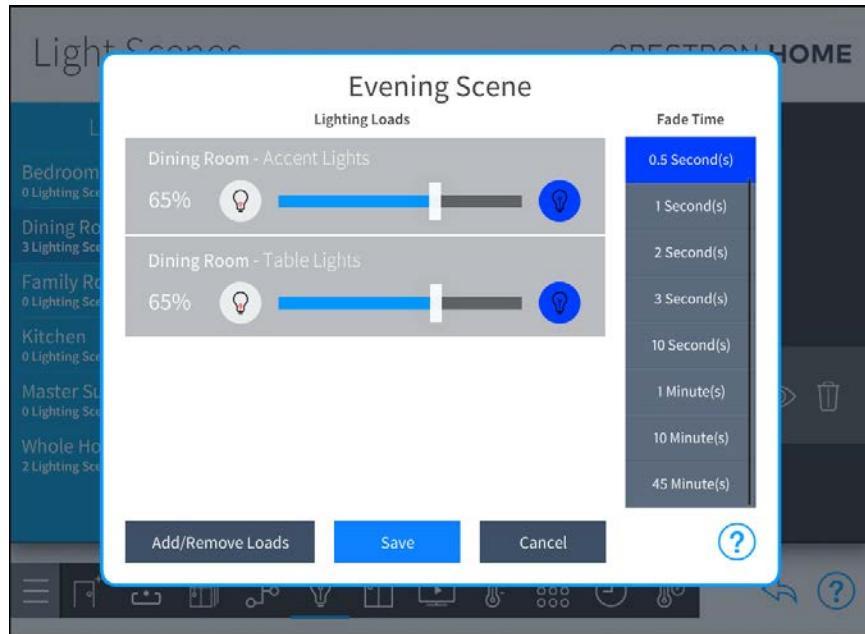
2. Enter a descriptive name for the lighting scene in the dialog box that is displayed, and then tap **OK**. The new lighting scene is added to the room under the **List of Scenes** menu.

## Configure a Lighting Scene

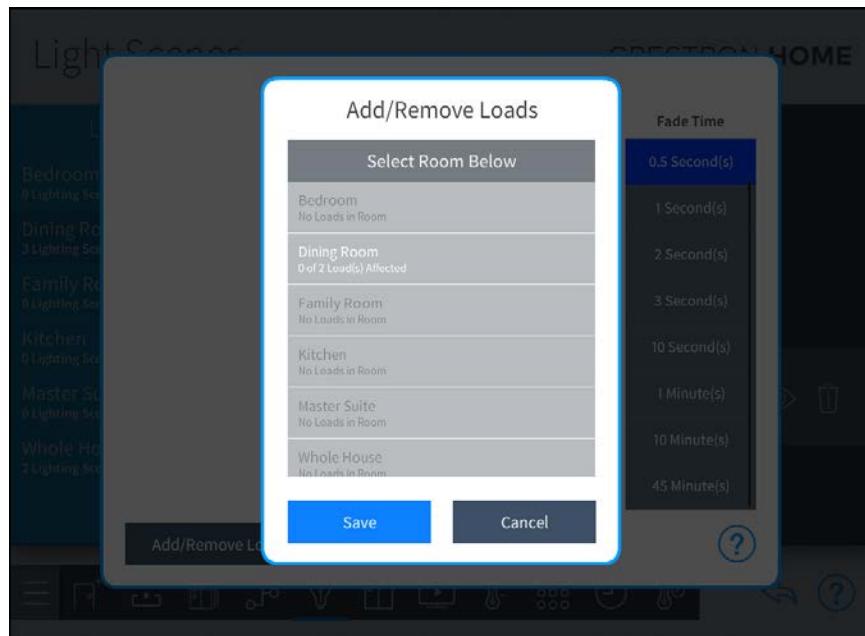
A lighting scene may be configured and tested after it has been added to the system. Use the **List of Scenes** menu to select a lighting scene for configuration.

To configure a lighting scene:

1. Tap the wrench button  next to the lighting scene name. The scene configuration screen opens.



2. Tap **Add/Remove Loads**. The **Add/Remove Loads** dialog is displayed.



3. Select a room from **Select Room Below** and then tap the check box next to the lighting loads that should be controlled in the lighting scene.

**NOTE:** The lighting loads can be from the same room or from different rooms in the house.

4. Configure the lighting scene:

- **Lighting Loads:** Use the provided controls to adjust the brightness levels for any lighting loads that have been added to the scene. Lighting loads are adjusted in real time.
  - Tap the left lightbulb button  to turn off a lighting load (0%).
  - Tap the right lightbulb button  to set a lighting load to its maximum brightness (100%).
  - Use the slider to adjust the brightness level incrementally for lighting loads with dimmers.

**NOTE:** Lighting loads may also be adjusted using the dimmers or switches configured to control the lighting load. The load levels are updated in real-time in the Crestron system.

- **Fade Time:** Select the duration that a lighting scene fades in after being recalled and fades out after the scene is completed.

5. Tap **Save** to save any changes or **Cancel** to discard the changes.

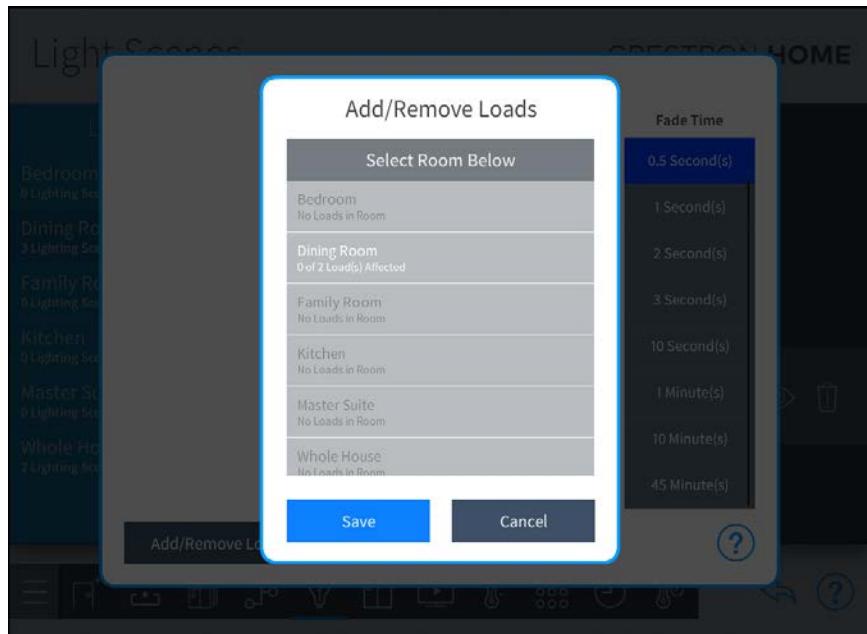
#### Add or Remove a Lighting Load from a Scene

A scene can contain all devices that are located in a room or only a few devices. A scene can also contain a lighting load that is located in different rooms in the house.

To add or remove a lighting load from the scene:

1. Tap the wrench button  next to the lighting scene name. The scene configuration screen opens.
2. Tap **Add/Remove Loads**. The **Add/Remove Loads** dialog is displayed.

3. Select a room from Select Room Below and then tap the check box next to the lighting loads that should be controlled in the lighting scene.



4. Tap **Save** to save any changes or **Cancel** to discard the changes.

**NOTE:** Adjust the lighting scene as necessary. Refer to the "Configure a Lighting Scene" section above.

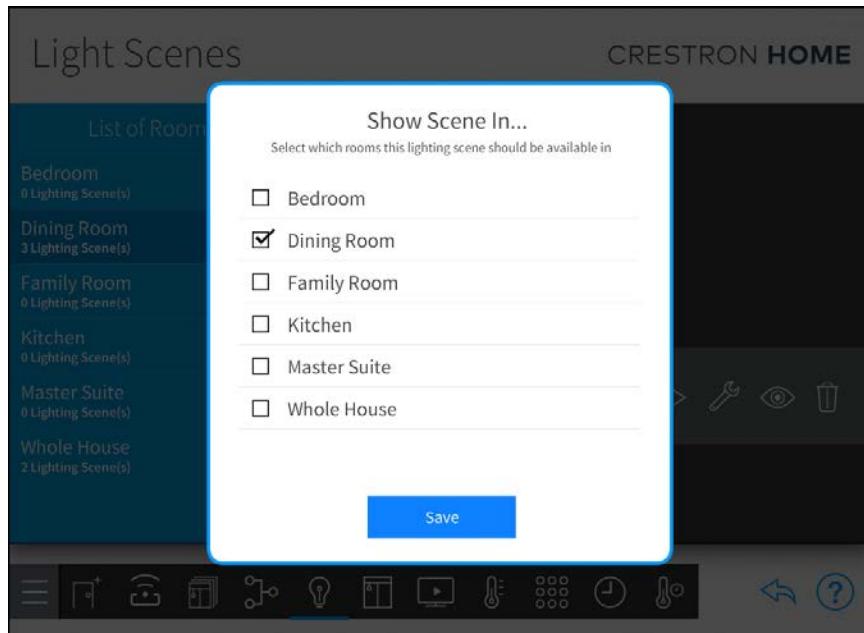
#### Display Lighting Scenes in Different Rooms

The lighting scene can be configured so that it is available in different rooms around the house. When the scene is displayed in a different room, it can be recalled by a user interface device that is located in any of the selected rooms.

To display lighting scenes in other rooms:

1. Tap the eye button next to a lighting scene name. The **Show Scene In...** dialog box is displayed.

2. Tap the check box next to a room name to make the lighting scene visible in that room. A filled check box indicates that the lighting scene is visible and may be recalled from a control device in the room (such as a touch screen).



3. Tap **Save** to save any changes.

### Delete a Light Scene

To delete a light scene:

1. Select a room from the **List of Rooms** menu and then select the scene to delete.
2. Tap the trashcan button to delete the light scene. A confirmation dialogue is shown.
3. Tap **OK** to delete the light scene or **Cancel** to keep the light scene.

To return to the previous screen, tap the back arrow button .

## Shade Scenes

Use the **Shade Scenes** screen to create shade scenes for one or more rooms or for the entire house.

Shade scenes are used to set predefined levels for multiple shade groups. By default, the Crestron Home system creates **All Open** and **All Closed** scenes for every room with a shade group. Additionally, **All Open** and **All Closed** scenes are created automatically for the whole house after the first shade motor has been added to the system.

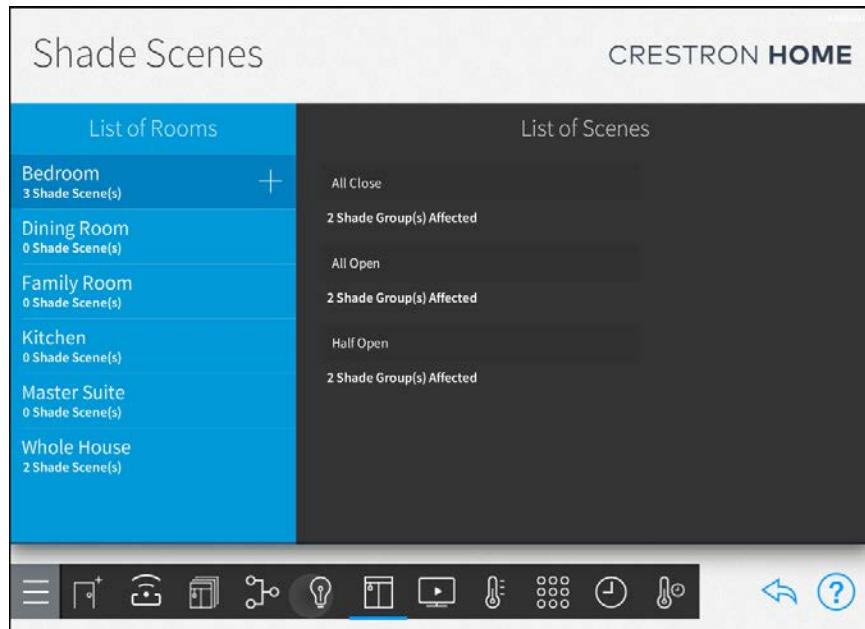
Tap the **Configure Shade Scenes** button on the **Setup Scenes** screen or the **Shade Scenes** button  on the setup menu to display the **Shade Scenes** screen.

### Create a New Shade Scene

**NOTE:** When a scene is created, the current shade state is saved as the scene setting and will be recalled by the scene. To adjust the levels, tap the wrench button  next to the shade scene name.

To create a new shade scene:

1. Select a room from the **List of Rooms** menu, and then tap the plus button (+) next to the room name. A dialog box for the scene name is displayed.



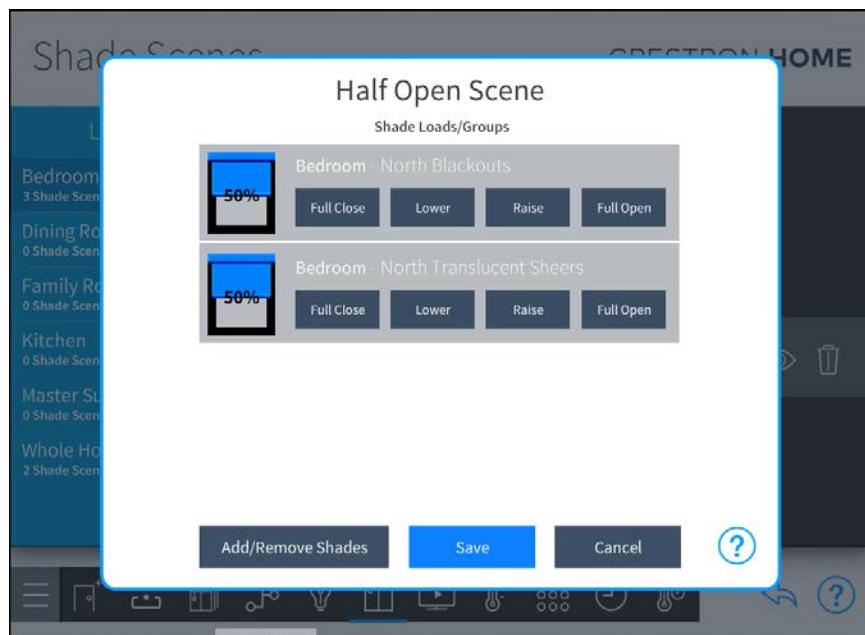
2. Enter a descriptive name for the shade scene in the dialog box that is displayed, and then tap **OK**. The new shade scene is added to the room under the **List of Scenes** menu.

## Configure a Shade Scene

A shade scene may be configured and tested after it has been added to the system. Use the **List of Scenes** menu to select a shade scene for configuration.

To configure a shade scene:

1. Tap the wrench button  next to the shade scene name. A notice is displayed stating that the shade scene will be recalled upon entering the scene configuration dialog box. Tap **OK** to display the dialog box or tap **Cancel** to cancel. The scene configuration screen opens.



2. Tap **Add/Remove Loads**. The **Add/Remove Loads** dialog is displayed.
3. Select a room from **Select Room Below** and then tap the check box next to the shade that should be controlled in the shade scene.

**NOTE:** The shades can be from the same room or from different rooms in the house.

4. Configure the shade scene:
  - **Raise** or **Lower**: Tap to raise or lower the shade incrementally.
  - **Full Open** or **Full Close**: Tap to open or close the shade fully.

### NOTES:

- Shade loads may also be adjusted using the shade motor controls or using keypads configured to control the shade motors.
- The icon to the left of each shade load shows the percentage that the shade group is open in real time.

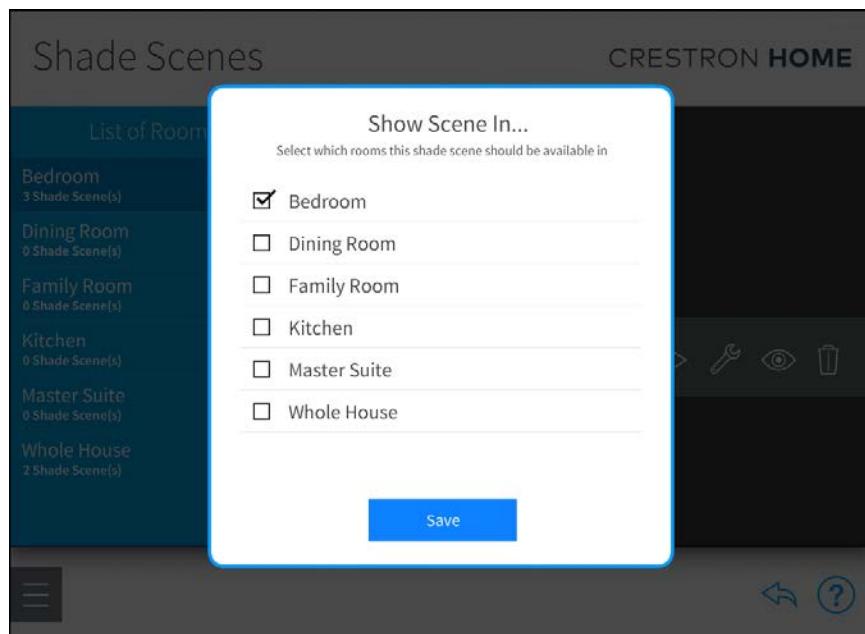
5. Tap **Save** to save any changes or **Cancel** to discard the changes.

## Display Shade Scenes in Different Rooms

The shade scene can be configured so that it is available in different rooms around the house. When the scene is displayed in a different room, it can be recalled by a user interface device that is located in any of the selected rooms.

To display shade scenes in other rooms:

1. Tap the eye button  next to a shade scene name. The **Show Scene In...** dialog box is displayed.
2. Tap the check box next to a room name to make the shade scene visible in that room. A filled check box indicates that the shade scene is visible and may be recalled from a control device in the room (such as a touch screen).



3. Tap **Save** to save any changes.

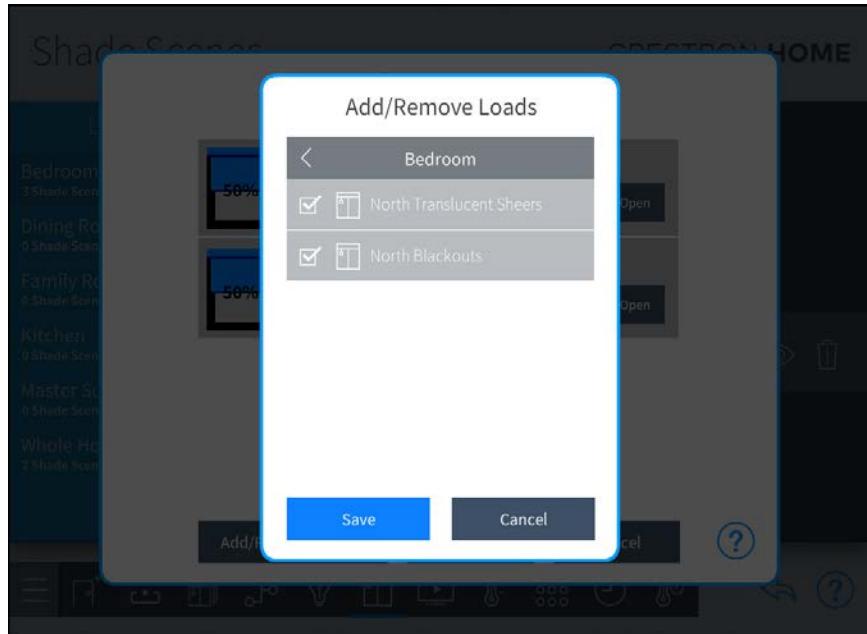
## Add or Remove a Shade from a Scene

A scene can contain all devices that are located in a room or only a few devices. A scene can also contain a shade that is located in different rooms in the house.

To add or remove a shade from the scene:

1. Tap the wrench button  next to the lighting scene name. The scene configuration screen opens.
2. Tap **Add/Remove Loads**. The **Add/Remove Loads** dialog is displayed.

3. Select a room from Select Room Below and then tap the check box next to the shade that should be controlled in the shade scene.



4. Tap **Save** to save any changes or **Cancel** to discard the changes.

**NOTE:** Adjust the shade scene as necessary. Refer to the "Configure a Shade Scene" section above.

#### Delete a Shade Scene

To delete a shade scene:

1. Select a room from the **List of Rooms** menu and then select the scene to delete.
2. Tap the trashcan button to delete the shade scene. A confirmation dialogue is shown.
3. Tap **OK** to delete the shade scene or **Cancel** to keep the shade scene.

Tap the back arrow button to return to the **Setup Scenes** screen.

## Media Scenes

Tap the **Configure Media Scenes** button on the **Setup Scenes** screen or the Media Scenes button  to display the **Media Scenes** screen.

Use the Media Scenes screen to create media scenes for the entire house. Media scenes are used to control source routing and on/off behavior for various media zones in the home.



### Create a New Media Scene

**NOTE:** When a scene is created, the current media state is saved as the scene setting and will be recalled by the scene. To adjust the levels, tap the wrench button  next to the media scene name.

To create a new media scene:

1. Select a room from the **List of Rooms** menu, and then tap the plus button (+) next to the room name. A dialog box for the scene name is displayed.



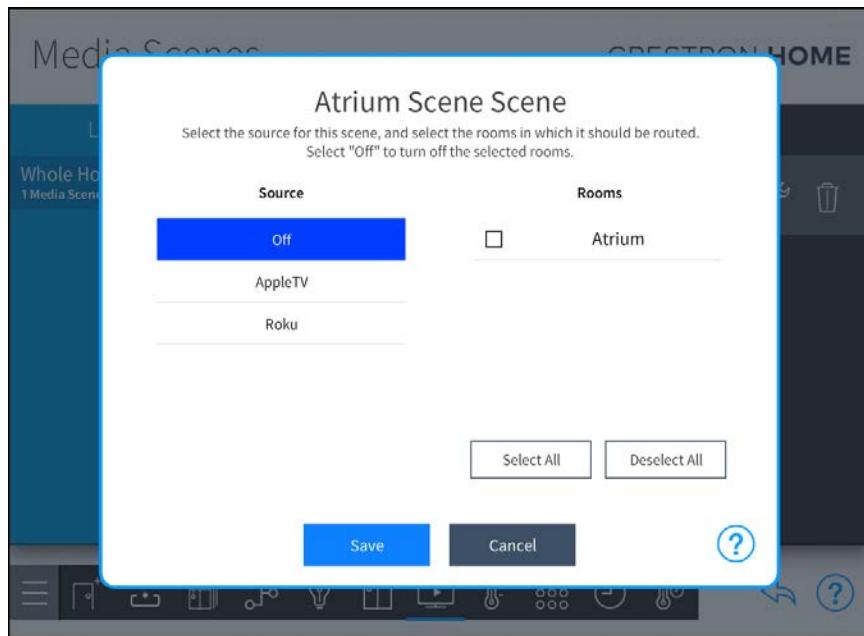
2. Enter a descriptive name for the media scene in the dialog box that is displayed, and then tap **OK**. The new media scene is added to the room under the **List of Scenes** menu.

## Configure a Media Scene

A media scene may be configured and tested after it has been added to the system. Use the **List of Scenes** menu to select a media scene for configuration.

To configure a media scene:

1. Tap the wrench button  next to the media scene name. The scene configuration screen opens.



2. Configure the media scene:

- **Source:** Swipe up or down to select the media source or favorite that will be added to the scene. Select **Off** to have the scene turn off all media sources for the selected rooms.
- **Rooms:** Swipe up or down to select the room(s) in which the media source will be routed when the scene is triggered. A filled checkbox to the left of the room name indicates that the room is selected.

**NOTE:** A room must be configured as a media zone before it can be selected for a media scene. For more information, refer to "Media Scenes" on page 178.

- **Select All:** Selects all available rooms.
- **Deselect All:** Deselects all available rooms.

3. Tap **Save** to save any changes or **Cancel** to discard the changes.

## Delete a Media Scene

To delete a media scene:

1. Select a room from the **List of Rooms** menu and then select the scene to delete.
2. Tap the trashcan button  to delete the media scene. A confirmation dialogue is shown.
3. Tap **OK** to delete the media scene or **Cancel** to keep the media scene.

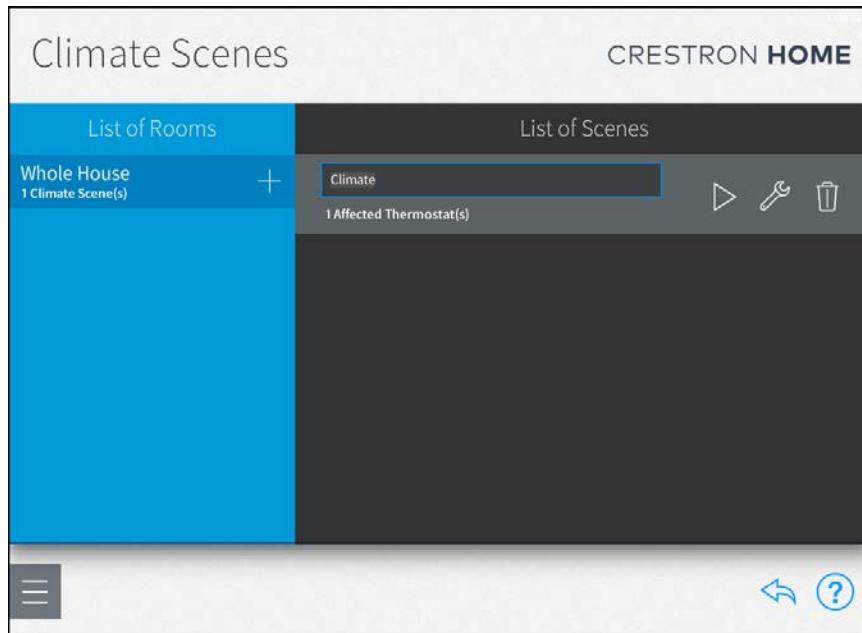
Tap the back arrow button  to return to the **Setup Scenes** screen.

## Climate Scenes

Use the **Climate Scenes** screen to create climate scenes for thermostats that have been added to the system.

Climate scenes are used to configure predefined temperature set points or modes for a thermostat when recalled. Climate scenes are ideal for changing the HVAC system parameters during specified times of day.

Tap the **Configure Climate Scenes** button on the **Setup Scenes** screen or the Climate Scenes button  on the setup menu to display the **Climate Scenes** screen.



### Create a New Climate Scene

**NOTE:** When a scene is created, the current thermostat state is saved as the scene setting and will be recalled by the scene. To adjust the levels, tap the wrench button  next to the climate scene name.

To create a new climate scene:

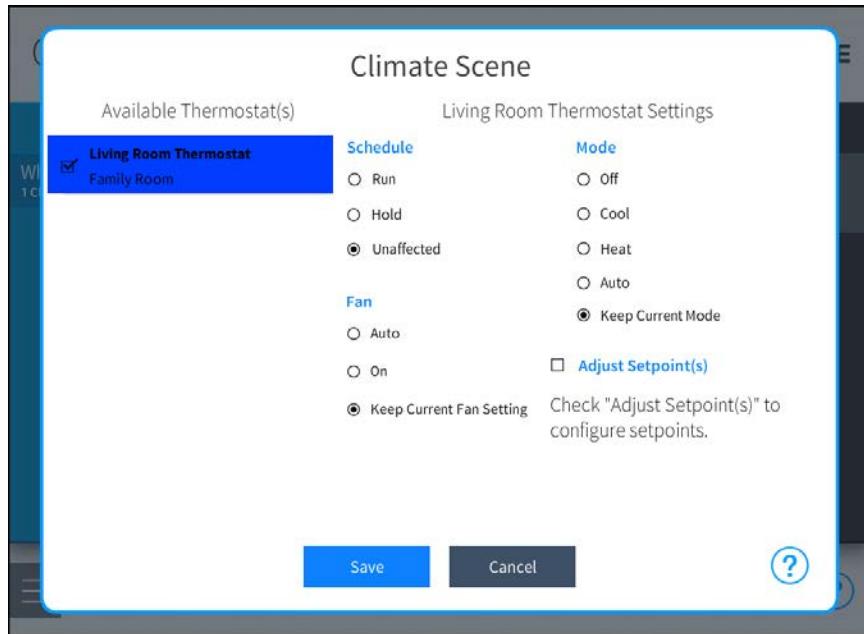
1. Select a room from the **List of Rooms** menu, and then tap the plus button (+) next to the room name. A dialog box for the scene name is displayed.
2. Enter a descriptive name for the climate scene in the dialog box that is displayed, and then tap **OK**. The new climate scene is added to the room under the **List of Scenes** menu.

## Configure a Climate Scene

A climate scene may be configured and tested after it has been added to the system. Use the **List of Scenes** menu to select a climate scene for configuration.

To configure a climate scene:

1. Tap the wrench button  next to the climate scene name. The scene configuration screen opens.



2. Configure the climate scene:

- **Available Thermostats:** Tap the check box next to one or more thermostats in the **Available Thermostat(s)** menu to add the thermostats to the climate scene. A filled check box indicates that the thermostat is added to the scene. Tap on a thermostat to configure its behavior within the scene.
- **Schedule:** Select one of the following scheduling options:

**NOTE:** If the thermostat schedule is running because **Run** or **Unaffected** was triggered by the scene, the next scheduled climate event will overwrite the climate scene's set points.

- **Run:** Starts the thermostat schedule.
- **Hold:** Stops the thermostat schedule.
- **Unaffected:** The scene does not alter the current thermostat schedule.
- **Fan:** Select one of the following fan behavior options:
  - **Auto:** Turns on and off the fan automatically.
  - **On:** Turns on the fan.
  - **Keep Current Fan Setting :** The scene does not alter the fan setting.
- **Mode:** Select one of the following thermostat modes:
  - **Off:** The scene turns the thermostat off.
  - **Cool:** The scene sets the operating mode to cool.
  - **Heat:** The scene sets the operating mode to heat.
  - **Auto:** The scene sets the operating mode to auto.
  - **Keep Current Mode:** The scene does not alter the current thermostat mode.
- **Adjust Setpoint(s):** If this checkbox is selected, the scene adjusts the set points for Heat , Cool , and Auto  modes to the chosen temperature values. Select the temperature set point for each mode from the appropriate spinner menu.

3. Tap **Save** to save any changes or **Cancel** to discard the changes.

#### Delete a Climate Scene

To delete a climate scene:

1. Select a room from the **List of Rooms** menu and then select the scene to delete.
2. Tap the trashcan button  to delete the climate scene. A confirmation dialogue is shown.
3. Tap **OK** to delete the climate scene or **Cancel** to keep the climate scene.

Tap the back arrow button  to return to the **Setup Scenes** screen.

## System Scheduling

Use the **Scheduler** screen to schedule events that recall one or more scenes at specific times and days of the week.

Tap the **System Scheduling** button on the **Setup** screen to display the **Scheduler** screen.



To recall the scenes that are scheduled to be triggered by the event, tap the play button ▶ next to the event name.

### Create a New Scheduled Event

To create a new scheduled event:

1. Tap the plus button (+) next to **Scheduled Events**.
2. Enter a descriptive name for the event.
3. Tap **OK**. The new event is displayed in the **Scheduled Events** menu.

### Configure a Scheduled Event

To configure an existing scheduled event:

- **Enabled:** Check the box to enable the event and add it to the system schedule.

**NOTE:** New events are disabled by default.

- **Day of Week:** Tap the appropriate check boxes above each day of the week to select the days that the event will occur. A filled check box indicates that the event is scheduled to occur on the associated day.

- Schedule the event to occur at a specific time of day. Set the time using the provided spinner menus.
- Schedule the event to occur at a time relative to sunrise or sunset (calculated by date and time zone). Select whether the event should occur at sunrise or sunset and then set when the event should occur relative to the sunrise or sunset time.

**NOTE:** To adjust the default times for sunrise and sunset, navigate to **Installer Settings > System Configuration > System Settings**, and then tap the wrench button on the **Current Times of Day** panel. For more information, refer to "Current Time and Date" on page 133.

- **Select Room Below:** Select a room from the menu, and then select the scene(s) that will be triggered by the event.

**NOTE:** Only rooms that contain scenes display on the **Select Rooms Below** menu. Any room with a selected scene is shown with blue text on the **Select Rooms Below** menu.

### Delete a Scheduled Event

To delete a scheduled event:

1. Tap an event in the **Scheduled Events** menu.
2. Tap the trashcan button next to the event name.
3. Tap **OK** to delete the event or tap **Cancel** to cancel any changes.

To return to the previous screen, tap the back arrow button .

## Climate Scheduling

Use the **Thermostat** screen to view and schedule events for the thermostats in the Crestron Home system.

The available thermostats are listed under **Select a Thermostat** and the list of available thermostat events are listed under **List of Scheduled Events**. Each thermostat event provides the time and days that it is scheduled to occur, as well as its cooling and heating set points.

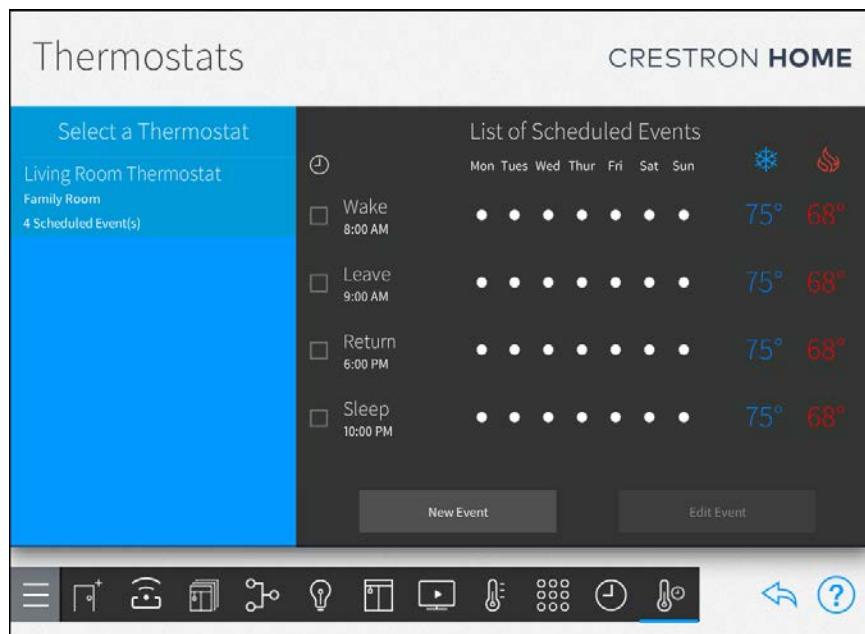
When a thermostat is added to the Crestron Home system, events are created for "Sleep," "Wake," "Leave," and "Return." These events are disabled by default. To enable them, tap the event's check box to the left of the event name. A filled check box indicates that the scene is enabled.

Tap the **Climate Scheduling** button on the **Configuration** screen to display the **Thermostats** screen.

### Create a New Thermostat Event

To create a new scheduled thermostat event:

1. Select a thermostat from the **Select a Thermostat** menu. The list of scheduled events for the selected thermostat is displayed.



2. Tap **New Event**. The **Edit Event** dialog box is displayed.



3. Configure the following event settings:

- **Event Name:** Enter a descriptive name for the event in the text box at the top of the dialog box using the on-screen keyboard.
- **Enable Event:** Tap the check box next to **Enabled** to enable the event and add it to the thermostat schedule. New events are disabled by default.
- **Set the Time:** Set the time that the thermostat event should occur using the provided spinner menus.
- **Select the Days:** Tap the check box above each day of the week to select the days that the thermostat event should occur. A filled check box indicates that the event is scheduled to occur on the associated day.
- **Select the Setpoints:** Select the temperature set points for cooling , heating , and auto modes using the appropriate spinner menu.

4. Tap **OK** to save the thermostat event or tap **Cancel** to cancel any changes.

### Configure a Thermostat Event

To configure an existing thermostat event:

1. Select a thermostat from the **Select a Thermostat** menu. The list of scheduled events for the selected thermostat is displayed.
2. Select a thermostat event from the **List of Scheduled Events**.
3. Tap **Edit Event** to display the **Edit Event** dialog box.
4. Configure the following event settings:
  - **Event Name:** Enter a descriptive name for the event in the text box at the top of the dialog box using the on-screen keyboard.

- **Enable Event:** Tap the check box next to **Enabled** to enable the event and add it to the thermostat schedule. New events are disabled by default.
  - **Set the Time:** Set the time that the thermostat event should occur using the provided spinner menus.
  - **Select the Days:** Tap the check box above each day of the week to select the days that the thermostat event should occur. A filled check box indicates that the event is scheduled to occur on the associated day.
5. Tap **OK** to save the thermostat event or tap **Cancel** to cancel any changes.

#### Enable or Disable a Thermostat Event

To enable or disable an existing thermostat event, tap the check box next to the event name. A filled check box indicates that the scene is enabled.

#### Delete a Thermostat Event

To delete an existing thermostat event:

1. Select a thermostat from the **Select a Thermostat** menu. The list of scheduled events for the selected thermostat is displayed.
2. Select a thermostat event from the **List of Scheduled Events**.
3. Tap **Edit Event** to display the **Edit Event** dialog box.
4. Tap the trashcan button  to delete the event.
5. Tap **OK** to save the thermostat event or tap **Cancel** to cancel any changes.

To return to the previous screen, tap the back arrow button .

# System Settings - End User

Tap the gear button  on the bottom right of the user **Setup** screen to display the **User Settings** screen.

Use the **User Settings** screen to configure various settings for the Crestron Home system and the CP4-R:

- **System Settings:** Configure the time and date, location settings, time of day settings, and the system language.
- **System Info & Passwords:** Change the user password.
- **Check for Updates:** Check for and download software updates for the Crestron Home system and for connected devices.
- **Diagnostics:** Configure various settings for the Crestron Home system and the CP4-R.
- **MyCrestron Monitoring Service:** Tap to obtain a registration code for registering the CP4-R with a MyCrestron domain and to access various MyCrestron services.
- **Advanced Configuration:** Tap to access the installer setup screens. An installer password is required.



Tap the help button  on any of the **User Settings** screens to display dialog boxes that explain the screen functions and features and provide links to tutorial videos. The iPad or setup device must be connected to the network to access videos.

To return to the previous screen, tap the back arrow button .

## System Settings

Use the **System Settings** screen to configure the time and date, the location settings, the current times of day used for events, the system language, and the BACnet Settings.

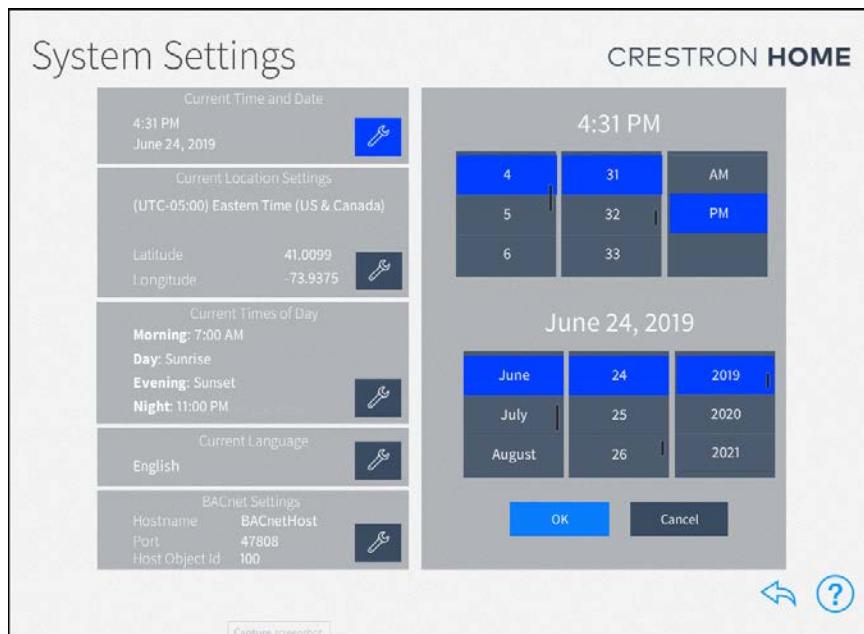
To configure the System Settings, tap **System Settings** on the **User Settings - System Configuration** screen.



## Current Time and Date

To set the current time and date:

1. Tap the wrench button  next to **Current Time and Date**.



2. Use the spinner menus to set the hour and minute and **AM** or **PM**.
3. Use the spinner menus to set the month, day, and year.
4. Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

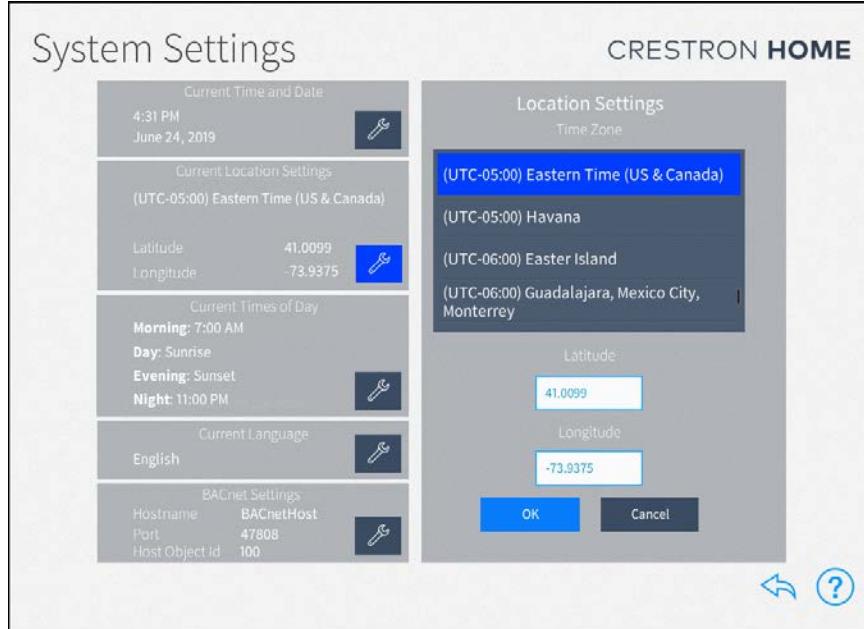
To return to the previous screen, tap the back arrow button .

## Current Location Settings

To set the Location Settings:

**NOTE:** If configuring the system with an iPad, tap **Synchronize with iPad** to synchronize the time zone, longitude, and latitude with the iPad device's location services.

1. Tap the wrench button  next to **Current Location Settings**.



2. To set the time zone, select the location in the **Time Zone** field.
3. If necessary, the latitude and longitude can be fine-tuned. Adjust the latitude in the **Latitude** field and adjust the longitude in the **Longitude** field.
4. Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

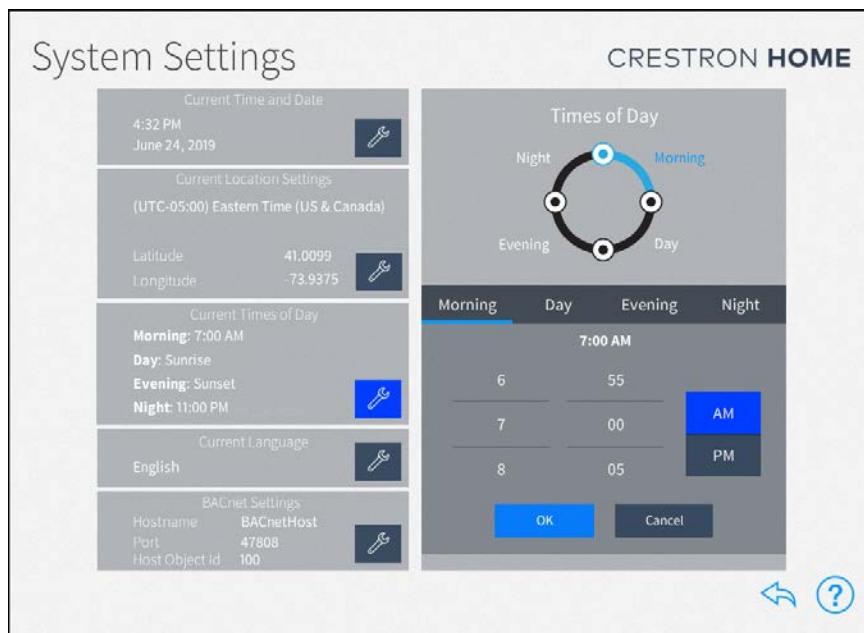
To return to the previous screen, tap the back arrow button .

## Current Times of Day

Times of day are used to trigger different actions and events within the system when the preset clock time is reached. The Morning and Night Times of Day are static times that occur at the same time every day. The Day and Evening Times of Day are based on sunrise and sunset times and change during the course of the year.

To set the Morning and Night times.

1. Tap the wrench button  next to **Current Times of Day**.



2. Tap **Morning** or **Night**, and then set the time.
  - **Morning:** When the homeowner typically wakes up.
  - **Night:** When the homeowner typically goes to sleep.
3. Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

To set the Day and Evening times:

1. Tap the wrench button  next to **Current Times of Day**.
2. Tap **Day** or **Evening**, and then set the time.
  - **Day:** How long before or after sunrise (calculated by date and time zone) the Day preset occurs.

**NOTE:** In some cases (such as in the summer months), the time set for the Day preset may occur before the time set for the Morning preset. In these cases, any actions or events set for the Morning preset do not occur.

3. Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

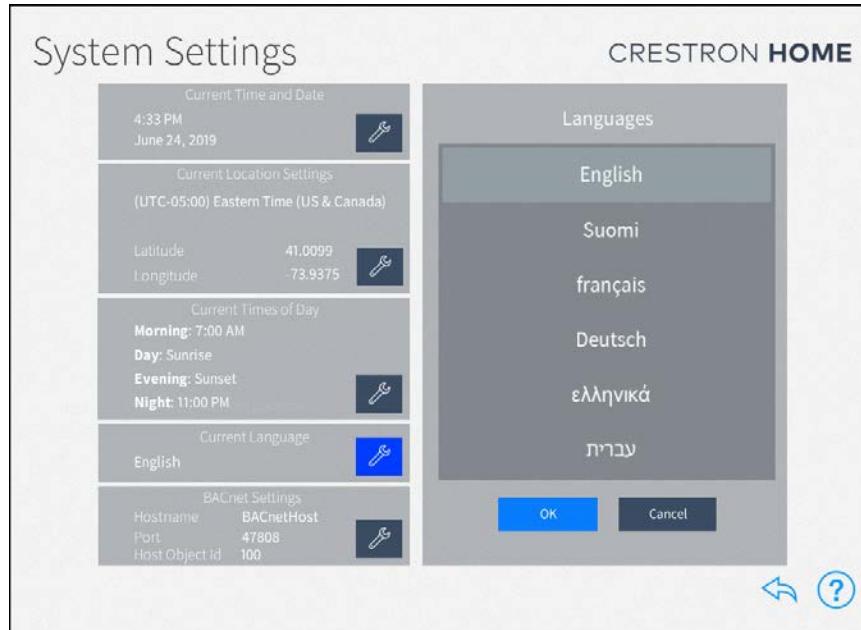
To return to the previous screen, tap the back arrow button .

## Current Language

The Current Languages screen sets the language that is used in the setup app and the user interface devices.

To set the language:

1. Tap the wrench button  next to **Current Language**.



2. Select the system language from the menu provided under **Languages**.
3. Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

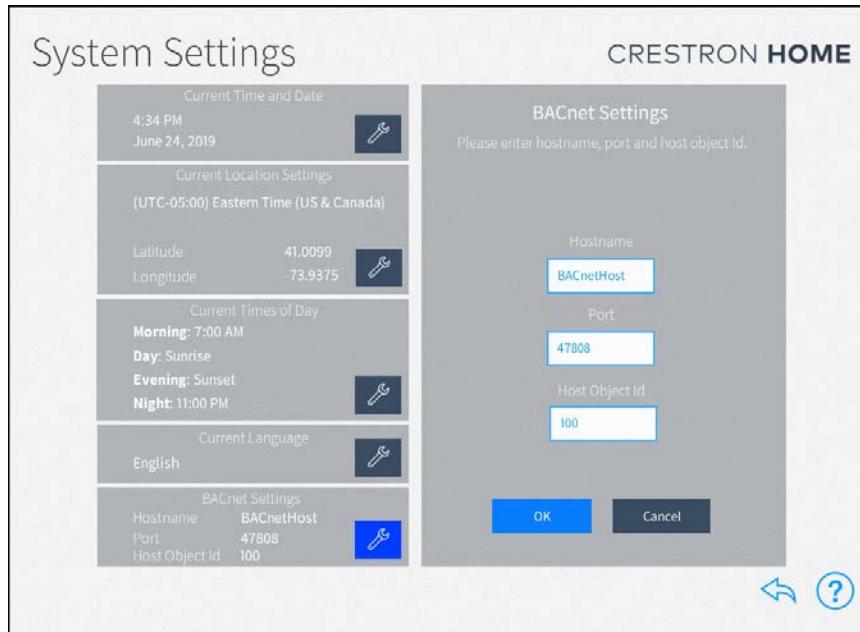
To return to the previous screen, tap the back arrow button .

## BACnet Settings

The **BACnet Settings** screen sets the information that is used for the BACnet.

To set the BACnet settings:

1. Tap the wrench button  next to **BACnet Settings**. The **BACnet Settings** screen displays.



2. Configure the following settings:
  - **Hostname:** Enter the HostName for the BACnet system.
  - **Port:** Enter the port for the BACnet system.
  - **Host Object Id:** Enter the host object id for the BACnet system.
3. Tap **OK** to save any changes. Tap **Cancel** to cancel any changes.

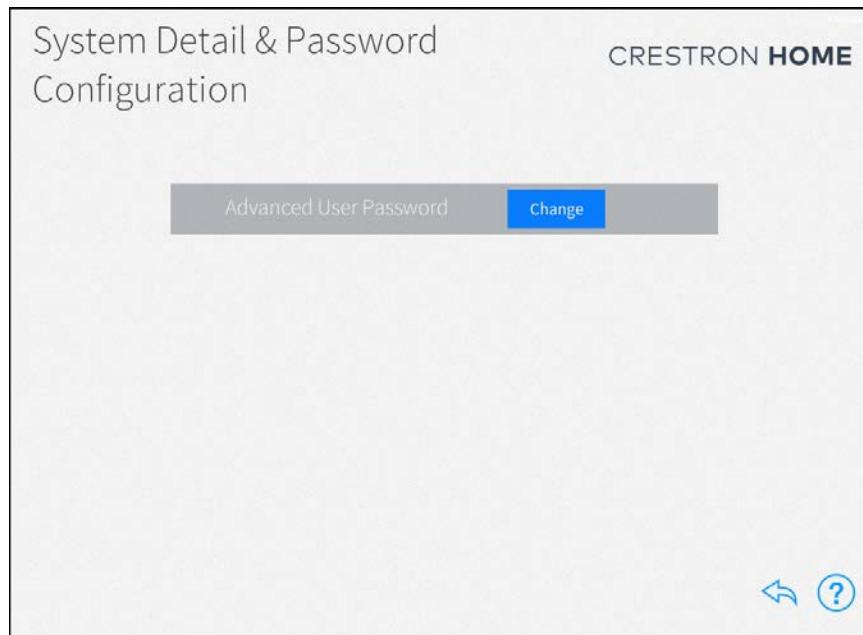
## Password Configuration

Use the **Password Configuration** screen to change the Advanced User password that is required to access the user setup screens.

Tap **System Info & Passwords** on the **User Settings** screen to display the **System Detail & Password Configuration** screen.

To change to change the Advanced User password:

1. Tap the **Change** button.
2. Enter a new password in the pop-up dialog box that is displayed.
3. Tap **OK** to save the password or **Cancel** to discard the changes.



To return to the previous screen, tap the back arrow button .

## Software Update

Use the **Software Update** screen to check for and download software updates for the Crestron Home system and for connected devices. System updates must be initiated manually.

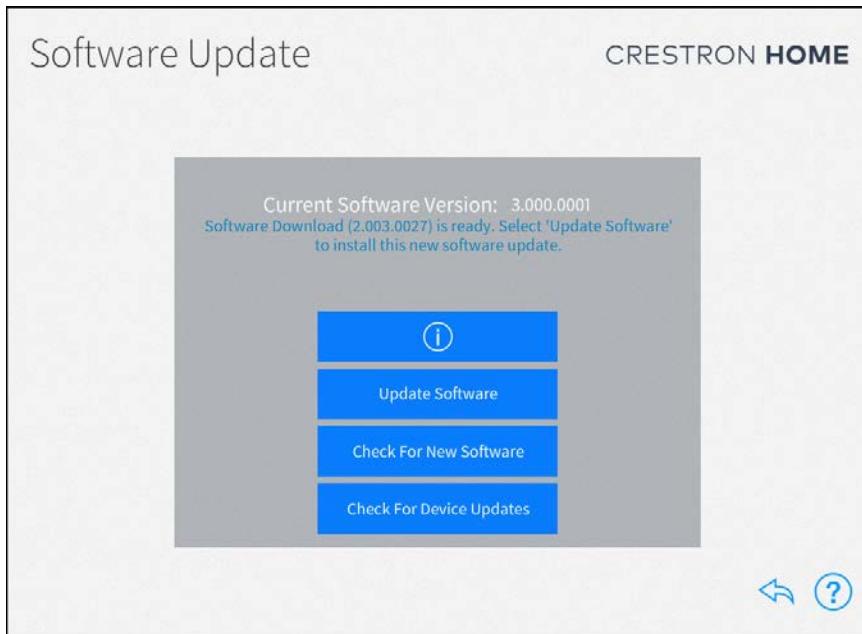
**NOTE:** When a software update is available, a pop-up notification on the user interface and setup pages is displayed. Software downloads may be initiated from this notification or from the **Software Update** screen.

### Update Software

To check for new updates and update the software for Crestron Home system:

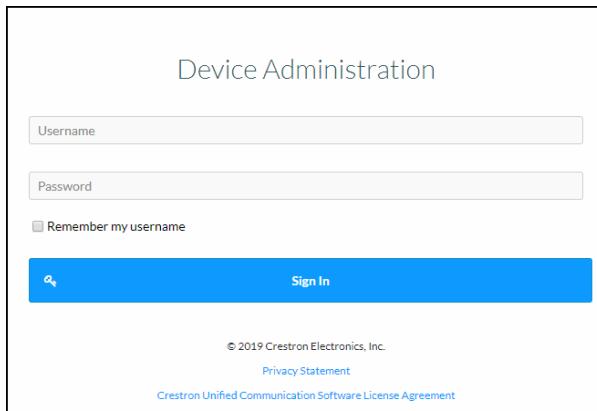
**NOTE:** A software update may take up to 30 minutes to complete, and the CP4-R reboots several times throughout the update process. Therefore, updates should be performed when the system is not in use.

1. Tap **Check for Updates**. The **Software Update** screen displays.



2. Tap **Check for New Software**. The system scans for available software updates and displays the available update.
3. Tap the **i** button to review the software release notes.
4. Tap **Download Update**. A confirmation dialog appears.
5. Tap **Download** to download the update. The CP4-R downloads the latest firmware. The download may take several minutes. The update does not install automatically.

- When the download is complete, tap **Update Software**. A confirmation dialog is shown along with the release notes.
- Tap **Update**. The software begins to update. The CP4-R reboots when the software update is complete.
- CAUTION:** Communication with the CP4-R will be lost several times during the software update. Do not power down the CP4-R during the software update.
- When the CP4-R reboots, enter the Crestron Home Setup app (or open the XPanel using a web browser). The **Device Administration** page displays.



- Enter the username and password and then tap **Sign In**.

#### Check for Device Updates

To scan the devices connected to the Crestron Home system for available updates:

- Tap **Check for Device Updates**. Crestron Home scans the connected devices for available updates. Once the scan is complete, the **Device Firmware Update** screen presents a list of devices with recommended firmware updates.

#### NOTES:

- To rescan the update server for new device firmware updates, tap **Check For Updates**.
- To view release notes for the firmware update, tap the information button ⓘ next to the device.



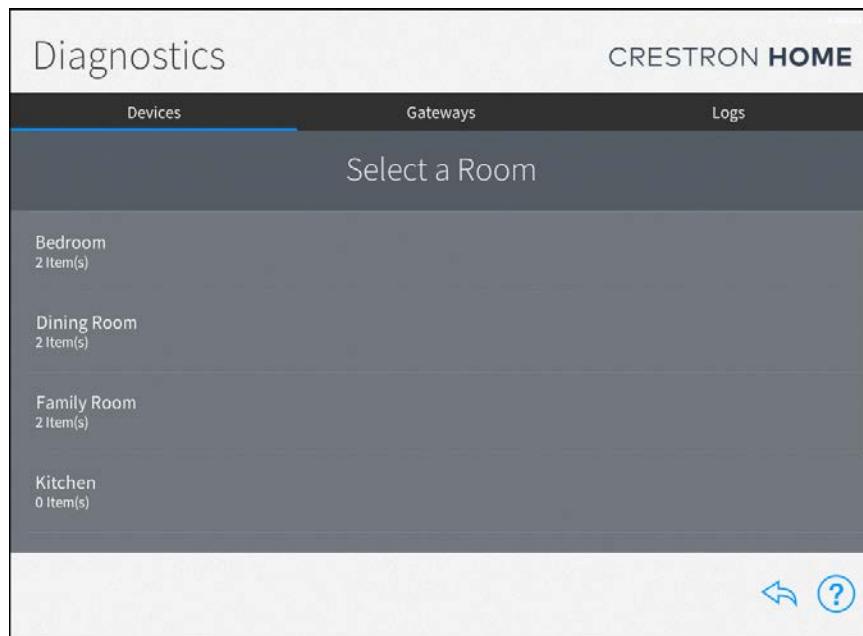
2. Tap the check box next to a device to select the device to receive a firmware update.
3. Tap **Update Selected Devices** to perform firmware updates for the selected devices.

To return to the previous screen, tap the back arrow button .

## Diagnostics

Use the **Diagnostics** screen to troubleshoot devices and gateways connected to the system and to view system message logs.

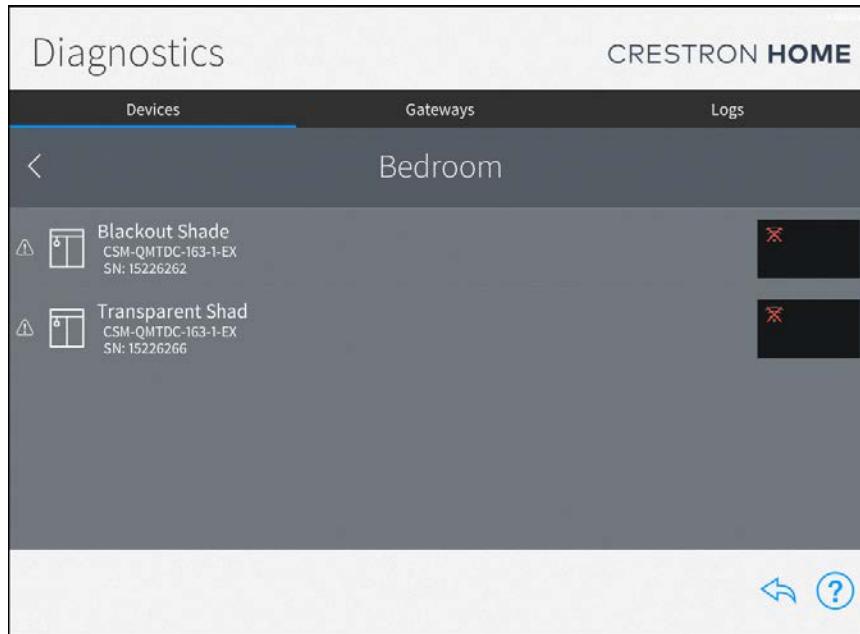
To view the **Diagnostics** screen, tap **Diagnostics** on the **User Settings - System Configuration** screen.



### Devices

Tap the **Devices** tab to view all of the network devices that are paired with the Crestron Home system, organized by room. Each device reports its network status, firmware status, whether it is included in a scene, and whether it is affected by a scheduled event.

Select a room from the list to view the status of the devices configured for the room.



The following status information is provided for each device in the room:

Icon	Description
	The wireless device is online and detected by the system.
	The wired device is online and detected by the system.
	The wireless device is offline or not detected by the system.
	The wired device is offline or not detected by the system.
	A network connection cannot be determined or if the device is being scanned.
	A serial device is functioning and is associated with a COM port in the system.
	A serial device is functioning but is not associated with a COM port.
	An IR device is functioning and is associated with an IR port in the system.
	An IR device is functioning but is not associated with an IR port.
	A CEC device is functioning and is associated with a CEC port in the system.
	A CEC device is functioning but it not associated with a CEC port in the system.
	The device is part of a scene.
	The device is running an outdated firmware version that is not supported by the system.



The device is battery-operated and has low battery power.



The system detects an issue with the device.

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**NOTE:** Devices that are not connected to the network, such as relay-controlled devices and uncontrolled audio sources, do not display any network connection information.

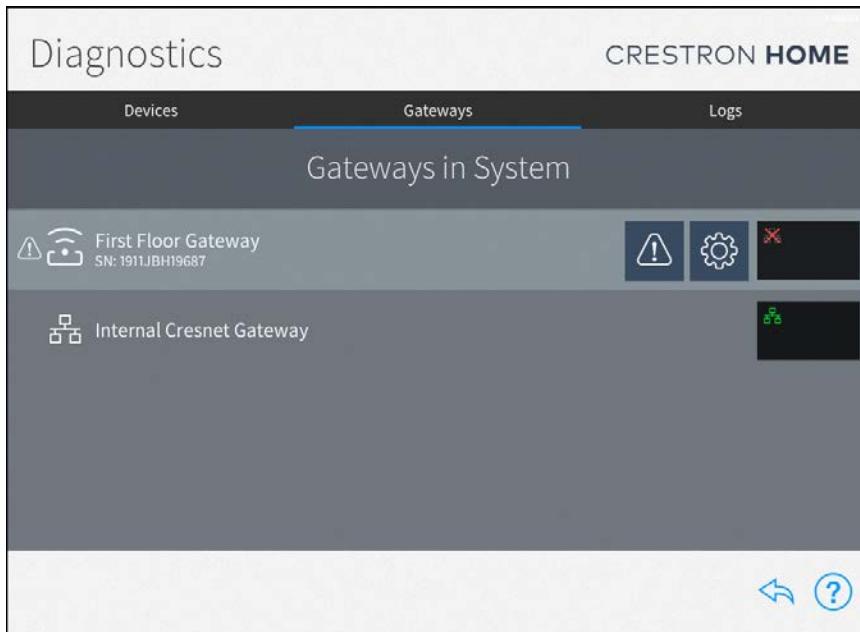
To view and modify device settings, tap the gear button next to the device.

To view the scene(s) that a device is in, tap the scene button next to the device.

To view an issue that is found with a device, tap the warning button next to the device.

## Gateways

Tap the **Gateways** tab to view all of the gateways that are paired with the Crestron Home system. The **Gateways** tab also provides an option for viewing the system of paired Sonos devices. Each gateway reports its network and firmware status.



The following status information is provided for each gateway:

Icon	Description
	The gateway is online and detected by the system.
	The gateway is offline or not detected by the system.
	The gateway is running an outdated firmware version that is not supported by the system.
	The system detects an issue with the gateway

The following additional status information is provided for the **Sonos System** gateway:

**NOTE:** For more information on troubleshooting the Sonos system, refer to "Sonos and Crestron Home Integration" on page 276.

Icon	Description
	The Sonos system has discovered devices from multiple households after a device from one household has been paired.
	The Sonos system is not detected by the Crestron Home system.
	The Sonos system is disabled.
	A paired Sonos device is not detected by the Crestron Home system.

To view and modify device settings, tap the gear button next to the device.

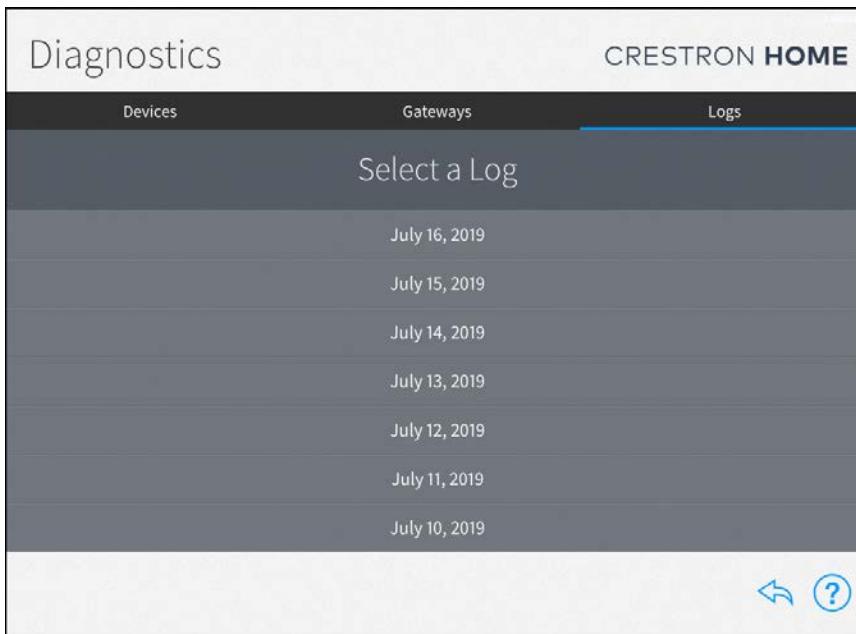
To view and modify gateway settings and to view all devices paired to the gateway, tap the gear button next to a gateway.

If an issue is found with a gateway, tap the warning button next to the device to view more information about the issue.

## Logs

The message logs display all of the actions that have occurred in the Crestron Home system during a specified date and time range.

Tap the **Logs** tab on the top of the screen to view the message logs for the entire system, organized by day and time. Each item in the message log includes a time stamp, a recorded event description, and a message level indicating whether the item is general information or an error.



**NOTE:** An SD card must be loaded into the **MEMORY** slot on the rear of the CP4-R to store log files.

To navigate the message logs:

- Select a date from the **Select a Log** menu.
- Tap the left and right arrow buttons (< and >) at the top of the screen to move forward and backward through logs for each day (starting with the current day).
- Swipe up or down through the list of times on the far left of the screen to view the logs for a specific time range (broken down into one-hour intervals).
- If more than one page of the log is available for the selected time range, use the left and right arrow buttons (< and >) at the bottom of the page to move forward or backward through the log pages.

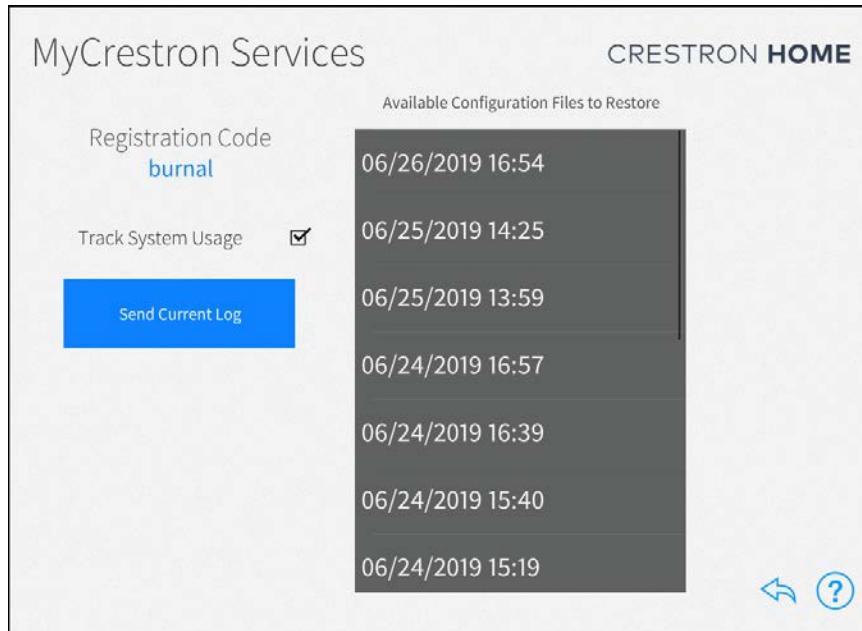
To return to the previous screen, tap the back arrow button .

## MyCrestron Services

Use the **MyCrestron Services** screen to restore saved configuration files and to send message logs to the cloud. A registration code is also provided for registering the Crestron Home system with a MyCrestron account.

For more information on registering the Crestron Home system with a MyCrestron account, refer to "MyCrestron Services" above.

To configure the MyCrestron Services, tap **MyCrestron Monitoring Services** on the **User Settings** screen.



### Track System Usage

Check or uncheck to enable or disable tracking the Crestron Home system usage through MyCrestron.

### Send Current Log

Sends the current message log file to MyCrestron. A dialog is displayed, tap **OK** to send the current message log file or tap **Cancel** to cancel.

#### NOTES:

- A golden configuration is indicated by a star icon next to the configuration in the **Available Configuration Files to Restore** menu.
- The golden configuration will always be available for restore. It will not be deleted from MyCrestron routine backups that are made by the system.

### Restore a Previous System Configuration:

The Crestron Home system records the system configuration settings periodically and saves them in configuration files, which are sorted by time and date. If an issue arises with the system, the system may be restored to an earlier working configuration. Golden Configurations always appear at the top of the **Available Configuration Files to Restore** list.

1. Identify a known working configuration file from the **Available Configuration Files to Restore** menu.

**NOTE:** Golden configurations are indicated by a star icon.

2. Tap the configuration file that you wish to restore. The configuration file begins to download and then installs on the system.

To return to the previous screen, tap the back arrow button .

## Advanced Configuration

The **Advanced Configuration** screen allows the homeowner to make changes to their Crestron Home system. For additional information, refer to "Enduser Configuration" on page 166.

Tap **Advanced Configuration** on the **User Settings** screen to enter the **Advanced Configuration** screen.

**Username:** advanceduser

**Password:** Set by the dealer. Contact your dealer for details.

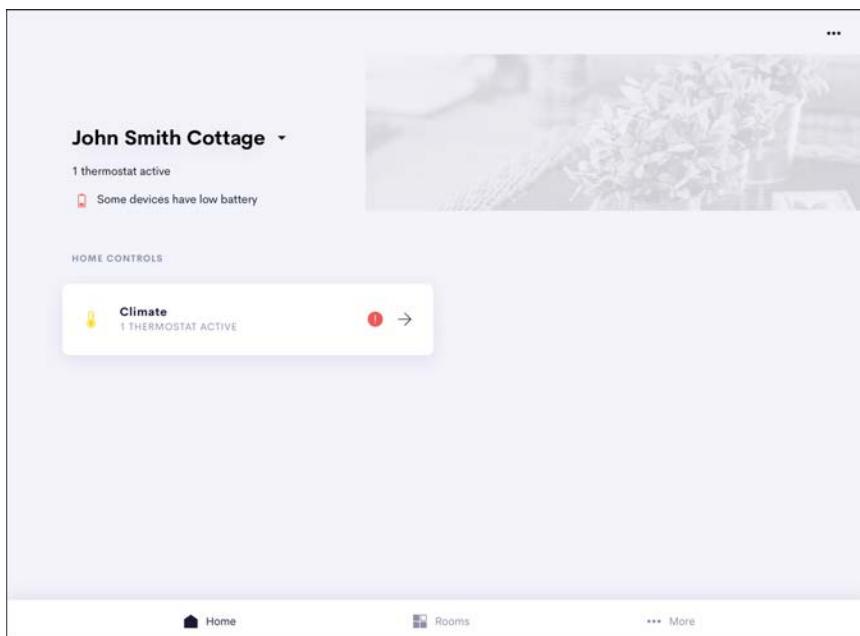
The following settings can be changed:

- **Setup Scenes:** Change the settings for Lighting Scenes, Shade Scenes, Media Scenes, and Climate Scenes. "Setup Scenes" on page 167
- **System Scheduling:** Create, edit, and delete scheduled events. Refer to "System Scheduling" on page 185 for details.
- **Climate Scheduling:** Create, edit, and delete climate events. Refer to "Climate Scheduling" on page 187 for details.

# Crestron Home OS 3 User Interface

The user interface for the Crestron Home system is populated based on the configuration of the Crestron Home system. The Crestron Home interface is comprised of three main tabs: **Home**, **Rooms**, and **More**.

- **Home:** Provides control to the entire home, the
- **Rooms:** Provides room specific control. The
- **More:** Provides information about the Crestron Home system and also additional functions available.

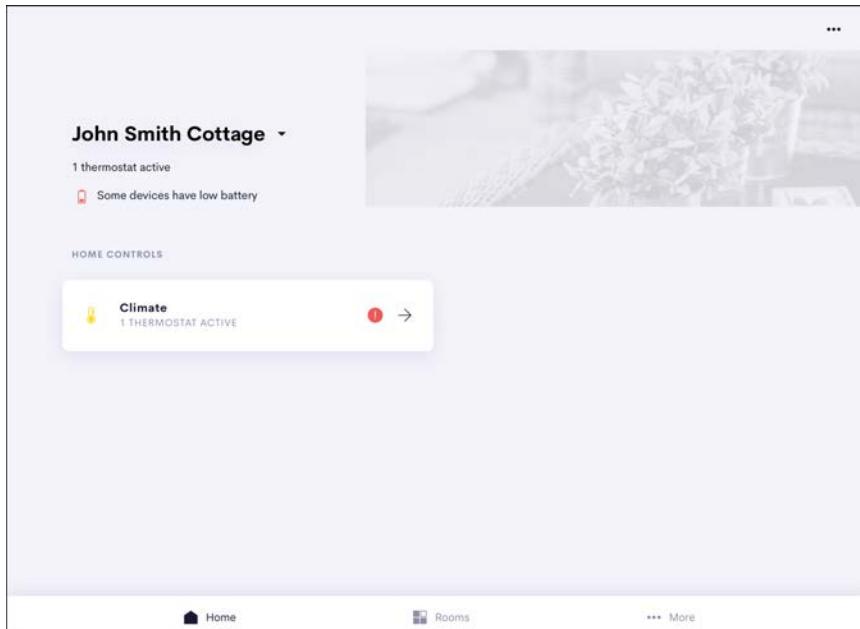


## Home Screen

The Home screen allows you to view and control your Crestron Home system. It displays the name of the home, the status of the security system, window and door sensors, temperature, lights, and more.

Perform Quick Actions, which are similar to shortcuts, to execute a scene with one tap. Swipe up to see every system that is available to you in your Crestron Home.

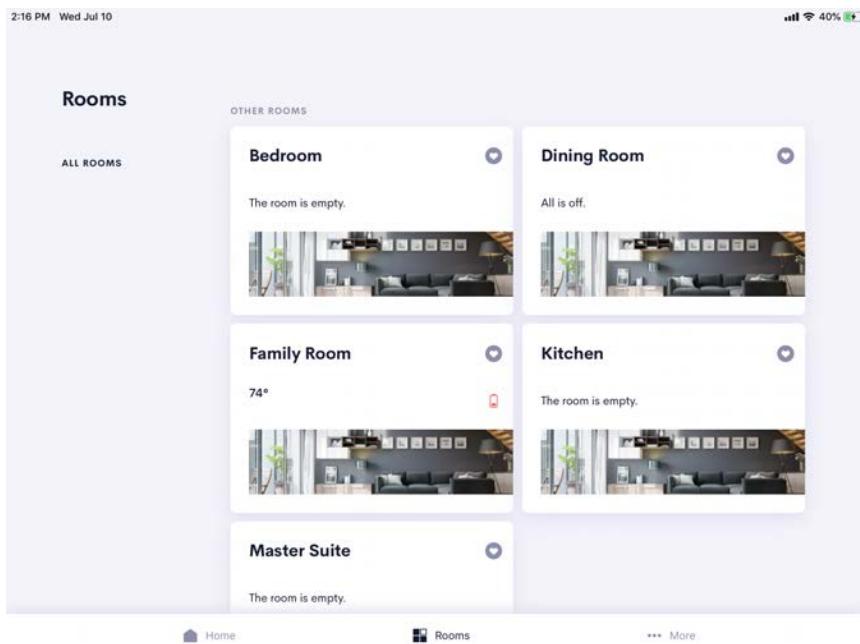
Tap the menu button  to show the collapsible side menu.



## Rooms Screen

The Rooms screen allows you to view and control your Crestron Home. It displays the name of the rooms in the home and key information about each room, such as the temperature, if music is playing or the television is on, the status of the shades, and more.

Swipe up to see all rooms in your Crestron Home.



## Favorites

Tap to select a room as a favorite. The Favorite rooms display at the top of the list. Each user interface device can have its own favorites.

## Room View

The Room View allows you to see every action that you can take in each room.

### Activate Quick Actions

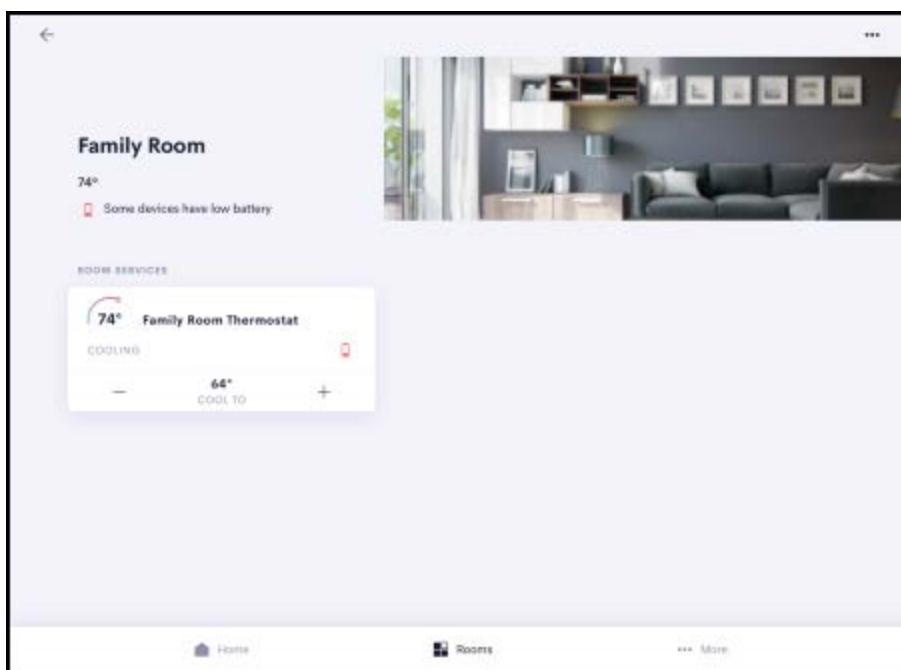
Tap a Quick Action to activate the quick action. A check mark indicates that the Quick Action is active. A Quick Action performs several actions to your room at the same time. For example, activating the Movies Quick Action may turn on the TV and Blu-Ray player, lowers the lights near the TV, and lower the shades in the room.

**NOTE:** Quick Actions are customized by your Crestron Home installer. The functionality are custom to the devices in the room, house, and your preferences.

## Control Room Devices

Control individual room devices in the Room Services section. Here you can control the lights, temperature, shades, and more independently of the Quick Action. For example, if you activated the Movies Quick Action and you would like to turn up the lights, use the Room Services controls to change only the lights.

Scroll up to view all of the Room Services that are available.



## More Screen

Tap More for information about your Crestron Home system, additional room and home device control, and to contact Crestron customer support.

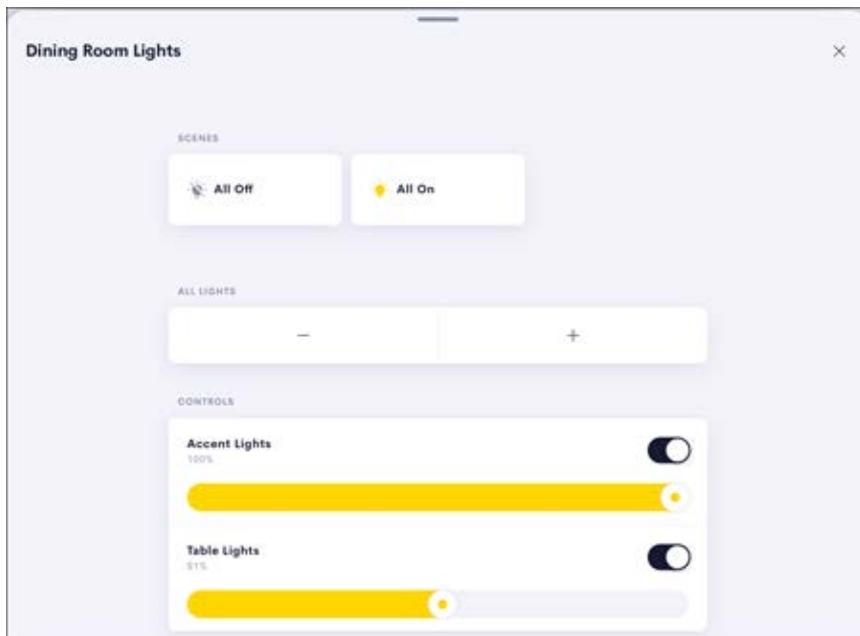
## Lights Screen

Use the Lights screen to select and play any lighting scene or load in the Crestron Home system.

### Scenes

Tap any of the available Lighting Scenes to activate them.

**NOTE:** Scenes are customized by your Crestron Home installer. The functionality are custom to the devices in the room, house, and your preferences.



### All Lights

Control All lights in the room using the + or - buttons.

### Controls

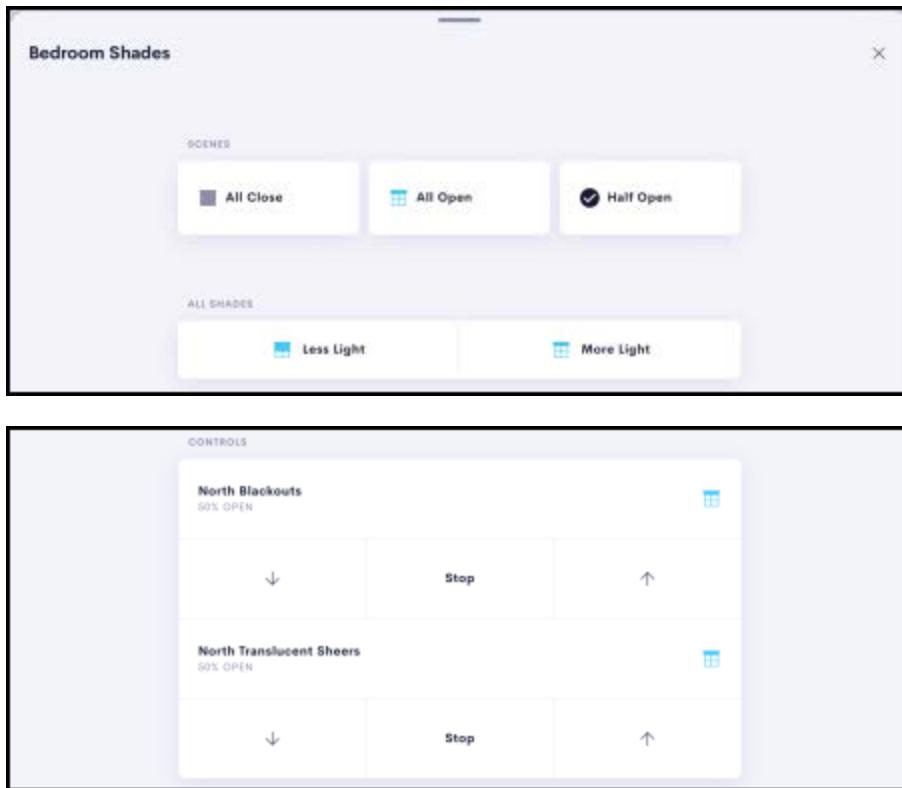
Control individual lights in the room. Tap the toggle switch to turn the lights on and off. Drag the sliders left or right to adjust the lighting level in the room.

## Shades Screen

### Scenes

Tap any of the available Shade Scenes to activate them.

**NOTE:** Scenes are customized by your Crestron Home installer. Scene functionality is customized according to the devices in the room, house, and your preferences.



### All Shades

Control all shades and drapes in the room using the Less Light or More Light buttons.

- **Less Light:** Lower the shades; close the drapes
- **More Light:** Raise the shades; open the drapes

### Controls

Control individual shades and drapes in the room. Tap the up or down arrow to raise or lower the shade or open or close the drape. Tap the **Stop** button to stop the shade or drape.

**NOTE:** Crestron horizontal sheer shades have additional controls to adjust the tilt of the hembar and allow more or less light into the room.

## Climate Screen

Set the temperature throughout the house, or a different temperature in every room. Tap the Climate button on the Home screen or a Room screen, the Climate screen displays showing the thermostats available in all rooms in the Crestron Home. Control the temperature in all rooms using the convenient control buttons.

Tap a room tile for information on the climate in that room.



### Change the Setpoint

Slide the circular temperature gauge, or tap the + and - buttons, to change the temperature setpoint.

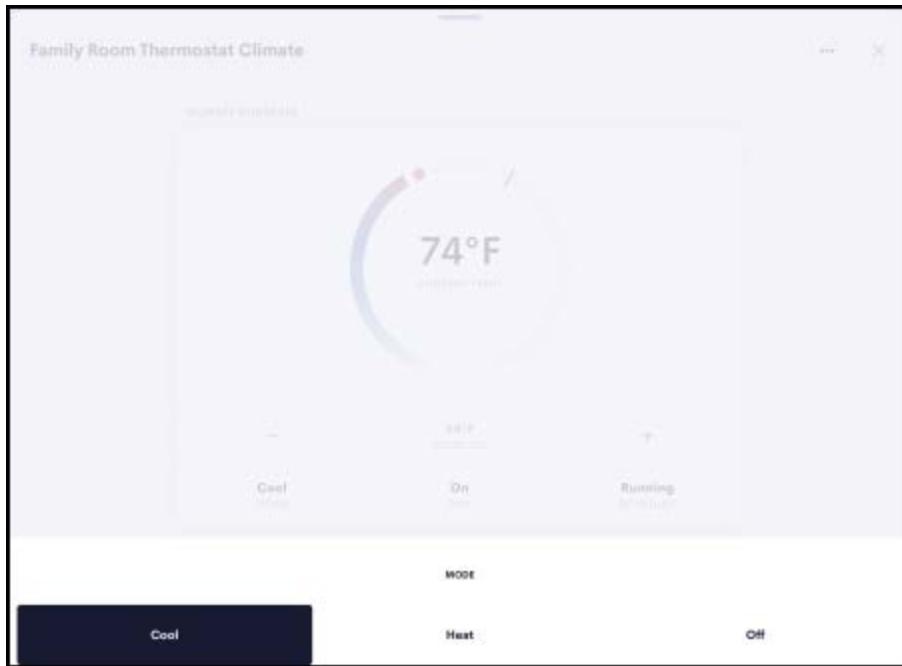
### Change the Operating Mode

The operating mode of the thermostat may be changed.

**NOTE:** The configurable settings may vary depending on the thermostat functionality. For more information, refer to the thermostat documentation.

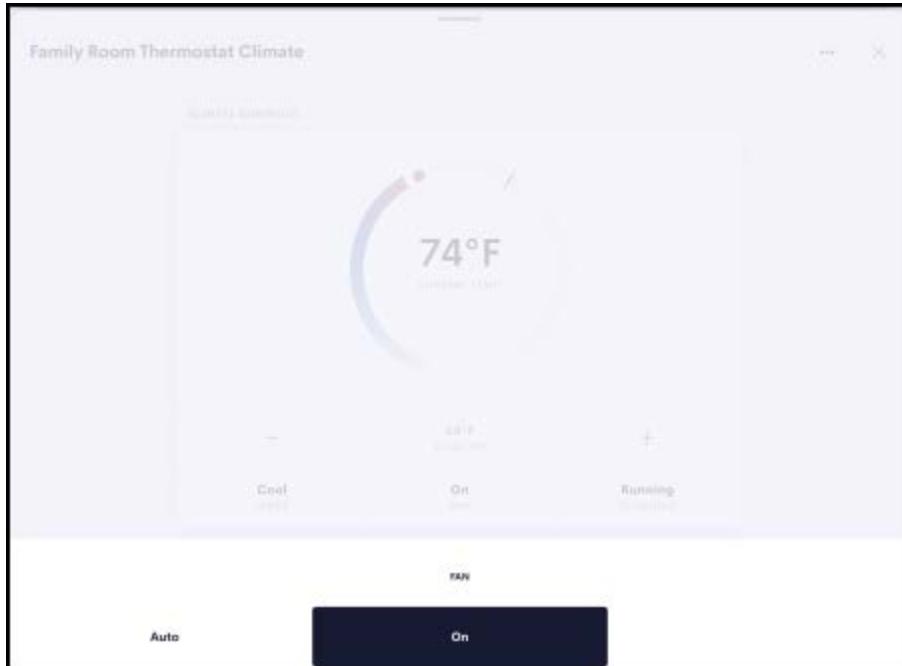
#### Mode

Tap **Mode** to switch the operating mode between **Off**, **Cool**, and **Heat**.



- **Off:** Turn the thermostat off
- **Cool:** Turn cooling mode on.
- **Heat:** Turn heating mode on.

Tap **Fan** to switch the fan between **Auto** and **On**.



- **Auto:** The scene runs the fan automatically.
- **On:** The scene turn the fan on.

Tap **Schedule** to switch the schedule between **Run** and **Hold**.



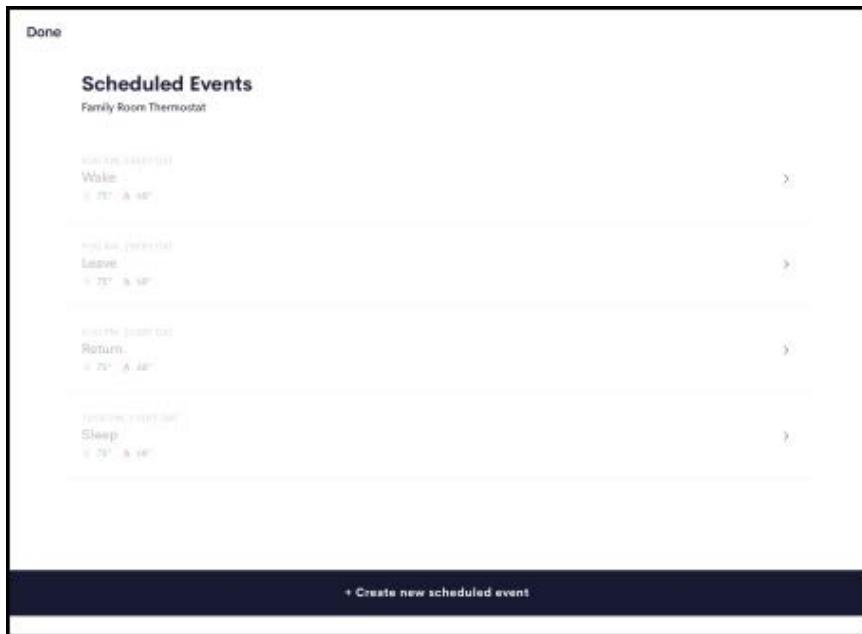
- **Run:** Starts the thermostat schedule.
- **Hold:** Stops the thermostat schedule.

## Create a Scheduled Climate Event

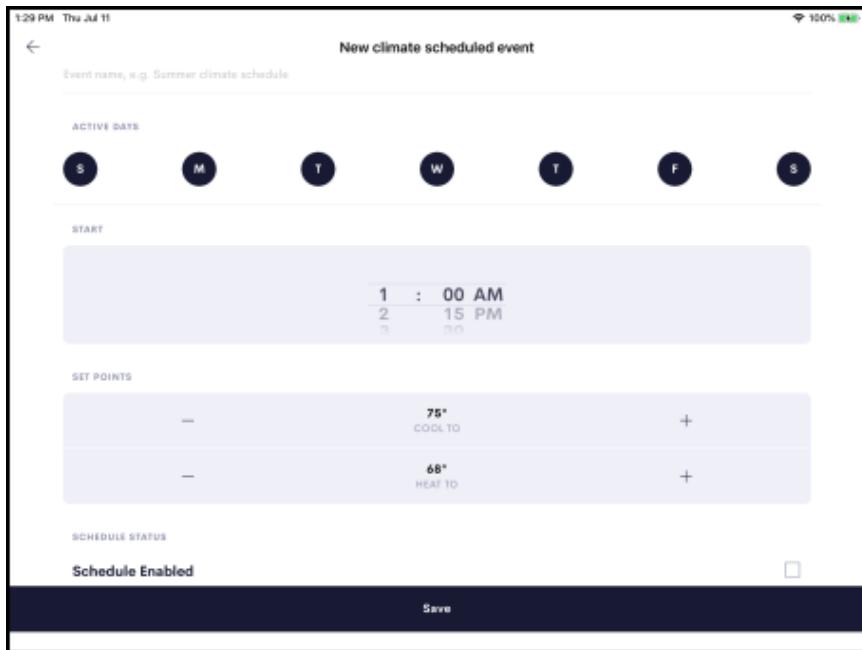
To create a new climate event in user control mode:

1. Select a thermostat from the drop-down menu on the top left of the screen.
2. Tap the menu button **...** on the top right of the screen.

3. Tap **Scheduled Events**. The **Scheduled Events** screen for the thermostat is displayed.



4. Tap **+ Create new scheduled event**. The **New climate scheduled event** screen is displayed.



5. Configure the following settings for the climate event:

- Use the text box at the top of the screen to edit the name for the climate event.
- **Start:** Set the time that the climate event should occur using the provided spinner menus.
- **Active Days:** Tap the appropriate day of the week to select the days that the climate event should occur. A filled icon indicates that the event is scheduled to occur on the associated day.
- **Set Points:** Select the temperature set points for cooling , heating , and auto  modes using the appropriate spinner menu.

**NOTE:** Depending on the selected mode, the thermostat switches to cooling mode when the room temperature reaches the cooling set point, switches to heating mode when the room temperature reaches the heating set point, or maintains the auto mode set point.

- **Event Status:** Tap the check box to enable the event and add it to the thermostat schedule. New events are disabled by default.

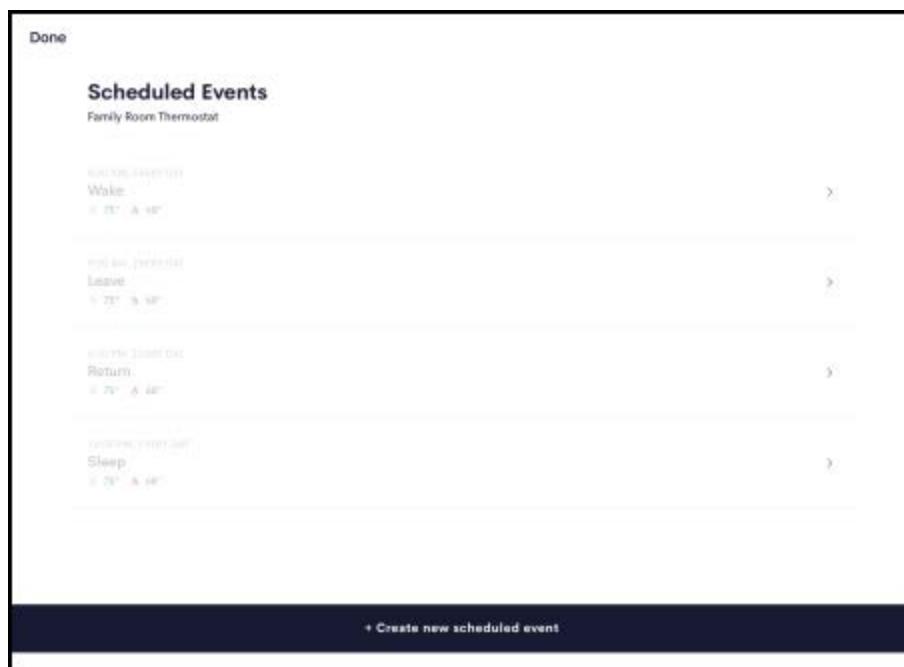
6. Tap **Save** to save the climate event or tap the back button to cancel creating the event.

## Edit a Scheduled Climate Event

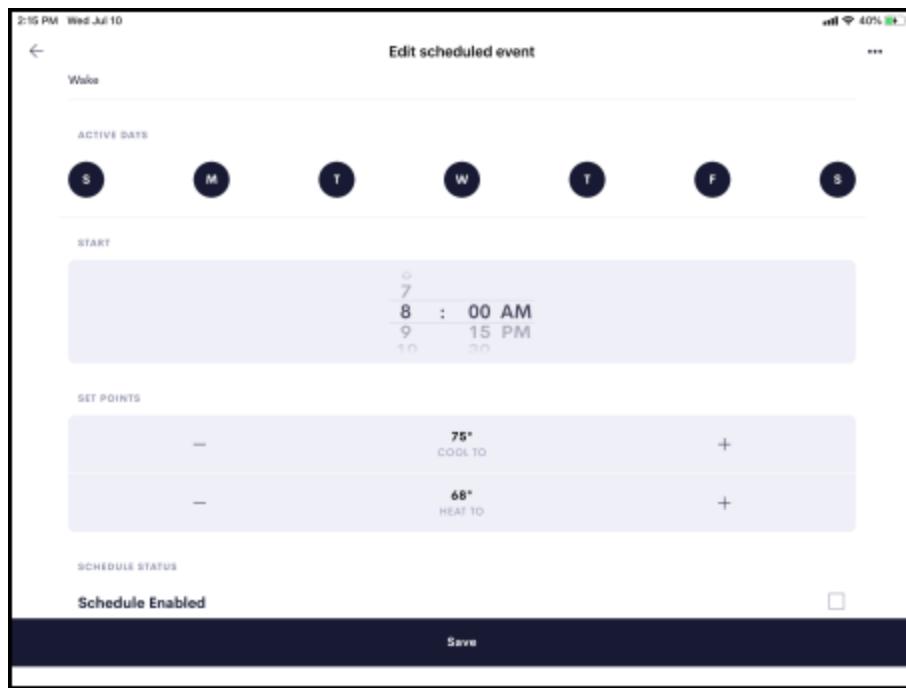
To edit an existing climate event:

1. Select a thermostat from room.
2. Tap the menu button  on the top right of the screen.
3. Tap **Scheduled Events**. The **Scheduled Events** screen for the thermostat is displayed. The **Scheduled Events** screen lists the thermostat events that have been created for the thermostat. Each thermostat event provides the time and days that it is scheduled to occur, as well as its cooling and heating set points.

### Schedules Screen - Climate



4. Tap the event to edit the thermostat behavior for the climate event.



5. Configure the following settings for the climate event:

- Use the text box at the top of the screen to edit the name for the climate event.
- **Start:** Set the time that the climate event should occur using the provided spinner menus.
- **Active Days:** Tap the appropriate day of the week to select the days that the climate event should occur. A filled icon indicates that the event is scheduled to occur on the associated day.
- **Set Points:** Select the temperature set points for cooling (blue snowflake), heating (red flame), and auto (green fan) modes using the appropriate spinner menu.

**NOTE:** Depending on the selected mode, the thermostat switches to cooling mode when the room temperature reaches the cooling set point, switches to heating mode when the room temperature reaches the heating set point, or maintains the auto mode set point.

- **Event Status:** Tap the check box to enable the event and add it to the thermostat schedule. New events are disabled by default.

6. Tap **Save** to save the climate event or tap the back button to cancel creating the event.

## Copy a Scheduled Climate Event to Another Thermostat

Scheduled climate events can be transferred between thermostats in the system.

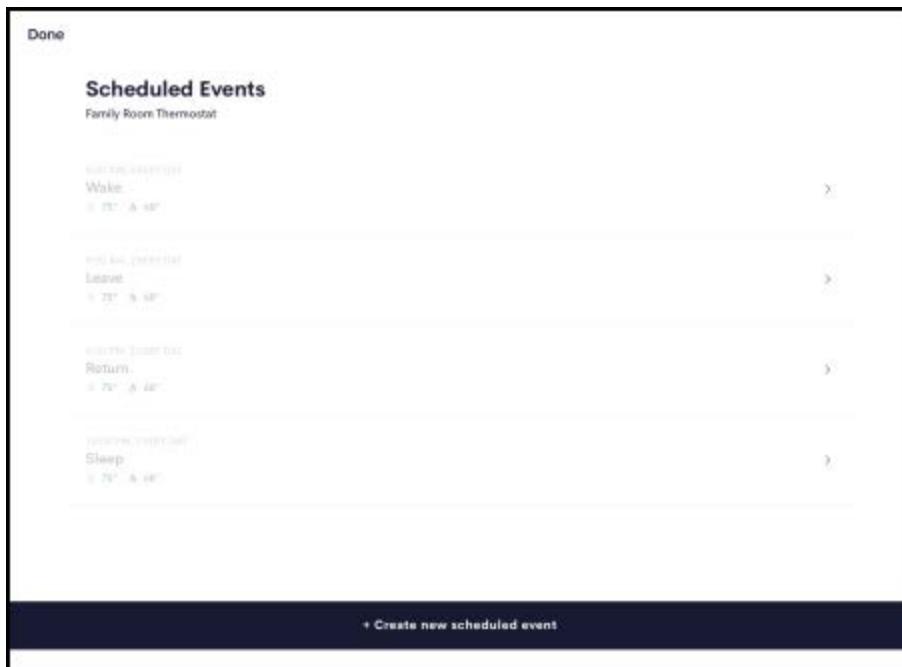
To copy a scheduled climate event to another thermostat:

1. Select a thermostat.
2. Tap the menu button  on the top right of the screen.
3. Select a scheduled event.
4. Tap the  icon and then **Copy Event**.
5. Tap **Copy to Another Thermostat**. A dialog shows the available thermostats in the system.
6. Select the desired thermostat and then tap **Apply Copy**. A dialog indicates that the scheduled event has been successfully copied to the new thermostat.

## Delete a Climate Event

To delete a climate event:

1. Select a thermostat from room.
2. Tap the menu button  on the top right of the screen.
3. Tap **Scheduled Events**. The **Scheduled Events** screen for the thermostat is displayed. The **Scheduled Events** screen lists the thermostat events that have been created for the thermostat. Each thermostat event provides the time and days that it is scheduled to occur, as well as its cooling and heating set points.



4. Tap the  icon and then **Delete** to delete the climate event.

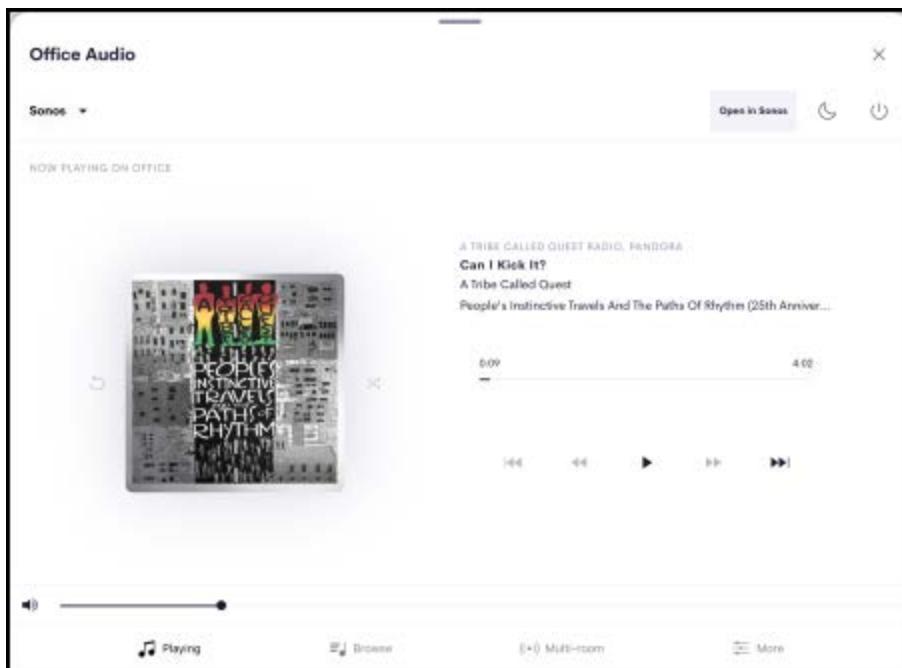
Tap the back arrow button  to return to the climate screen.

## Media Screen

### Audio

Play your favorite music throughout the house, or different music in every room. Tap the Audio button on the Home screen or a Room screen, the Active media screen displays the audio playing in all rooms in the Crestron Home. Control the music in all rooms using the play, pause, previous/rewind, and skip/fast forward buttons.

Tap a room tile for information on audio in that room.



**NOTE:** When connecting to the system from outside the home network, users can select audio sources. Users will not be able to browse provider content such as songs or playlists.

### Change Audio Source

Tap the down arrow to select an audio source. The list of available audio sources is displayed.

#### [Go to App](#)

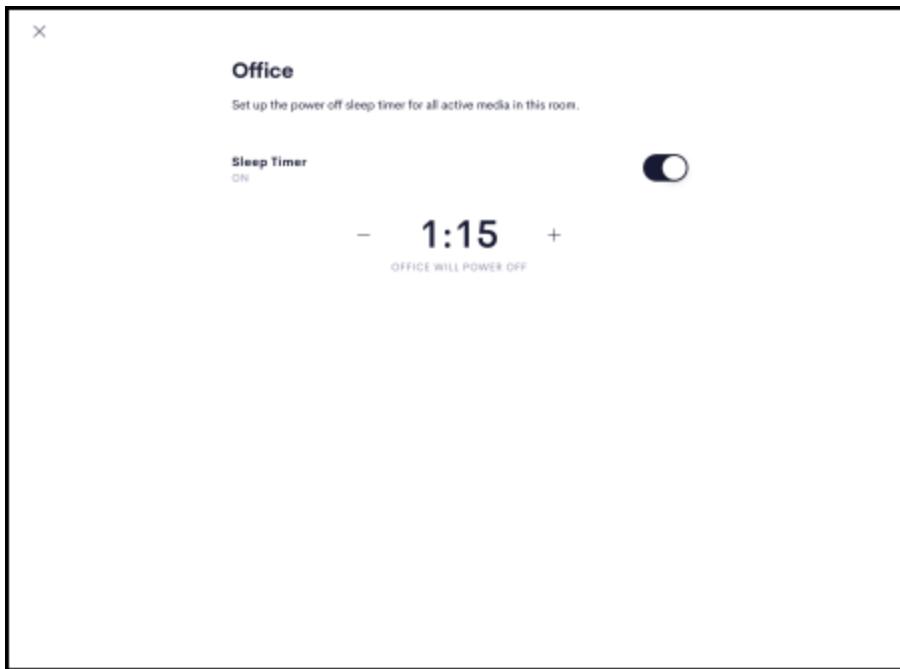
If available, tap to open the music app.

## Sleep Timer

Set a sleep timer so that the music turns off automatically.

Tap the sleep button  at the top right of the screen to display the sleep timer menu.

- Tap the toggle switch next to **Sleep Timer** to enable or disable the sleep timer.
- If **Sleep Timer** is enabled, tap the minus (-) or plus (+) buttons to set the duration of the sleep timer.



## Power Off

Tap the power button  to stop the music. The audio sources and associated hardware turn off.

**NOTE:** If audio and video is playing in the same room (audio breakaway mode), pressing room power off will turn off both video and audio sources.

## Audio Control

Perform standard music controls using the play, pause, stop, previous/rewind, skip/fast forward, shuffle, and repeat buttons.

Use the slider to control the volume. Tap the speaker button to mute or unmute the audio.

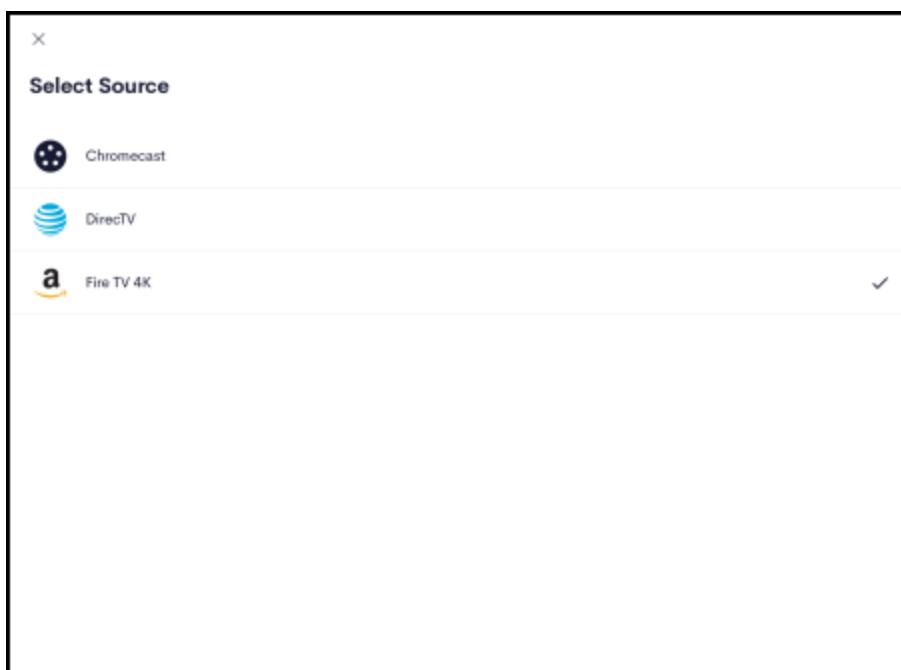
## Video

Enjoy your favorite entertainment in every room. Tap the Video button on the Home screen or a Room screen, the Active media screen displays showing the video playing in all rooms in the Crestron Home. Control the video in all rooms using the play, pause, previous/rewind, and skip/fast forward buttons.

Tap a room tile for information on video in that room.

### Change Video Source

Tap the down arrow to select an video source. The list of available video sources is displayed.



### Go to App

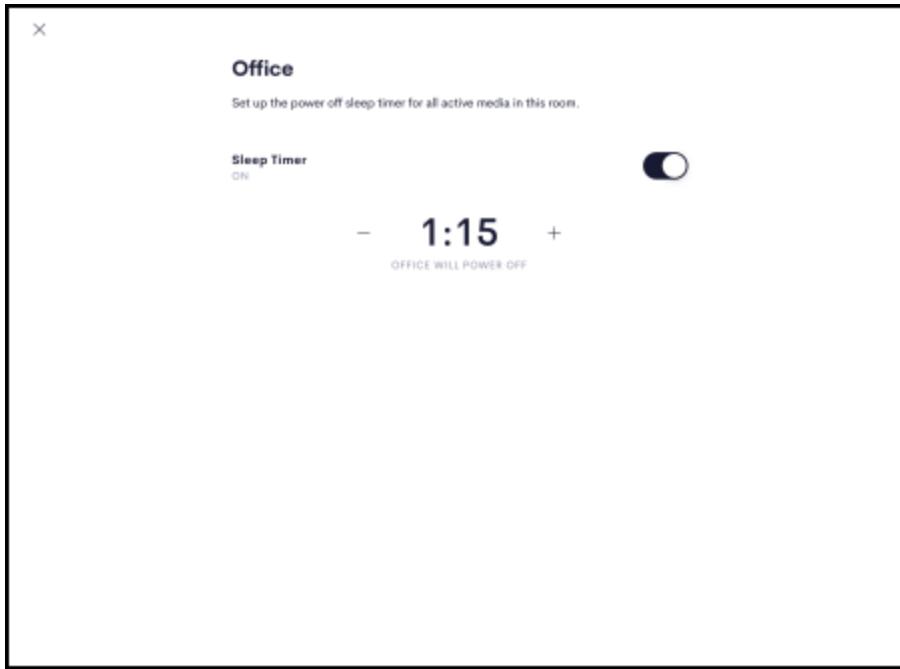
If available, tap to open the video app.

## Sleep Timer

Set a sleep timer so that the video turns off automatically.

Tap the sleep button  at the top right of the screen to display the sleep timer menu.

- Tap the toggle switch next to **Sleep Timer** to enable or disable the sleep timer.
- If **Sleep Timer** is enabled, tap the minus (-) or plus (+) buttons to set the duration of the sleep timer.



## Power Off

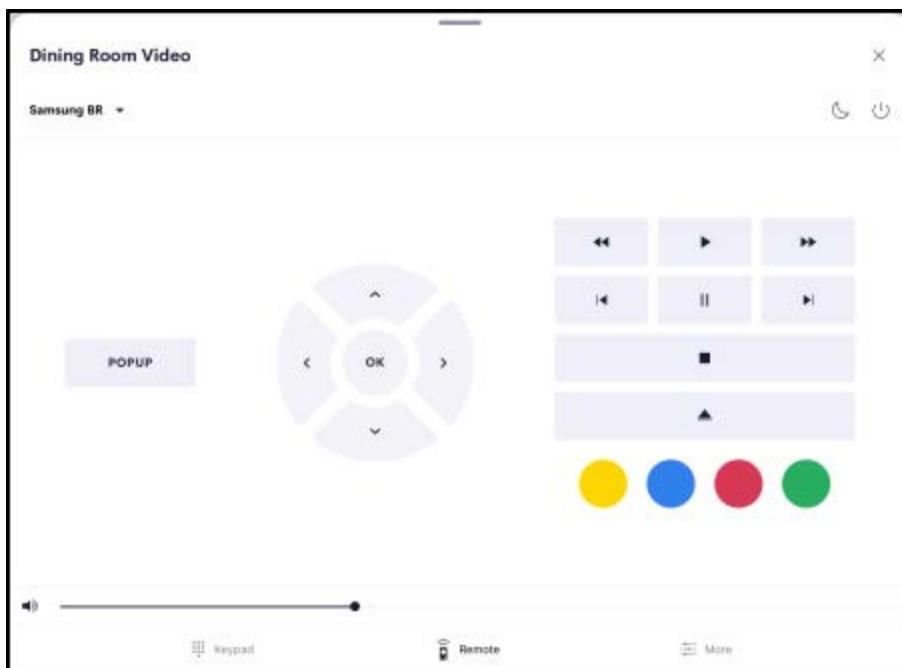
Tap the power button  to stop the video. The video sources and associated hardware turn off.

**NOTE:** If audio and video is playing in the same room (audio breakaway mode), pressing room power off will turn off both video and audio sources.

## Controls

Perform standard video controls using the play, pause, stop, previous/rewind, skip/fast forward, shuffle, and repeat buttons. The controls function like the remote that came with your TV, Roku, DirecTV, Amazon Fire TV, etc.

Use the slider to control the volume. Tap the speaker button to mute or unmute the audio.



## Play Audio in Multiple Rooms

Listen to the same music in more than one room in your house by creating a room group. All rooms in the media group display their audio sources in the Select Source menu. Room groups work alongside Sonos device groups to synchronize audio output across rooms.

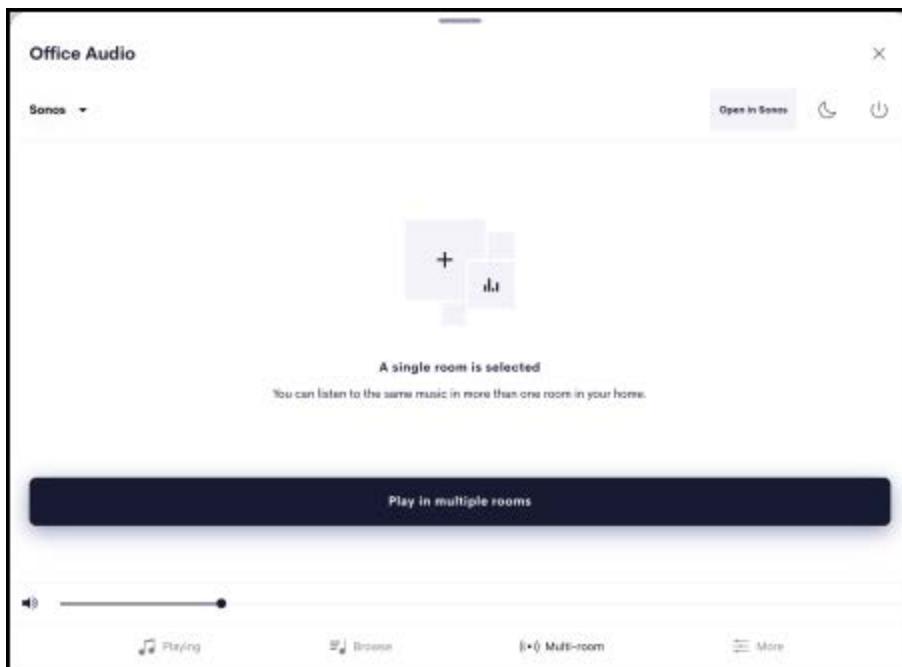
### NOTE:

- When creating a room group with rooms that have audio or video playing in the rooms, note the following:
  - If the room creating the group is playing a video source, the video source is turned off.
  - If the room creating the group is playing an audio source, the audio source is played in all rooms.
  - If the rooms added to the group are playing an audio or video source, the audio or video source is turned off.
- Crestron recommends placing no more than 8 media rooms in one group for optimal performance. However, the Sonos app allows for more than 8 Sonos devices to be grouped together, which may cause inconsistencies between the Sonos app and the Crestron Home user interface.

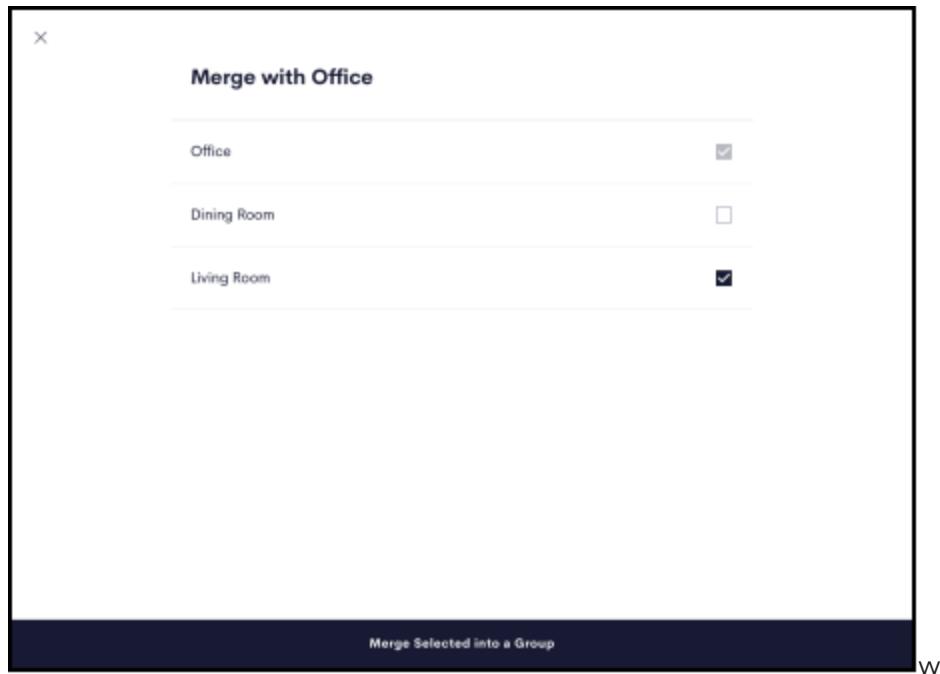
### Create a Room Group

To create a room group:

1. Press the Multi-room button to display a menu for grouping media rooms.



2. Tap **Play in multiple rooms**. The rooms in the home are displayed.



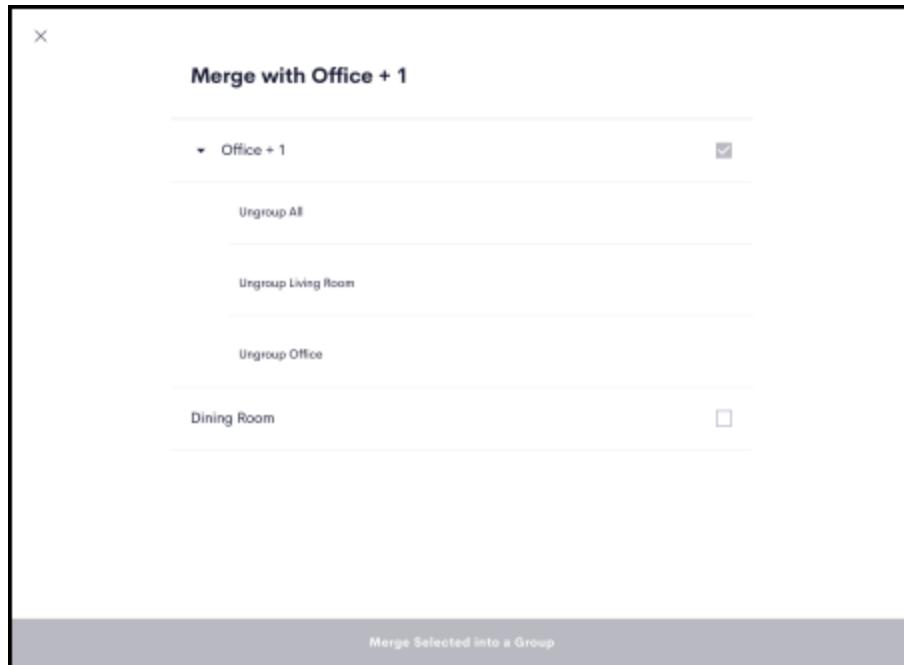
3. Tap the check box next to a room to add it to the group.
4. When all of the rooms are selected, tap **Merge Selected into a Group** to save the group. The source selection screen updates to show the rooms as grouped.

## Add or Remove Rooms from a Room Group

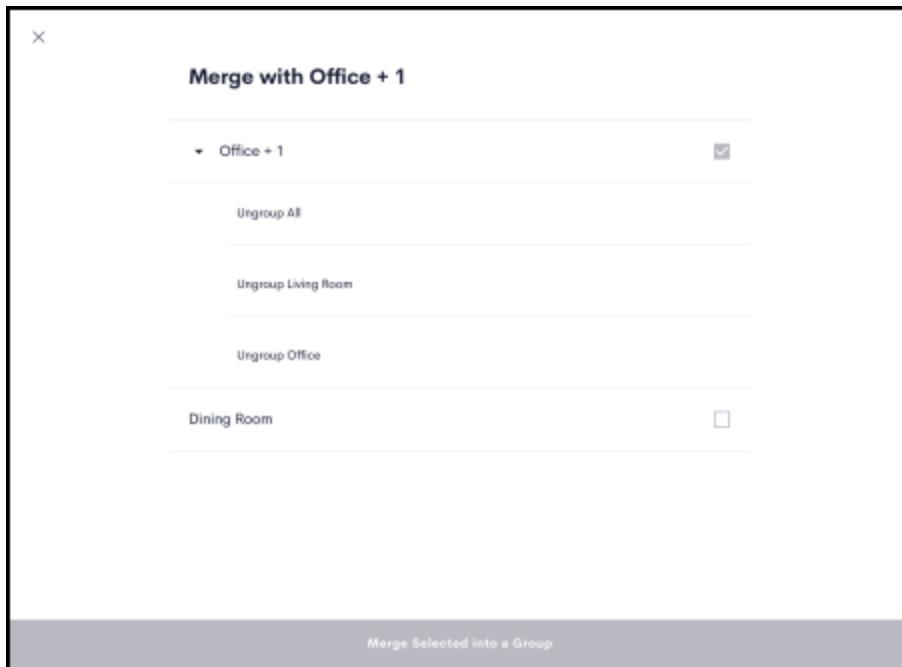
After a room group is created, rooms can be added to a room group, removed from a room group, and room groups can be deleted.

To manage room groups:

1. Press the Multi-room button to display the menu for grouping media rooms.



2. Tap **Manage Rooms and Groups**. The grouped rooms are displayed with options to change the grouping.



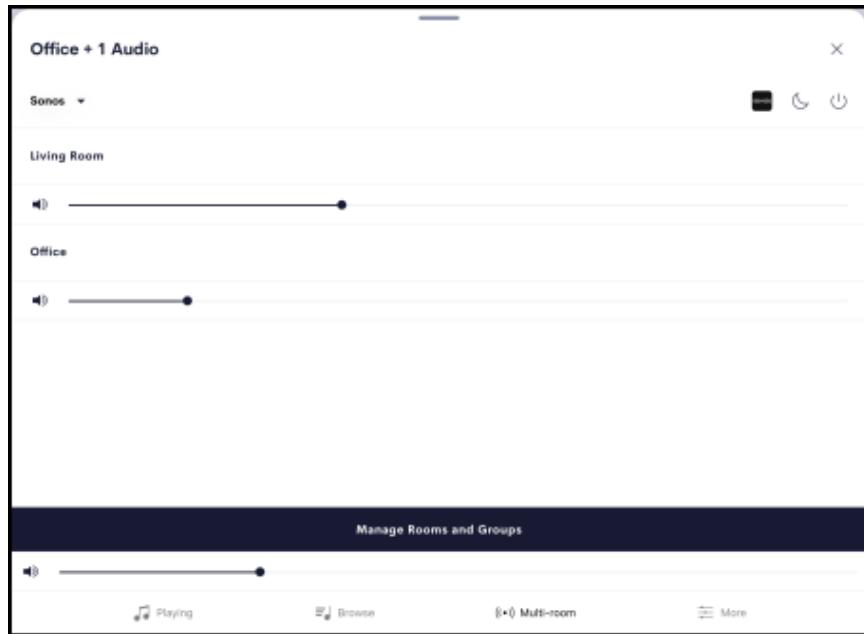
- To remove a room from a room group or to remove a room group:
  - **Ungroup All:** Removes all rooms from the room group. The room group is removed.
  - **Ungroup [Room Name]:** Removes the room from the room group.
- To add a room to a room group
  - I. Tap the check box next to a room to add it to the group.
  - II. Tap **Merge Selected into a Group** to group the selected rooms

## Room Group Volume Control

**NOTE:** In order for volume management controls to display on the source selection page, the chosen media room must be powered on. For more information, refer to "Media Screen" on page 224.

To change the volume for all rooms in a room group:

1. Press the Multi-room button to display the **Volume Manager** menu. The **Volume Manager** menu provides settings for managing the volume for all media sources within a room or all of the rooms within a group.



2. The following options are provided for each source or room
  - Tap the volume button to mute or unmute the volume for the source or room.
  - Use the slider to adjust the volume level for the source or room.

#### About Sonos Room Groups

Observe the following points about media groups and Sonos device groups:

#### Group Creation

- All compatible endpoint devices that may be grouped (such as a Sonos PLAYBAR) are grouped immediately at the device level.
  - When compatible endpoints and sources are available in the same room, only source devices show as available.
  - A Sonos endpoint (PLAYBAR) may be added to a device group in the Sonos app, but it is ignored by the Crestron Home media system.
- All compatible endpoint devices have their sources displayed as one. For example, all Sonos speakers are displayed as one source named "Sonos."
- Source devices that are added as individual sources and later grouped are displayed alone. For example, a Sonos CONNECT device added as an individual source is displayed alone with the name set for it in the Sonos app.
- Media group names do not always match the device group names set in the Sonos app.

## Device-Grouped Source Routes

- All compatible Sonos devices that may be grouped and that are required to complete the routes to all rooms in the group are added to the appropriate device group.
  - If a speaker's "Sonos" source is routed, but a room only allows routing from a Sonos CONNECT, the CONNECT is added to the Sonos group so that it plays audio in sync with the routed Sonos speakers.
  - If an individual Sonos CONNECT is routed, it is always added to the group of Sonos speakers (if any exist).
  - If an individual Sonos CONNECT is routed, but other rooms only allow routing from other Sonos CONNECT devices, those CONNECT devices are grouped together.
- All Source devices that may be grouped but are no longer routed anywhere are removed from the device group.

## Non-Device-Grouped Source Routes

- All source devices that may be grouped are removed from the group.
- Group power off shares this behavior.

## Group Modification

- Any rooms added to a media group abide by the behavior listed under the Group Creation bullet on the previous page. If a group source exists, the added rooms have the source routed to them using the source routing behavior described above.
- If any rooms removed from the media group, the compatible endpoint devices from that room are removed from the device group.
- All Source devices that may be grouped but are no longer available to the group or routed anywhere are removed from the device group.

## Group Deletion

All source devices and endpoint devices in the grouped rooms are ungrouped after a deletion.

## Grouping via a Third-Party App (Sonos)

- When endpoint devices are grouped for the first time, a new media group is created with the rooms that contain the endpoints.
- When endpoint devices are added to an existing device group, the room containing the endpoints is added to the corresponding media group.
- When source devices are grouped, the Crestron Home media subsystem does nothing.
- When source devices are ungrouped, the Crestron Home media subsystem turns off the rooms that use the source devices. However, these rooms are not removed from the media group.

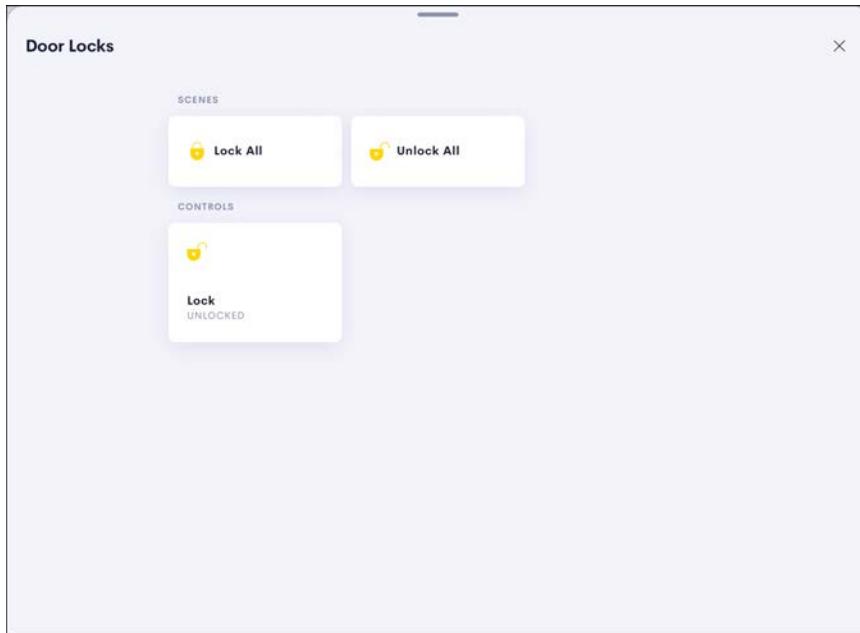
## Locks Screen

### Scenes

Tap **Lock All** to lock all of the locks in the house or **Unlock All** to unlock all of the locks in the house.

### Control

Tap the **Lock** or **Unlock** button to lock or unlock the lock in the room.



## Security Screen

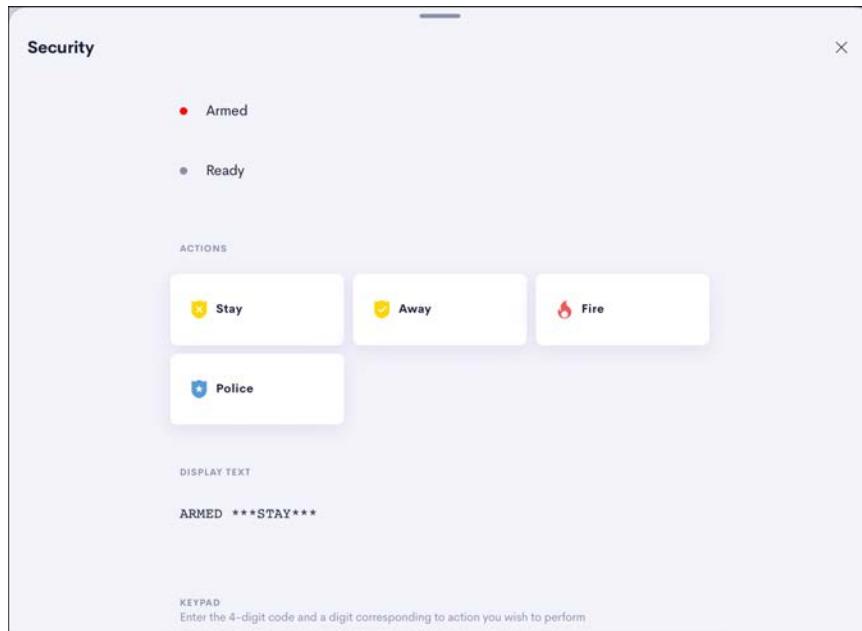
The status of the security system is displayed at the top of the screen.

### Actions

To initiate an action, tap and hold an **ACTIONS** button until the button icon updates.

### Keypad

Use the keypad to enter the code for arming and disarming the security system.



## Cameras Screen

### NOTES:

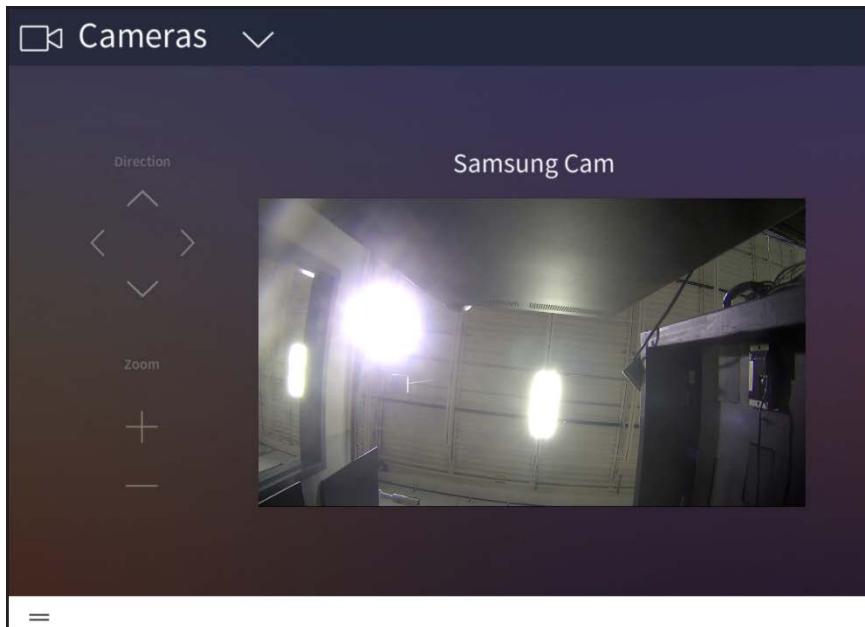
- Viewing and controlling cameras is not currently supported in Crestron Home. To view and control cameras, set up the TSW-xx60 series touch screen to use the Smart Graphics user interface.

To switch between the Smart Graphics user interface and the Crestron Home user interface:

- Open a web browser and navigate to the IP address of the touch screen.
  - Click on **Apps** and then select **User Project** to use the Smart Graphics user interface or **Crestron Home** to run the Crestron Home user interface.
- The following information assumes that the TSW-xx60 series touch screen is operating in Smart Graphics Mode.

Use the **Cameras** screen to view and control all of the cameras configured for the Crestron Home system. The selected camera feed is shown in the bottom right portion of the screen.

Select the **Cameras** button  from the **Home** screen or select **Cameras** from the **Devices** section of the user menu to display the **Cameras** screen.



If multiple cameras are configured for the Crestron Home system, use the dropdown menu on the top left of the screen to select a camera to view.

The following camera controls are provided:

- Tap any of the **Direction** arrows to change the camera view direction (if supported by the camera).

- Tap the plus (+) or minus (-) buttons under **Zoom** to have the camera zoom in or out, respectively (if supported by the camera).
- Tap the camera feed to view it in full screen mode. Tap the camera feed again to return it to its normal size.

Tap **Home** in the user menu to return to the **Home** screen.

## 2N® Door Stations Screen

### NOTES:

- Viewing and controlling cameras is not currently supported in Crestron Home. To view and control cameras, set up the TSW-xx60 series touch screen to use the Smart Graphics user interface.

To switch between the Smart Graphics user interface and the Crestron Home user interface:

- Open a web browser and navigate to the IP address of the touch screen.
  - Click on **Apps** and then select **User Project** to use the Smart Graphics user interface or **Crestron Home** to run the Crestron Home user interface.
- The following information assumes that the TSW-xx60 series touch screen is operating in Smart Graphics Mode.

If a TSW-xx60 series touch screen has been added to the Crestron Home system and is running the Crestron Home user project, the touch screen may be connected to a 2N® door station to provide a door station solution for the system.

For more information on integrating a 2N door station with Crestron Home, refer to "Connect to a 2N® Door Station" on page 331.

### Answer a Call

When the touch screen receives a call from the door station, an incoming call window opens on the touch screen with the door station name and the camera feed. If the call is declined, the call window is closed.

To answer a call:

- Tap  to answer the call.
- Tap  to decline the call.

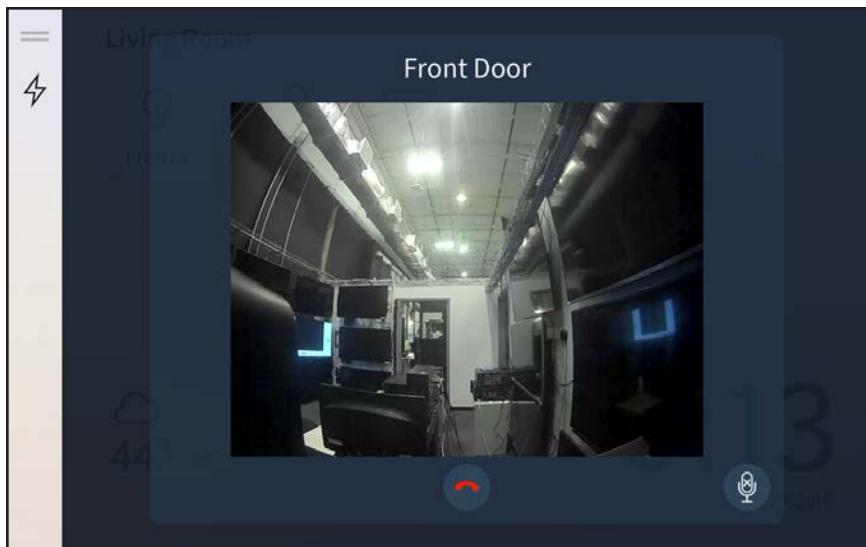


### Mute the Microphone

Tap  to mute or unmute the intercom microphone.

### End a Call

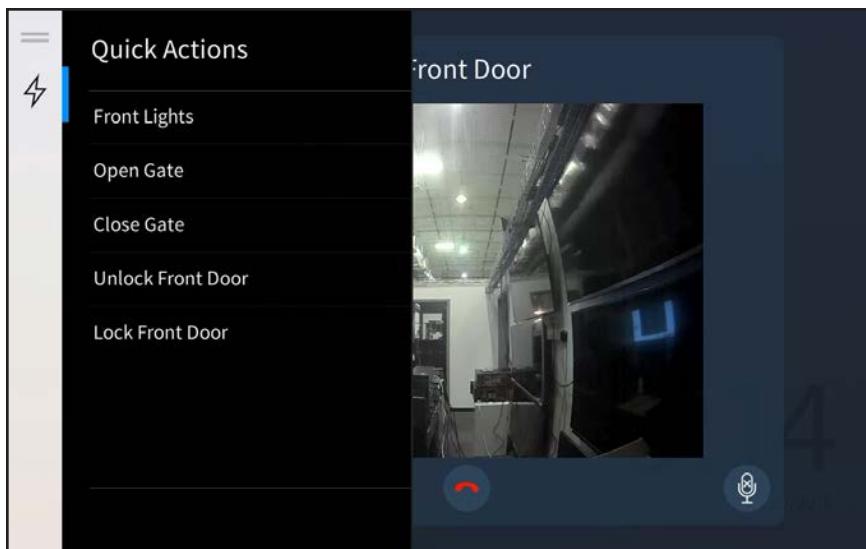
Tap  to end the call. The call window is closed.



## Quick Actions During a Call

Tap the lightning bolt icon  on the left menu to view and activate quick actions during the call (such as "Open Gate"). A quick actions menu is displayed.

Tap a quick action to activate it. Tap the lightning bolt icon again to close the quick action menu.



# Configure the TSW-xx60 Series Touch Screen

The **Settings** screen for the TSW-xx60 series touch screens provides an additional **Hardware** menu for configuring touch screen settings.

## Room List

Use the **Room List** panel to select the rooms or room groups that appear as top-level items in user control mode. It also allows the user to select the default room that is displayed on the TSW-xx60 series touch screen



- Tap the check box next to **Sort Alphabetically** to select whether rooms are sorted automatically (in alphabetical order) or manually.
- Tap the check box next to a room or room group in the **Top-Level Rooms/Groups List** menu to select whether the room or room group appears as a top-level item.
- Tap a room group to display a **Room(s) In Group** menu, which enables the rooms in that group to be selected as top-level items or to be sorted manually.
- If **Sort Alphabetically** is disabled, press and hold a room or room group until the list item turns green. Then, slide the room up or down the list to sort the room manually.

## Display

Use the **Display** screen to configure the touch screen LCD display settings.



## Brightness

- Tap the toggle switch to turn on or off Auto brightness mode. When Auto brightness mode is on, the touch screen display adjusts its brightness based on the ambient light level in the room.
- Use the slider to raise or lower the brightness level.

## Timeout

Select the duration before the touch screen enters standby timeout mode. Select **Never** to disable standby timeout mode. During standby timeout mode, the screen turns off. If screensaver is on, the screensaver displays.

## Screensaver

Tap the toggle switch to turn on or off the screensaver during standby timeout mode.

## Hard Key Wakes LCD

Tap **On** or **Off** to turn on or off the user's ability to wake the touch screen display by pressing one of the hard keys.

## Volume

Use the **Volume Settings** to configure volume settings for the touch screen and for the 2N door station intercom (if configured).



To adjust the Master Volume and Media Volume:

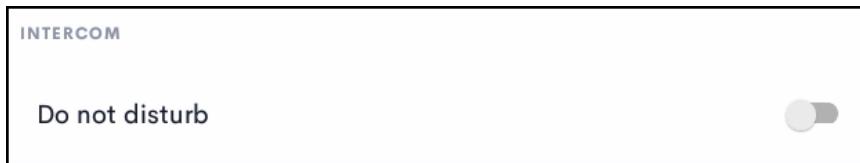
- Tap the toggle switch to enable or disable the audio.
- Use the slider to raise or lower the volume.

- Tap  to mute and unmute the volume.
- Tap **Play Test** to play a test recording at the current volume level.

## Intercom

**NOTE:** The **Intercom** settings are only applicable if the touch screen is connected to a 2N door station in the Crestron Home system. For more information, refer to "Connect to a 2N® Door Station" on page 331.

Tap the toggle switch to turn on or off Do not disturb mode. When in Do not disturb mode, calls from the 2N door station are not received on the touch screen.



## Home

Make changes to the Crestron Home system.



## Info

The info section displays the firmware versions running on the touch screen.

INFO	
Firmware version	2.005.0035
UI version	0.2.5-ts

# Troubleshooting

The following table provides troubleshooting information. If further assistance is required, contact a Crestron customer service representative.

## Crestron Home Troubleshooting

Problem	Possible Causes(s)	Corrective Action
Crestron Home is showing Cresnet® devices in the Network Device Tree, but is not discovering them in the Home system.	The CP4-R device firmware is not up to date.	Update the CP4-R to the latest recommended firmware.
Crestron Home is showing Cresnet thermostats in the Network Device Tree, but is not discovering them in the Crestron Home system.	The CHV-THSTAT3F firmware is for 3-Speed-Fan applications only, which are not supported by Crestron Home at this time.	Use the CHV-TSTAT/THSTAT firmware instead.
Crestron Home shows a "Gateway Could Not Be Added" dialogue box when attempting to add a CSA-PWS10S-HUB-ENET gateway to the Crestron Home system.	The mode switch on the device is not set correctly.	Ensure that the mode switch on the CSW-PSW10S-HUB-ENET is set to match the physical connection method (CRES or ETH).
Crestron Home cannot discover a security system.	Crestron Home does not support the security system at this time.	Refer to the Security section of <a href="http://www.crestron.com/en-US/Products/Featured-Solutions/Crestron-Pyng">www.crestron.com/en-US/Products/Featured-Solutions/Crestron-Pyng</a> to view the security systems compatible with Crestron Home.
A connection to Crestron Home cannot be established from both an iPad device or from the web XPanel interface, but the device is still communicating in Crestron Toolbox.	SSL may have been enabled after a firmware update or a system restore.	Connect to the CP4-R in Crestron Toolbox to determine if SSL is enabled using one of the following methods: If using Text Console, issue the SSL command. If the "SSL On" prompt is returned, issue the SSL command followed by the restore command. If using the System Info dialog box, navigate to Functions > SSL Management, uncheck the SSL box, and then click OK.

## Crestron Home Troubleshooting

Problem	Possible Causes(s)	Corrective Action
The web XPanel interface loads, but there is no response when clicking buttons or some page elements are missing.	The domain web setting for XPanel is set incorrectly.	In Installer Settings, select Web Settings, and then ensure that Domain is set to "*". For more information on XPanel web settings, refer to OLH article 5793.
The CP4-R is not communicating with Crestron Toolbox via Ethernet or USB.	The CP4-R needs to be restored to factory settings.	Follow the procedures described in "Create and Upload a Custom Device Driver" on page 295.
The iOS or TSW-xx60 series touch screen can't connect to the Crestron Home system	The User Interface Device Password is not set.	Set the User Interface Device Password. For details, refer to "System Detail & Password Configuration" on page 138
	The User Interface Device Password was incorrectly entered three times.	The IP address of the User Interface Device is blocked after the User Interface Device Password is entered incorrectly three times. The IP address is blocked for one hour.
Cannot enter Advanced User settings.	The Advanced User username is incorrectly entered.	The Advanced User username is "advanceduser".
	The Advanced User functionality is not enabled.	The Advanced User functions are enabled after the installer sets up the Advanced User password. For details, refer to "Remove the Advanced User Password" on page 139.

# Appendix A: Works with Crestron Home

Crestron Home is designed to work with many Crestron and third-party products. Refer to the list below for compatible devices.

## Video

### DigitalMedia Switchers

- DM-MD16X16 - 16x16 DigitalMedia™ Switcher
- DM-MD16X16-CPU3 - 16x16 DigitalMedia™ Switcher
- DM-MD32X32 - 32x32 DigitalMedia™ Switcher
- DM-MD32X32-CPU3 - 32x32 DigitalMedia™ Switcher
- DM-MD8X8 - 8x8 DigitalMedia™ Switcher
- DM-MD8X8-CPU3 - 8x8 DigitalMedia™ Switcher

### DigitalMedia Cards

- DMC-4K-CO-HD - 2-Channel HDBaseT® Certified 4K DigitalMedia 8G+® Output Card for DM® Switchers
- DMC-4K-CO-HD-HDCP - 2-Channel HDBaseT® Certified 4K DigitalMedia 8G+® Output Card for DM® Switchers
- DMC-4K-CO-HD-HDCP2 - 4K HDMI® Input Card for DM® Switchers
- DMC-4K-HD - 4K HDMI® Input Card for DM® Switchers
- DMC-4K-HD-DSP - 4K HDMI® Input Card w/ Downmixing for DM® Switchers
- DMC-4K-HD-DSP-HDCP2 - 4K HDMI® Input Card w/ Downmixing for DM® Switchers
- DMC-4K-HDO - 2-Channel 4K Scaling HDMI® Output Card for DM® Switchers
- DMC-4KZ-CO-HD - 2-Channel DigitalMedia 8G+® 4K60 4:4:4 HDR Output Card for DM® Switchers
- DMC-4KZ-HD - HDMI® 4K60 4:4:4 HDR Input Card for DM® Switchers
- DMC-4KZ-HD-DSP - HDMI® 4K60 4:4:4 HDR Input Card w/ Downmixing for DM® Switchers
- DMC-4KZ-HDO - 2-Channel 4K Scaling HDMI® 4K60 4:4:4 HDR Scaling Output Card for DM® Switchers
- DMC-CO-HD - 2-Channel DigitalMedia 8G+™ Output Card for DM® Switchers
- DMC-CPU3 - CPU Card for 8X8, 16X16, and 32X32 DigitalMedia™ Switchers
- DMC-DVI - DVI/VGA Input Card for DM® Switchers
- DMC-HD - HDMI® Input Card for DM® Switchers

- DMC-HD-DSP - HDMI® Input Card w/Downmixing for DM® Switchers
- DMC-HDO - 2-Channel HDMI® Output Card for DM® Switchers

## DigitalMedia Room Boxes

- DM-RMC-200-C - DigitalMedia 8G+® Receiver & Room Controller 200
- DM-RMC-4K-100-C - 4K DigitalMedia 8G+® Receiver & Room Controller 100
- DM-RMC-4K-100-C-1G-B-T - Wall Plate 4K DigitalMedia 8G+® Receiver & Room Controller 100, Black Textured
- DM-RMC-4K-100-C-1G-B-W - Wall Plate 4K DigitalMedia 8G+® Receiver & Room Controller 100, White Textured
- DM-RMC-4K-SCALER-C - 4K DigitalMedia 8G+® Receiver & Room Controller w/Scaler
- DM-RMC-4K-SCALER-C-DSP - 4K DigitalMedia 8G+® Receiver & Room Controller w/Scaler & Downmixing
- DM-RMC-4KZ-100-C - DigitalMedia 8G+® 4K60 4:4:4 HDR Receiver & Room Controller 100
- DM-RMC-4KZ-100-C - DigitalMedia 8G+® 4K60 4:4:4 HDR Receiver & Room Controller 100
- DM-RMC-4KZ-SCALER-C - DigitalMedia 8G+® 4K60 4:4:4 HDR Receiver & Room Controller w/Scaler
- DM-RMC-SCALER-C - DigitalMedia 8G+® Receiver & Room Controller w/Scaler

## DigitalMedia NVX

- DM-NVX-350 - DM NVX™ 4K60 4:4:4 HDR Network AV Encoder/Decoder
- DM-NVX-350C - DM NVX™ 4K60 4:4:4 HDR Network AV Encoder/Decoder Card
- DM-NVX-351 - DM NVX™ 4K60 4:4:4 HDR Network AV Encoder/Decoder with Downmixing
- DM-NVX-351C - DM NVX™ 4K60 4:4:4 HDR Network AV Encoder/Decoder Card with Downmixing
- DM-NVX-352 - DM NVX™ 4K60 4:4:4 HDR Network AV Encoder/Decoder with Dante® Audio
- DM-NVX-352C - DM NVX™ 4K60 4:4:4 HDR Network AV Encoder/Decoder Card with Dante® Audio
- DM-NVX-D30 - DM NVX™ 4K60 4:4:4 HDR Network AV Decoder
- DM-NVX-D30C - DM NVX™ 4K60 4:4:4 HDR Network AV Decoder Card
- DM-NVX-E30 - DM NVX™ 4K60 4:4:4 HDR Network AV Encoder
- DM-NVX-E30C - DM NVX™ 4K60 4:4:4 HDR Network AV Encoder Card

## Remotes

- HR-100-B - Handheld Remote, 34 Button, Black
- HR-150-B - Handheld Remote, 50 Button, Black
- HR-310 - Handheld Remote, US & Canada
- HR-310-I - Handheld Remote, International
- TSR-310 - Handheld Touch Screen Remote

## infiNET EX Wireless Gateways and Expanders

- CEN-GWEXER - infiNET EX® Network and ER Wireless Gateway
- CEN-GWEXER-PWE - infiNET EX® & ER Wireless Gateway w/ PoE Injector
- CENI-GWEXER - infiNET EX® Network and ER Wireless Gateway - International Version
- CENI-GWEXER-PWE - infiNET EX® & ER Wireless Gateway w/ PoE Injector - International Version
- CLW-EXPEX-GD-W-T - infiNET EX® Wireless Expander, Ground Pin Down, White Textured

## Audio

### Amplifiers and Expanders

- ATC-AMFM2 - Dual AM/FM Radio Tuner Card
- ATC-AMFMXMD - AM/FM and XM® Satellite Radio Tuner Card
- ATC-AUDIONET - Internet Radio Tuner Card
- C2N-AMP-4X100 - 4 Room Audio System
- C2N-AMP-6X100 - 6 Room + 2 Audio System
- C2NI-AMP-4X100 - 4 Room Audio System - International Version, 230V
- C2NI-AMP-6X100 - 6 Room + 2 Audio System – International Version, 230V
- CEN-NSP-1 - Network Stream Player
- CEN-TRACK-AMFM2 - Tuner Rack Modular Multi-Tuner w/Dual AM/FM Tuner Card
- CEN-TRACK-AMFMSRD - Tuner Rack w/AM/FM & SIRIUS Satellite Radio Tuner Card, Digital Output
- CEN-TRACK-AMFMXMD - Tuner Rack Modular Multi-Tuner w/AM/FM & XM® Satellite Radio Tuner Card
- CEN-TRACK-AUDIONET - Tuner Rack Modular Multi-Tuner w/Internet Radio Tuner Card
- HDI-XSPA - 4K Ultra High-Definition 7.1 Surround Sound AV Receiver, International, 220-240V
- HD-XSP - High-Definition 7.1 Surround Sound Processor

- HD-XSPA - 4K Ultra High-Definition 7.1 Surround Sound AV Receiver, US/NA, 120V
- SWAMP-24X8 - Sonnex® Multiroom Audio System
- SWAMPE-4 - Sonnex® Multiroom Audio Expander, 4-Zone
- SWAMPE-8 - Sonnex® Multiroom Audio Expander, 8-Zone
- SWAMPI-24X8 - Sonnex® Multiroom Audio System - International Version, 220-240V
- SWAMPIE-4 - Sonnex® Multiroom Audio Expander - International Version, 4-Zone
- SWAMPIE-8 - Sonnex® Multiroom Audio Expander - International Version, 8-Zone
- SWE-8 - Sonnex® Multiroom Audio Unamplified Expander, 8-Zone

## Speakers

- AIR IGS82T-BRZ-T-EACH - AIR® Dual 8" In-Ground Subwoofer, Bronze Textured, Single
- AIR LS4T-BRZ-T - AIR® 4" Landscape Speakers, Bronze Textured, Pair
- AIR LS6T-BRZ-T - AIR® 6.5" Landscape Speakers, Bronze Textured, Pair
- AIR SR4 - AIR® 4" 2-Way Surface Mount Outdoor Speakers, Pair
- AIR SR6 - AIR® 6.5" 2-Way Surface Mount Outdoor Speakers, Pair
- AIR SR8 - AIR® 8" 2-Way Surface Mount Outdoor Speakers, Pair
- ASPIRE IC5-W-T - Aspire® 5.25" 2-Way In-Ceiling Speakers, White Textured, Pair
- ASPIRE IC6DT-W-T-EACH - Aspire® 6.5" 2-Way Single-Point Stereo In-Ceiling Speaker, White Textured, Single
- ASPIRE IC6-W-T - Aspire® 6.5" 2-Way In-Ceiling Speakers, White Textured, Pair
- ASPIRE IC8DT-W-T-EACH - Aspire® 8" 2-Way Single-Point Stereo In-Ceiling Speaker, White Textured, Single
- ASPIRE IC8-W-T - Aspire® 8" 2-Way In-Ceiling Speakers, White Textured, Pair
- ASPIRE IW5-W-T - Aspire® 5.25" 2-Way In-Wall Speakers, White Textured, Pair
- ASPIRE IW6-W-T - Aspire® 6.5" 2-Way In-Wall Speakers, White Textured, Pair
- ASPIRE IW8-W-T - Aspire® 8" 2-Way In-Wall Speakers, White Textured, Pair
- ASPIRE IWLCR52-W-T-EACH - Aspire® In-Wall Dual 5.25" 2-Way LCR Speaker, White Textured, Single
- ASPIRE IWS82-W-T-EACH - Aspire® In-Wall Dual 8" Subwoofer, White Textured, Single
- EXCITE IC5-W-T - Excite® 5.25" 2-Way In-Ceiling Speakers, White Textured, Pair
- EXCITE IC6DT-W-T-EACH - Excite® 6.5" 2-Way Single-Point Stereo In-Ceiling Speaker, White Textured, Single
- EXCITE IC6-W-T - Excite® 6.5" 2-Way In-Ceiling Speakers, White Textured, Pair
- EXCITE IC8-W-T - Excite® 8" 2-Way In-Ceiling Speakers, White Textured, Pair
- EXCITE IW5-W-T - Excite® 5.25" 2-Way In-Wall Speakers, White Textured, Pair

- EXCITE IW6-W-T - Excite® 6.5" 2-Way In-Wall Speakers, White Textured, Pair
- EXCITE IW8-W-T - Excite® 8" 2-Way In-Wall Speakers, White Textured, Pair
- SAROS SR4T-B-T-EACH - Saros 4" 2-Way Surface Mount Indoor/Outdoor Speaker, Black Textured, Single
- SAROS SR4T-W-T-EACH - Saros 4" 2-Way Surface Mount Indoor/Outdoor Speaker, White Textured, Single
- SAROS SR6T-B-T-EACH - AIR® 6.5" 2-Way Surface Mount Indoor/Outdoor Speaker, Black Textured, Single
- SAROS SR6T-W-T-EACH - AIR® 6.5" 2-Way Surface Mount Indoor/Outdoor Speaker, White Textured, Single
- SAROS SR8T-B-T-EACH - Saros® 8" 2-Way Surface Mount Indoor/Outdoor Speaker, Black Textured, Single
- SAROS SR8T-W-T-EACH - Saros® 8" 2-Way Surface Mount Indoor/Outdoor Speaker, White Textured, Single

## Lighting

### In-Wall

- CLC-1DIMFLV2EX-24V-W - Wireless In-Ceiling 0-10V Dimmer for 24VDC Applications
- CLC-1LEDPWM-RGBW-EX - RGBW LED Controller
- CLC-FANDELVEX-W - Wireless Lighting and Fan Controller, White
- CLCI-1DIMFLV2EX-W - Wireless In-Ceiling 0-10V Dimmer, 230VAC
- CLCI-1SW2EX-W - Wireless In-Ceiling Switch, 230VAC
- CLCI-DIMUEX-W - Wireless In-Ceiling Dimmer, 230VAC
- CLFI-LDIMUEX-230 - Universal Lamp Dimmer, 230 VAC
- CLF-LDIMUEX-W - Wireless Lamp Dimmer, 120V, White
- CLF-LDIMUEX-W-CORD - Wireless Lamp Dimmer w/ Lamp Switch Control Input, 120V, White
- CLW-DELVEX-230-E - Cameo® Express Wireless In-Wall Dimmer, ELV, 230V
- CLW-DELVEX-230-P - Cameo® Wireless In-Wall Dimmer, ELV, 230V
- CLW-DELVEX-277-P - Cameo® Wireless In-Wall Dimmer, ELV, 277V
- CLW-DELVEX-E - Cameo® Express Wireless In-Wall Dimmer, ELV, 120V
- CLW-DELVEX-P - Cameo® Wireless In-Wall Dimmer, ELV, 120V
- CLW-DIMEX-230-E - Cameo® Express Wireless In-Wall Dimmer, 230V
- CLW-DIMEX-230-P - Cameo® Wireless In-Wall Dimmer, 230V
- CLW-DIMEX-277-P - Cameo® Wireless In-Wall Dimmer, 277V
- CLW-DIMEX-E - Cameo® Express Wireless In-Wall Dimmer, 120V
- CLW-DIMEX-P - Cameo® Wireless In-Wall Dimmer, 120V

- CLW-DIMFLVEX-P - In-Wall 0-10V Dimmer, 120V
- CLW-DIMSWEX-E - Cameo® Express Wireless In-Wall Dimmer/Switch Combo, 120V
- CLW-DIMSWEX-P - Cameo® Wireless In-Wall Dimmer/Switch Combo, 120V
- CLWI-1SW2EX - In-Wall 2-Channel Switch, 230VAC
- CLWI-DIMFLVEX - In-Wall 0-10V Dimmer, 230VAC
- CLWI-DIMUNEX - Universal Phase In-Wall Dimmer with Neutral Wire, 230 VAC
- CLWI-KPLCN - In-Wall Keypad, Cresnet
- CLWI-KPLEX-ANTH - In-Wall Wireless Keypad, 230VAC Line Powered, Anthracite
- CLWI-SWEX-ANTH - In-Wall Switch, 230VAC, Anthracite
- CLW-LDIMEX-1GD-W-T - Single-Channel Wireless Lamp Dimmer, Ground Pin Down, White Textured
- CLW-LDIMEX-1GU-W-T - Single-Channel Wireless Lamp Dimmer, Ground Pin Up, White Textured
- CLW-LDIMEX-2GD-W-T - Dual-Channel Wireless Lamp Dimmer, Ground Pin Down, White Textured
- CLW-LSWEX-1GD-W-T - Single-Channel Wireless Lamp Switch, Ground Pin Down, White Textured
- CLW-LSWEX-1GU-W-T - Single-Channel Wireless Lamp Switch, Ground Pin Up, White Textured
- CLW-LSWEX-2GD-W-T - Dual-Channel Wireless Lamp Switch, Ground Pin Down, White Textured
- CLW-SLVU-230-P - Cameo® In-Wall Remote Dimmer, 230V
- CLW-SLVU-P - Cameo® In-Wall Remote Dimmer, 120V
- CLW-SWEX-230-E - Cameo® Express Wireless In-Wall Switch, 230V
- CLW-SWEX-230-P - Cameo® Wireless In-Wall Switch, 230V
- CLW-SWEX-277-P - Cameo® Wireless In-Wall Switch, 277V
- CLW-SWEX-E - Cameo® Express Wireless In-Wall Switch, 120V
- CLW-SWEX-P - Cameo® Wireless In-Wall Switch, 120V

## Centralized

- CAEN-1X1 - Automation Enclosure, 1 modules high x 1 module wide
- CAEN-2X1 - Automation Enclosure, 2 modules high x 1 module wide
- CAEN-4X1 - Automation Enclosure, 4 modules high x 1 module wide
- CAEN-4X2 - Automation Enclosure, 4 modules high x 2 module wide
- CAEN-7X1 - Automation Enclosure, 7 modules high x 1 module wide
- CAEN-7X2 - Automation Enclosure, 7 modules high x 2 module wide

- CAEN-BLOCK-CENCN-2-POE - Ethernet to Cresnet® Bridge for CAEN Automation Enclosures
- CLX-1DELV4 - 4 Channel Electronic Low-Voltage Dimmer Module, Single Feed
- CLX-1DIM8 - 8 Channel Dimmer Module, Single Feed
- CLX-1DIMU4 - 4 Channel Universal Dimmer Module, 1 Feed, 120V
- CLX-1DIMU4-HP - 4 Channel Universal Dimmer Module, High Power, 1 Feed, 120V
- CLX-1FAN4 - 4 Channel Fan Speed Control Module, Single Feed
- CLX-1MC4 - 4 Channel Motor Control Module, 1 Feed, 120V
- CLX-2DIM2 - 2 Channel Dimmer Module, 2 Feeds.
- CLX-2DIM8 - 8 Channel Dimmer Module, 2 Feeds, 120V
- CLX-2DIMFLV8 - 8 Channel 0-10V Dimmer Module, 2 Feeds, 120V
- CLX-2DIMU8 - 8 Channel Universal Dimmer Module, 2 Feeds, 120V
- CLX-2IND - 2 Channel Inductor Module
- CLX-4HSW4 - 4 Channel High-Inrush Switch Module, 4 Feeds, 120V
- CLX-4IND - 4 Channel Inductor Module
- CLXI-1DELV4 - 4 Channel Electronic Low-Voltage Dimmer Module, Single Feed - International Version, 230V
- CLXI-1DIM4 - 4 Channel Dimmer Module, Single Feed - International Version, 230V.
- CLXI-1MC4 - 4 Channel Motor Control Module, Single Feed - International Version, 230V
- CLXI-2DIM2 - 2 Channel Dimmer Module, 2 Feeds - International Version, 230V
- CLXI-2DIM8 - 8 Channel Dimmer Module, 2 Feeds - International Version, 230V
- CLXI-2DIMU8 - 8 Channel Universal Dimmer Module, 2 Feeds, 230V
- CLXI-2IND - 2 Channel Inductor Module - International Version, 230V
- CLXI-4HSW4 - 4 Channel High-Inrush Switch Module, 4 Feeds - International Version, 230V
- CLXI-4IND - 4 Channel Inductor Module - International Version, 230V
- DIN-1DIM4 - DIN Rail Dimmer, 1 feed, 4 channels
- DIN-1DIMU4 - DIN Rail Universal Dimmer, 1 feed, 4 channels
- DIN-2MC2 - DIN Rail Motor Control, 2 feeds, 2 channels
- DIN-4DIMFLV4 - DIN Rail 0-10V Dimmer Module, 4 feeds, 4 channels
- DIN-8SW8 - DIN Rail High-Voltage Switch, 8 feeds, 8 channels
- DIN-8SW8-I - DIN Rail High-Voltage Switch with Digital Inputs
- DIN-AO8 - DIN Rail Analog Output Module
- DIN-AP3 - DIN Rail 3-Series® Automation Processor
- DIN-CENCN-2 - Ethernet to Cresnet® Network Bridge
- DIN-CENCN-2-POE - Ethernet to Cresnet® Network Bridge with PoE

- DIN-EN-2X18 - Enclosure for DIN Rail Devices, 2 DIN Rails, 18 Units Wide
- DIN-EN-3X18 - Enclosure for DIN Rail Devices, 3 DIN Rails, 18 Units Wide
- DIN-EN-3X18-MMOE - Enclosure for DIN Rail Devices, 3 DIN Rails, 18 Units Wide, Rough-In Enclosure
- DIN-EN-3X18-MMP - Enclosure for DIN Rail Devices, 3 DIN Rails, 18 Units Wide, Lay-In Panel
- DIN-EN-6X18 - Enclosure for DIN Rail Devices, 6 DIN Rails, 18 Units Wide
- DIN-EN-6X18-MMOE - Enclosure for DIN Rail Devices, 6 DIN Rails, 18 Units Wide, Rough In Enclosure
- DIN-EN-6X18-MMP - Enclosure for DIN Rail Devices, 6 DIN Rails, 18 Units Wide, Lay-In Panel
- DIN-IO8 - DIN Rail Versiport Module
- GL-CAEN-2DIM8 KIT - 8 Channel Dimmer Module w/ Terminal Block, 2 Feeds, 120V
- GL-EXP-DIM-CN - Crestron Green Light® Dimmer Expansion Module, Cresnet®
- GL-EXP-DIMFDB-CN - Crestron Green Light® 3-Wire Fluorescent Dimmer Expansion Module, Cresnet®
- GL-EXP-DIMFLV-CN - Crestron Green Light® 0-10V Dimmer Expansion Module, Cresnet®
- GL-EXP-DIMU-CN - Crestron Green Light® Universal Dimmer Expansion Module, Cresnet®
- GL-EXP-SW-CN - Crestron Green Light® Switching Expansion Module, Cresnet®
- GLPP-1DIMFLV2CN-PM - Crestron Green Light® Power Pack, 2-Channel 0-10V Dimmer w/Cresnet® & Built-in Power Monitoring
- GLPP-1DIMFLV2EX-PM - Crestron Green Light® Power Pack, 2-Channel 0-10V Dimmer w/infiNET EX® Wireless & Built-in Power Monitoring
- GLPP-1DIMFLV3CN-PM - Crestron Green Light® Power Pack, 3-Channel 0-10V Dimmer w/Cresnet® & Built-in Power Monitoring
- GLPP-1DIMFLV3EX-PM - Crestron Green Light® Power Pack, 3-Channel 0-10V Dimmer w/infiNET EX® Wireless & Built-in Power Monitoring
- GLPP-1SW2CN - Crestron Green Light® Power Pack, 2-Channel Switch w/Cresnet®
- GLPP-1SW2EX - Crestron Green Light® Power Pack, 2-Channel Switch w/infiNET EX® Wireless
- GLPP-1SW3CN - Crestron Green Light® Power Pack, 3-Channel Switch w/Cresnet®
- GLPP-1SW3EX - Crestron Green Light® Power Pack, 3-Channel Switch w/infiNET EX® Wireless
- GLPP-DIMFLVCN-PM - Crestron Green Light® Power Pack, 1-Channel 0-10V Dimmer w/Cresnet® & Built-in Power Monitoring
- GLPP-DIMFLVEX-PM - Crestron Green Light® Power Pack, 1-Channel 0-10V Dimmer w/infiNET EX® Wireless & Built-in Power Monitoring
- GLPP-SWCN - Crestron Green Light® Power Pack, 1-Channel Switch w/Cresnet®

- GLPP-SWEX - Crestron Green Light® Power Pack, 1-Channel Switch w/infiNET EX® Wireless
- GLX-DIM6 - 6 Channel Dimmer Module
- GLX-HSW8 - 8 Channel High-Inrush Switch Module
- GLXP-DIMFLV8 - 8 Channel 0-10V Dimmer Module
- GLXP-DIMFLV8-LP - 8 Channel 0-10V Dimmer Module, Low Profile
- GLXP-HSW12 - 12 Channel High-Inrush Switch Module
- GLXP-HSW12-LP - 12-Channel High-Inrush Switch Module, Low Profile
- GLXP-HSW12-LP - 12-Channel High-Inrush Switch Module, Low Profile
- GLXP-HSW8 - 8 Channel High-Inrush Switch Module
- GLXP-SW10 - 10 Channel Switch Module
- GLXP-SW16 - 16 Channel Switch Module
- GLXP-SW16-LP - 16-Channel Switch Module, Low Profile
- GLXX-2DIM8 - 8 Channel Dimmer Module
- GLXX-CTRL - Cresnet® Control Module

## Shading

### Shade Motors

- CSM-QMT50-DCCN - Crestron® QMT® Motor for 38-Inch Roller Shades and Larger, Cresnet®
- CSM-QMT50-DCEX - Crestron® QMT® Motor for 38-Inch Roller Shades and Larger, infiNET EX®
- CSM-QMT60-DRP-DCCN - Crestron® Drapery Track Motor w/ Cresnet®
- CSM-QMT60-DRP-DCEX - Crestron® Drapery Track Motor w/ infiNET EX®
- CSM-QMTDC-163-1-CN - Digital QMT® Shade Motor for QMT3 Series, 3/4 Nm, Cresnet®
- CSM-QMTDC-163-1-EX - Digital QMT® Shade Motor for QMT3 Series, 3/4 Nm, infiNET EX®
- CSM-QMTDC-250-2-CN - Digital QMT® Shade Motor for QMT5 Series, 2 Nm, Cresnet®
- CSM-QMTDC-250-2-EX - Digital QMT® Shade Motor for QMT5 Series, 2 Nm, infiNET EX®
- CSM-QMTDC-250-4-CN - Digital QMT® Shade Motor for QMT5 Series, 4 Nm, Cresnet®
- CSM-QMTDC-250-4-EX - Digital QMT® Shade Motor for QMT5 Series, 4 Nm, infiNET EX®
- CSM-QMTDC-256-2-CN - Digital QMT® Shade Motor for 21-Inch Roller Shades and Larger, 2 Nm, Cresnet®

- CSM-QMTDC-256-2-EX - Digital QMT® Shade Motor for 21-Inch Roller Shades and Larger, 2 Nm, infiNET EX®
- CSM-QMTDC-275-4-CN - Digital QMT® Shade Motor for QMT5 Series, 4 Nm, Cresnet®
- CSM-QMTDC-275-4-EX - Digital QMT® Shade Motor for QMT5 Series, 4 Nm, infiNET EX®
- CSM-QMTDC-DRP-3-CN - Digital QMT® Drapery Motor for CSS-DRAPERY, Cresnet®
- CSM-QMTDC-DRP-3-EX - Digital QMT® Drapery Motor for CSS-DRAPERY, infiNET EX®

## Modules

- C2N-SDC - Shade and Drape Controller, 2 outputs for 120 VAC 3-wire bidirectional motors
- C2N-SDC-DC - Shade and Drape Controller, 2 outputs for 24 VDC 2-wire bidirectional motors
- CSC-ACEX - infiNET EX® Interface to Somfy® ST50 ILT2 Motor
- CSC-DCCN - Cresnet® Interface to Crestron® CSM-QMT30 Shades

## Accessories

- CSA-PWS10S-HUB - 10-Motor Power Supply and Cresnet® Hub
- CSA-PWS10S-HUB-ENET - 10-Motor Power Supply with Ethernet to Cresnet® Bridge and Cresnet Hub
- CSC-DCEX - infiNET EX® Interface to Crestron® CSM-QMT30 Shades
- CSS-ARCH3 - QMT3 Series Architectural Shade Hardware
- CSS-ARCH5 - QMT5 Series Architectural Shade Hardware
- CSS-DECOR3 - QMT3 Series Décor Shade Hardware
- CSS-DECOR5 - QMT5 Series Décor Shade Hardware

## Touch Screens

- TSW-1060 - 10.1 in. Touch Screen
- TSW-1060-NC - 10.1 in. Touch Screen without Camera, Microphone, or PinPoint™ Beacon
- TSW-560 - 5 in. Touch Screen
- TSW-560-NC-B-S - 5 in. Touch Screen without Camera, Microphone, or PinPoint™ Beacon; Black Smooth
- TSW-560P - 5 in. Touch Screen, Portrait
- TSW-760 - 7 in. Touch Screen

- TSW-760-NC - 7 in. Touch Screen without Camera, Microphone, or PinPoint™ Beacon

## Climate Control

### Crestron

- CHV-THSTAT - Heating, Cooling and Relative Humidity Thermostat
- CHV-TSTAT - Heating and Cooling Thermostat
- CHV-TSTATEX - infiNET EX® Thermostat
- CHV-TSTATEX-FCU - infiNET EX® Thermostat, Fan Coil Unit
- CHV-TSTATEX-W-T - infiNET EX® Thermostat, White Textured
- DIN-1TSTAT8 - 8-Zone Radiant Heat Thermostat, DIN Rail Mount
- DIN-THSTAT - Heating, Cooling, and Relative Humidity Thermostat, DIN Rail Mount

### Cool Automation

**NOTE:** BACnet over IP allows control and feedback of BACnet enabled HVAC systems.

- CoolMasterNet - Universal HVAC Bridge

## Security and Door Locks

### Door Stations

#### 2N

- IP Verso
- IP Solo
- IP Force
- IP Base
- IP Vario
- IP Safety
- IP Uni
- IP Audio Kit
- IP Audio Kit Lite
- IP Video Kit

## Door Locks

### Yale®

- CLK-YL-YRD210-CR-605 - Yale® Wireless Deadbolt Lock w/infiNET EX® and Pushbutton Keypad, Polished Brass
- CLK-YL-YRD210-CR-619 - Yale® Wireless Deadbolt Lock w/infiNET EX® and Pushbutton Keypad, Satin Nickel
- CLK-YL-YRD210-CR-OBP - Yale® Wireless Deadbolt Lock w/infiNET EX® and Pushbutton Keypad, Oil-Rubbed Bronze
- CLK-YL-YRD216-CR2-605 - Yale® Assure Lock™ Wireless Deadbolt w/ infiNET EX® and Pushbutton Keypad , Polished Brass
- CLK-YL-YRD216-CR2-619 - Yale® Assure Lock™ Wireless Deadbolt w/ infiNET EX® and Pushbutton Keypad , Satin Nickel
- CLK-YL-YRD216-CR2-OBP - Yale® Assure Lock™ Wireless Deadbolt w/ infiNET EX® and Pushbutton Keypad , Oil-Rubbed Bronze
- CLK-YL-YRD220-CR-OBP - Yale® Wireless Deadbolt Lock w/infiNET EX® and Touch Screen Keypad, Oil-Rubbed Bronze
- CLK-YL-YRD220-CR-605 - Yale® Wireless Deadbolt Lock w/infiNET EX® and Touch Screen Keypad, Polished Brass
- CLK-YL-YRD220-CR-619 - Yale® Wireless Deadbolt Lock w/infiNET EX® and Touch Screen Keypad, Satin Nickel
- CLK-YL-YRD226-CR2-605 - Yale® Assure Lock™ Wireless Deadbolt w/infiNET EX® and Touchscreen Keypad, Polished Brass
- CLK-YL-YRD226-CR2-619 - Yale® Assure Lock™ Wireless Deadbolt w/infiNET EX® and Touchscreen Keypad, Satin Nickel
- CLK-YL-YRD226-CR2-OBP - Yale® Assure Lock™ Wireless Deadbolt w/infiNET EX® and Touchscreen Keypad, Oil-Rubbed Bronze
- CLK-YL-YRD240-CR-OBP - Yale® Key-Free Wireless Deadbolt Lock w/infiNET EX® and Touch Screen Keypad, Oil-Rubbed Bronze
- CLK-YL-YRD240-CR-605 - Yale® Key-Free Wireless Deadbolt Lock w/infiNET EX® and Touch Screen Keypad, Polished Brass
- CLK-YL-YRD240-CR-619 - Yale® Key-Free Wireless Deadbolt Lock w/infiNET EX® and Touch Screen Keypad, Satin Nickel
- CLK-YL-YRD246-CR2-605 - Yale® Assure Lock™ Key-Free Wireless Deadbolt w/ infiNET EX® and Touchscreen Keypad, Polished Brass
- CLK-YL-YRD246-CR2-619 - Yale® Assure Lock™ Key-Free Wireless Deadbolt w/ infiNET EX® and Touchscreen Keypad, Satin Nickel
- CLK-YL-YRD246-CR2-OBP - Yale® Assure Lock™ Key-Free Wireless Deadbolt w/ infiNET EX® and Touchscreen Keypad, Oil-Rubbed Bronze
- CLK-YL-YRD256-CR2-605 - Yale Real Living® Assure Lock® SL – Key Free Touchscreen Deadbolt w/infiNET EX® Technology, Polished Brass

- CLK-YL-YRD256-CR2-619 - Yale Real Living® Assure Lock® SL – Key Free Touchscreen Deadbolt w/infiNET EX® Technology, Satin Nickel
- CLK-YL-YRD256-CR2-OBP - Yale Real Living® Assure Lock® SL – Key Free Touchscreen Deadbolt w/infiNET EX® Technology, Oil-Rubbed Bronze
- CLK-YL-YRL210-CR-605 - Yale® Wireless Lever Lock w/infiNET EX® and Pushbutton Keypad, Polished Brass
- CLK-YL-YRL210-CR-619 - Yale® Wireless Lever Lock w/infiNET EX® and Pushbutton Keypad, Satin Nickel
- CLK-YL-YRL210-CR-OBP - Yale® Wireless Lever Lock w/infiNET EX® and Pushbutton Keypad, Oil-Rubbed Bronze
- CLK-YL-YRL220-CR-605 - Yale® Wireless Lever Lock w/infiNET EX® and Touch Screen Keypad, Polished Brass
- CLK-YL-YRL220-CR-619 - Yale® Wireless Lever Lock w/infiNET EX® and Touch Screen Keypad, Satin Nickel
- CLK-YL-YRL220-CR-OBP - Yale® Wireless Lever Lock w/infiNET EX® and Touch Screen Keypad, Oil-Rubbed Bronze

#### Baldwin®

- CLK-BD-8252-003-AC5 - Baldwin® Boulder Wireless Deadbolt w/infiNET EX®, Pushbutton Keypad, Polished Brass
- CLK-BD-8252-003-AC5X - Baldwin® Boulder Wireless Deadbolt w/infiNET EX®, No Keypad, Polished Brass
- CLK-BD-8252-102-AC5 - Baldwin® Boulder Wireless Deadbolt w/infiNET EX®, Pushbutton Keypad, Oil-Rubbed
- CLK-BD-8252-102-AC5X - Baldwin® Boulder Wireless Deadbolt w/infiNET EX®, No Keypad, Oil-Rubbed Bronze
- CLK-BD-8252-112-AC5 - Baldwin® Boulder Wireless Deadbolt w/infiNET EX®, Pushbutton Keypad, Venetian Bronze
- CLK-BD-8252-112-AC5X - Baldwin® Boulder Wireless Deadbolt w/infiNET EX®, No Keypad, Venetian Bronze
- CLK-BD-8285-056-AC5 - Baldwin® Soho Wireless Deadbolt w/infiNET EX®, Pushbutton Keypad, Satin Nickel
- CLK-BD-8285-056-AC5X - Baldwin® Soho Wireless Deadbolt w/infiNET EX®, No Keypad, Satin Nickel
- CLK-BD-8285-260-AC5 - Baldwin® Soho Wireless Deadbolt w/infiNET EX®, Pushbutton Keypad, Polished Chrome
- CLK-BD-8285-260-AC5X - Baldwin® Soho Wireless Deadbolt w/infiNET EX®, No Keypad, Polished Chrome
- CLK-BD-8285-264-AC5 - Baldwin® Soho Wireless Deadbolt w/infiNET EX®, Pushbutton Keypad, Satin Chrome
- CLK-BD-8285-264-AC5X - Baldwin® Soho Wireless Deadbolt w/infiNET EX®, No Keypad, Satin Chrome

## Kwikset®

- CLK-KW-914TRL-ZB-11P-UL - Kwikset® SmartCode™ 914 Wireless Deadbolt w/infiNET EX®, Pushbutton Keypad, Venetian Bronze
- CLK-KW-914TRL-ZB-15-UL - Kwikset® SmartCode™ 914 Wireless Deadbolt w/infiNET EX®, Pushbutton Keypad, Satin Nickel
- CLK-KW-914TRL-ZB-LO3-UL - Kwikset® SmartCode™ 914 Wireless Deadbolt w/infiNET EX®, Pushbutton Keypad, Polished Brass
- CLK-KW-916TRL-ZB-11P-UL - Kwikset® SmartCode™ 916 Wireless Deadbolt w/infiNET EX®, Touch Screen Keypad, Venetian Bronze
- CLK-KW-916TRL-ZB-15-UL - Kwikset® SmartCode™ 916 Wireless Deadbolt w/infiNET EX®, Touch Screen Keypad, Satin Nickel
- CLK-KW-916TRL-ZB-LO3-UL - Kwikset® SmartCode™ 916 Wireless Deadbolt w/infiNET EX®, Touch Screen Keypad, Polished Brass

## Security Systems

### Crestron

- PYNG-CONNECT-COM - COM Port Expander

**NOTE:** The PYNG-CONNECT-COM is required to interface with a security system

### Honeywell® Vista®

- VISTA- 128FBPT
- VISTA-128BPT
- VISTA-128BPTSIA
- VISTA-15P
- VISTA-15PSIA
- VISTA-20P
- VISTA-20PSIA (Firmware version 9.1 or higher required)
- VISTA-21iP
- VISTA-21iPSIA (Firmware version 3.13 or higher required)
- VISTA-250BPT (Firmware version 10.3 or higher required)
- VISTA-250FBPT
- VISTA-32FBPT

### Interlogix

- Interlogix NetworX NX-4
- Interlogix NetworX NX-4V2
- Interlogix NetworX NX-6

- Interlogix NetworX NX-6V2
- Interlogix NetworX NX-8
- Interlogix NetworX NX-8E
- Interlogix NetworX NX-8V2

#### DSC

- DSC PC1616
- DSC PC1832
- DSC PC1864

#### First Alarm

- FA1660CT (Works with all firmware versions)

#### Texecom

- Premier Elite 48
- Premier Elite 88
- Premier Elite 168

## Keypads

#### Wired

- C2N-CBD-E - Cameo® Express Keypad, Standard Mount
- C2N-CBD-P - Cameo® Keypad, Standard Mount
- C2N-CBF-P - Cameo® Keypad, Flush Mount
- C2NI-CB-A-T - Cameo® Keypad - International Version, Almond Textured
- C2N-UNI8IO - Universal Keypad Interface
- CLWI-KPLCN - In-Wall Keypad, Cresnet
- CNX-B12 - Designer Keypad, 12-Buttons
- CNX-B2 - Designer Keypad, 2-Buttons
- CNX-B4 - Designer Keypad, 4-Buttons
- CNX-B6 - Designer Keypad, 6-Buttons
- CNX-B8 - Designer Keypad, 8-Buttons
- HZ-KPCN - Horizon™ Keypad, Cresnet®

#### infiNET EX® Wireless

- CLWI-KPLEX - In-Wall Wireless Keypad, 230VAC Line Powered
- CLWI-KPLEX-BATT - On-Wall Wireless Lighting Keypad, Battery Powered
- HTT-B10EX - Wireless Tabletop Keypad
- HTT-B2EX-BATT - Battery-Powered infiNET EX® 2-button Wireless Keypad

- INET-CBDEX-230-E - Cameo® Express Wireless Keypad, infiNET EX®, 230V
- INET-CBDEX-230-P - Cameo® Wireless Keypad, infiNET EX®, 230V
- INET-CBDEX-277-P - Cameo® Wireless Keypad, infiNET EX®, 277V
- INET-CBDEX-E - Cameo® Express Wireless Keypad, infiNET EX®, 120V
- INET-CBDEX-P - Cameo® Wireless Keypad, infiNET EX®, 120V

## Sensors

- GLS-ODT-C-CN - Dual-Technology Occupancy Sensor with Cresnet®, 2000 Sq. Ft.
- GLS-OIR-C-CN - Passive Infrared Occupancy Sensor with Cresnet®
- GLS-OIR-CSM-EX-BATT - Wireless Passive Infrared Occupancy Sensor, infiNET EX®, Battery-Powered
- GLS-OIRLCL-C-CN - Ceiling Mount Passive Infrared Occupancy & Daylight Sensor, Cresnet®
- INETS-IOEX-DOOR-BATT - infiNET EX® Wireless Door Sensor

## Sonos

- SNS-BEAM1US1 - Sonos® Beam Smart Soundbar, White (BEAM1US1)
- SNS-BEAM1US1BLK - Sonos® Beam Smart Soundbar, Black (BEAM1US1)
- SNS-CTAZPUS1 - Sonos® CONNECT:AMP Streaming Amplifier (CTAZPUS1)
- SNS-CTNZPUS1 - Sonos® CONNECT Streaming Player & Preamplifier (CTAZPUS1)
- SNS-ONEG1US1BLK - Sonos® One Wireless Speaker with Amazon® Alexa™ Built In, Black
- SNS-ONEG1US1 - Sonos® One Wireless Speaker with Amazon® Alexa™ Built In, White
- SNS-PBAR1US1BLK - Sonos® PLAYBAR Home Theater Soundbar & Streaming Music Speaker, Black
- SNS-PBASEUS1 - Sonos® PLAYBASE Home Theater & Streaming Music Speaker for TVs on Stands, White
- SNS-PBASEUS1BLK - Sonos® PLAYBASE Home Theater & Streaming Music Speaker for TVs on Stands, Black
- SNS-PL5G2US1 - Sonos® PLAY:5 Wireless Speaker, White (PL5G2US1)
- SNS-PL5G2US1BLK - Sonos® PLAY:5 Wireless Speaker, Black (PL5G2US1)
- SNS-PLAY1US1 - Sonos® PLAY:1 Wireless Speaker, White (PLAY1US1)
- SNS-PLAY1US1BLK - Sonos® PLAY:1 Wireless Speaker, Black (PLAY1US1BLK)
- SNS-PLAY3US1 - Sonos® PLAY:3 Wireless Speaker, White (PLAY3US1)
- SNS-PLAY3US1BLK - Sonos® PLAY:3 Wireless Speaker, Black (PLAY3US1BLK)
- SNS-SUBG1US1 - Sonos® SUB Wireless Subwoofer, White (SUBG1US1)
- SNS-SUBG1US1BLK - Sonos® SUB Wireless Subwoofer, Black (SUBG1US1BLK)

## Cameras

- ONVIF Type S compliant cameras

## I/O Devices

- C3IR-8 - 3-Series™ Control Card – 8 IR Ports
- CEN-CI3-1 - 3-Series® Control Processor Card Interface – 1 Slot
- CEN-CI3-1-POE - 3-Series® Control Processor Card Interface – 1 Slot, w/ PoE Injector
- INET-IOEX-IRCOM - infiNET EX® Wireless IR/RS-232 Control Module
- INET-IOEX-RYIO - infiNET EX® Wireless Relay/Digital Input Control Module

## Third-Party AV Devices

Crestron Certified Drivers allow third-party AV devices to be added to the Crestron Home system. They offer standardized control without the need to create and maintain custom drivers.

Search for Crestron Certified Drivers using the Crestron Certified Driver Web Portal at [drivers.crestron.io](http://drivers.crestron.io).

Crestron Certified Drivers are available for the following device types:

- AV Receivers
- Bluray Players
- Cable Boxes
- Flat Panel Displays
- Projectors
- Video Servers

## Coming Soon

- DM-MD-6x4 - 6x4 DigitalMedia™ Distribution Center
- DM-MD-6x6 - 6x6 DigitalMedia™ Distribution Center

## Unsupported Devices

- CNX-BIPAD8 - CAT5 Audio Distribution Processor
- CNX-PAD8 - Professional Audio Distribution Processor
- TS-1542 Series - 15.6 in. HD Touch Screen, Wall Mount or VESA

**NOTE:** All touch screens in the TS-1542 series are unsupported, including the -C, -TILT, and -C-TILT models.

- TSD-2020-B - 20" HD Touch Screen Display, Black
- TSW-xx52 Series - Touch Screen

**NOTE:** The TSW-xx52 series touch screens are supported in Pyng OS 1 only. For Pyng OS 2 and Crestron Home OS 3, use TSW-xx60 series touch screens.

## Appendix B: Pair User Interface Devices

Use the Crestron Home app to add TSW-xx60 series touch screens and iOS devices to the system. The process authenticates devices to ensure they are allowed to join the system.

**NOTE:** The Crestron Home app is available from the App Store® online store and may be downloaded onto an Apple iOS® device such as an iPhone or iPad.

To download the Crestron Home app:

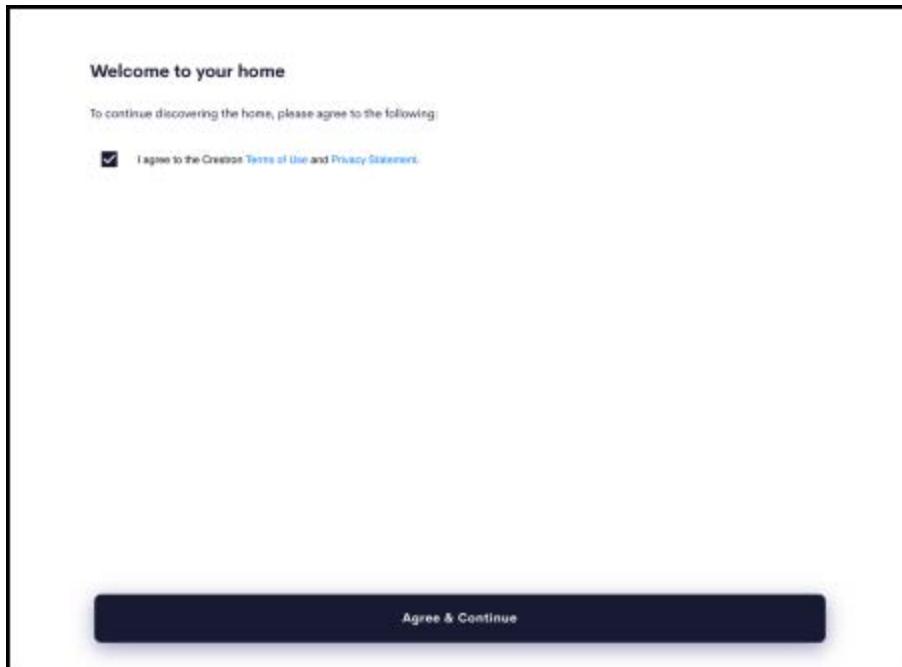
**NOTE:** For a comprehensive list of iOS® hardware and software versions that are compatible with Crestron Home, refer to OLH article 5655 at [https://support.crestron.com/app/answers/detail/a\\_id/5655](https://support.crestron.com/app/answers/detail/a_id/5655).

1. Tap the **App Store** icon  on the iPad device home screen.
2. Tap the search field, and enter the search term "Crestron Home."
3. Tap **Search**.
4. Tap the **Crestron Home** app icon .
5. Follow the prompts to download and install the app to the device.

## Connect an iOS Device

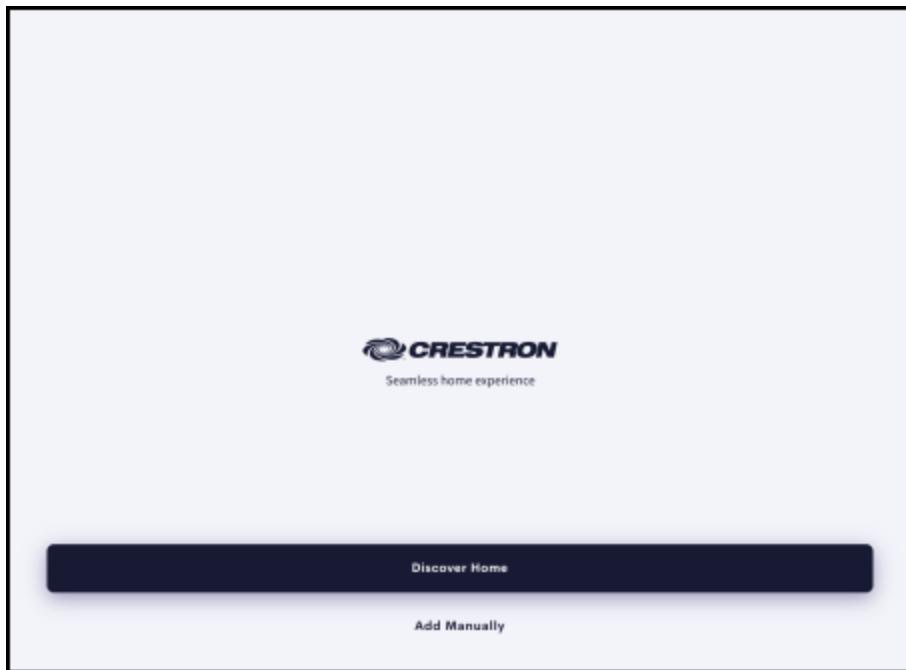
To connect an iOS device:

1. Tap  to open the Crestron Home app. The landing page is displayed.
2. The first time the Crestron Home app is opened, the **Welcome to your home** screen is displayed. Tap **Terms of Use** and **Privacy Statement** to read the terms of use and privacy information.



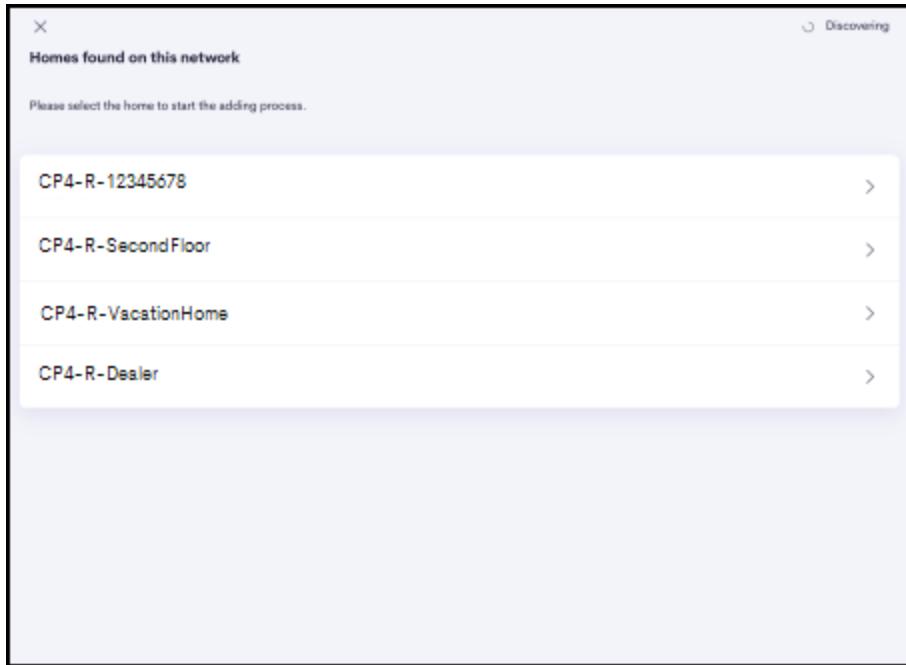
3. To accept the terms, tap the box next to I agree to the Crestron Terms of Use and Privacy Statement.

4. Tap **Agree & Continue** to proceed. The landing page is displayed.

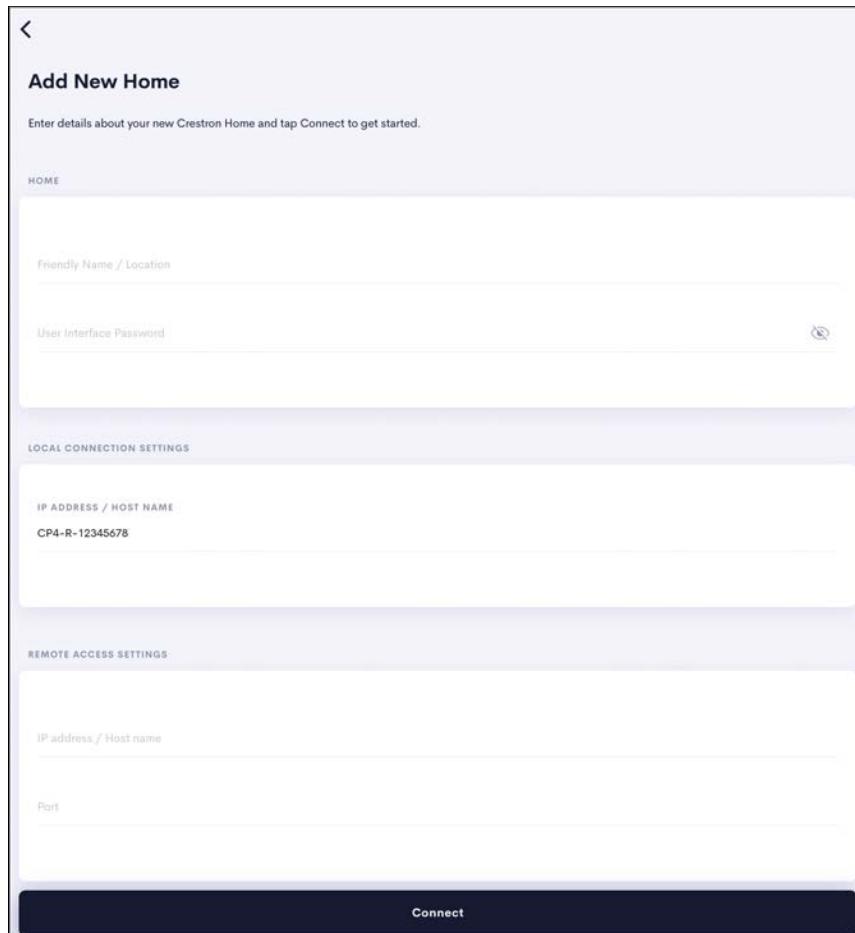


5. Tap **Discover Home** to scan the network for the CP4-R. The **Homes found on this network** screen is displayed and shows the list of available CP4-Rs on the network. The Hostname and IP Address for each CP4-R is displayed.

**NOTE:** The iOS device and the CP4-R must be on the same wireless network for the device to be found.



6. Tap on the home you would like to connect to. The **Add New Home** screen is displayed.



7. Enter the following information for **HOME**, **LOCAL CONNECTION SETTINGS**, and **REMOTE ACCESS SETTINGS** on the **Add New Home** screen:

#### **HOME:**

- **Friendly Name / Location:** Enter a name or location of the CP4-R. The name will be used to identify the CP4-R on the My Homes screen.
- **User Interface Password:** Enter the User Interface Password. For details, refer to "Enable the User Interface Device Password" on page 12 and "System Detail & Password Configuration" on page 138.

**NOTE:** After three unsuccessful login attempts, the IP address of the device is blocked from joining the Crestron Home system for 1 hour. Other devices are allowed to join during this period.

To change the login attempts and lockout time and to clear the blocked IP(s) from the CP4-R, establish a USB connection between a PC and the CP4-R using a USB cable. Use Crestron Toolbox™ software (Text Console tool) to issue the following commands:

- To change the number of unsuccessful login attempts, issue the SETLOGINAttempts command.
- To change the amount of time that a user is locked out, issue the SETLOCKOUTTIME command.
- To clear the blocked IP(s) from the system, issue the REMBLOCKEDip command.

#### **LOCAL CONNECTION SETTINGS:**

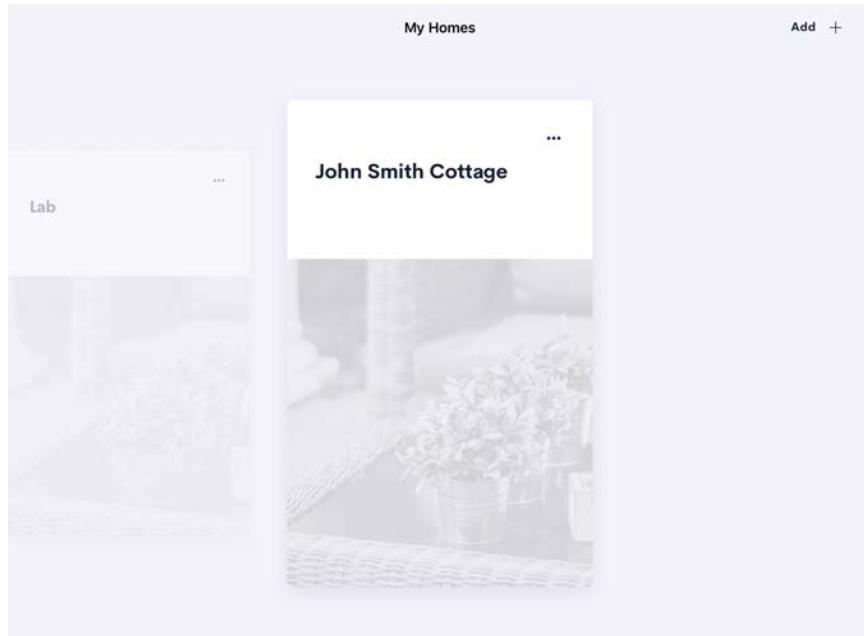
- **IP ADDRESS / HOST NAME:** The Host name is entered by the system during discovery.

#### **REMOTE ACCESS SETTINGS:**

**NOTE:** To configure the system for remote access (outside of the home using a cellular network), refer to "Enable Remote System Access" on page 321.

- **IP address / Host name:** Enter the IP address or the Host name of the CP4-R to enable remote access.
- **Port:** Enter the port to access the system. The default port is 50001.

8. Tap **Connect** to add the iOS device to the Crestron Home system. If the information is valid, the **My Homes** screen is displayed.



## Connect a TSW-xx60 Series Touch Screen

**NOTE:** The TSW-xx60 series touch screen must be using firmware version 2.05.xx or higher.

To connect a TSW-xx60 Series touch screen:

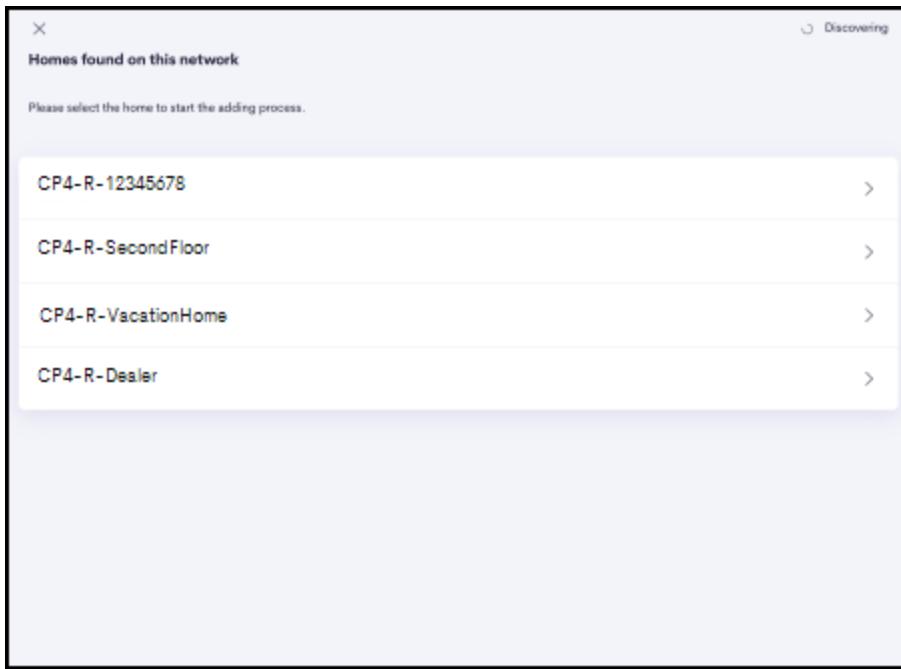
1. Enter the touchscreen settings on the touchscreen itself or from the touchscreen's web page.
  - a. From the Touch Screen:
    - I. Place five fingers on the display and hold for 15 seconds.
    - II. Tap **Application Selection** to bring up the **Application Selection** screen.
    - III. Tap **Crestron Home**.
    - IV. Tap **Confirm Selection**. The touch screen reboots with the Crestron Home application running and then displays the landing page.

b. From the Touch Screen's Web Page:

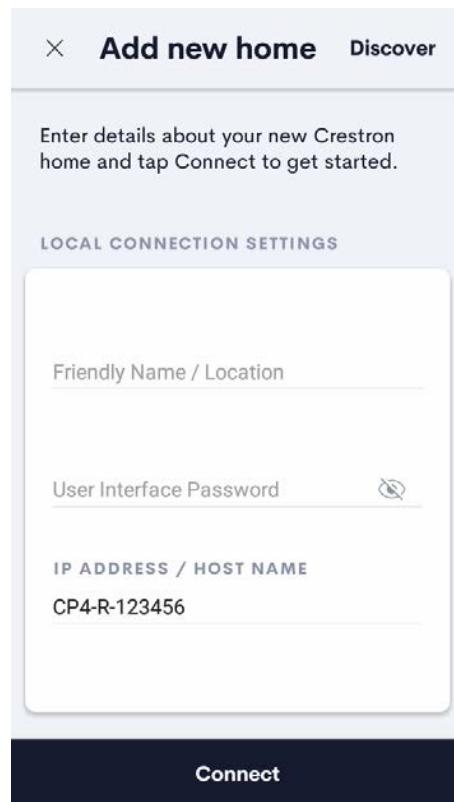
- I. Enter the IP address or host name of the touch screen into a web browser.
- II. Click **Settings** and then **Applications**.
- III. Select **Crestron Home** from the **Application Mode** drop-down.
- IV. Click **Save Changes**. A pop-up dialog is displayed stating that the touch screen must be rebooted for the new application to take effect. Click **Yes** to reboot the touch screen now or **No** to reboot the touch screen later. The touch screen reboots with the Crestron Home application running and then displays the landing page.



2. Tap **Discover Home** to scan the network for the CP4-R. The **Homes found on this network** screen is displayed and shows the list of available CP4-Rs on the network. The Hostname and IP Address for each CP4-R is displayed.



3. Tap on the home you would like to connect to. The **Add New Home** screen is displayed.



4. Enter the following information for the **LOCAL CONNECTION SETTINGS** on the **Add New Home** screen:

- **Friendly Name / Location:** Enter a friendly name or location of the CP4-R. The name is displayed on the TSW and will be used to identify the CP4-R on the My Homes screen.
- **User Interface Password:** Enter the User Interface Password. For details, refer to "Enable the User Interface Device Password" on page 12 and "System Detail & Password Configuration" on page 138.

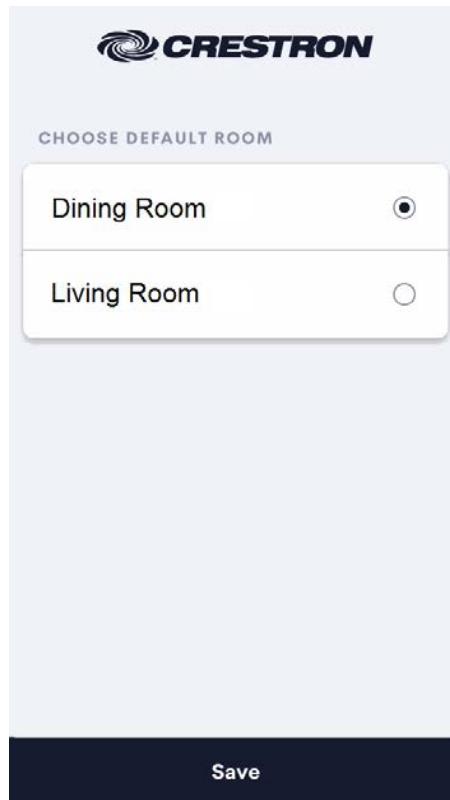
**NOTE:** After three unsuccessful login attempts, the IP address of the device is blocked from joining the Crestron Home system for 1 hour. Other devices are allowed to join during this period.

- To change the number of unsuccessful login attempts, issue the `SETLOGINAttempts` command.
- To change the amount of time that a user is locked out, issue the `SETLOCKOUTTIME` command.
- To clear the blocked IP(s) from the system, issue the `REMBLOCKEDip` command.

- **IP ADDRESS / HOST NAME:** The Host name is entered by the system during discovery.

5. Tap **Connect** to add the touch screen to the Crestron Home system.

6. When prompted, select the room that the touch screen is in and then tap **Save**.



7. If successfully added to the system, the touch screen displays the **Home** screen.
8. Press the "Home" hard key on the TSW-xx60 series touch screen to display the **Room** screen.

**NOTE:** If the TSW-xx60 series touch screen was previously discovered and added to the Crestron system during "Step 2: Pair Devices" on page 40, it will now appear as "TSW-xx60(Legacy)" in the Crestron Home system. The TSW-xx60 series touch screen can be safely removed from the system. Refer to "Step 2: Pair Devices" on page 40 for details.

## Appendix C: Sonos and Crestron Home Integration

A Sonos system is also referred to as a Sonos household. A Sonos household includes all of the Sonos devices that are part of the same system. Sonos devices that are part of the same household may be grouped together and may share a Favorites list.

The Sonos app shows the devices for only one household. When the Sonos app is first launched, the app asks the user to add one Sonos device to the same subnet as the controller (the device that is running the Sonos app). Once the controller is synced with the Sonos device, the Sonos household that includes the device becomes the default household for the controller.

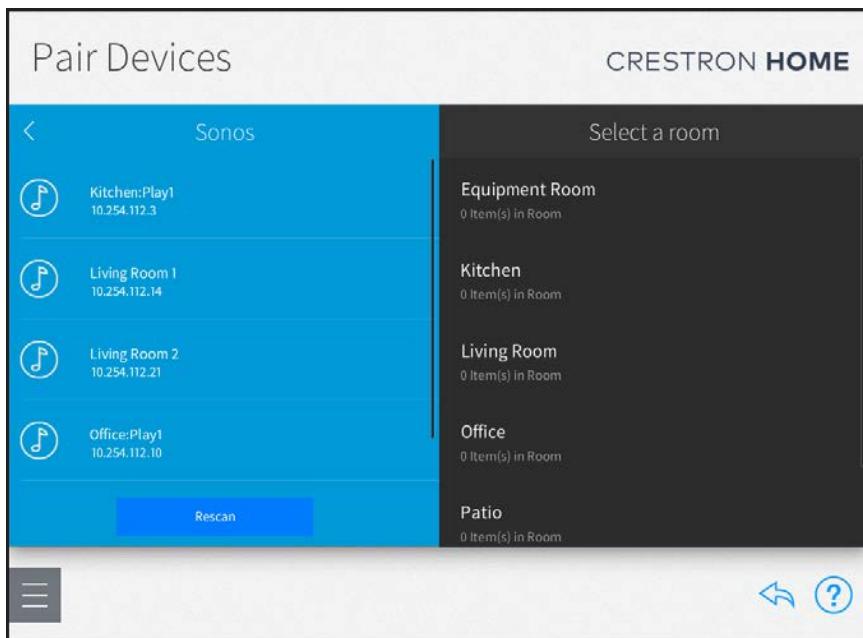
When a Sonos device from a different Sonos household is added to the same network, the Sonos app does not display the Sonos device in the device list until it is added using the appropriate procedure (**Manage > Add a player or sub**). To display devices from another household in the Sonos app, select **Help > Reset Controller**. Doing so will reset the household for the Sonos app and allows for a different household to be assigned.

The Crestron Home system allows only Sonos devices that belong to the same household to be added to the system. If no Sonos devices have been added to the system, all discovered Sonos devices are listed in the unassigned devices list, regardless of their configured Sonos household.

Once the first Sonos device is assigned to the Crestron Home system, the unassigned devices list is updated to display warning signs for all devices that are not part of the same Sonos household. These devices may not be added to the system unless they are added to the Sonos household that is currently associated with the system.

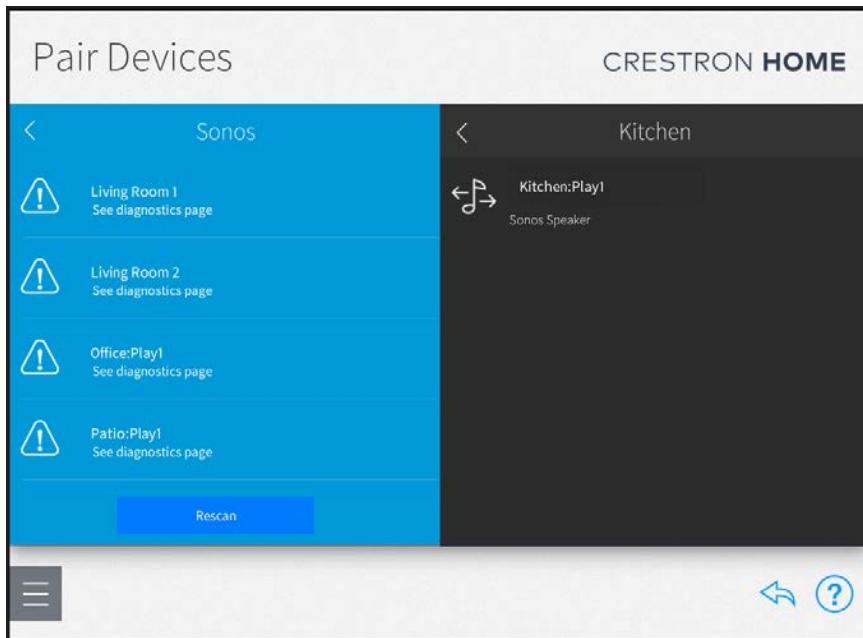
In the image on the following page, the "Kitchen:Play:1" device is assigned to a different Sonos household than the other devices that are shown.

### Pair Devices Screen - Sonos (Devices from Multiple Households Shown)

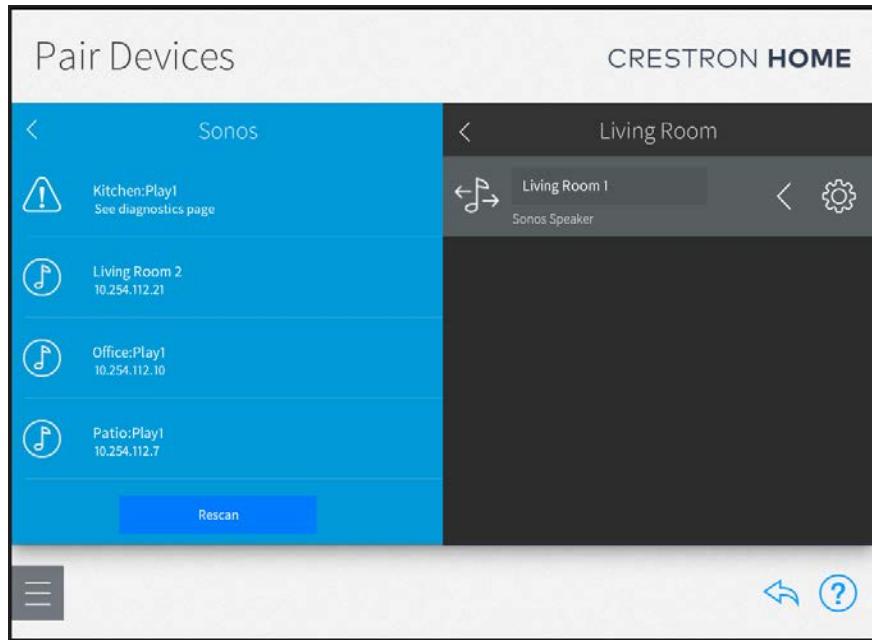


If the "Kitchen:Play:1" device is added to a room within the Crestron Home system, the devices from the other Sonos household may no longer be added.

### Pair Devices Screen - Sonos (Kitchen:Play:1 Added)



If the "Living Room:Play:1" device is added to a room within the Crestron Home system, the "KitchenPlay1" device from the other Sonos household may no longer be added.



## Sonos Troubleshooting

The following sections describe troubleshooting procedures for some of the common issues that may occur when adding Sonos devices to the Crestron Home system.

### Multiple Sonos Households Found

This issue occurs when multiple Sonos households are discovered by the Crestron Home system.

#### Issue(s)

- Not all discovered Sonos devices may be added to the Crestron Home system.
- A Sonos device is reporting as offline after it is moved to a different Sonos household.

#### Explanation

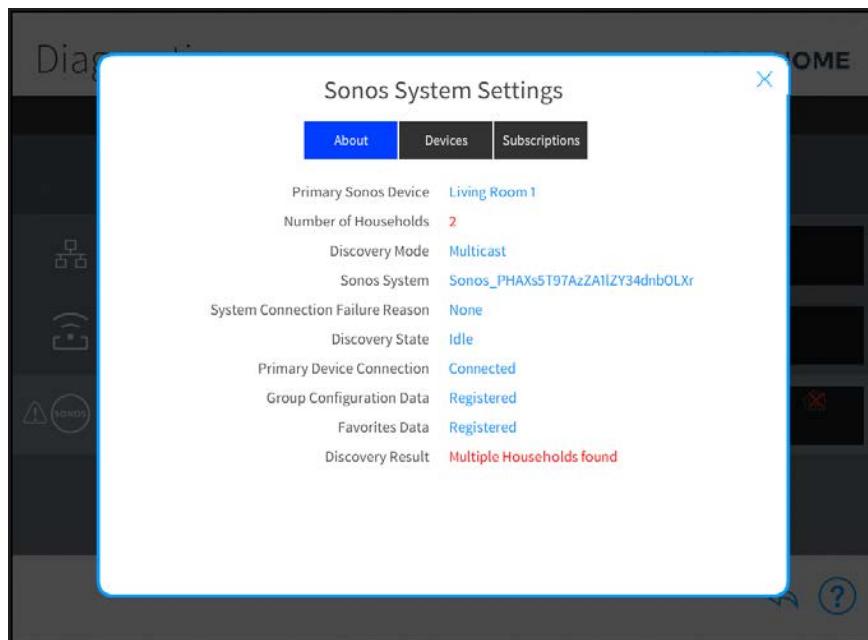
Devices from different Sonos households have been discovered on the network. The Crestron Home system provides a notification of this issue on the **Diagnostics** screen.

#### Diagnostics Screen - Multiple Sonos Households Found



Tap **Sonos System** in the **Gateways in System** screen, and then the gear icon next to the gateway to view the **Sonos System Settings** page. A "Multiple Households found" status is indicated for **Discovery Result**.

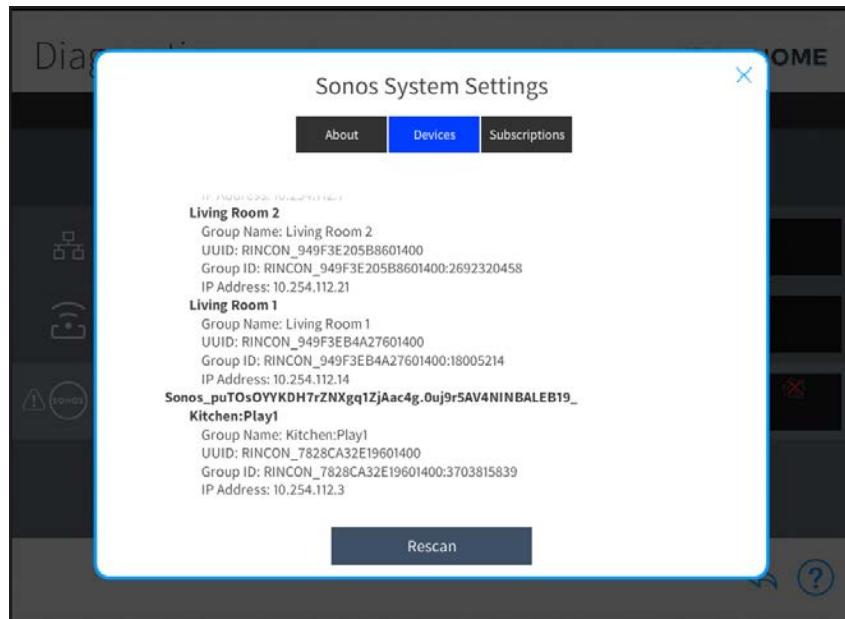
## Sonos System Settings Screen - Multiple Sonos Households Found



## Solution

1. Tap the **Devices** tab on the **Sonos System Settings** page.
2. Scroll through the list of devices to determine which devices belong to different Sonos households.

### Sonos System Settings Screen - Devices Tab



3. Reconfigure devices in the Sonos app so that they are added to the Sonos household that is assigned to the Crestron Home system.

## Desired Household Not Found

This issue occurs when the desired Sonos household cannot be discovered by the Crestron Home system.

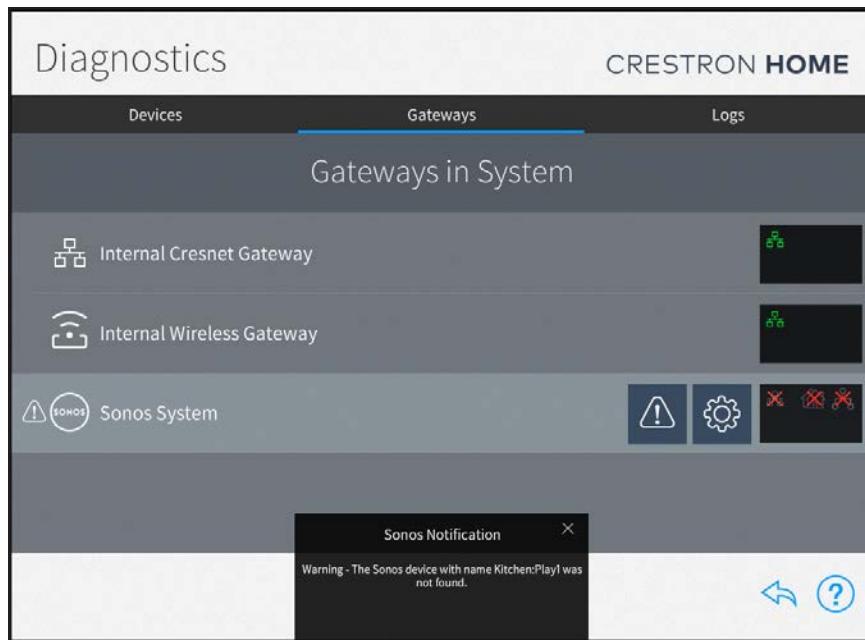
### Issue(s)

- The Sonos discovery scan found Sonos devices, but all Sonos devices in the Crestron Home system report as offline.
- All Sonos devices in the Sonos household were reset to factory default settings.

### Explanation

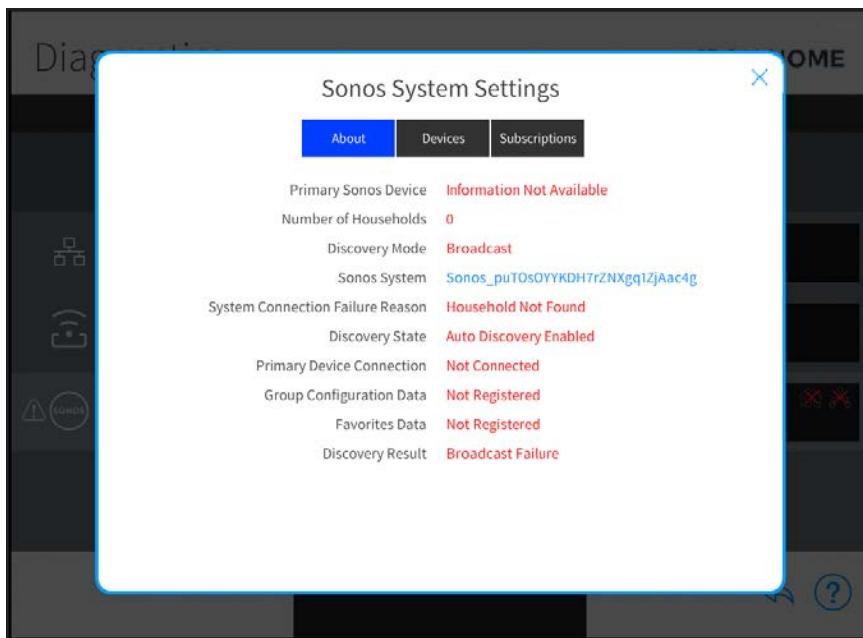
When the first Sonos device is added to the Crestron Home system, the Sonos household that the device belongs to is saved in the system configuration files. The Sonos System in Crestron Home reports as online only when a connection is established with one of the devices that is part of the saved Sonos household. The Crestron Home system provides a notification of this issue on the **Diagnostics** screen.

#### Diagnostics Screen - Desired Household Not Found



Tap **Sonos System** in the **Gateways in System** screen, and then the gear icon next to the gateway to view the **Sonos System Settings** page. A "Household Not Found" status is indicated for **Discovery State**.

## Sonos System Settings Screen - Multiple Sonos Households Found



### Solution

1. Open the Sonos app.
  2. To verify that the devices that are assigned in the Crestron Home system are online, test to see if the devices can be controlled via the app.
- NOTE:** Always close the Sonos app before verifying that a Sonos device is online.
3. If the device can be controlled, start a Sonos discovery scan on the **Pair Devices** screen to discover the device.

## No Devices Found

This issue occurs when no Sonos devices are discovered by the Crestron Home system.

### Issue(s)

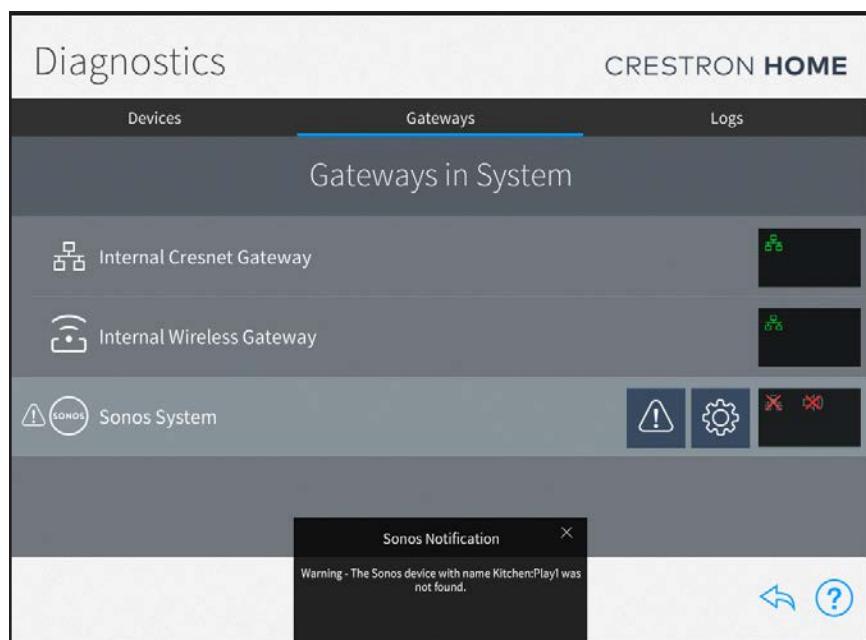
No Sonos devices were found during the Sonos discovery scan.

### Explanation

When a Sonos discovery is initiated, a two-stage discovery process begins. In the first stage, a multicast message is sent out on the network. The Crestron Home system gives Sonos devices 30 seconds to respond. If at least one device responds during this interval, discovery is stopped. On the **Sonos System Settings** screen, a "Multicast Success" message is displayed.

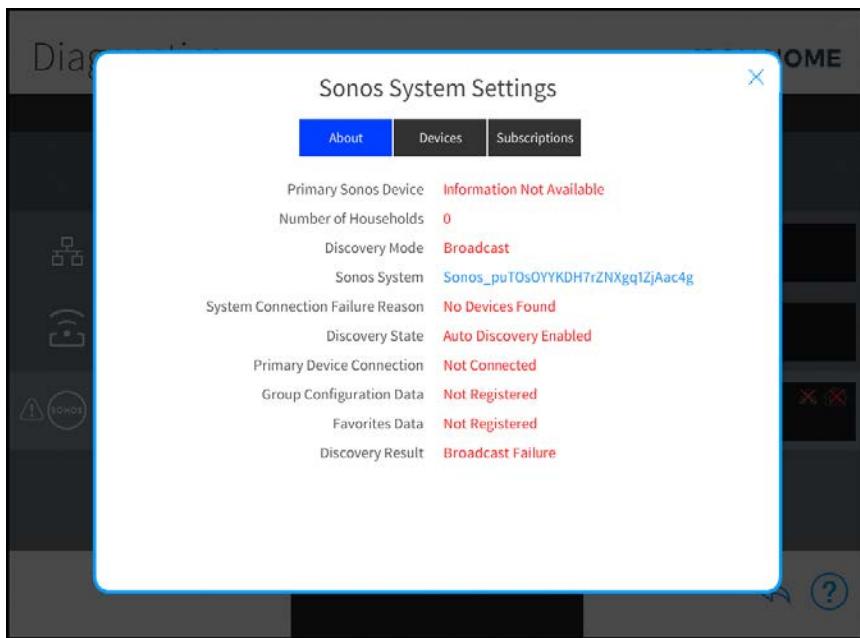
If no devices are discovered during the first stage, a second multicast message is sent out on the network. If no Sonos devices respond within 30 seconds, a "No Devices Found" error is raised. The Crestron Home system provides a notification of this issue on the **Diagnostics** screen.

### Diagnostics Screen - No Devices Found



Tap the gear icon next to the **Sonos System** gateway to view the **Sonos System Settings** page with the **About** tab open by default. A "Household Not Found" status is indicated for **System Connection Failure Reason**.

## Sonos System Settings Screen - No Devices Found



## Solution

1. Connect a PC that is wired to the same network switch as the CP4-R.
2. Open the Sonos app on the PC.
3. Verify that the Sonos devices are listed in the Sonos app.
4. If no devices are listed, the Sonos household must be reconfigured until the Sonos devices are discovered. For more information, refer to the Sonos support pages at [www.sonos.com/support](http://www.sonos.com/support).

## No Online Devices Found

This issue occurs when the discovered Sonos devices do not report as online.

### Issue(s)

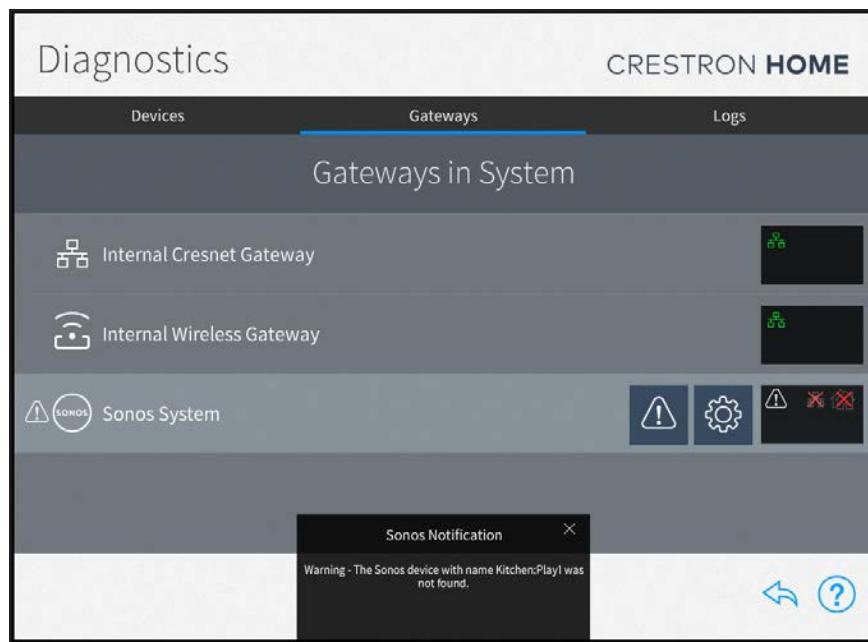
The Crestron Home system was able to discover Sonos devices but is unable connect to any of the devices for setup.

### Explanation

After a successful Sonos discovery scan, the Crestron Home system selects one of the Sonos devices as the primary device. The system then connects to the device and subscribes for the Favorites event (used to retrieve and update the Favorites list) and the Group Configuration event (used to retrieve and update the group and player configuration).

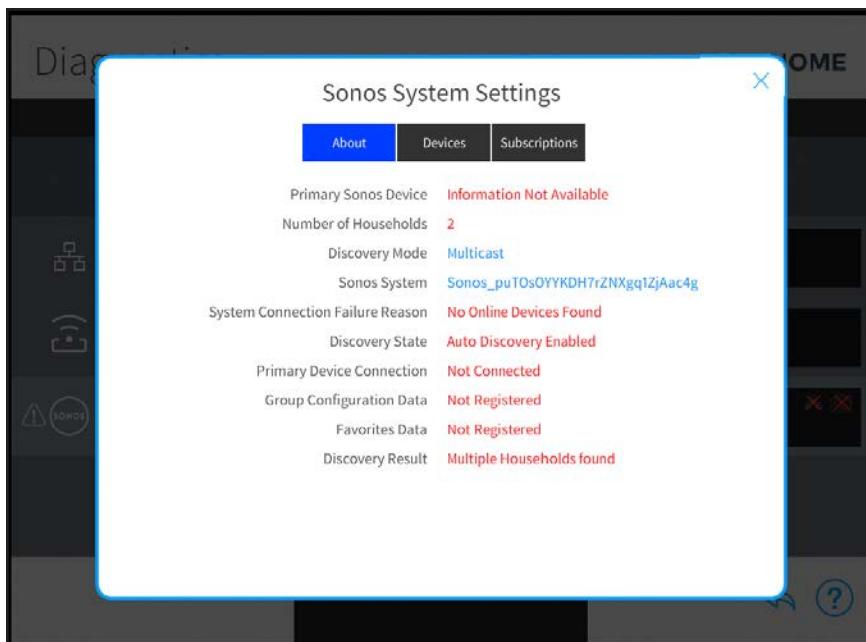
If one of these three processes fails, the Crestron Home system assumes that the device is offline and moves to the next Sonos device that was discovered. If one of these three processes fails for all discovered Sonos devices, the Sonos system cannot be created, and a "No Online Devices Found" error is raised. The Crestron Home system provides a notification of this issue on the **Diagnostics** screen.

### Diagnostics Screen - No Online Devices Found



Tap the gear icon next to the Sonos System gateway to view the **Sonos System Settings** page with the **About** tab open by default. A "No Online Devices Found" status is indicated for **System Connection Failure Reason**.

## Sonos System Settings Screen - No Devices Found



## Solution

Depending on the issue, multiple solutions may be attempted:

- In the Sonos app, ungroup all devices, and then start a new Sonos discovery scan.
- Remove all Sonos devices in the Crestron Home system, and then add one new device to the system.
- For a "Favorites Event Subscription Timeout" or "Favorites Event Subscription Failed" message, select the **Subscriptions** tab in the **Sonos System Settings** page, and then press the **Refresh** button for the Favorites event.
- For a "Group Configuration Event Subscription Timeout" or "Group Configuration Event Subscription Failed" message, select the **Subscriptions** tab in the **Sonos System Settings** page, and then press the **Refresh** button for the Group Configuration event.

If the above solutions do not fix the issue:

- Power cycle the Sonos devices, and wait until they are discovered in the Sonos app.

**NOTE:** Close the Sonos app after powering down a Sonos device.

- Power cycle the CP4-R.

## Speaker Pairs

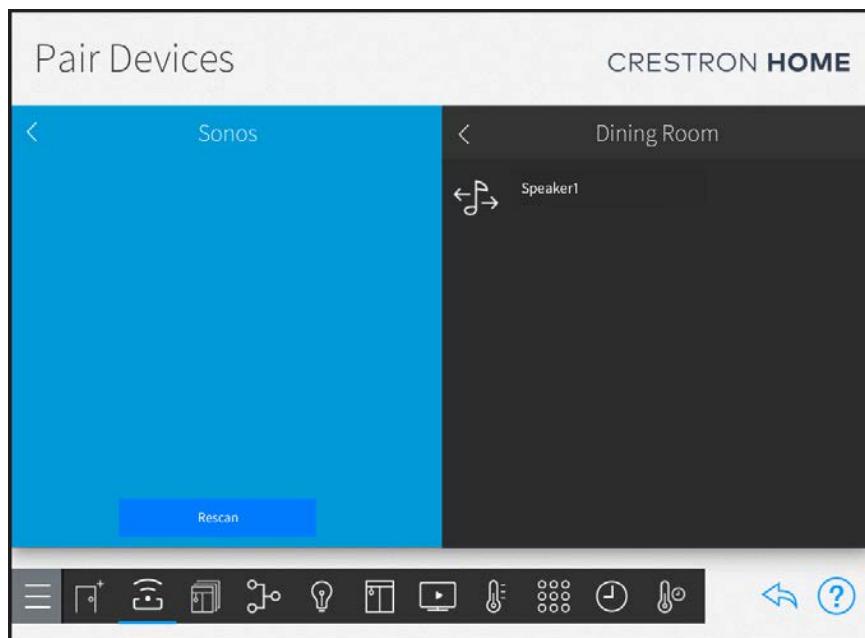
In the Sonos app, it is possible to pair two PLAY:1, PLAY:3, PLAY:5, or CONNECT:AMP speaker devices. When two of these speakers are paired, both speakers act as a single Sonos device in the Sonos app.

When a speaker pair is created in the Sonos app, the user is asked to assign one of the paired speakers as the left speaker. The speaker assigned as the left speaker becomes the master, and from that point forward, is used to represent both speakers in the pair.

The speaker pair is named after the speaker that was used to start the speaker pair configuration. If this speaker is not chosen as the left (master) speaker, the left speaker is renamed automatically.

In the following images, "Speaker1" in the Dining Room and "Speaker2" in the Entrance will be used to create a speaker pair.

Pair Devices Screen - Sonos (Speaker1)



### Pair Devices Screen - Sonos (Speaker2)

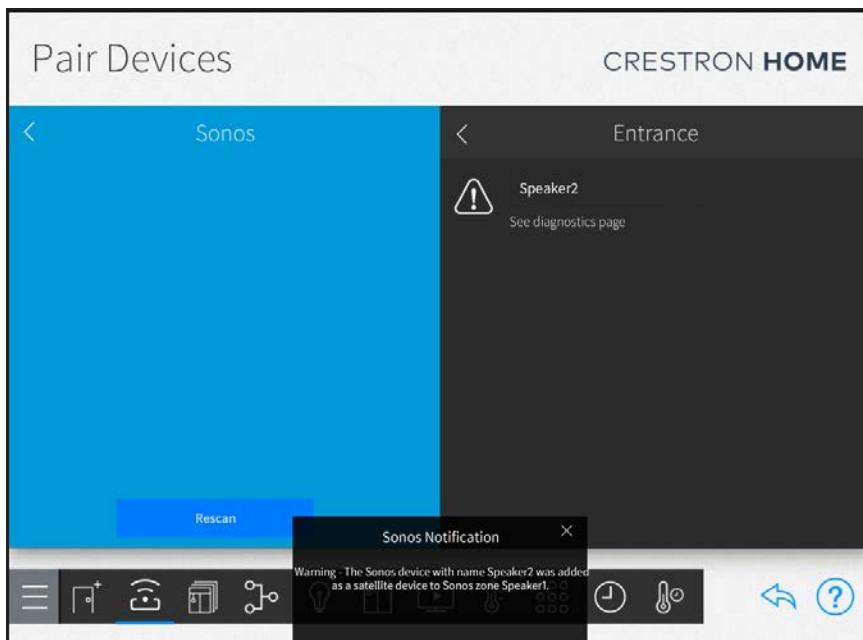


To select Speaker1 as the left (master) speaker:

1. Open the Sonos app.
2. Select **Speaker1**, and then select **Settings > Create Speaker Pair**.
3. Create a pair between Speaker1 and Speaker2 by following the in-app instructions.
4. Assign **Speaker1** as the left speaker.

Speaker2 is hidden, and the resulting speaker pair is named Speaker1. The Crestron Home system will be able to discover only Speaker1. If Speaker2 was assigned in the Crestron Home system, it will report as offline, and a pop-up dialog is displayed stating that Speaker2 was added as a satellite device to Speaker1.

### Pair Devices Screen - Sonos (Speaker2 Offline)



To select Speaker2 as the left (master) speaker:

1. Open the Sonos app.
2. Select **Speaker1**, and then select **Settings > Create Speaker Pair**.
3. Create a pair between Speaker1 and Speaker2 by following the in-app instructions.
4. Assign **Speaker2** as the left speaker.

Speaker1 is hidden, and the resulting speaker pair is named Speaker1. The Crestron Home system will be able to discover only Speaker2 (renamed to Speaker1). If Speaker1 was assigned in Crestron Home system, it will report as offline, and a pop-up dialog is displayed stating that Speaker1 was added as a satellite device to Speaker2.

### Pair Devices Screen - Sonos (Speaker1 Pair)



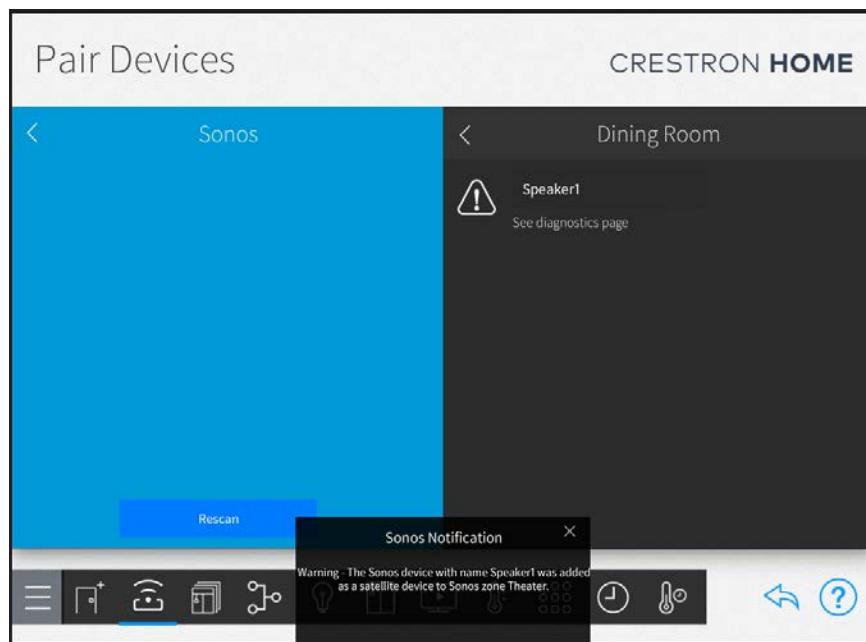
## Surround Speakers

In the Sonos app, it is possible to assign two PLAY:1, PLAY:3, or PLAY:5 speaker devices as surround speakers for a Beam, PLAYBAR, or PLAYBASE device.

The two speakers that are selected as surround speakers are hidden in the Sonos app and may no longer be controlled.

If any of the surround speakers were assigned in the Crestron Home system, a pop-up dialog is displayed stating the Sonos device was added as a satellite device to the Beam, PLAYBAR, or PLAYBASE device.

Pair Devices Screen - Sonos (Speaker1 Offline)



## Line-Out Configuration

For a Sonos CONNECT device, the line-out settings may be set as **Variable** or **Fixed**:

- **Variable:** The volume level of the line-out output may be controlled.
- **Fixed:** The volume level of the line-out output is set to 100% and may not be controlled.

Depending on the device type that was chosen when assigning a Sonos device in the Crestron Home system, observe the following points:

- Source
  - A source device type is used for a CONNECT device that is connected as an input to an audio receiver.
  - The line-out setting for source devices should always be set to **Fixed**, as the audio receiver is used for volume control.

- A notification is displayed if the line-out setting for a CONNECT device with a source device type was set to **Variable**.
- Speaker
  - A speaker device type is added to a room in the Crestron Home system as an audio endpoint.
  - The line-out setting for speaker devices should always be set to **Variable**, as the Sonos device is used for volume control.
  - A notification is displayed if the line-out setting for a CONNECT device with a speaker device type was set to **Fixed**.

## Best Practices

Refer to the following best practices when integrating Sonos devices with the Crestron Home system.

- When adding a Sonos device to an existing Sonos household, the device must be reset to factory settings to ensure that it begins using the system ID assigned to the existing Sonos system.
- Multiple Sonos households cannot be placed on the same network. Each Sonos household has a unique system ID, and Crestron Home system only allows Sonos devices to be assigned that are part of the Sonos household stored in the Crestron Home system configuration files.
- Set up the Sonos device(s) through the Sonos app before attempting a discovery with Crestron Home. If the Sonos device is not assigned to a room in the Sonos app, it cannot be discovered by Crestron Pyng.
- To rename a Sonos device in Crestron Home, change the name of the Sonos room that the device is assigned to using the Sonos app. The device name automatically updates in the Crestron Pyng system.
- Do not group Sonos devices together in the Sonos app, as this can lead to Crestron Home only being able to control one Sonos device instead of all of them individually.
- Crestron Home uses multicast to discover Sonos devices. Some network switches do not route these discovery packets correctly, and, as a result, Crestron Home does not discover any Sonos devices.
- The Autoplay option must be turned on in the Sonos app when adding a PLAY:5, CONNECT:AMP, Beam, PLAYBAR, or PLAYBASE.

## Appendix D: Restore a CP4-R to Factory Settings

If the CP4-R is no longer communicating with Crestron Toolbox via USB or Ethernet, use the following procedure to restore the device to its factory default settings.

**CAUTION:** All configured settings and device pairings are lost following a factory restore.

1. Use a small, pointed object (such as the tip of a pen) to press and release the **HW-R** button on the front of the CP4-R.
2. Use a small, pointed object (such as the tip of a pen) to quickly press the **SW-R** button on the front of the CP4-R five times, with under a 1-second gap between each press.
3. Wait up to 15 minutes for the self-recovery process to complete.
4. Attempt to make a connection to Crestron Toolbox via USB. (USB is the only valid connection type.)
5. Once the device has been discovered, use the Text Console tool in Crestron Toolbox to check for a prompt. The standard device prompt should display.

**NOTE:** Repeat steps 1–5 if the first attempt does not correct the issue. If the CP4-R is still unresponsive, contact Crestron Technical Support for assistance.

6. The restore process may enable SSL (Secure Sockets Layer) on the CP4-R. After communication returns following the restore, issue the `ssl off` command using the Text Console tool to disable SSL.

**NOTE:** If a connection cannot be established using the Text Console tool, change the connection type from **Auto Detect** to **SSL** in the **Edit Connections** dialogue.

7. Reload the Crestron Home firmware via the Package Update Tool in Crestron Toolbox to ensure that any touch screen projects are also reloaded to the CP4-R.

If the CP4-R is still communicating with Crestron Toolbox via USB or Ethernet, or if the `initialize` command was issued to the CP4-R as part of a troubleshooting procedure, issue the `restore` command using the Text Console tool, and then follow the post-restore process (steps 6–7 in the above procedure).

## Appendix E: Create and Upload a Custom Device Driver

Custom device drivers expand the functionality of the Crestron Home system by allowing additional third party devices to be paired with the system. Use the Device Learner tool in Crestron Toolbox to create driver files that may be loaded directly into the CP4-R. Device controls are mapped from the driver file to buttons on Crestron remote controls and user interface control pages.

**NOTE:** For additional information about drivers, please visit the Crestron SDK Repository at [www.crestron.com/developer](http://www.crestron.com/developer).

The screenshot shows a software interface titled "Device Learner" with a "Remote Buttons" tab selected. At the top, there are status indicators: "100% Required Standard Commands" and "0% of Standard Commands Learned". Below this is a table with columns: "Button Label", "Standard Command \* Required", "Learned", "Device Ready", "Test", and "Description". The table lists various buttons with their corresponding commands and status indicators. For example, the "BLUE" button is mapped to the "BLUE" command, has a red "Learned" indicator, and a green "Device Ready" indicator. The "Description" column provides a brief explanation for each button.

Button Label	Standard Command * Required	Learned	Device Ready	Test	Description
BLUE	*BLUE	Red	Green	Test	Good Blue button
DISC-	*DISC-	Red	Green	Test	Good Decrement the disc number
DISC+	*DISC+	Red	Green	Test	Good Increment the disc number
DN_ARROW	*DN_ARROW	Red	Green	Test	Good Down arrow, usually for menus or to c
ENTER	*ENTER	Red	Green	Test	Good ENTER, usually select something or te
FSCAN	*FSCAN	Red	Green	Test	Good Forward, while showing visually
GREEN	*GREEN	Red	Green	Test	Good Green button
LEFT_ARROW	*LEFT_ARROW	Red	Green	Test	Good Left arrow, usually for menus
MENU	*MENU	Red	Green	Test	Good Show the menu
PAUSE	*PAUSE	Red	Green	Test	Good Pause, transport command for a sourc
PLAY	*PLAY	Red	Green	Test	Good Play, transport command for a source
RED	*RED	Red	Green	Test	Good Red button
RETURN	*RETURN	Red	Green	Test	Good Return to the previous screen
RIGHT_ARROW	*RIGHT_ARROW	Red	Green	Test	Good Right arrow, usually for menus
RSCAN	*RSCAN	Red	Green	Test	Good Reverse, with visual shown
STOP	*STOP	Red	Green	Test	Good Stop, transport command for a source

**NOTE:** For more information on using the Device Learner tool to create device drivers, refer to the embedded Crestron Toolbox help file.

Refer to the following tables for each supported device class when mapping buttons to device controls.

Each button mapping table (except for remote controls) includes the following information:

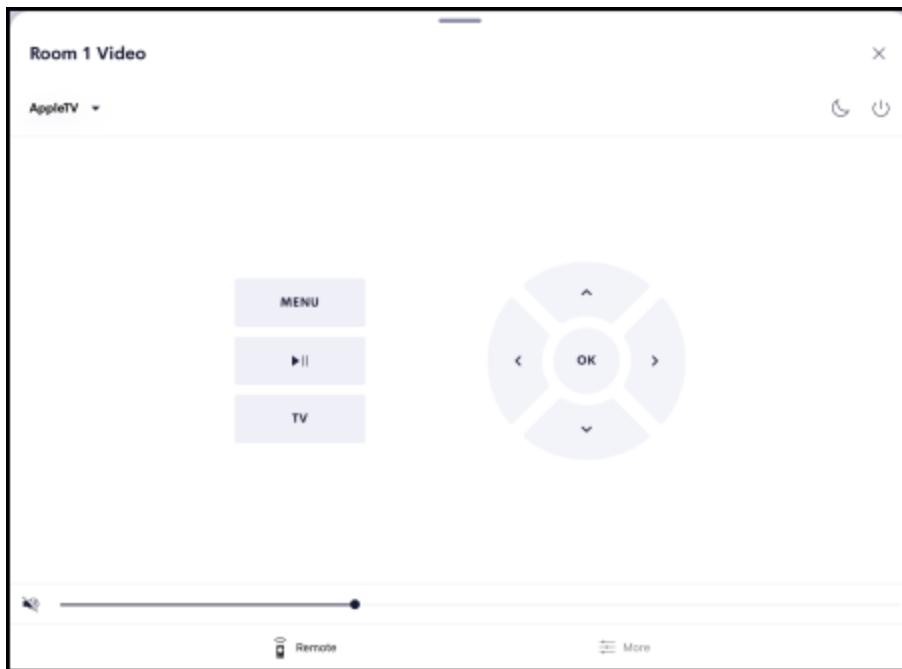
- Button:** A button used by the device class that may be mapped to a command
- Pyng Command:** The command that is sent from the Crestron Home system to the device when the button is activated

- **Driver Command:** The command that is sent from the device driver to the device when the button is activated
- **Standard Command:** The standard command that is associated with the button in the Device Learner tool

A standard command table is also provided for each device class that includes the following information:

- **Standard Command:** The name of the standard command in the Device Learner tool
- **Aliased Command List:** A list of aliased commands for the standard command  
Aliasing is used when a command does not exist for a certain device. In this scenario, the driver moves to the next command in the list, and repeats the process for each subsequent command that does not exist.
- **Required/Optional:** Indicates whether the command is required or optional (**Required** commands must be included to build the driver package file.)

# Apple TV® User Interface Digital Media Extender Button Mapping



## Apple TV Button Mapping

Button	Creston Home Command	Driver Command	Standard Command
▶	FirstPlayPause <sup>1</sup>	Not supported	Play_Pause
MENU	Menu	Menu	Menu
▲	Up	Up	Up_Arrow
▶	Right	Right	Right_Arrow
▼	Down	Down	Dn_Arrow
◀	Left	Left	Left_Arrow
OK	Select	Select	Select

<sup>1</sup> If this command does not exist for the device, this button is mapped to the **Play** command instead.

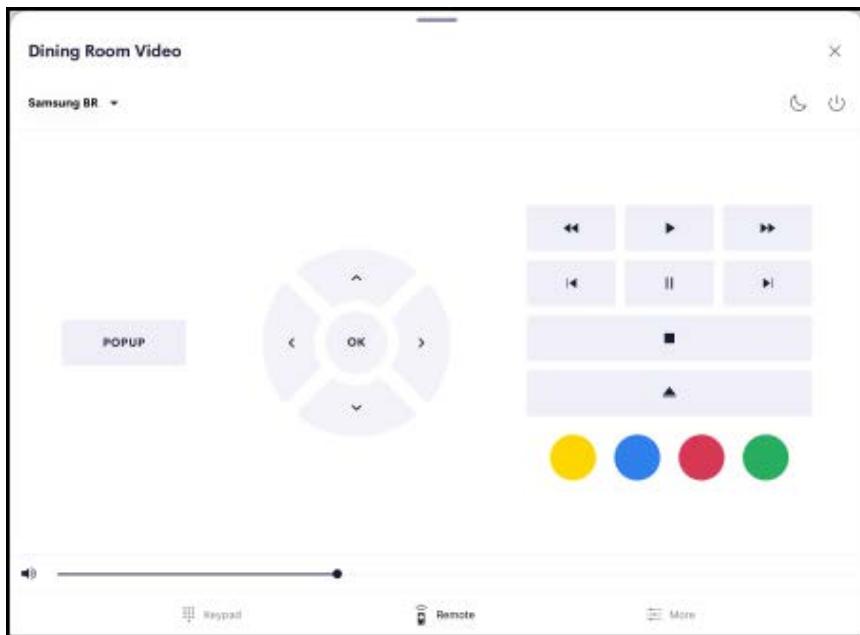
## Apple TV Standard Commands

Standard Command	Aliased Command List	Required/Optional
Play_Pause		Required
Dn_Arrow	Down, DN, Dw_Arrow, Navigation_Down, Menu_Down, Cursor_Down, v, -, tilt_down, tilt_dn, tilt-down, tilt-dn, tiltdown	Required

## Apple TV Standard Commands

Standard Command	Aliased Command List	Required/Optional
Left_Arrow	Left, Navigation_Left, Menu_Left, Cursor_Left, <, Track-, pan_left, pan_lt, l, LT, panleft	Required
Right_Arrow	Right, Navigation_Right, Menu_Right, Menu_RT, Cursor_Right, >, pan_right, pan_rt, pan-right, pan-rt, rt, panright	Required
Up_Arrow	Up, Navigation_Up, Menu_Up, Cursor_Up, ^, +, tilt_up, tilt-up	Required
Select	OK, Navigation_Select, Select	Required
Menu	Root_Menu, Disc_Menu, DiscMenu/List, DVD_Menu, DVD-Menu, DVDMenu	Required

## Blu-ray Disc Player Device Button Mapping

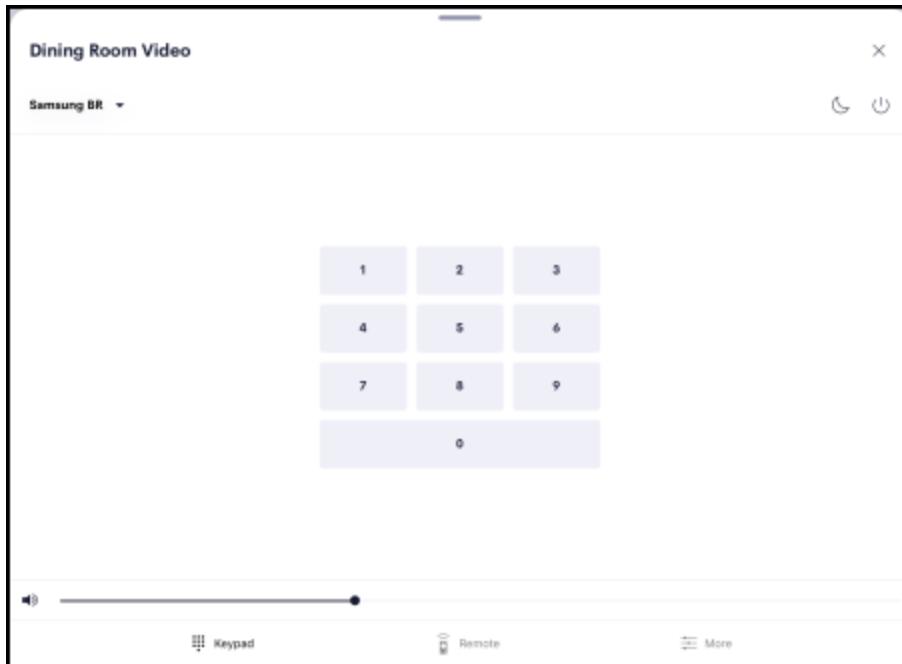


### Blu-ray Disc Player Button Mapping

Button	Crestron Home Command	Driver Command	Standard Command
◀◀	Rewind	ReverseScan	Rscan
▶▶	Play	Play	Play
▶▶▶	FastForward	ForwardScan	Fscan
◀◀◀	PreviousTrack	ReverseSkip	Track-
	Pause	Pause	Pause
▶	NextTrack	ForwardSkip	Track+
■	Stop	Stop	Stop
✖	ToggleShuffle	Not supported	Shuffle
▲	Eject	Eject	Eject
⟳	ToggleRepeat	Repeat	Repeat_1

### Blu-ray Disc Player Button Mapping

Button	Crestron Home Command	Driver Command	Standard Command
BACK	Back	Back	Back
TOP MENU	TopMenu	TopMenu	TopMenu
EXIT	Exit	Exit	Exit
POP-UP MENU	PopUpMenu	PopUpMenu	PopUpMenu
SETTINGS	Settings	Options	Options
HOME	Home	Home	Home
+	NextDisc	Not supported	Disc+
-	PreviousDisc	Not supported	Disc-
^	Up	Up	Up_Arrow
>	Right	Right	Right_Arrow
<	Down	Down	Dn_Arrow
<	Left	Left	Left_arrow
OK	Select	Select	Select
● Red	Red	Red	Red
● Green	Green	Green	Green
● Yellow	Yellow	Yellow	Yellow
● Blue	Blue	Blue	Blue



#### Blu-ray Disc Player Button Mapping - Numbers

Button	Crestron Home Command	Driver Command	Standard Command
1	Digit1	Digit1	1
2	Digit2	Digit2	2
3	Digit3	Digit3	3
4	Digit4	Digit4	4
5	Digit5	Digit5	5
6	Digit6	Digit6	6
7	Digit7	Digit7	7
8	Digit8	Digit8	8
9	Digit9	Digit9	9
0	Digit0	Digit0	0
ENTER	Enter	Enter	Enter
CLEAR	Clear	Not supported	Not supported

#### Blu-ray Disc Player Standard Commands

Standard Command	Aliased Command List	Required /Optional
Rscan	Rscan, Rew, Rewind, Review, Reverse_Scan, Rewind_Scan, Previous_Scan, Prev_Scan, R_Srch, Rsrch, Scan-, <<, &Rscan, A_Rew, ReverseScan	Required
Play	Play_Pause, Play/Pause, A_PLAY, >, PLAY/SLOW, VOD-PLAY,	Required

## Blu-ray Disc Player Standard Commands

Standard Command	Aliased Command List	Required /Optional
	PLAY_MODE	
Fscan	FFWD, F_SCAN, SCAN, FF, >>, F_Srch, FSRCH, FFW, Forward, Fast_Forward, SCAN+, SEARCH, A_FFWD, SEARCH>>, SEARCH_MODE, &Fscan	Required
Pause	A_PAUSE, Pse, PAUSE_STEP, VOD-PAUSE, Play_Pause, Play/Pause	Required
Dn_Arrow	Down, DN, Dw_Arrow, Navigation_Down, Menu_Down, Cursor_Down, v, -, tilt_down, tilt_dn, tilt-down, tilt-dn, tiltdown	Required
Left_Arrow	Left, Navigation_Left, Menu_Left, Cursor_Left, <, Track-, pan_left, pan_lt, l, LT, panleft	Required
Right_Arrow	Right, Navigation_Right, Menu_Right, Menu_RT, Cursor_Right, >, pan_right, pan_rt, pan-right, pan-rt, rt, panright	Required
Up_Arrow	Up, Navigation_Up, Menu_Up, Cursor_Up, ^, +, tilt_up, tilt-up	Required
Select	OK, Navigation_Select, Select	Required
TopMenu	Top, Top_Menu, Tmenu	Required
Exit	ESC, CANCEL/OSD, CANCEL, Navigation_MenuBack_F11	Required
Track+	Track/Chapter_+, Advance, Jump, Skip_Fwd, Chapter/Track_Fwd, Next, F_Srch/Skip, FF, NextTrack, TRK+, Track_+, NEXT_TRK, F_TRK, F_TRACK, NEXT_SCENE, SCENE+, >> , F_Scene, FTRK, >>	Required
Track-	Track/Chapter_-, Chapter/Track_Rev, Skip_Rev, Previous, PreviousTrack, TRK-, Track_-, PREV_TRK, R_TRK, R_TRACK, PREV_SCENE, SCENE-,  <<, R_Scene	Required
Back		Required
Disc+	Disc_+, Disc_Skip+, NEXT_DISC_F_DISC	Optional
Disc-	Disc_-, Disc_Skip-, PREV_DISC, R_DISC	Optional
PopUpMenu	PopUp_Menu	Optional
0	Disc_Key_0, Direct_Channel_Entry_0, 0_Space, Number_0_or_Number_10, Keyboard_0, NUM_0, kpd_0, kpd-0, key_0, key-0, Dial_0, Dial0, Key0	Optional
1	Disc_Key_1, Direct_Channel_Entry_1, Number_1, Keyboard_1, NUM_1, kpd_1, kpd-1, key_1, key-1, Dial_1, Dial1, Key1	Optional
2	Disc_Key_2, Direct_Channel_Entry_2, 2_ABC, Number_2, Keyboard_2, NUM_2, kpd_2, kpd-2, key_2, key-2, Dial_2, Dial2, Key2	Optional
3	Disc_Key_3, Direct_Channel_Entry_3, 3_DEF, Number_3, Keyboard_3, NUM_3, kpd_3, kpd-3, key_3, key-3, Dial_3, Dial3, Key3	Optional
4	Disc_Key_4, Direct_Channel_Entry_4, 4_GHI, Number_4, Keyboard_4,	Optional

## Blu-ray Disc Player Standard Commands

Standard Command	Aliased Command List	Required /Optional
	NUM_4, kpd_4, kpd-4, key_4, key-4, Dial_4, Dial4, Key4	
5	Disc_Key_5, Direct_Channel_Entry_5, 5_JKL, Number_5, Keyboard_5, NUM_5, kpd_5, kpd-5, key_5, key-5, Dial_5, Dial5, Key5	Optional
6	Disc_Key_6, Direct_Channel_Entry_6, 6_MNO, Number_6, Keyboard_6, NUM_6, kpd_6, kpd-6, key_6, key-6, Dial_6, Dial6, Key6	Optional
7	Disc_Key_7, Direct_Channel_Entry_7, 7_PQRS, Number_7, Keyboard_7, NUM_7, kpd_7, kpd-7, key_7, key-7, Dial_7, Dial7, Key7	Optional
8	Disc_Key_8, Direct_Channel_Entry_8, 8_TUV, Number_8, Keyboard_8, NUM_8, kpd_8, kpd-8, key_8, key-8, Dial_8, Dial8, Key8	Optional
9	Disc_Key_9, Direct_Channel_Entry_9, 9_WXYZ, Number_9, Keyboard_9, NUM_9, kpd_9, kpd-9, key_9, key-9, Dial_9, Dial9, Key9	Optional
Stop	A_STOP, [], VOD-STOP, Stop_Presenting, StopPresenting	Optional
F_Step	NEXT, NEXT_STEP, FORWARD, FWD, STEP, SLOW,   >, STEP_FORWARD, FRAME_FORWARD, FRAME_+, FRAME+	Optional
R_Step	Prev, PREV_STEP, REVERSE, REV, STEP_BACK, STEP_<, <  , FRAME_BACK, FRAME_-, FRAME-	Optional
Replay	REPLAY_GUIDE, INSTANT_REPLAY, REPLAY/BACK, REPLAY_ZONES	Optional
Enter	#, Disc_Key, Enter, Direct_Channel, Enter, #_Enter, Partition_1_Keypad_Enter, Keyboard_Enter, ENT	Optional
Eject	OPEN, OPEN/CLOSE	Optional
Blue	F1_Blue	Optional
Green	F3_Green	Optional
Red	F2_Red	Optional
Yellow	F4_Yellow	Optional
Options		Optional
Repeat_1	REPEAT, RPT, RPT_A, RPT_1, LOOP, A-B, AB	Optional
Shuffle		Optional

## Digital Video Server Button Mapping

**Digital Video Server Button Mapping**

Button	Crestron Home Command	Driver Command	Standard Command
	Rewind	ReverseScan	Rscan
	FirstPlayPause <sup>1</sup>	Not supported	Play
	FastForward	ForwardScan	Fscan
	PreviousTrack	ReverseSkip	R_Step
	Pause	Pause	Pause
	NextTrack	ForwardSkip	F_Step
	Replay	Replay	Replay
<b>HOME</b>	Home	Home	Home
<b>MENU</b>	Menu	Menu	Menu
<b>BACK</b>	Back	Back	Back
<b>EXIT</b>	Exit	Exit	Exit
	Up	Up	Up_Arrow
	Right	Right	Right_Arrow
	Down	Down	Down_Arrow
	Left	Left	Left_Arrow
<b>OK</b>	Select	Select	Select

<sup>1</sup> If this command does not exist for the device, this button is mapped to the Play command instead.

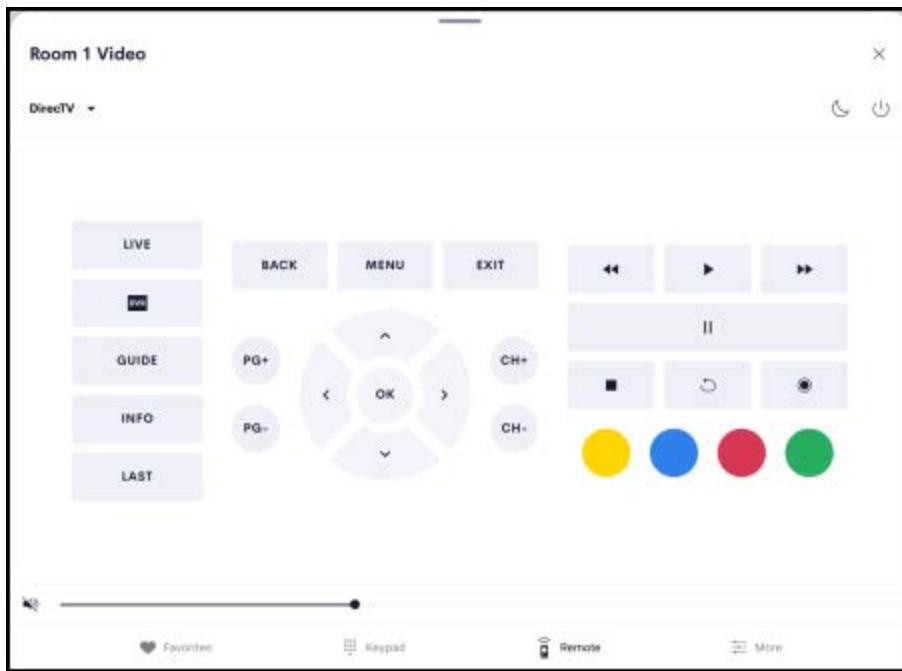
**Digital Video Server Standard Commands**

Standard Command	Aliased Command List	Required/Optional
Rscan	Rscan, Rew, Rewind, Review, Reverse_Scan, Rewind_Scan, Previous_Scan, Prev_Scan, R_Srch, Rsrch, Scan-, <<, &Rscan, A_Rew, ReverseScan	Required
Play_	Play_Pause, Play/Pause, A_PLAY, >, PLAY/SLOW, VOD-PLAY,	Required

## Digital Video Server Standard Commands

Standard Command	Aliased Command List	Required/Optional
Pause	PLAY_MODE	
Fscan	FFWD, F_SCAN, SCAN, FF, >>, F_Srch, FSRCH, FFW, Forward, Fast_Forward, SCAN+, SEARCH, A_FFWD, SEARCH>>, SEARCH_MODE, &Fscan	Required
Pause	A_PAUSE, Pse, PAUSE_STEP, VOD-PAUSE, Play_Pause, Play/Pause	Required
Dn_Arrow	Down, DN, Dw_Arrow, Navigation_Down, Menu_Down, Cursor_Down, v, -, tilt_down, tilt_dn, tilt-down, tilt-dn, tiltdown	Required
Left_Arrow	Left, Navigation_Left, Menu_Left, Cursor_Left, <, Track-, pan_left, pan_lt, l, LT, panleft	Required
Right_Arrow	Right, Navigation_Right, Menu_Right, Menu_RT, Cursor_Right, >, pan_right, pan_rt, pan-right, pan-rt, rt, panright	Required
Up_Arrow	Up, Navigation_Up, Menu_Up, Cursor_Up, ^, +, tilt_up, tilt-up	Required
Select	OK, Navigation_Select, Select	Required
Menu	Root_Menu, Disc_Menu, DiscMenu/List, DVD_Menu, DVD-Menu, DVDMenu	Required
Back		Required
Stop	A_STOP, [], VOD-STOP, Stop_Presenting	Optional
F_Step	NEXT, NEXT_STEP, FORWARD, FWD, STEP, SLOW,   >, STEP_FORWARD, FRAME_FORWARD, FRAME_+, FRAME+	Optional
R_Step	Prev, PREV_STEP, REVERSE, REV, STEP_BACK, STEP_<, <  , FRAME_BACK, FRAME_-, FRAME-	Optional
Replay	REPLAY_GUIDE, INSTANT_REPLAY, REPLAY/BACK, REPLAY_ZONES	Optional
Exit	ESC, CANCEL/OSD, CANCEL, Navigation_MenuBack_F11	Optional

## DVR and AVR Button Mapping



**DVR and AVR Button Mapping**

Button	Crestron Home Command	Driver Command	Standard Command
◀◀	Rewind	ReverseScan	Rscan
▶	Play	Play	Play
▶▶	FastForward	ForwardScan	Fscan
◀	PreviousTrack	ReverseSkip	Track-
	Pause	Pause	Pause
■	Stop	Stop	Stop
↶	Replay	Replay	Replay
⌚	Record	Record	Record
PG+	PageUp	PageUp	Page_Up

## DVR and AVR Button Mapping

Button	Crestron Home Command	Driver Command	Standard Command
PG-	PageDown	PageDown	Page_Down
CH+	ChannelUp	ChannelUp	CH+
CH-	ChannelDn	ChannelDn	CH-
GUIDE	Guide	Guide	Guide
MENU	Menu	Menu	Menu
BACK	Back	Back	Back
INFO	Info	Info	Info
ON DEMAND	OnDemand	Not supported	On_Demand
FAV	ToggleFavorite	Not supported	Favorite
EXIT	Exit	Exit	Exit
^	Up	Up	Up_Arrow
>	Right	Right	Right_Arrow
▼	Down	Down	Down_Arrow
<	Left	Left	Left_Arrow
OK	Select	Select	Select
Red	Red	Red	Red
Green	Green	Green	Green
Yellow	Yellow	Yellow	Yellow
Blue	Blue	Blue	Blue
A	LetterA	A	A
B	LetterB	B	B
C	LetterC	C	C

### DVR and AVR Button Mapping

Button	Crestron Home Command	Driver Command	Standard Command
Thumb Down	UserFeedbackNegative	ThumbsDown	Thumbs_Down
Thumb Up	UserFeedbackPositive	ThumbsUp	Thumbs_Up
LAST	LastChannel	Last	Last
LIVE	Live	Live	Live

### DVR and AVR Button Mapping - Numbers

Button	Crestron Home Command	Driver Command	Standard Command
1	Digit1	Digit1	1
2	Digit2	Digit2	2
3	Digit3	Digit3	3
4	Digit4	Digit4	4
5	Digit5	Digit5	5
6	Digit6	Digit6	6
7	Digit7	Digit7	7
8	Digit8	Digit8	8
9	Digit9	Digit9	9
0	Digit0	Digit0	0
ENTER	Enter	Enter	Enter

## DVR and AVR Standard Commands

Standard Command	Aliased Command List	Required/Optional
Rscan	Rscan, Rew, Rewind, Review, Reverse_Scan, Rewind_Scan, Previous_Scan, Prev_Scan, R_Srch, Rsrch, Scan-, <<, &Rscan, A_Rew, ReverseScan	Required
Play	Play_Pause, Play/Pause, A_PLAY, >, PLAY/SLOW, VOD-PLAY, PLAY_MODE	Required
Fscan	FFWD, F_SCAN, SCAN, FF, >>, F_Srch, FSRCH, FFW, Forward, Fast_Forward, SCAN+, SEARCH, A_FFWD, SEARCH>>, SEARCH_MODE, &Fscan	Required
Pause	A_PAUSE, Pse, PAUSE_STEP, VOD-PAUSE, Play_Pause, Play/Pause	Required
Dn_Arrow	Down, DN, Dw_Arrow, Navigation_Down, Menu_Down, Cursor_Down, v, -, tilt_down, tilt_dn, tilt-down, tilt-dn, tiltdown	Required
Left_Arrow	Left, Navigation_Left, Menu_Left, Cursor_Left, <, Track-, pan_left, pan_lt, l, LT, panleft	Required
Right_Arrow	Right, Navigation_Right, Menu_Right, Menu_RT, Cursor_Right, >, pan_right, pan_rt, pan-right, pan-rt, rt, panright	Required
Up_Arrow	Up, Navigation_Up, Menu_Up, Cursor_Up, ^, +, tilt_up, tilt-up	Required
Select	OK, Navigation_Select, Select	Required
Menu	Root_Menu, Disc_Menu, DiscMenu/List, DVD_Menu, DVD-Menu, DVDMenu	Required
CH+	CH_+, CHANNEL+, Channel_Up, CHAN_UP, CHAN+, CHAN-UP, CH_UP, CH-UP, TUNE+	Required
CH-	CH_-, Channel_Down, CHAN_DOWN, CHAN-, CHANNEL_DN, CHAN_DN, CHANNEL-, CHAN-DOWN, CHAN-DN, CH_DN, CH-DN, TUNE-	Required
Back		Required
Last	RECENT, JUMP, LC, PC	Required
Guide	Channel_Guide, Electronic_Program_Guide	Required
Info		Required
0	Disc_Key_0, Direct_Channel_Entry_0, O_Space, Number_0_or_Number_10, Keyboard_0, NUM_0, kpd_0, kpd-0, key_0, key-0, Dial_0, Dial0, Key0	Required
1	Disc_Key_1, Direct_Channel_Entry_1, Number_1, Keyboard_1, NUM_1, kpd_1, kpd-1, key_1, key-1, Dial_1, Dial1, Key1	Required

## DVR and AVR Standard Commands

Standard Command	Aliased Command List	Required/Optional
2	Disc_Key_2, Direct_Channel_Entry_2, 2_ABC, Number_2, Keyboard_2, NUM_2, kpd_2, kpd-2, key_2, key-2, Dial_2, Dial2, Key2	Required
3	Disc_Key_3, Direct_Channel_Entry_3, 3_DEF, Number_3, Keyboard_3, NUM_3, kpd_3, kpd-3, key_3, key-3, Dial_3, Dial3, Key3	Required
4	Disc_Key_4, Direct_Channel_Entry_4, 4_GHI, Number_4, Keyboard_4, NUM_4, kpd_4, kpd-4, key_4, key-4, Dial_4, Dial4, Key4	Required
5	Disc_Key_5, Direct_Channel_Entry_5, 5_JKL, Number_5, Keyboard_5, NUM_5, kpd_5, kpd-5, key_5, key-5, Dial_5, Dial5, Key5	Required
6	Disc_Key_6, Direct_Channel_Entry_6, 6_MNO, Number_6, Keyboard_6, NUM_6, kpd_6, kpd-6, key_6, key-6, Dial_6, Dial6, Key6	Required
7	Disc_Key_7, Direct_Channel_Entry_7, 7_PQRS, Number_7, Keyboard_7, NUM_7, kpd_7, kpd-7, key_7, key-7, Dial_7, Dial7, Key7	Required
8	Disc_Key_8, Direct_Channel_Entry_8, 8_TUV, Number_8, Keyboard_8, NUM_8, kpd_8, kpd-8, key_8, key-8, Dial_8, Dial8, Key8	Required
9	Disc_Key_9, Direct_Channel_Entry_9, 9_WXYZ, Number_9, Keyboard_9, NUM_9, kpd_9, kpd-9, key_9, key-9, Dial_9, Dial9, Key9	Required
Record	REC, A_RECORD, O	Required
Stop	A_STOP, [], VOD-STOP, Stop_Presenting, StopPresenting	Optional
F_Step	NEXT, NEXT_STEP, FORWARD, FWD, STEP, SLOW,   >, STEP_FORWARD, FRAME_FORWARD, FRAME_+, FRAME+	Optional
R_Step	Prev, PREV_STEP, REVERSE, REV, STEP_BACK, STEP_<, <  , FRAME_BACK, FRAME_-, FRAME-	Optional
R_Skip		Optional
Enter	#, Disc_Key, Enter, Direct_Channel, Enter, #_Enter, Partition_1_, Keypad_Enter, Keyboard_Enter, ENT	Optional
Track+	Track/Chapter_+, Advance, Jump, Skip_Fwd, Chapter/Track_Fwd, Next, F_Srch/Skip, FF, NextTrack, TRK+, Track_+, NEXT_TRACK, F_TRK, F_TRACK, NEXT_SCENE, SCENE+, >> , F_Scene, FTRK, >>	Optional
Track-	Track/Chapter_-, Chapter/Track_Rev, Skip_Rev, Previous,	Optional

## DVR and AVR Standard Commands

Standard Command	Aliased Command List	Required/Optional
	PreviousTrack, TRK-, Track_-, PREV_TRK, R_TRK, R_TRACK, PREV_SCENE, SCENE-,  <, R_Scene	
Blue	F1_Blue	Optional
Green	F3_Green	Optional
Red	F2_Red	Optional
Yellow	F4_Yellow	Optional
Replay	REPLAY_GUIDE, INSTANT_REPLAY, REPLAY/BACK, REPLAY_ZONES	Optional
Page_Up	PGUP, PREV_PAGE, PAGE+, Page_+	Optional
Page_Down	PGDN, NEXT_PAGE, PAGE-, PAGE_ND, Page_-	Optional
Thumbs_Down	Th_down, Thumb_DN	Optional
Thumbs_Up	Th_up, Thumb_Up	Optional
Live	RETURN_TO_LIVE	Optional
A		Optional
B		Optional
C		Optional
D		Optional
Exit	ESC, CANCEL/OSD, CANCEL, Navigation_MenuBack_F11	Optional
Favorite	FAV	Optional
On_Demand	OnDemand	Optional
List		Optional
Tivo		Optional
DVR	List, TIVO, TV-DVR, TV/DVR	Optional

## Remote Control Button Mapping

Remote Control Button Mapping

Button	Crestron Home Command	Driver Command	TSR-310 Support	HR-310 Support	HR-150 Support	HR-100 Support
0	Digit0	Digit0	Yes	No	Yes	No
1	Digit1	Digit1	Yes	Nuo	Yes	No
2	Digit2	Digit2	Yes	No	Yes	No
3	Digit3	Digit3	Yes	No	Yes	No
4	Digit4	Digit4	Yes	No	Yes	No
5	Digit5	Digit5	Yes	No	Yes	No
6	Digit6	Digit6	Yes	No	Yes	No
7	Digit7	Digit7	Yes	No	Yes	No
8	Digit8	Digit8	Yes	No	Yes	No
9	Digit9	Digit9	Yes	No	Yes	No
◀	Clear	Not Supported	Yes	Yes	Yes	Yes
ENTER	Enter	Enter	Yes	Yes	Yes	Yes
POWER	TogglePower	PowerToggle	Yes	Yes	Yes	Yes
BRIGHTNESS	(Turns on the remote's keypad backlight)	Not applicable	No	No	Yes	Yes
★	NextFavorite (for all devices except for Roku)For Roku, acts the same as the Menu button	Not applicable	Yes	No	No	No
☰	The first of these available commands for the device: Home, Menu, TopMenu	Home, Menu, TopMenu	Yes	Yes	No	No
VOLUME UP	VolumeUp	VolumeUp	Yes	Yes	Yes	Yes
MUTE	ToggleMute	Mute	Yes	Yes	No	No
VOLUME DOWN	VolumeDown	VolumeDown	Yes	Yes	Yes	Yes

## Remote Control Button Mapping

Button	Crestron Home Command	Driver Command	TSR-310 Support	HR-310 Support	HR-150 Support	HR-100 Support
	ChannelUp	ChannelUp	Yes	Yes	Yes	Yes
	Info	Info	Yes	Yes	No	No
INFO	Info	Info	No	No	Yes	Yes
	ChannelDown	ChannelDown	Yes	Yes	Yes	Yes
MENU	The first of these available commands for the device: Menu, Home, TopMenu	Home, Menu, TopMenu	Yes	Yes	Yes	Yes
GUIDE	The first of these available commands for the device: Guide, Home, TopMenu	Guide, Home, TopMenu	Yes	Yes	Yes	Yes
Directional pad, normal (non-color button) mode	Up, Right, Down, Left	Up, Right, Down, Left	Yes	Yes	Yes	Yes
Directional pad, color button mode	Green, Red, Yellow, Blue	Green, Red, Yellow, Blue	Yes	Yes	No	No
Directional pad, center button	Select	Select	Yes	Yes	No	No
Directional pad, SELECT	Select	Select	No	No	Yes	Yes
EXIT	The first of these available commands for the device: Exit, Back	Exit, Back	Yes	Yes	Yes	Yes
	(Turns on the directional pad's color button mode)	Not applicable	Yes	Yes	No	No

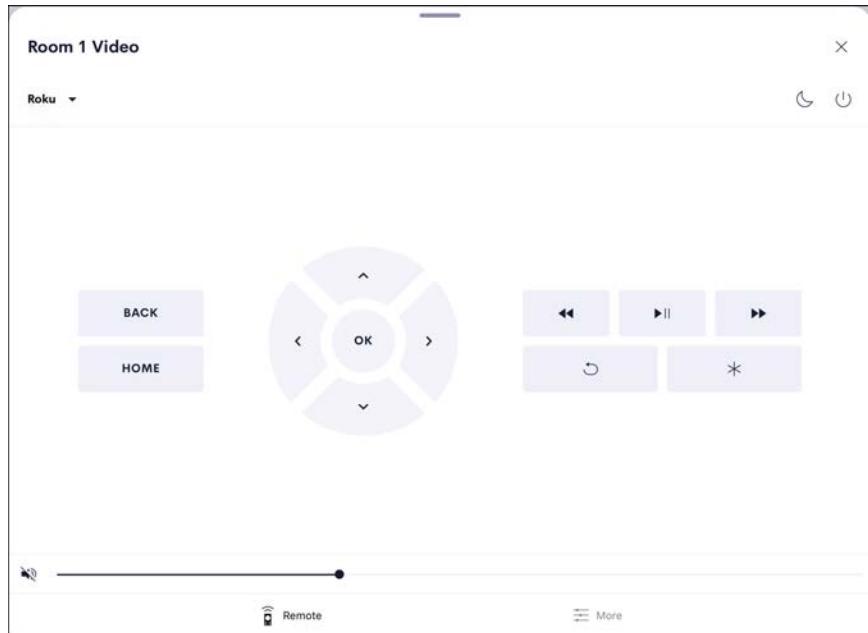
### Remote Control Button Mapping

Button	Crestron Home Command	Driver Command	TSR-310 Support	HR-310 Support	HR-150 Support	HR-100 Support
LAST	The first of these available commands for the device: LastChannel, Back	Last, Back	Yes	Yes	Yes	Yes
	Rewind	ReverseScan	Yes	Yes	Yes	Yes
	Play (if available)Otherwise, sends TogglePlayPause	Play, PlayPause	Yes	Yes	Yes	Yes
	FastForward	ForwardScan	Yes	Yes	Yes	Yes
	The first of these available commands for the device: PreviousTrack, Replay, PreviousTunerPreset, PreviousDisc	ReverseSkip, Replay, Not supported, PreviousDisc	Yes	Yes	No	No
	The first of these available commands for the device: PreviousTrack, Replay, PreviousTunerPreset, PreviousDisc	ReverseSkip, Replay, Not supported, PreviousDisc	No	No	Yes	Yes
	Pause (if available)Otherwise, sends TogglePlayPause	Pause, PlayPause	Yes	Yes	Yes	Yes
	The first of these available commands for the device: NextTrack, Advance, NextTunerPreset, NextFavoriteChannel, PreviousDisc	ForwardSkip, ForwardSkip, Not supported, Not supported, Not supported	Yes	Yes	No	No

## Remote Control Button Mapping

Button	Crestron Home Command	Driver Command	TSR-310 Support	HR-310 Support	HR-150 Support	HR-100 Support
	The first of these available commands for the device: NextTrack, Advance, NextTunerPreset, NextFavoriteChannel, PreviousDisc	ForwardSkip, ForwardSkip, Not supported, Not supported, Not supported	No	No	Yes	Yes
	Stop	Stop	Yes	Yes	Yes	Yes
DVR	RecordingMenu	Not applicable	Yes	Yes	Yes	Yes
	ToggleRecord	Record	Yes	Yes	Yes	Yes
	Press and hold button while speaking to issue a voice command	Not applicable	Yes	No	No	No

## Roku® Streaming Player User Interface Button Mapping



**Roku Button Mapping**

Button	Crestron Home Command	Driver Command	Standard Command
◀	Rewind	ReverseScan	Rscan
▶	FirstPlayPause <sup>1</sup>	Not supported	Play_Pause
▶▶	FastForward	ForwardScan	Fscan
*	Asterisk	Asterisk	*
⟳	Replay	Replay	Replay
<b>HOME</b>	Home	Home	Home
<b>MENU</b>	Menu	Menu	Menu
<b>BACK</b>	Back	Back	Back
^	Up	Up	Up_Arrow
>	Right	Right	Right_Arrow
▼	Down	Down	Down_Arrow

## Roku Button Mapping

Button	Crestron Home Command	Driver Command	Standard Command
	Left	Left	Left_Arrow
	Select	Select	Select

<sup>1</sup> If this command does not exist for the device, this button is mapped to the Play command instead.

## Roku Standard Commands

Standard Command	Aliased Command List	Required/Optional
Rscan	Rscan, Rew, Rewind, Review, Reverse_Scan, Rewind_Scan, Previous_Scan, Prev_Scan, R_Srch, Rsrch, Scan-<<, &Rscan, A_Rew, ReverseScan	Required
Play_Pause	Play_Pause, Play/Pause, A_PLAY, >, PLAY/SLOW, VOD-PLAY, PLAY_MODE	Required
Fscan	FFWD, F_SCAN, SCAN, FF, >>, F_Srch, FSRCH, FFW, Forward, Fast_Forward, SCAN+, SEARCH, A_FFWD, SEARCH>>, SEARCH_MODE, &Fscan	Required
Dn_Arrow	Down, DN, Dw_Arrow, Navigation_Down, Menu_Down, Cursor_Down, v, -, tilt_down, tilt_dn, tilt-down, tilt-dn, tiltdown	Required
Left_Arrow	Left, Navigation_Left, Menu_Left, Cursor_Left, <, Track-, pan_left, pan_lt, l, LT, panleft	Required
Right_Arrow	Right, Navigation_Right, Menu_Right, Menu_RT, Cursor_Right, >, pan_right, pan_rt, pan-right, pan-rt, rt, panright	Required
Up_Arrow	Up, Navigation_Up, Menu_Up, Cursor_Up, ^, +, tilt_up, tilt-up	Required
Select	OK, Navigation_Select, Select	Required
Menu	Root_Menu, Disc_Menu, DiscMenu/List, DVD_Menu, DVD-Menu, DVDMenu	Required
Back		Required
Replay	REPLAY_GUIDE, INSTANT_REPLAY, REPLAY/BACK, REPLAY_ZONES	Required
Home	Tivo, Options	Required
*	Kpd-*_, key_*_, key-*_, Dial_*_, Dial*, Dial_Star, DialStar, Key*, Asterisk	Required

## Load Device Driver Files

To side load a custom device driver file into the CP4-R:

1. Connect to the CP4-R over FTP or by using the File Manager tool in Crestron Toolbox.
2. Upload the custom driver package file or IR file into the CP4-R's \User\ThirdPartyDrivers\Import directory.
3. Navigate to the driver using the **Third Party Devices** menu in the **Pair Devices** screen. The screen refreshes automatically to display the driver after it has been loaded into the system.
4. Add the custom third party device to a room. For more information, refer to "Third Party Devices" on page 55.

Additionally, device drivers may be loaded directly to the CP4-R via the Device Learner tool:

1. Navigate to **File > Send .PKG to Device**.
2. Save the driver package file to the User Database.
3. Select the CP4-R using the **Address Book** tool, and then click **OK**.

Once the transfer is complete, a pop-up dialog is displayed showing the package file, the device hostname/IP address, and the transfer status.

**NOTE:** If a device driver is loaded into the CP4-R that shares the same ID (manufacturer, model name, and communication type) as an existing driver, the latest file will overwrite the existing entry.



## Delete Device Driver Files

To delete a custom device driver file from the CP4-R:

**NOTE:** Drivers may be deleted to reclaim disk space, to remove a known bad version of an existing driver, to allow the cloud to download the latest version of a Crestron Certified Driver, or to remove a test driver.

1. Connect to the CP4-R over FTP or by using the File Manager tool in Crestron Toolbox.
2. Navigate to the CP4-R's \User\ThirdPartyDrivers\Storage\Rad directory.
3. Delete the appropriate driver file(s) from the directory.

## Mapping Virtual Sources

Certain A/V receivers use virtual sources, which require mapping on the A/V receiver itself (and not through the Crestron Home system) to map switching commands to connectors. For these A/V receivers, the source selections on the handheld remote are mapped to a physical connection on the back of the receiver using the receiver's web-based or on-screen configuration interface.

receivers that use virtual mapping behave in the Crestron Home system as follows:

- The source selections in the Crestron Home system mimic the selections on the handheld remote.
- The receiver's physical connectors (such as HDMI) will always be labeled as "GenericAV" in the Crestron Home interface. This is done to allow the mapping in the receiver to be changed without requiring an update to the Crestron Home interface.

For example, if a Blu-ray Disc player source is mapped to the Component 1 input, and the mapping was changed to use the HDMI 1 input instead, the Blu-ray Disc player is still selected as the source in the Crestron Home interface. The connection label will show GenericAV even though the connector has been changed to HDMI 1.

Additionally, if a Sonos CONNECT is mapped to the Audio In 5 (CD) input, and the mapping was changed to use the Optical 1 (CD) input instead, the Sonos CONNECT is still selected as the audio source in the Crestron Home interface. The connection label will show GenericAV even though the connector has been changed to Optical 1 (CD).

## Appendix F: Source Routing Behavior for Media Sources

When a media source is routed to a room from the media screen in user control mode, the behavior of the media source varies depending on the device type and the routing action that is performed.

This appendix describes the expected source routing behavior for various media sources within the Crestron Home system.

When a media source is routed to a room:

- For audio-only media devices (such as the CEN-NSP-1 and CEN-TRACK devices), if the device is not yet playing, it should begin to play automatically.
- A Sonos device does not begin to play when the "Sonos Favorites" source is selected. The Sonos device begins to play once a specific favorites channel is selected from inside the channel's user interface.
- The Crestron Home system does not attempt to start devices automatically unless the device supports automatic play functionality.

When a room is turned off, or a new media source is routed to a room:

- For the CEN-NSP-1 and CEN-TRACK devices, a discrete pause command is executed. If this command is not available, no command is executed.
- For DVD players, a discrete pause command is executed. If this command is not available, no command is executed.
- For streaming devices (such as Amazon Fire® streaming devices or Apple TV digital media extenders), a discrete pause command is executed. If this command is not available, no command is executed.
- For cable boxes, no action is attempted.
- If the existing media source is still playing, no action is attempted.

**NOTE:** The Crestron Home system does not execute a discrete pause command when:

- Switching between sources that are part of the same device and part of the same audio output channel
- Switching between sources that are part of the same device that has single audio output channel (such as the CEN-NSP-1).

The Crestron Home system also supports a "Device No Longer Used" feature. When a source is no longer being used by the Crestron Home system, a power off command is sent to the device after one minute.

Media endpoints (such as speakers and displays) are powered off immediately.

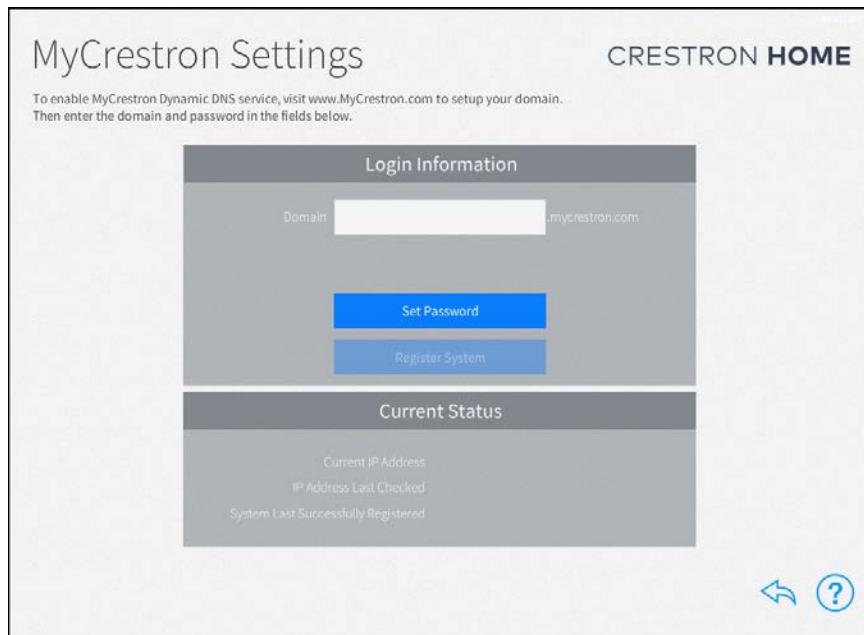
## Appendix G: Enable Remote System Access

The Crestron Home system may be monitored remotely using the MyCrestron Dynamic DNS service. Use the following procedures to enable remote system access via MyCrestron.

### Register the System with MyCrestron

To register the Crestron Home system with a MyCrestron account.

1. Tap **MyCrestron Dynamic DNS Service** on the **Installer Settings - System Control Options** screen to display the **MyCrestron Settings** screen.



**NOTE:** A MyCrestron domain name must be registered at [www.mycrestron.com](http://www.mycrestron.com) prior to registering the system with MyCrestron.

2. Enter the domain name of the MyCrestron account in the **Domain** text box.
3. Tap Set Password and then enter the password for the MyCrestron account in the **Password** field.
4. Tap **Register System**.

If the registration is successful, a success message is displayed, and the **System Last Successfully Registered** date updates in the **Current Status** panel.

## Configure Port Mapping on a Router

Many routers do not allow for direct port forwarding of common ports, including 80, 443, 23, and others. Port mapping is ideal in this scenario, as an arbitrary external port is forwarded to the internal port being used.

For example, port 80 (internal) to port 80 (external) may be blocked, but mapping from port 8080 to port 80 or port 8081 to port 80 is allowed.

Map the following ports to ensure proper functionality.

**NOTE:** Only map ports that are required for the necessary functions.

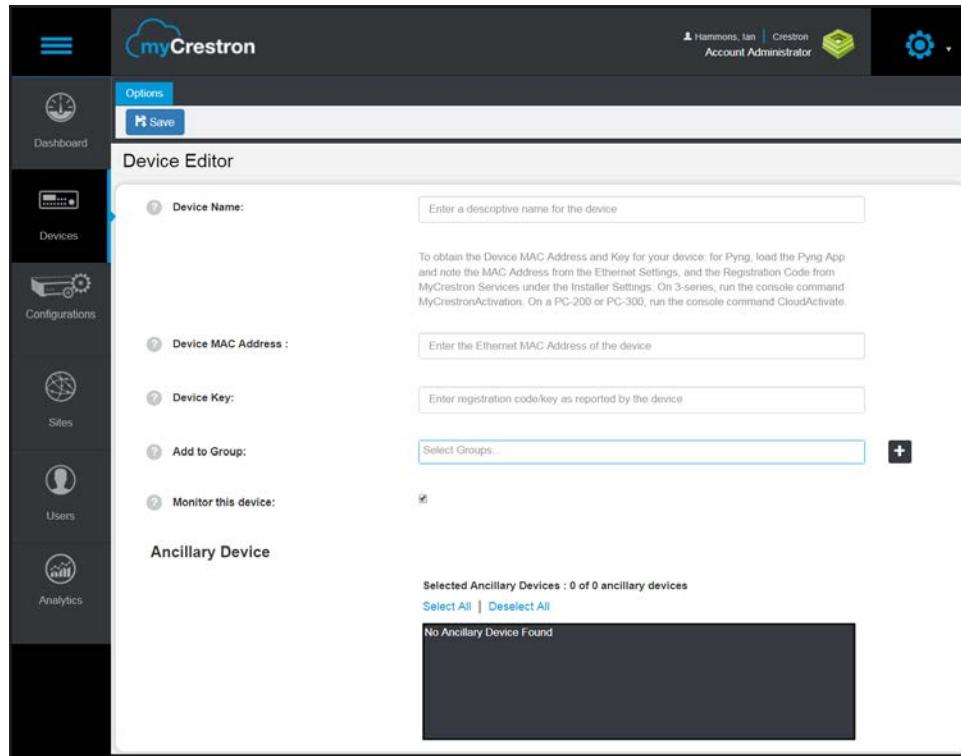
- **50001:** Used for access to the system by the Crestron Home Setup App and Crestron Home App.
- **41794 (CIP):** Used for system control and communication.
- **41795 (CTP):** Used for connecting to the processor in Crestron Toolbox.
- **843 (Web XPanel Interface):** Used for an Adobe® software Flash Policy Server request. For more information, refer to OLH article 5793 at <https://support.crestron.com>.
- **80 (HTTP):** Used for serving files from the \HTTP\ folder on the processor (Crestron Home web XPanel interface, app manifest file, and so forth).

**NOTE:** The webport command may be issued using the Text Console tool in Crestron Toolbox to change the processor's HTTP port (if the router is not capable of port mapping).

## Add the CP4-R to MyCrestron

To add the CP4-R to a MyCrestron account for remote monitoring:

1. Log into <https://portal.my.crestron.com> using the MyCrestron.com subdomain that is paired with the system.
2. Click **Add Device** from the menu at the top of the screen. The **Device Editor** panel is displayed.



3. Enter the following information in the appropriate fields:
  - **Device Name:** Enter a descriptive name for the CP4-R.
  - **Device MAC Address:** Enter the device MAC address, which is found by navigating to **Installer Settings > System Configuration > Ethernet Settings**.
  - **Device Key:** Enter the device registration key, which is found by navigating to **Installer Settings > System Configuration > MyCrestron Monitoring Service**.
  - **Add to Group:** If desired, add the CP4-R to a MyCrestron device group.
  - **Monitor the device:** Click the checkbox to enable or disable remote monitoring for the PYNG-HUB. A filled checkbox indicates that the device will be monitored.
  - **Ancillary Device:** If desired, select any ancillary devices that are connected to the CP4-R.
4. Click **Save**. The CP4-R is added to the MyCrestron account.

# Appendix H: Create and Upload a Custom Television Provider

When a third-party cable box device is added to the Crestron Home system, the system prompts the user to select a television provider from the available options. After a television provider is selected, the appropriate channel names and icons are made available to the media controls for the cable box.

However, the Crestron Home system does not provide native support for all television providers in all regions. As a workaround, a custom television provider file must be created and uploaded to the Crestron Home system. The television provider file obtains the channel names and icons from files that are hosted on an external web server.

Use the following procedures to create and upload a custom television provider into the Crestron Home system.

## Create a Channel JSON File

The television provider file obtains channel data from an externally hosted JSON file. To create a custom channel JSON file:

1. Open a text editor or code editing program.
2. Create the channel list file schema as shown below. The value for the `lastUpdated` parameter should be set to the current date (for example, "071618").

```
{  
    "lastUpdated": "Date",  
    "data": [  
        ]  
}
```

3. For each channel, create a child object within the `data` array that contains the following parameters. Refer to the example on the following page.
  - **name:** The channel name (string)
  - **channel:** The channel number (string)
  - **index:** An index identifier that increments for each successive channel in the JSON file (integer)
  - **id:** The unique ID of the channel (string)

- **imageId:** The unique ID of the channel icon PNG image file, which is uploaded along with the provider file (string)

```
{
  "lastUpdated": "Date",
  "data": [
    {
      "name": "WPIO",
      "channel": "1.1",
      "index": 1,
      "id": "wpio",
      "imageId": "wpio"
    },
    {
      "name": "WPII",
      "channel": "2.1",
      "index": 2,
      "id": "wpii",
      "imageId": "wpii" } ] }
```

2. Save the file with a JSON file extension (for example, "customChannels1.json").

**NOTE:** Crestron recommends that the filename of the JSON file match the actual name of the television provider.

## Create Channel Icon Image Files

The television provider file obtains channel icon data from externally hosted PNG files. Any PNG image may be used that represents the channel logo; this image is displayed when its associated channel is selected with the Crestron Home media controls.

Note the following when creating custom channel icon files:

- The image must be in PNG format.
- The channel icon filename must exactly match the `imageId` parameter value for the associated channel. (For example, to use a channel icon file with a "wpii.png" filename, the `imageId` parameter value for the associated channel must be "wpii".)
- Images with dimensions less than 150 x 150 pixels are not resized. Images with dimensions larger than 150 x 150 pixels are scaled down with an aspect ratio kept to a maximum of 150 pixels (length or height, depending on which is greater).

Once all channel icons have been created, package all of the files together into a separate .zip file.

## Upload the Channel JSON and Icon Files to a Web Server

Once the channel list JSON file and all channel icon files are created, upload the JSON files and the zipped channel icon files to a location on a web server. The television provider file must be able to access this location to obtain channel and icon data.

**NOTE:** The JSON and channel icon files may be used to service any customers using the exact same provider.

## Create and Upload a Television Provider File

To create and upload a custom television provider file:

1. Open a text editor or code editing program.
2. Create the television provider file schema with the following parameters. Refer to the example below.

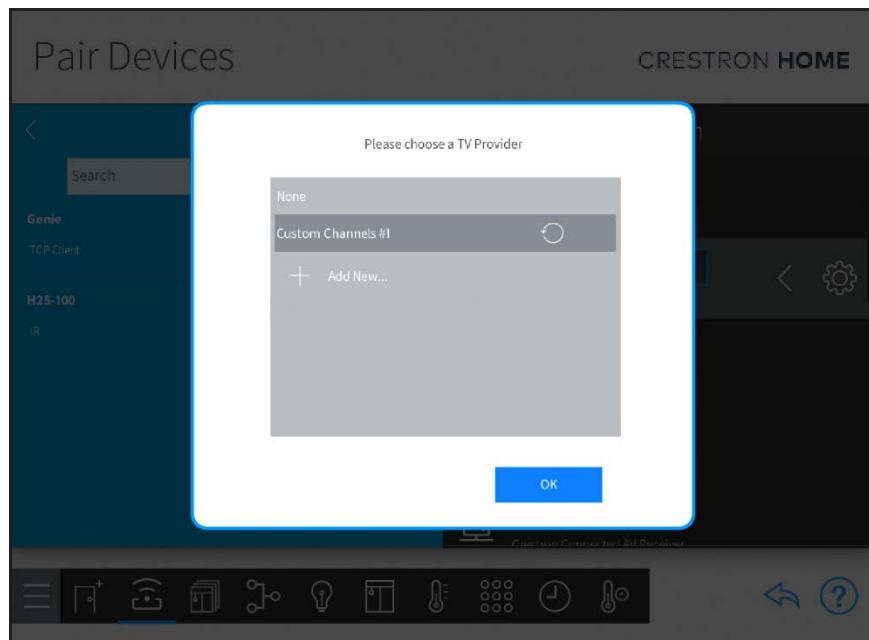
- **id:** The unique ID of the custom television provider file (string)
- **name:** The name of the custom television provider that is displayed in the Crestron Home system (string)
- **eTag:** The value set for lastUpdated in the channels JSON file, which is populated automatically from the JSON file (Enter a "null" value when first adding this parameter.) (string)
- **channelsLastUpdated:** Not used for custom television provider files (Enter a "null" value when first adding this parameter.) (string)
- **custom:** Indicates whether the television provider file is custom (Boolean)
- **channelFile:** The URL of the channels JSON file on the external web server (string)
- **imageFile:** The URL of the channel icons .zip file on the external web server (string)

```
{  
    "id": "custom1",  
    "name":  
        "Custom Channels #1",  
    "eTag": null,  
    "channelsLastUpdated": null,  
    "custom": "true",  
    "channelFile": "http://yourdomain.com/customchannels1.json",  
    "imageFile": "http://yourdomain.com/customimages1.zip"  
}
```

3. Save the file with an .exprovider file extension (for example, "custom1.exprovider").
4. Connect to the CP4-R over FTP or by using the File Manager tool in Crestron Toolbox.
5. Upload the custom television provider file into the CP4-R's \User\TvProviders\Import directory.

- In the Crestron Home application, use the **Third Party Devices** menu in the **Pair Devices** screen to add a new cable box or to edit the television provider settings for an existing cable box.

When prompted to select a television provider, the custom television provider is displayed in the list of providers.



- Select the custom cable provider, and then tap **OK**.

## Update the Television Provider File

If the channel lineup for the cable provider changes, the channels JSON file and channel icon .zip file must be updated and uploaded to the web server.

To update the channel provider data in the Crestron Home application:

- Make the necessary changes to the channels JSON file and channel icons .zip file.

### NOTES:

- Ensure that the lastUpdated parameter has been updated in the channels JSON file to the current date. The channel provider data will update automatically when an updated .exprovider is imported into the system.
- If the provider name must be edited, update the name parameter in the .exprovider file. Ensure that the id field is not changed. Then, import the updated .exprovider file into the CP4-R as described in the "Create and Upload a Custom Television Provider" section on the previous page.

- Overwrite the existing channels JSON file and the channel icons .zip file on the web server.

**NOTE:** Overwriting the existing files on the web server updates the channel data for all customers that are using the associated custom television provider file.

3. In the Crestron Home application, navigate to any cable box in the system.
4. Tap the gear button  next to the cable box name.
5. Click the **Provider** tab to edit the cable provider settings. Refer to the image above.
6. Tap the refresh button  next to the custom television provider name. The channel lineup and icons update in real time.

# Appendix I: Update Crestron Certified Drivers

When a third-party device is added to the Crestron Home system using a Crestron Certified device driver, a copy of the driver PKG file is stored in the CP4-R file structure. However, the PKG file is not updated automatically in the system when an updated version of the driver is made available in the cloud.

To update a Crestron Certified device driver:

1. Log in to the Crestron Certified Drivers web portal at <https://drivers.crestron.io>. The **Driver Search** page is displayed.

**NOTE:** New users to the Crestron Certified Drivers web portal must create an account in order to search for and download device drivers.

Crestron Certified Drivers Portal - Driver Search Page

Manufacturer	Type	Communication	Supported Models	Version	More
DirecTV	Cable Box	IR	DirecTV	2.00.009.0011	<a href="#">More</a>
Epson	Projector	Serial	PowerLite 2140W...	2.00.009.0011	<a href="#">More</a>
LG	Bluray Player	IR	LG BD Series	2.00.009.0011	<a href="#">More</a>
NEC	Flat Panel Display	IP	Multisync V323 ...	2.00.009.0011	<a href="#">More</a>
NEC	Flat Panel Display	Serial	Multisync V323 ...	2.00.009.0011	<a href="#">More</a>
NEC	Flat Panel Display	IR	Multisync	2.00.009.0011	<a href="#">More</a>
Panasonic	Flat Panel Display	Serial	TH42PF30U ...	2.00.009.0011	<a href="#">More</a>
Roku	Video Server	IP	Roku ...	2.00.009.0011	<a href="#">More</a>
Roku	Video Server	IR	Roku	2.00.009.0011	<a href="#">More</a>
Samsung	Bluray Player	IR	Samsung BD Series	2.00.009.0011	<a href="#">More</a>

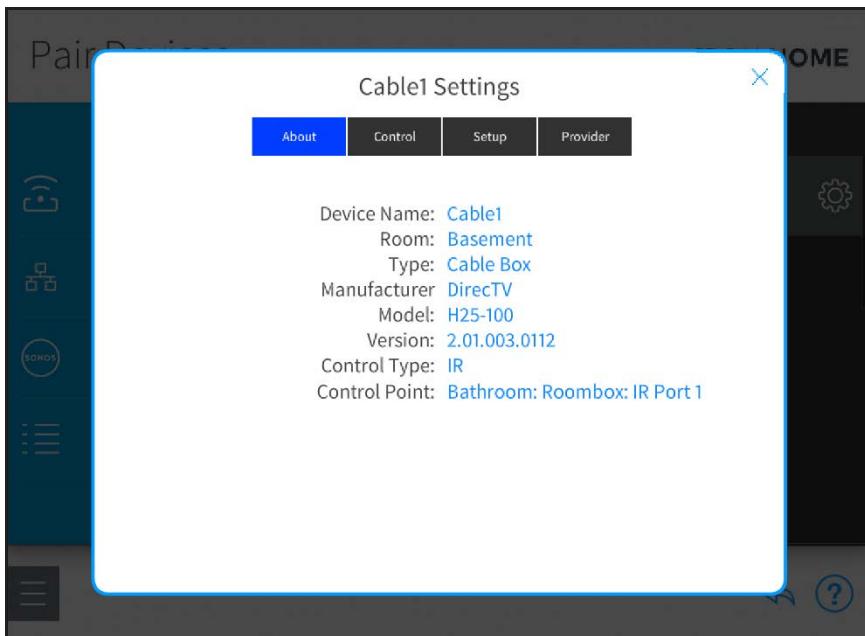
2. Navigate to the desired device driver(s) in the web portal. Use the **Version** tab to confirm the version of the device driver(s).
3. Select the device driver(s) by clicking the check box to the left of a driver name.
4. Once all drivers have been selected, click **Download Drivers** to download the drivers to the host computer. All selected drivers download as PKG files within a single zipped file.
5. Connect to the CP4-R over FTP or by using the File Manager tool in Crestron Toolbox.

6. Upload the updated device driver files into the CP4-R's \\User\\ThirdPartyDrivers\\Import directory.

After the updated device driver files have been imported into the CP4-R, apply the updated driver to its associated third party device as follows:

- For IR devices, add the device(s) to the system after the updated driver file is uploaded. Existing IR devices that were added using an older version of the driver must be deleted and added back to the system.
- For Serial and TCP/IP devices (or any other DLL-based devices), delete all devices that were added using the older firmware. Wait 60 seconds without making any other changes to the system configuration, and then reboot the CP4-R. After the CP4-R has rebooted, add the device(s) back to the system.

To confirm that the device was added with the updated device driver file, tap the gear button  next to the device name. The driver version is shown next to **Version** in the **About** section of the device settings dialog box.



## Appendix J: Connect to a 2N® Door Station

A 2N door station may be integrated with the Crestron Home system and controlled from a supported Crestron touch screen (TSW-560, TSW-760, TSW-1060, or TSW-560P).

### NOTES:

- For additional technical information, refer to the [2N WiKi](#).
- Minimum firmware requirements:
  - TSW-xx60 Touch Screen: 2.003.0040
  - 2N Door Station: 2.25.0

For more information on configuring the touch screen for 2N door station support, refer to the TSW-560/TSW-760/TSW-1060 Supplemental Guide (Doc. 7927) at [www.crestron.com/manuals](http://www.crestron.com/manuals).

Crestron Home supports a connection to the following 2N door station models:

- [2N IP Audio Kit](#)
- 2N IP Audio Kit Lite
- [2N IP Base](#)
- [2N IP Force](#)
- [2N IP Safety](#)
- [2N IP Solo](#)
- [2N IP Uni](#)
- [2N IP Vario](#)
- [2N IP Verso](#)
- 2N IP Video Kit

Use the procedures in this appendix to integrate a 2N door station with the Crestron Home system.

**NOTE:** The following procedures assume that the 2N door station has been installed completely and is discoverable on the network. For more information, refer to the 2N device documentation.

### Discover the 2N Device

To discover the 2N device on the network:

1. Download and install the 2N Network Scanner application from [https://www.2nusa.com/en\\_US/products/2n-network-scanner](https://www.2nusa.com/en_US/products/2n-network-scanner).

2. Open the application. All discovered 2N door stations on the network are displayed.

The screenshot shows a software window titled "2N® Network Scanner (version 3.0.4)". The window has a menu bar with "File" and "Help" options. Below the menu is a "Filter" input field. The main area is a table with four columns: "IP Address", "Serial Number", "Display Name", and "Version". There are four rows of data:

IP Address	Serial Number	Display Name	Version
172.30.177.16	54-1228-1832	2N IP Verso	2.25.0.34.3
172.30.177.107	54-1267-0958	2N Helios IP Force	2.25.0.34.3
172.30.177.132	54-0626-0343	2N IP Vario	2.25.0.34.3
172.30.177.151	54-2000-2972	2N IP Solo	2.25.0.34.3

Count: 4

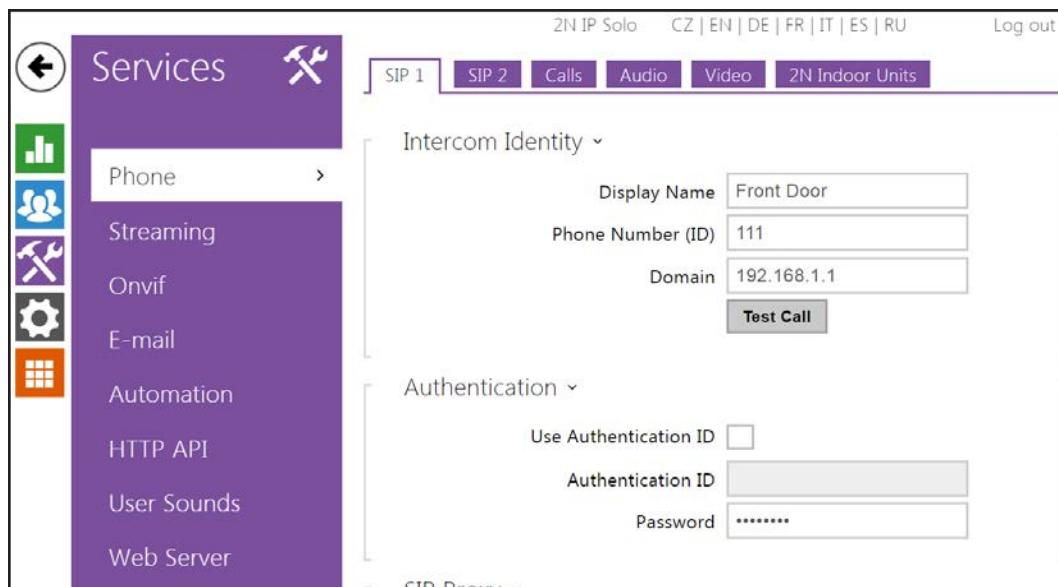
## Configure 2N Device Settings

Use the following procedures to configure the 2N device for integration with the Crestron Home system.

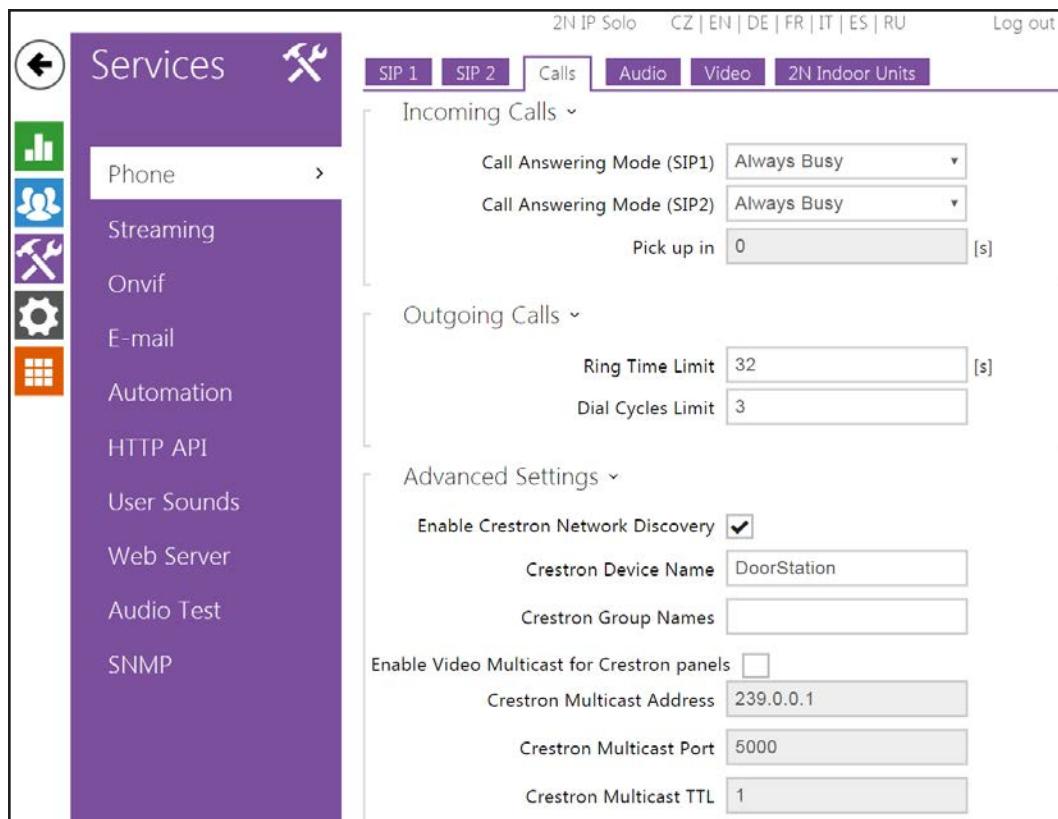
### Services Settings

1. Launch the web configuration utility for the appropriate 2N device by entering its IP address into a web browser. For more information on the 2N web configuration utility, refer to the 2N device documentation.
2. Click the purple tool icon to display the **Services** menu.
3. Navigate to **Phone > SIP 1**, and enter the following information under Intercom Identity:
  - Enter a name for the door station in the **Display Name** text field. This name will be shown on the touch screen to identify the door station when a call is received.
  - If configuring the door station to support Rava® SIP intercom calls, enter the Rava extension for the door station in the **Phone Number (ID)** text field.

**NOTE:** If there are multiple door stations on site, each door station will have a unique extension number.



4. Select the **Calls** tab.
5. Click the check box to display a check mark next to **Enable Crestron Network Discovery** under **Advanced Settings**. The 2N device is now discoverable in Crestron Toolbox.



### NOTES:

- Video unicast may be used if three or fewer Rava-enabled touch screens will be used with the 2N device. Otherwise, click the checkbox to display a check mark next to **Enable Video Multicast for Crestron panels**, and enter the Crestron multicast settings in the appropriate text fields.
- If multicast is used and there are multiple 2N door stations on site, specify the unique multicast address for each door station.
- Multicast may not be supported if it is used with an SIP server.

#### 6. Select the **Video** tab, and enter the following settings:

- Click the check box to display a check mark next to **H.264**.
- Select **VGA (640x480)** from the **Video Resolution** drop-down menu.
- Select **30 fps** from the **Video Framerate** drop-down menu.
- Select **2048 kbps** from the **Video Bitrate** drop-down menu.

The screenshot shows the 'Services' configuration page. On the left, a sidebar lists various services: Phone, Streaming, Onvif, E-mail, Automation, HTTP API, User Sounds, and Web Server. The 'Phone' service is currently selected. At the top right, there are language links (CZ | EN | DE | FR | IT | ES | RU) and a 'Log out' button. Below the sidebar, tabs for SIP 1, SIP 2, Calls, Audio, Video, and 2N Indoor Units are present, with 'Video' being the active tab. The main content area is titled 'Video Codecs'. It contains a table with three rows:

CODEC	ENABLED	PRIORITY
H.264	<input checked="" type="checkbox"/>	1 (highest)
H.263+	<input type="checkbox"/>	2
H.263	<input type="checkbox"/>	3

Below this section is another titled 'H.264 Video Parameters' with three dropdown menus:

- Video Resolution: VGA (640x480)
- Video Framerate: 30 fps
- Video Bitrate: 2048 kbps

### Directory Settings

1. In the web configuration utility, click the blue users icon to display the **Directory** menu.
2. Navigate to **Users**, and click the add user button to create a new user.

## 2N Configuration Utility - Users Settings

The screenshot shows the 'Users' section of the 2N Configuration Utility. On the left is a sidebar with icons for Directory, Users (selected), Time Profiles, and Holidays. The main area has tabs for 'Name' and 'E-mail'. A search bar is at the top right. Below the tabs is a table with one row labeled 'Button'. At the bottom is a pagination control showing page 1 of 1.

**NOTE:** 2N devices also refer to users as "buttons," as this refers to the buttons on the 2N door station that are used to dial specific dwellings or ring groups.

- Enter "rava:CRESTRON" in the **Phone Number** text field.

This screenshot shows the 'User Basic Information' screen for the 'Button' user. It includes fields for Name (set to 'Button'), E-mail, and Virtual Number. On the right, under 'User Phone Numbers', there is a section for 'Number 1' with fields for Phone Number (set to 'rava:CRESTRON'), Time Profile (set to '[not used]'), 2N® IP Eye Address, and Group call to next number.

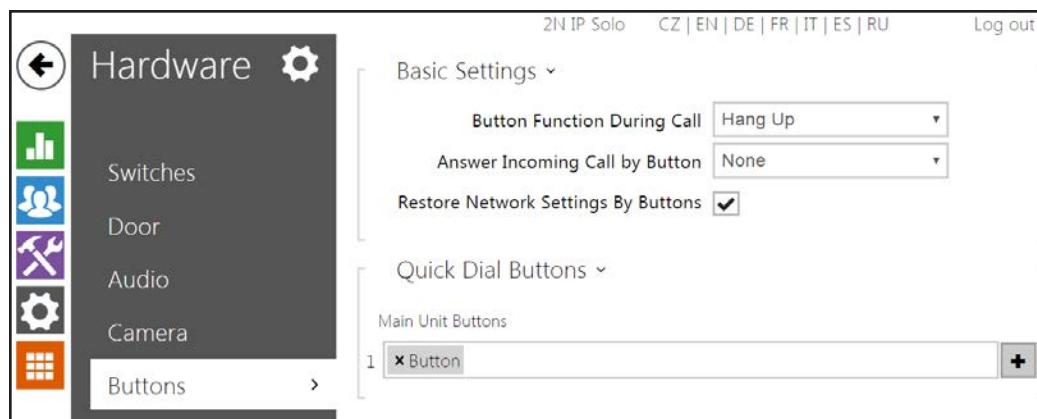
**NOTE:** CRESTRON is the default ring groups for all shipping TSW-x60 touch screens. To use a different group name, issue the `SIPPAGEGROUP [GROUPNAME]` command to the touch screen using the Text Console tool in Crestron Toolbox, where `[GROUPNAME]` is the desired group name (all capital letters with no spaces). Then, enter "rava:[GROUPNAME]" in the **Phone Number** text field.

For example, if a `SIPPAGEGROUP FIRSTFLOORGROUP` command was issued to the touch screen, enter "rava:FIRSTFLOORGROUP" in the **Phone Number** text field.

## Hardware Settings

1. In the web configuration utility, click the gray gear icon to display the **Hardware** menu.
2. Navigate to **Buttons**.
3. Add the button (user) created in the previous procedure to the **Main Unit Buttons** menu by clicking the plus button next to the menu.

### 2N Configuration Utility - Buttons Settings



## Advanced Configuration

If the 2N door station has been configured to send calls to a mobile device via the 2N Mobile Video app, calls may be sent to both the mobile device and the Crestron Home touch screen by configuring two phone numbers for the 2N device.

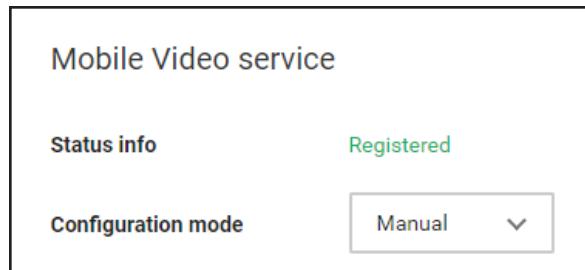
All 2N Mobile Video app settings must be configured and propagated to the door station before configuring the 2N device for call forwarding. For more information on configuring the mobile app, refer to [www.my2n.com](http://www.my2n.com).

To configure the 2N door station for use with the app and the touch screen:

**NOTE:** The 2N door station must be configured to support a connection to the touch screen(s) prior to attempting this procedure. For more information, refer to "Configure 2N Device Settings" on page 332.

1. Open the **DEVICE DETAIL** tab for the configured 2N door station in the 2N Mobile Video web configuration interface.
2. Under **Mobile Video service**, select **Manual** from the **Configuration mode** drop-down menu.

## Mobile Video service - Configuration mode



**NOTE:** If Configuration mode is set to automatic, the mobile app may overwrite the existing 2N IP intercom settings, including the touch screen connection.

3. In the 2N device web configuration utility, click the blue users icon to display the **Directory** menu.
4. Navigate to **Users**, and click the desired user to edit user settings.
5. Enter the following information under **User Phone Numbers**:

**NOTE:** The phone number for the mobile device is entered automatically in the Phone Number text field for Number 1 if the mobile device has been configured using the 2N Mobile Video app.

- For **Number 1**, click the check box to display a check mark next to **Group call to next number**.
- For **Number 2**, enter "rava: [GROUPNAME]" in the **Phone Number** text field, where [GROUPNAME] is the desired ring group name. For more information, refer to "Directory Settings" on page 334.

## 2N Configuration Utility - Users Settings

The screenshot shows the 'Users' configuration page in the 2N Configuration Utility. The left sidebar has icons for Directory, Users (selected), Time Profiles, and Holidays. The main area shows 'User Basic Information' with fields for Name (Front Door), E-mail, and Virtual Number. Below that is 'User Phone Numbers' with two entries: 'Number 1' and 'Number 2'. Each entry includes a Phone Number field (12345678/2 and rava:CRESTRON respectively), a Time Profile dropdown set to '[not used]', and a checkbox for 'Group call to next number' (checked for Number 1).

Directory

Users

Time Profiles

Holidays

User Basic Information

Name: Front Door

E-mail:

Virtual Number:

User Phone Numbers

Number 1

Phone Number: 12345678/2

Time Profile: [not used]

2N® IP Eye Address:

Group call to next number:

Number 2

Phone Number: rava:CRESTRON

Time Profile: [not used]

2N® IP Eye Address:

Group call to next number:

# Appendix K: Transfer Data between Hardware

## Transfer Data between CP3-R and CP4-R Devices

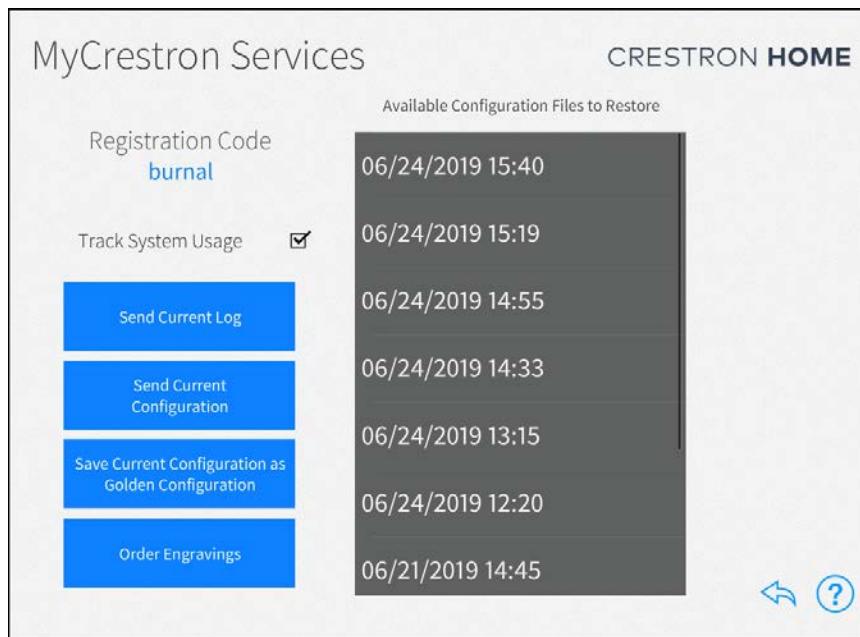
Pyng OS 2 data can be transferred between hardware that is running Pyng OS 2. Data can be transferred using a deployment code (recommended), copied from the CP3-R or CP4-R, or using a Golden configuration.

### Method 1: Use a Deployment Code (Recommended)

Using the deploy code allows you to transfer data from a CP3-R to a CP4-R, or between different CP4-R devices.

#### Generate a Deploy Code

1. Tap the gear button  on the bottom right of the **Setup** screen to display the Installer **Settings** screen.
2. Tap System Configuration on the Installer **Settings** screen to display the **Installer Settings - System Configuration** screen.
3. Tap **MyCrestron Monitoring Services** on the **Installer Settings - System Configuration** screen to display the **MyCrestron Services** screen.



4. Tap **Save Current Configuration as Golden Configuration** to save the current configuration as a golden configuration. Tap **OK** in the dialog box that is displayed to save the current configuration or tap **Cancel** to cancel saving the configuration. The Golden Configuration is automatically uploaded and available at <https://portal.my.crestron.com>.

**NOTE:** Golden configurations represent known, working system states that may always be restored safely, and are indicated by a star icon in the **Available Configuration Files to Restore** menu.

5. Log into <https://portal.my.crestron.com> using the MyCrestron.com subdomain that is paired with the system.
6. Select the CP3-R or CP4-R from the device list.
7. Click **Generate Deploy Code** The deploy code is displayed in the main window. Write down the code.

**NOTE:** The deploy code expires after 14 days.

The screenshot shows the myCrestron web interface. At the top, there's a navigation bar with tabs for Actions, Options, Groups, and Other. Below the navigation bar, there are several buttons: + Add Device, Edit, Download Backup, View Log Files, View Change Logs, View Alert Logs, and Generate Deploy Code. The main area displays a list of devices. On the left, there's a thumbnail for a device labeled 'CP4-R' with the text 'Firmware Version: [REDACTED]'. On the right, there's a detailed view for a device labeled 'CP4R 2'. The detailed view includes fields for Hostname (CP4.R), Is Managed (True), Device Mac ID (00:0C:77:00:00:00), Last Reboot Reason (Reboot Soft Reset), Public IP Address (192.168.1.100), Product Line (Crestron CP4-R), and Deploy Code (64UHX2RQ). The Deploy Code field is highlighted with a red border.

8. Write down the Hostname of the CP3-R or CP4-R.
9. If necessary, unregister the CP3-R or CP4-R from the Amazon® software Alexa™ voice services account or the Google® software Google Assistant™ voice services account. For more information, refer to "Voice Control Settings" on page 156.
  - If the existing Crestron Home system is still available, tap **Voice Control Settings** on the **Installer Settings - System Control Options** screen to display the **Voice Control Settings** screen and then click **Unregister**.
  - If the existing Crestron Home system is no longer available, navigate to <https://echoadminportal.crestronfusion.com/#/>. Ensure that the control system ID shown in the portal matches the MAC address of the CP3-R or CP4-R and then click **Unregister**.

**NOTE:** The homeowner's Amazon or Google credentials may need to be entered to unregister the CP3-R or CP4-R.

10. Disconnect the CP3-R or CP4-R from the network.
11. Set up the new system. Refer to "Set Up the Crestron Home System using a Deployment Code" on the facing page.

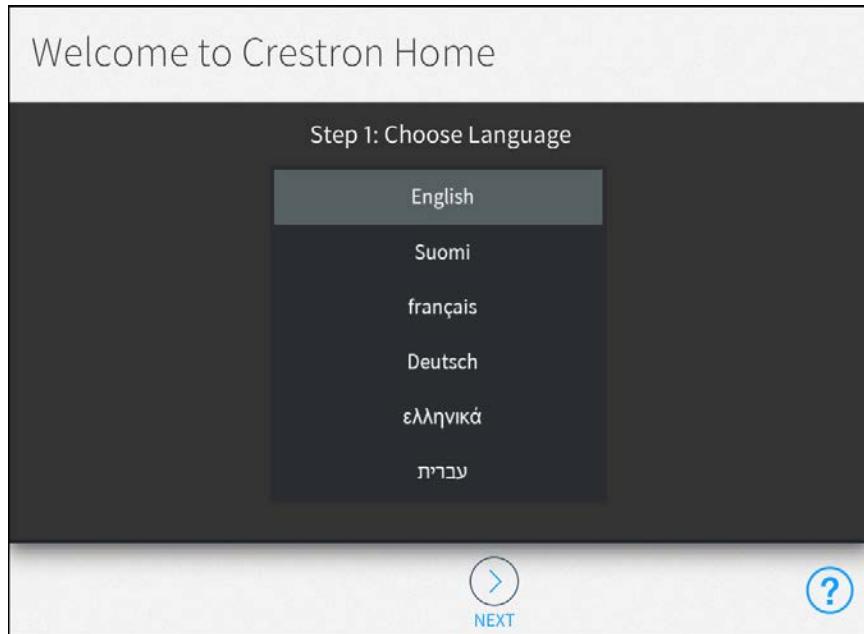
## Set Up the Crestron Home System using a Deployment Code

1. Tap the Crestron Home Setup app icon  on the iPad device home screen.
2. The Crestron Home Setup app connects to the CP4-R automatically, and a splash screen is displayed.

**NOTE:** If the Crestron Home Setup app does not connect to the CP4-R automatically, enter the CP4-R's hostname and tap **Connect**. The default hostname for a CP4-R is "CP4-R-xxxxxxx," where xxxxxxxx is the last eight digits of the device's MAC address (excluding punctuation). The MAC address label is located on the bottom or rear of the device.



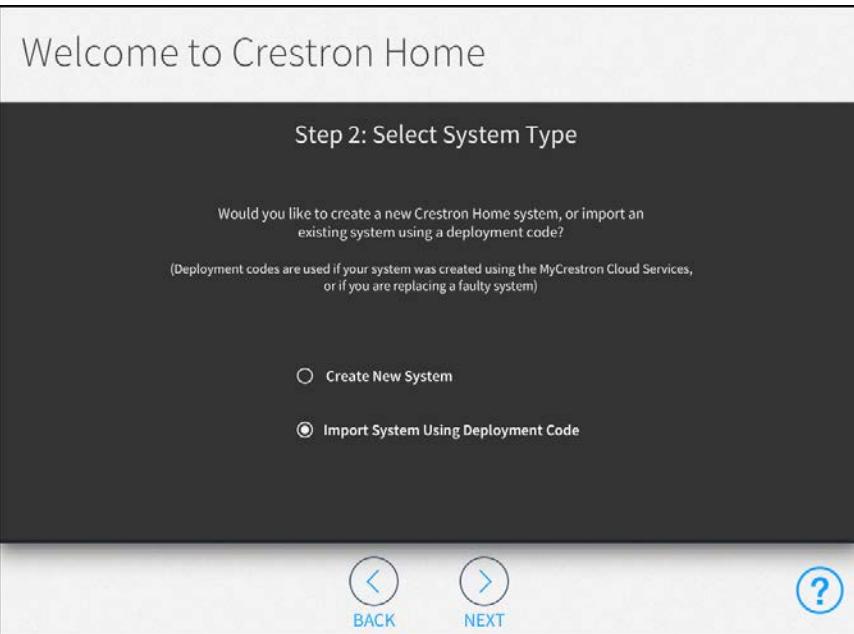
3. Tap the **Tap Here to Begin** text. The **Step 1: Choose Language** screen is displayed.



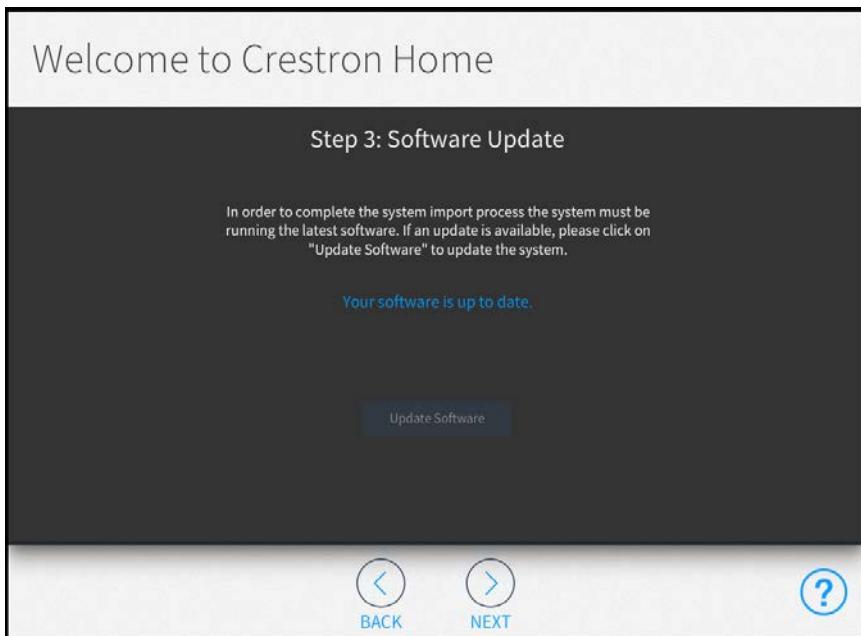
**NOTES:**

- Tap the help button (?) at any time to display help screens that explain the functions and features of each setup screen and provide instructional videos. The iPad device or setup device must be connected to the network to access videos.
- Tap the **BACK** button (<) at any point during the setup process to return to the previous screen.

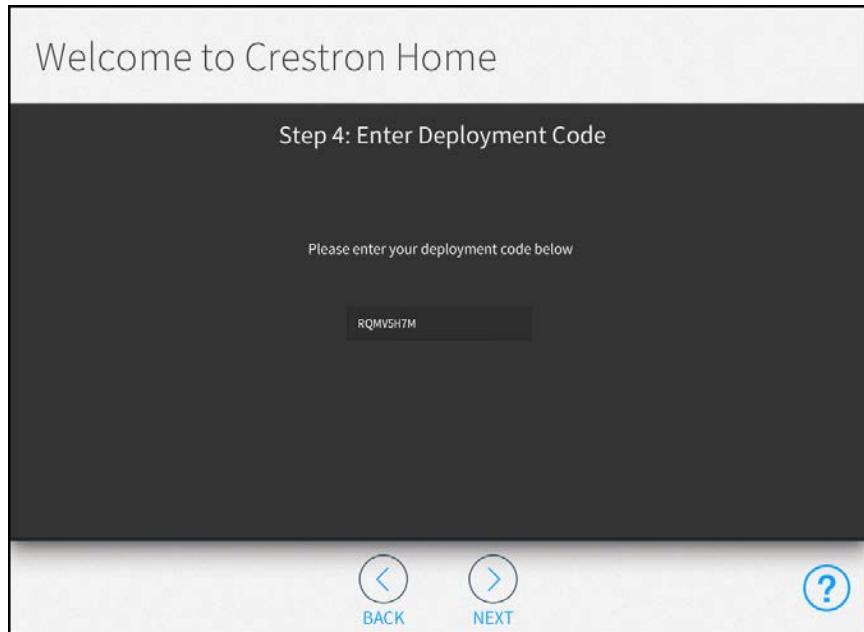
4. Select the language that will be displayed by the system.
5. Tap the **NEXT** button (>). The **Step 2: Select System Type** screen is displayed.



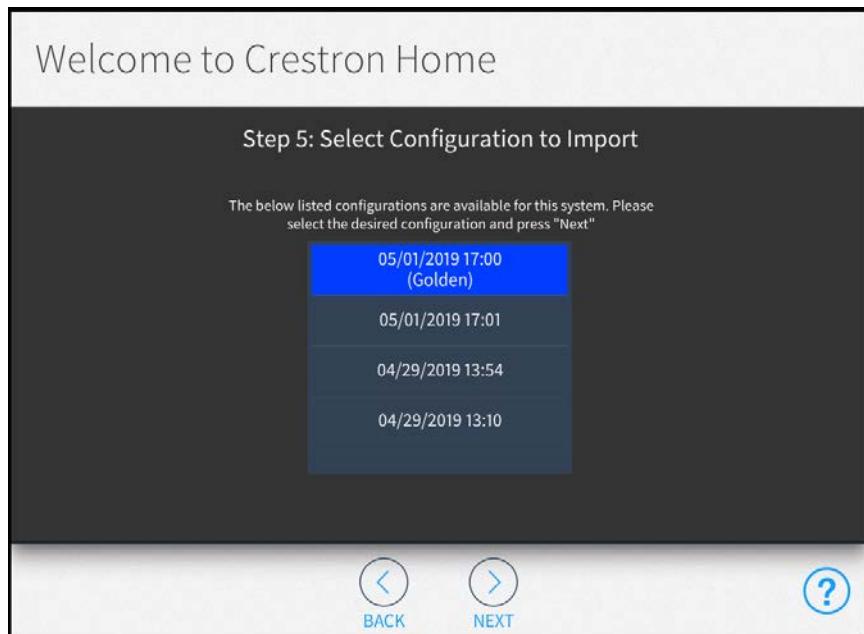
6. Tap the **Import System Using Deployment Code** radio button and then tap the **NEXT** button (>). The **Step 3: Software Update** screen is displayed.



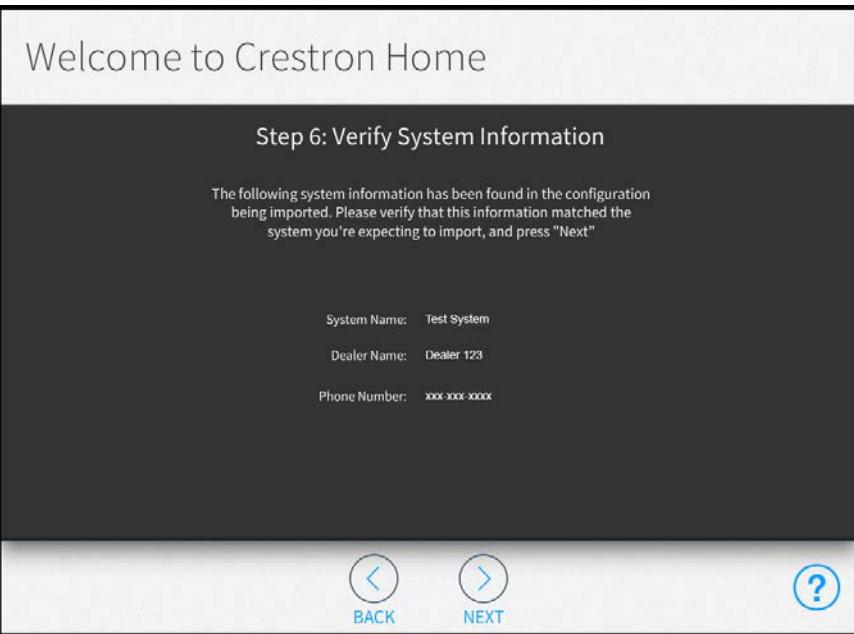
7. The Pyng software must be up to date to use a deployment code. If necessary, tap the **Update Software** button to update the software.
8. Tap the **NEXT** button (>). The **Step 4: Enter Deployment Code** screen is displayed.



9. Enter the deployment code that was generated in ""Generate a Deploy Code" on page 339" "Generate a Deploy Code" on page 339.
10. Tap the **NEXT** button (>). The deployment code is validated and then the **Step 5: Select Configuration to Import** screen is displayed.



11. Tap the configuration that you wish to import. The configuration is downloaded from MyCrestron.
12. Tap the **NEXT** button (>). The **Step 6: Verify System Information** screen is displayed.



**CAUTION:** The imported system configuration will replace the configuration that is currently on the system. All information on the device will be lost if it is not backed up on MyCrestron. This process cannot be undone.

13. Tap the **NEXT** button (>) to confirm that you want to import the system configuration. The **Step 7: Loading System Information** screen is displayed while the system information is loaded onto the device.

**NOTE:** The system information is typically loaded to the system very quickly. The Loading System Information screen may be visible for a very short period of time.

14. The **Step 8: System Import Status** screen is displayed and the device restarts.
15. If necessary, register the CP4-R with an Amazon® software Alexa™ voice services account or a Google® software Google Assistant™ voice services account. For more information, refer to "Voice Control Settings" on page 156.
16. Update the hostname of the CP4-R.

The hostname on the CP4-R must match the hostname on the CP3-R or CP4-R that was written down during the "Generate a Deploy Code" on page 339.

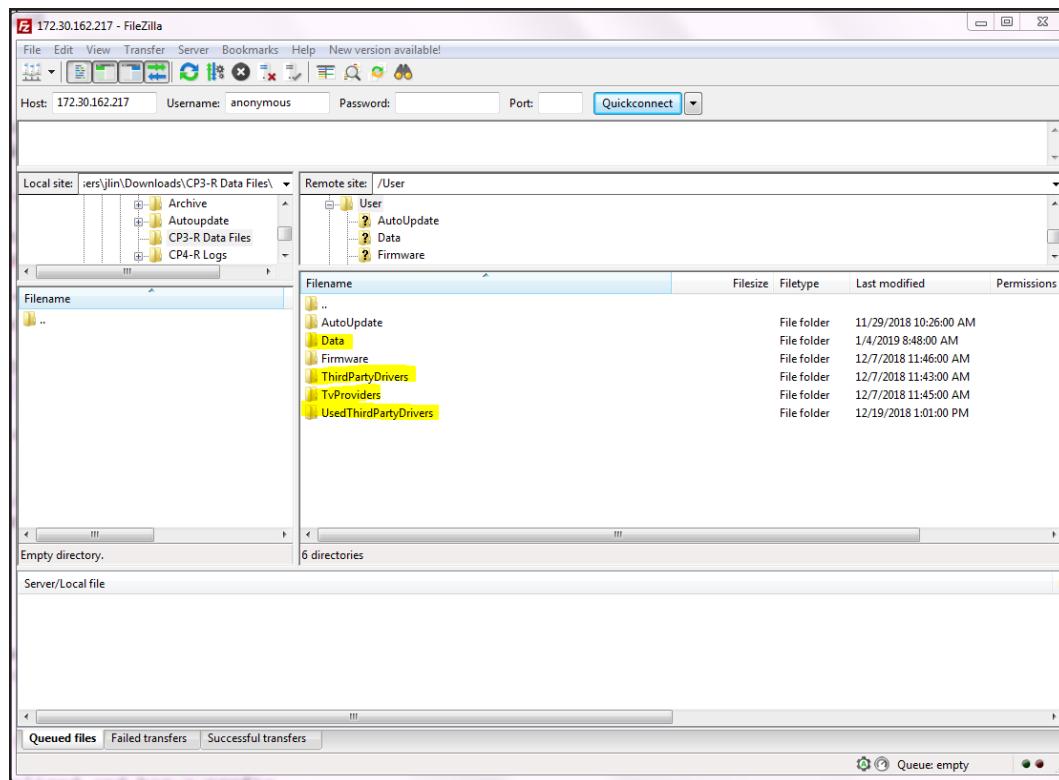
- a. Tap **Ethernet Settings** on the **Installer Settings - System Configuration** screen to display the **Ethernet Settings** screen.
  - b. Enter the hostname.
  - c. Tap **Apply**. A dialog box is displayed to confirm the changes.
  - d. Tap **OK** to save the changes and to reboot the device using the new Ethernet settings.
17. Reboot the router to restart the DNS server.

18. Reboot the TSR-310, and other IP devices on the network, to resolve the hostname with the new CP4-R.

## Method 2: Copy Data from the CP3-R

1. Connect to the CP3-R using an FTP client (such as FileZilla).
2. Copy the following folders (highlighted in the image below) from the CP3-R to a location on the computer.
  - User\ UserData
  - User\ ThirdPartyDrivers
  - User\ TvProviders
  - User\ UsedThirdPartyDrivers

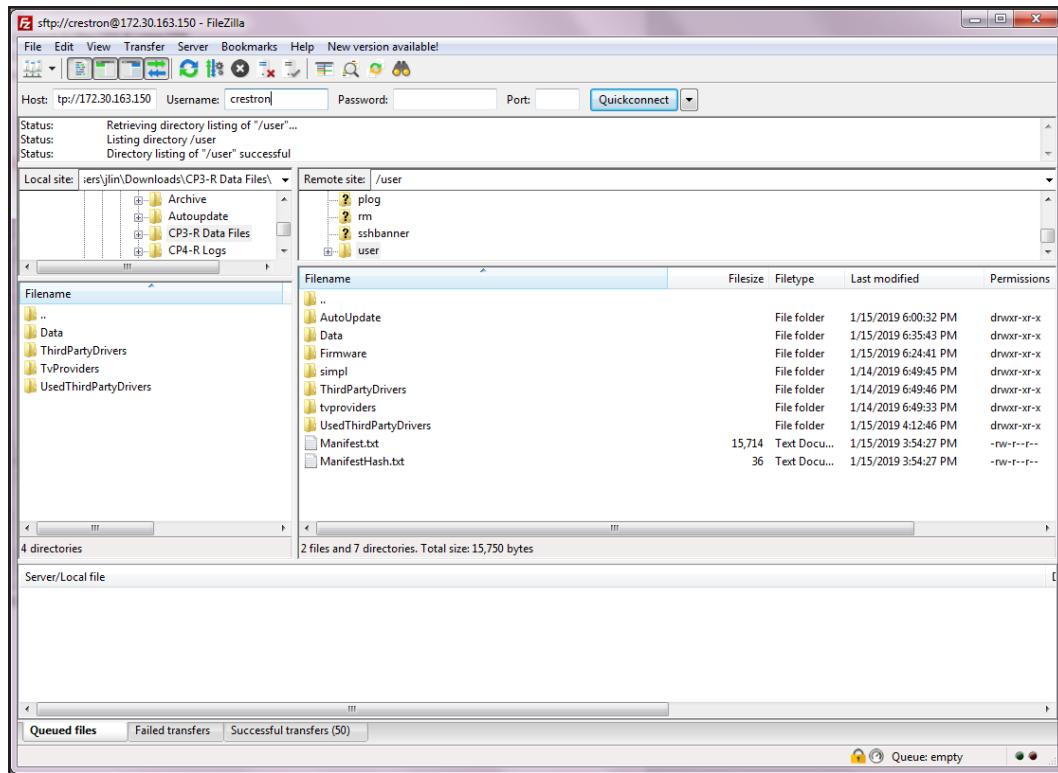
CP3-R User Directory



3. Connect to the CP4-R console using the Text Console tool in Crestron Toolbox.
4. Issue the following console commands to stop the Crestron Home program:
  - Enableprogramcmd
  - Stopprog -p:0
5. Connect to the CP4-R over SFTP (Simple File Transfer Protocol) using the device login credentials.

**NOTE:** The default username is "crestron" and there is no default password.

## CP4-R Connection over SFTP



- a. Delete all folders in the "User" directory except for "AutoUpdate."
- b. Copy the User folders saved in step 2 from the computer to the CP4-R "User" directory.
6. Connect to the CP4-R console and issue the `hostname [hostname]` command to change the CP4-R hostname to match what was used for the CP3-R.
7. If necessary, unregister the CP3-R from the Amazon® software Alexa™ voice services account or the Google® software Google Assistant™ voice services account. For more information, refer to "Voice Control Settings" on page 156.
  - If the existing Crestron Home system is still available, tap **Voice Control Settings** on the **Installer Settings - System Control Options** screen to display the **Voice Control Settings** screen and then click **Unregister**.
  - If the existing Crestron Home system is no longer available, navigate to <https://echoadminportal.crestronfusion.com/#/>. Ensure that the control system ID shown in the portal matches the MAC address of the CP3-R and then click **Unregister**.

**NOTE:** The homeowner's Amazon or Google credentials may need to be entered to unregister the CP3-R.

8. Reboot the appropriate components:
  - Reboot the CP4-R by issuing the `reboot` command in the console.
  - Restart the DNS server. In most cases, this is accomplished by rebooting the router.
  - Reboot all connected touch screens and Ethernet devices.
9. Register Alexa to the CP4-R. For more information, refer to "Voice Control Settings" on page 156.
10. Reconfigure the MyCrestron DNS service (if applicable). For more information, refer to "Reconfigure MyCrestron DDNS" on page 354.

## Method 3: Use a CP3-R Golden Configuration

1. Log into <https://portal.my.crestron.com> using the MyCrestron.com subdomain that is paired with the system.
2. Select the CP3-R from the device list.
3. Click **Download Backup**.

### MyCrestron Portal - Download Backup

The screenshot shows the MyCrestron Portal interface. At the top, there's a navigation bar with 'Actions', 'Options', 'Groups', and 'Other'. Below it is a toolbar with buttons for '+ Add Device', 'Edit', 'Download Backup' (which is highlighted with a red box), 'View Log Files', 'View Change Logs', 'View Alert Logs', and 'Generate Deploy Code'. The main area is titled 'Device List' and contains a search bar. It lists three devices: 'Desk Pnyg' (PYNG-HUB), 'MC3', and 'CP3-R'. The 'CP3-R' card is highlighted with a blue box. To the right of the device cards, there's a detailed view panel showing the device's firmware version (1.503.3522.20301), last connected time (2018/08/24 11:16:42), and other metadata like HostName, Is Managed, Device Mac ID, Last Reboot Reason, Public IP Address, and Product Line.

4. Expand the file list for the CP3-R and select the golden configuration. The file category for this configuration is "Golden" and the Tag Name is "Configuration."
5. Click **Download Files** and confirm to download the backup.

The screenshot shows the 'Download Backup' page for the selected CP3-R device. At the top, it says 'Files to download: 1 selected' and 'Total Size(Bytes): 13348'. Below is a table with columns: Site Name, Device Name, Host Name, Device Mac Address, Public IP Address, Model, and Last Upload Date. The table shows one entry for the CP3-R. Below the table is a detailed file list for the 'CP3-R' device, showing files categorized by 'File Category' (Crestron | Golden) and 'Tag Name' (Configuration). The 'Crestron | Golden' row has a checked checkbox. The 'File Name' column lists several zip files, including 'Data01-15-19-20-19(Golden).zip'. At the bottom, there are pagination controls and a 'Items per page' dropdown set to 10.

6. Extract the "data[MM-DD-YY-HH-MM](Golden).zip" file inside the myCrestron.zip file to the computer.

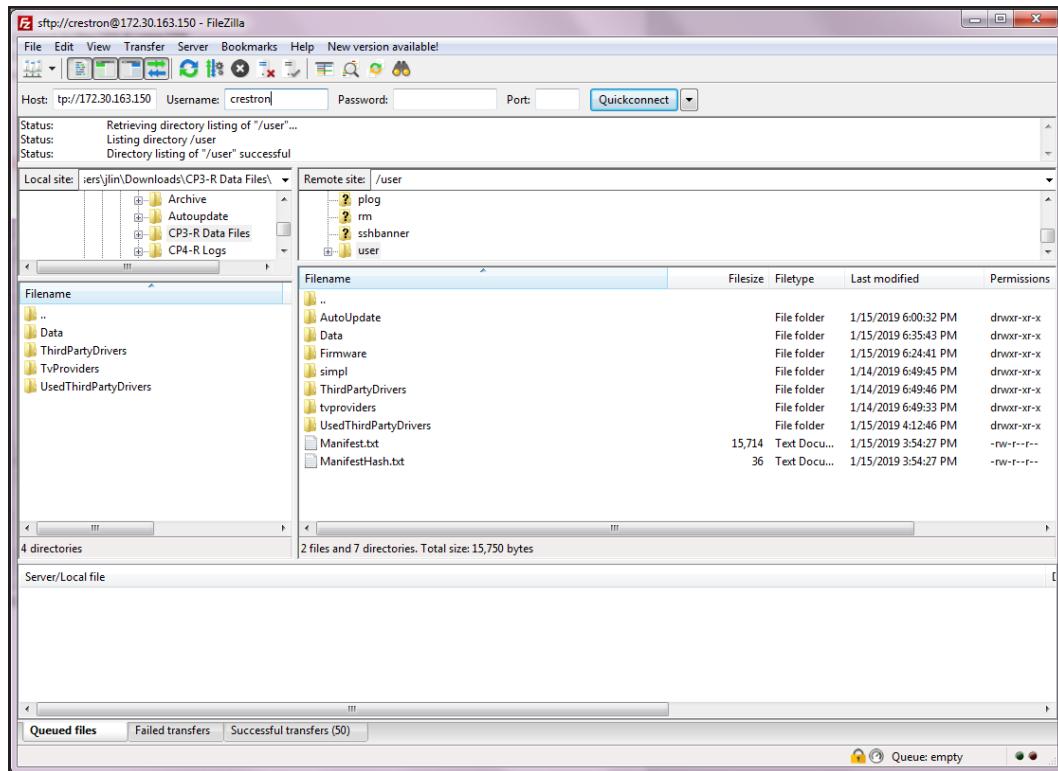
#### Golden Configuration ZIP File

Name	Date modified	Type	Size
ClimateSchedules	1/15/2019 8:29 PM	File folder	
Configuration	1/15/2019 8:29 PM	File folder	
Devices	1/15/2019 3:19 PM	File folder	
PyngDeviceManifest	1/15/2019 8:29 PM	File folder	
Scene	1/15/2019 8:29 PM	File folder	
Subsystem	1/15/2019 8:29 PM	File folder	
Actions.dat	6/1/2018 9:33 AM	DAT File	1 KB
Events.dat	9/10/2018 5:54 PM	DAT File	3 KB
UsedDrivers.zip	9/28/2018 7:49 PM	Compressed (zipp...)	76 KB

7. Connect to the CP4-R console using the Text Console tool in Crestron Toolbox.
8. Issue the following console commands to stop the Crestron Home program:
  - Enableprogramcmd
  - Stopprog -p:0

9. Connect to the CP4-R over SFTP (Simple File Transfer Protocol) using the device login credentials.

**NOTE:** The default username is "crestron" and there is no default password.



- a. Delete all folders in the "User" directory except for "AutoUpdate."
- b. Copy the content of the extracted "data[MM-DD-YY-HH-MM](Golden).zip" file from the computer to the "User" directory.
10. Connect to the CP4-R console and issue the `hostname [hostname]` command to change the CP4-R hostname to match what was used for the CP3-R.
11. If necessary, unregister the CP3-R or CP4-R from the Amazon® software Alexa™ voice services account or the Google® software Google Assistant™ voice services account. For more information, refer to "Voice Control Settings" on page 156.
  - If the existing Crestron Home system is still available, tap **Voice Control Settings** on the **Installer Settings - System Control Options** screen to display the **Voice Control Settings** screen and then click **Unregister**.
  - If the existing Crestron Home system is no longer available, navigate to <https://echoadminportal.crestronfusion.com/#/>. Ensure that the control system ID shown in the portal matches the MAC address of the CP3-R or CP4-R and then click **Unregister**.

**NOTE:** The homeowner's Amazon or Google credentials may need to be entered to unregister the CP3-R or CP4-R.

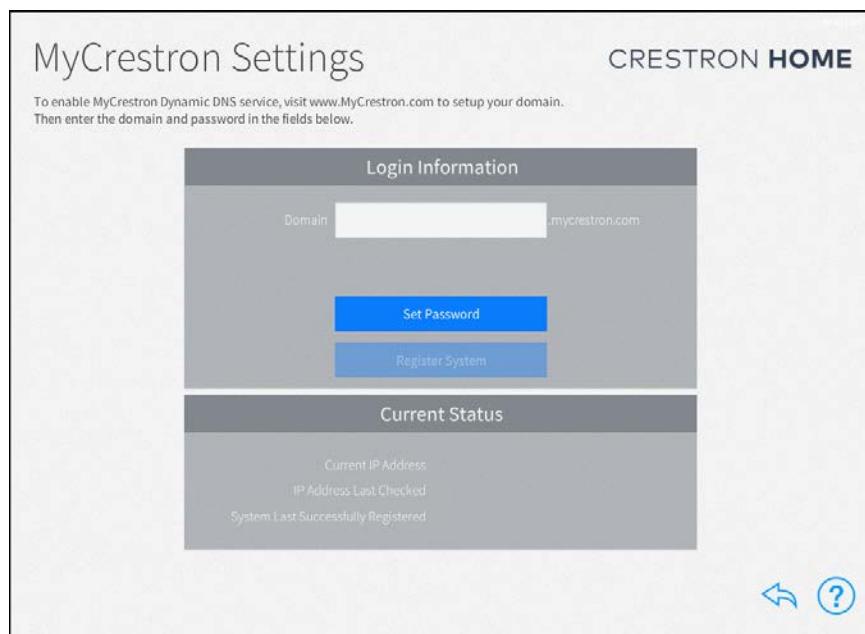
12. Reboot the appropriate components:
  - a. Reboot the CP4-R by issuing the reboot command in the console.
  - b. Restart the DNS server. In most cases, this is accomplished by rebooting the router.
  - c. Reboot all connected touch screens and Ethernet devices.
13. Register Alexa to the CP4-R. For more information, refer to "Voice Control Settings" on page 156.
14. Reconfigure the MyCrestron DNS service (if applicable). For more information, refer to "Reconfigure MyCrestron DDNS" on the next page.

## Reconfigure MyCrestron DDNS

To reconfigure MyCrestron DDNS using the Crestron Home configuration utility:

1. In the CP3-R configuration utility, tap the gear button  on the bottom right of the **Setup** screen to display the **Installer Settings** screen.
2. Navigate to **System Control Options > MyCrestron Dynamic DNS** to display the **MyCrestron Settings** screen.
3. Record the domain and password shown for the CP3-R.

### MyCrestron Settings Screen



4. Disconnect the CP3-R from the network.
5. Dissociate the CP3-R MAC address from the MyCrestron account:
  - a. Navigate to <https://www.crestron.com/Support/Tools/Applications/MyCrestron-Dynamic-DNS-Service>.
  - b. Find and select the domain that was associated with the CP3-R.
  - c. Scroll to the "Utilities" section at the bottom of the page.
  - d. Click **Clear Mac Address**. The CP3-R MAC address will be dissociated from the domain.
6. In the CP4-R configuration utility, tap the gear button  on the bottom right of the **Setup** screen to display the **Installer Settings** screen.
7. Navigate to **System Control Options > MyCrestron Dynamic DNS** to display the **MyCrestron Settings** screen.
  - a. Enter the domain and password previously used for the CP3-R.
  - b. Click **Register System** to register the CP4-R with MyCrestron.

To reconfigure MyCrestron DDNS using console commands (via the Text Console tool in Crestron Toolbox):

1. Connect to the CP3-R with the Text Console tool.
2. Issue the `mycrestron` command.
3. Record the domain and password that are returned by the command.
4. Disconnect the CP3-R from the network.
5. Dissociate the CP3-R MAC address from the MyCrestron account:
  - a. Navigate to  
<https://www.crestron.com/Support/Tools/Applications/MyCrestron-Dynamic-DNS-Service>.
  - b. Find and select the domain that was associated with the CP3-R.
  - c. Scroll to the "Utilities" section at the bottom of the page.
  - d. Click **Clear Mac Address**. The CP3-R MAC address will be dissociated from the domain.
6. Connect to the CP4-R with the Text Console tool.
7. Issue the `mycrestron [domain] [password]` command, where [domain] and [password] are the CP3-R values returned in step 3. The CP4-R should register with MyCrestron within a minute.
8. Issue the `mycrestron` command to confirm the correct settings.

## Appendix L: How to Create Images for the Crestron Home App

Custom images can be used in Crestron Home. Images may represent the residence that the Crestron Home system is installed in or a room within the residence.

Keep the following in mind when creating custom images:

- Plan Pictures Accordingly

On most user interface devices, the picture will be displayed in a wide band.

Images with a landscape orientation may display better than portrait orientation.

A panoramic picture is not necessary.

- Use the Preview

The Crestron Home app displays a preview of the cropped image.

Use the preview to find the best location to crop the image.

- Use a Quality Camera

Use a digital camera to create high quality images.

The built-in camera on your phone or tablet may produce acceptable image. Verify the images are acceptable before use.

- Images are synchronized across all user interface devices. After an image is selected for a room it will be seen on all other user interface devices connected to the Crestron Home system. Review the images on each user interface device to ensure that the image is acceptable on all devices.

- Keep the Camera Steady

For the best quality photos, use a tripod to keep the camera steady.

- Optimize the Lighting

Turn on as many lights as possible to create the best image.

Take all of the pictures when there is good exterior lighting.

For example, the bright morning light tends to look great for rooms with windows. Try to take all of the room pictures at the same time so you have consistent lighting for the rooms with windows. If pictures of eastern facing windows are taken in the morning, west facing windows may need to be photographed in the afternoon.

- Use Existing Pictures

Existing real estate pictures can be used since they often times are high quality images. Make sure that you have the rights to use these pictures.

Coordinate with the homeowner to verify that the images accurately represent the room.

- **Maintain Backups**

Keep a backup of the final set of room images. The homeowner has the ability to change the images and the only way to restore the image is to add it back to the system.

Crestron Home configurations that are backed up to the cloud contain a copy of the room images so please make sure you register each Crestron Home processor with the myCrestron cloud. Otherwise, you will not be able to retrieve the system configuration later.

- We can't cover all of the best photography tips in this document, but there are a wealth of resources on the internet. The same type of internet content that describes how to get great room pictures for real estate also tends to apply to getting great looking room images for the Crestron Home app.

## Appendix M: Integrate CoolMasterNet by Cool Automation

Native BACnet thermostats are built right into Crestron Home OS 3 to provide complete HVAC control of advanced VRF air conditioning systems.

**NOTE:** Dual mode cannot be used if the heat and cool objects have the same Object ID.

### Add the BACnet Thermostat to the system:

1. Tap the **Pair Devices** button on the **Setup** screen, or the Pair Devices button  on the setup menu, to display the **Pair Devices** screen.
2. Select the room where the device is installed from the **Select a room** menu.
3. Select **Other** from the **Device Types** menu.
4. Select **BACnet Thermostat** from the **Other** menu.
5. Tap the plus button (+) and then assign a name to the to add the BACnet Thermostat to the system.

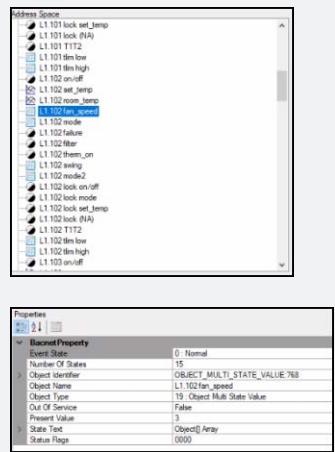
### Configure the BACnet Thermostat

To configure the BACnet Thermostat with the Crestron Home system:

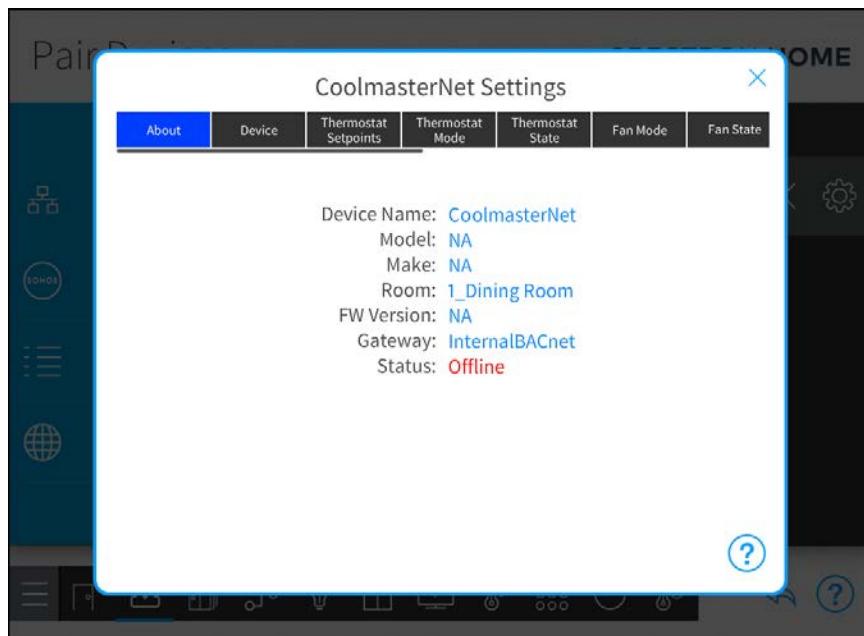
**NOTE:**

- The CoolMasterNet must be properly installed and wired in order to function properly. Refer to the CoolMasterNet documentation for details.

- Use a BACnet explorer application, such as Yet Another Bacnet Explorer (YABE) to interface with the CoolMasterNet. YABE can display the address space for the HVAC setting and the Properties for each setting. Use the information in the Properties window to configure the BACnet thermostat.



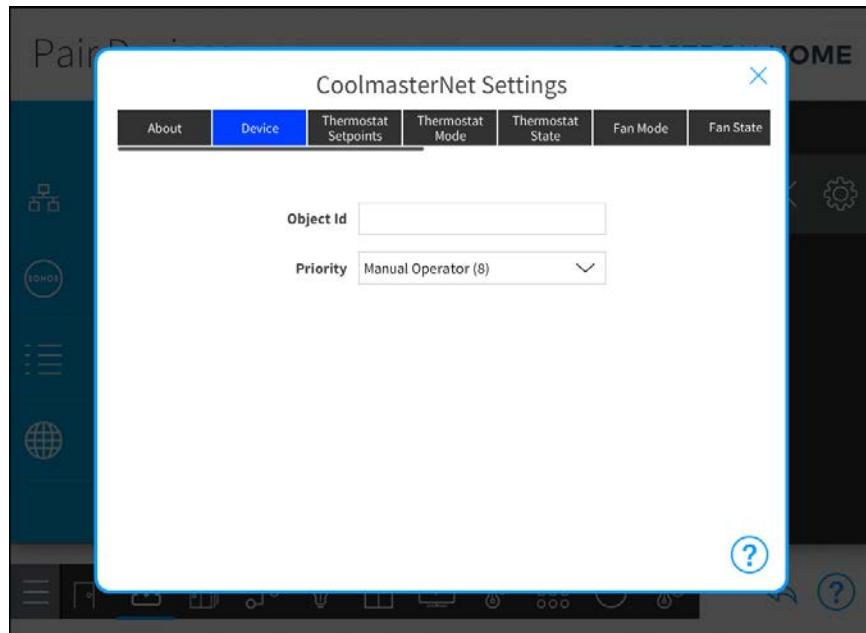
1. Select the CoolMasterNet from the **Select a room** menu and then tap the gear button  next to the device. The Settings dialog box is displayed.



2. Configure the following settings:

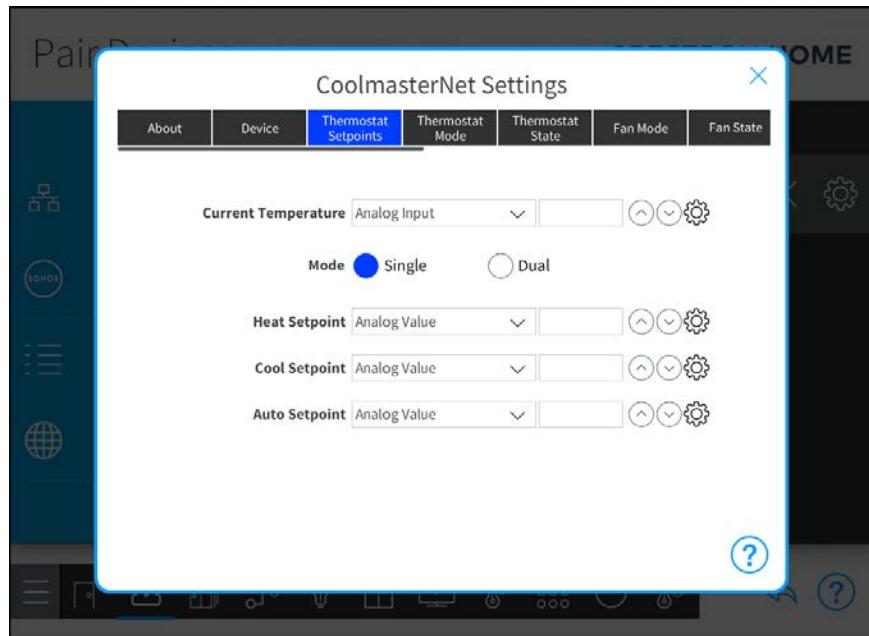
**NOTES:**

- The gear icon lights green to indicate that the setting is correct and that the CP4-R and CoolMasterNet are communicating properly.
- The gear icon lights red to indicate that a setting is incorrect and that the CP4-R and CoolMasterNet are not communicating.
- **Device:** Enter the BACnet ID to establish communications with the CoolMasterNet.

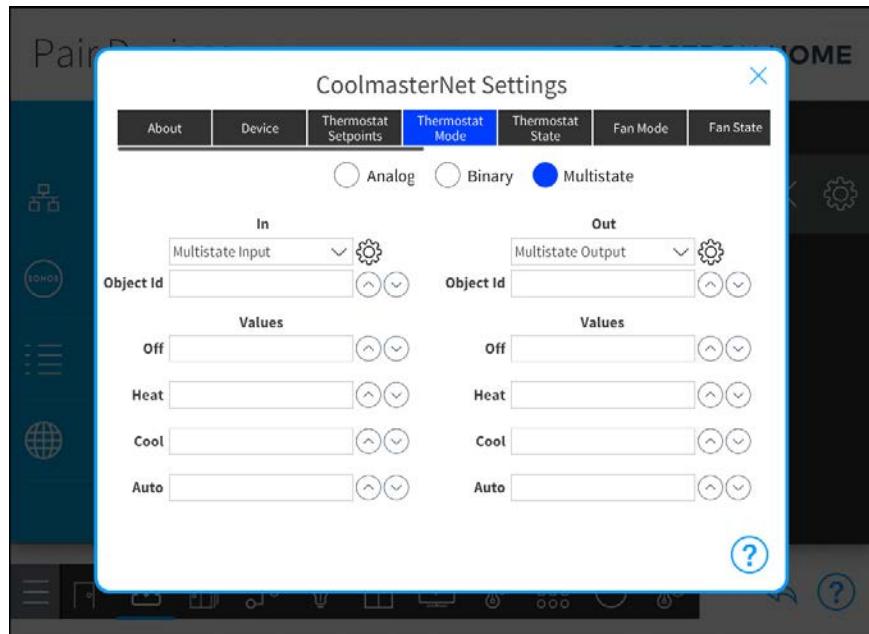


- **Thermostat Setpoints:** Enter the BACnet ID for the temperature setpoints.

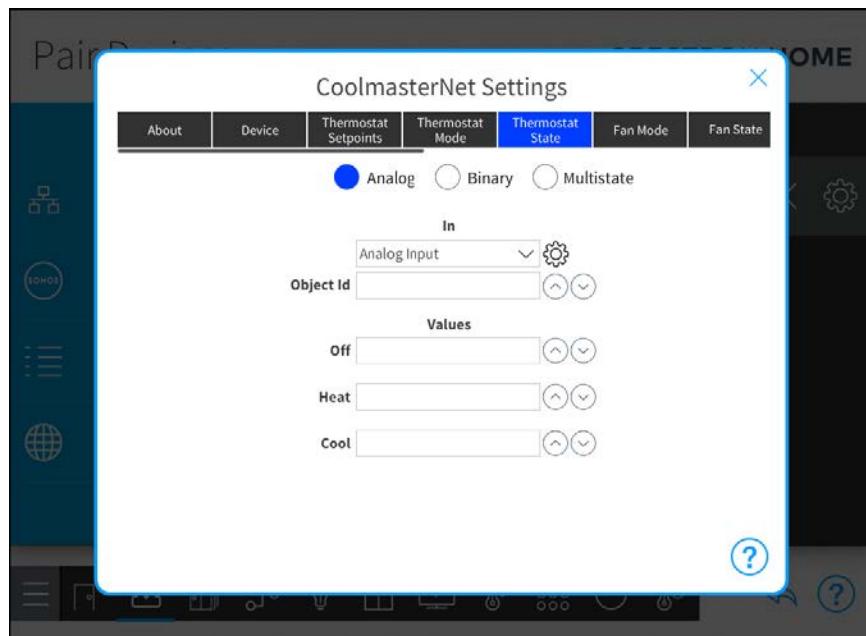
**NOTE:** CoolMasterNet does not support Dual mode.



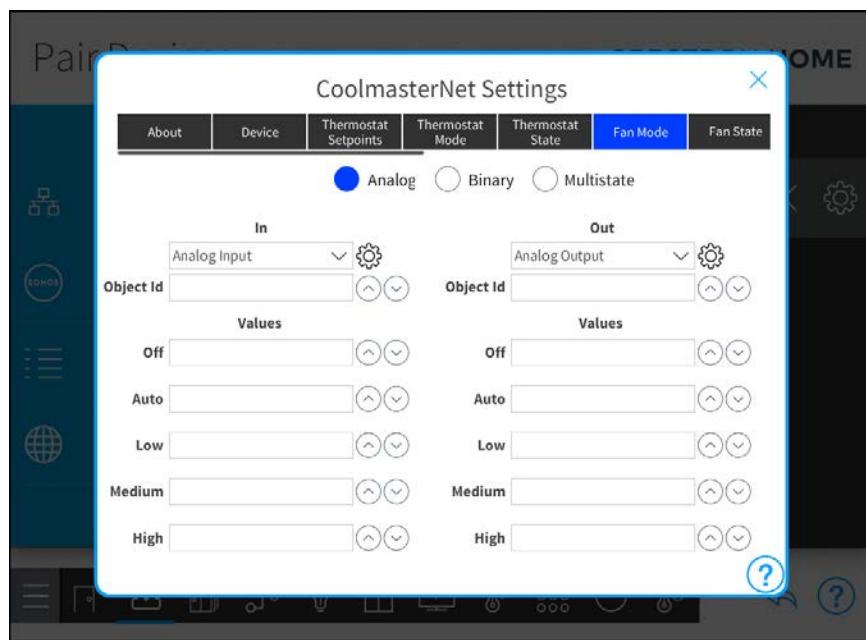
- **Thermostat Mode:** Enter the BACnet ID for the thermostat operating mode.



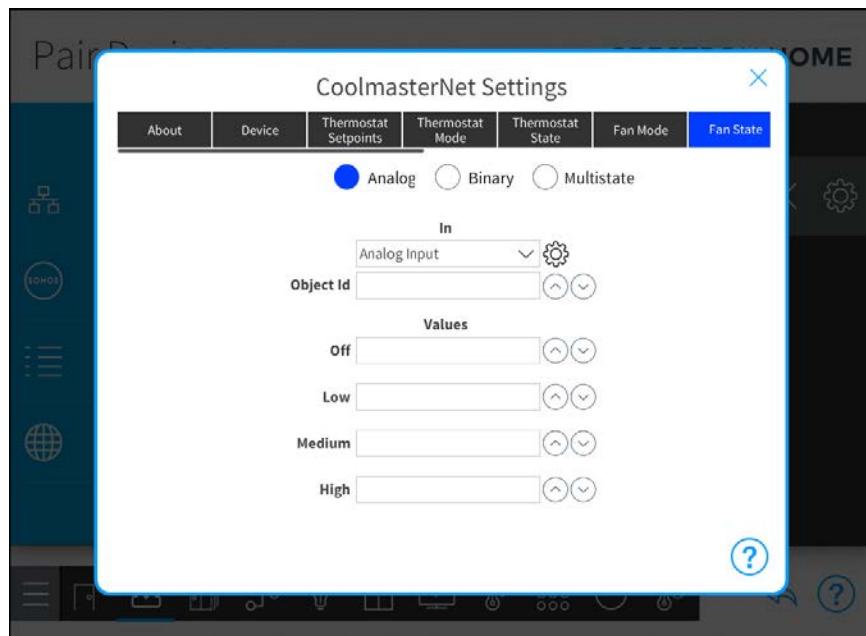
- **Thermostat State:** Enter the BACnet ID for the thermostat state.



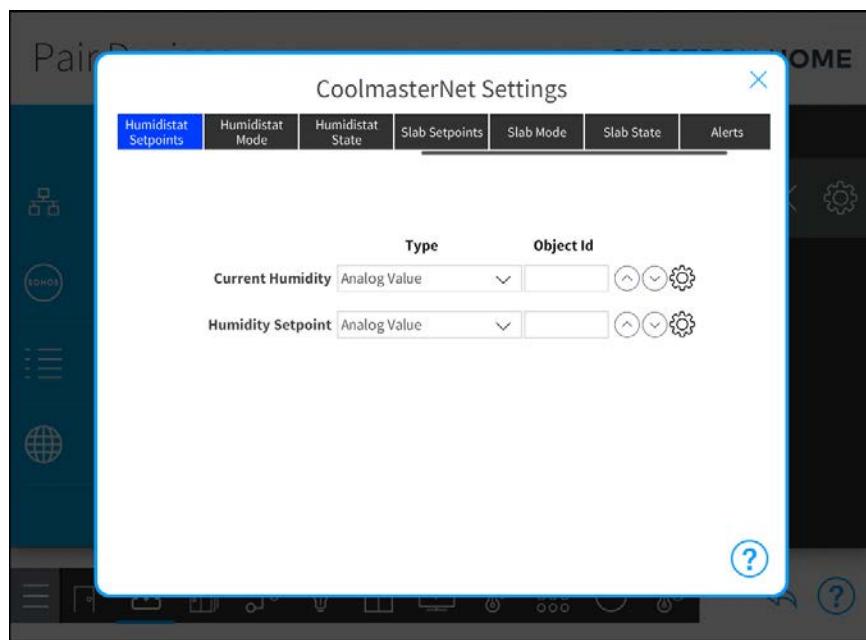
- **Fan Mode:** Enter the BACnet ID for the fan mode.



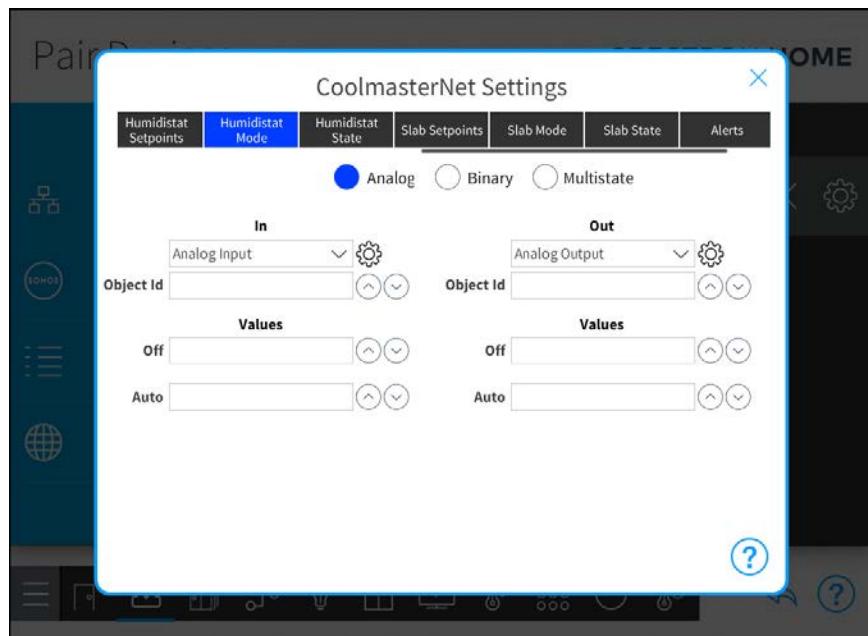
- **Fan State:** Enter the BACnet ID for the fan state.



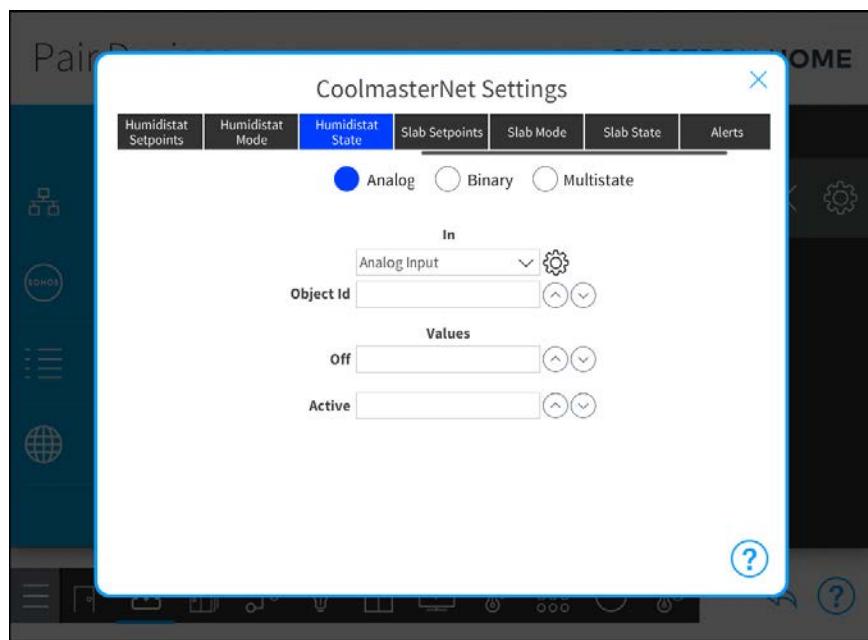
- **Humidistat Setpoints:** Enter the BACnet ID for the humidistat setpoints.



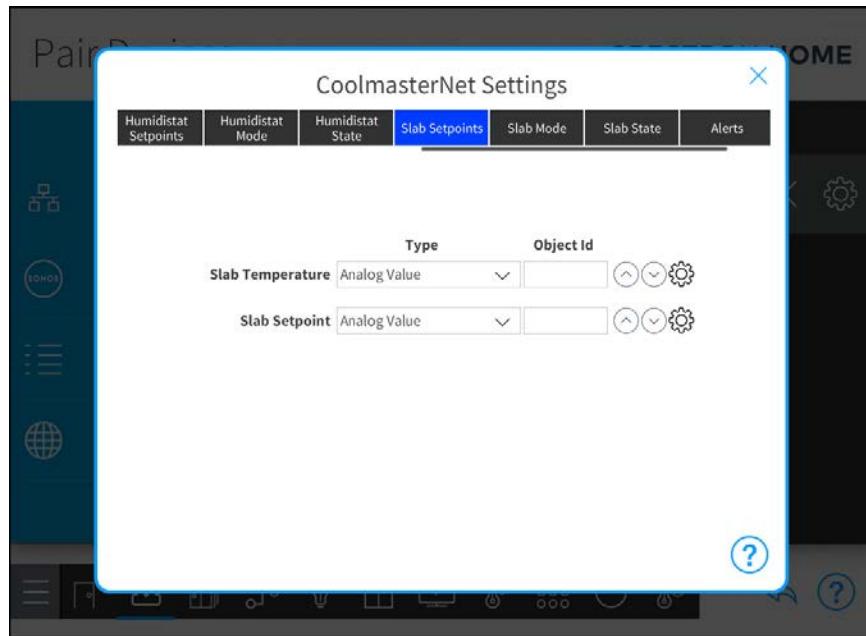
- **Humidistat Mode:** Enter the BACnet ID for the humidistat mode.



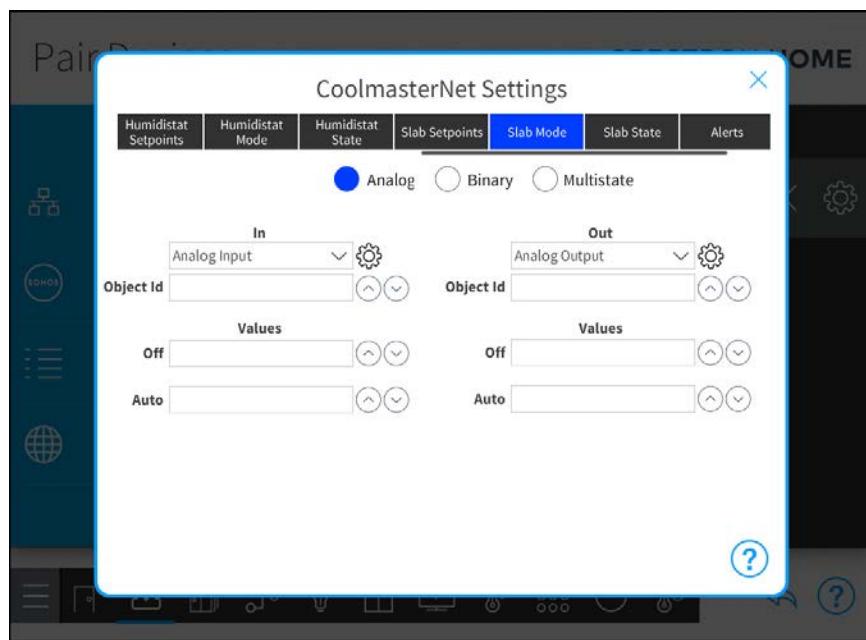
- **Humidistat State:** Enter the BACnet ID for the humidistat state.



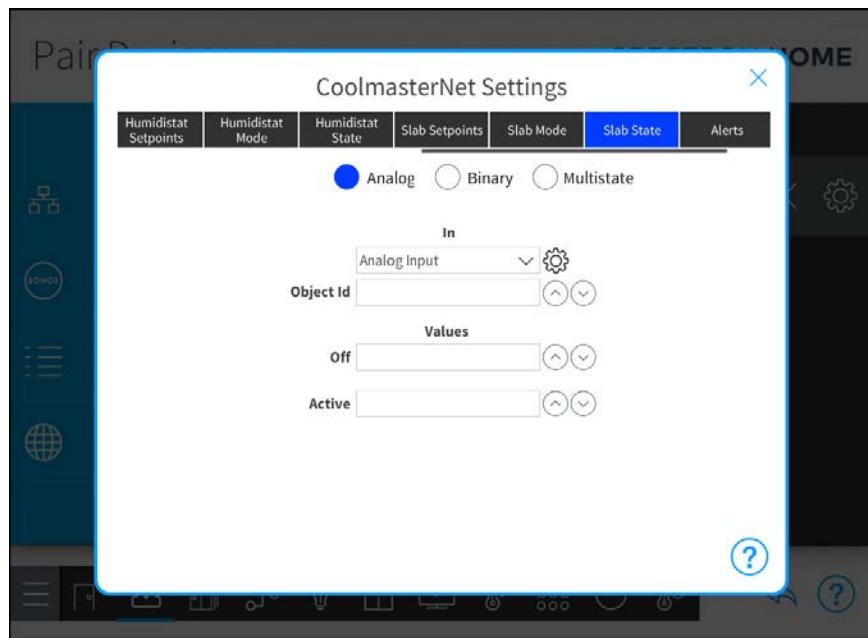
- **Slab Setpoints:** Enter the BACnet ID for the slab setpoints.



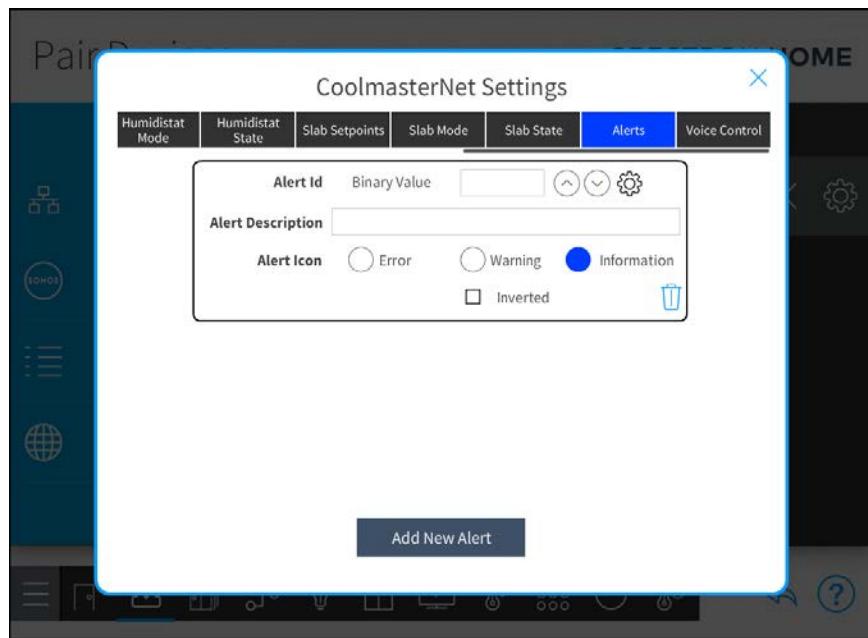
- **Slab Mode:** Enter the BACnet ID for the slab mode.



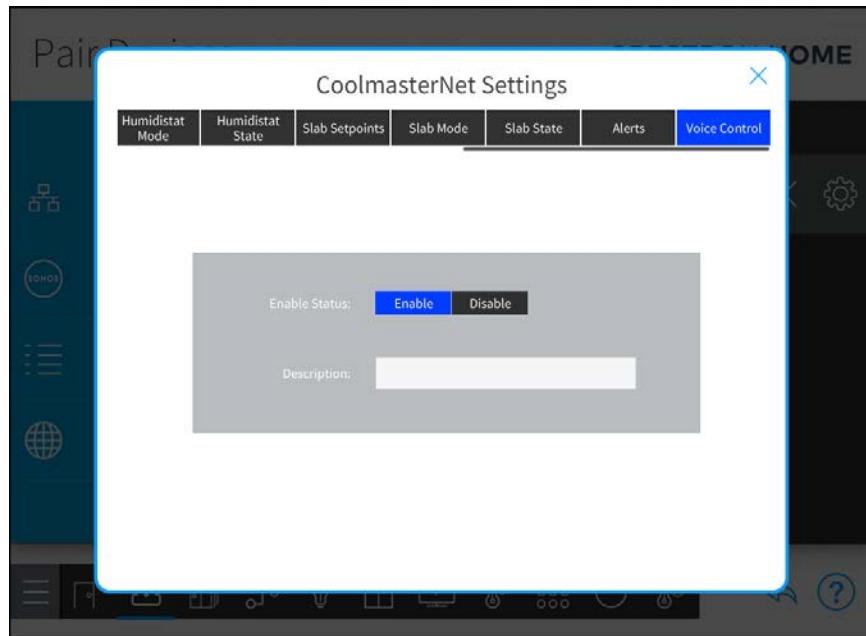
- **Slab State:** Enter the BACnet ID for the slab states.



- **Alerts:** Enter the BACnet ID for device alerts.



- **Voice Control:** Enable or Disable voice control for the device.



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