Crestron® Beacon Setup Pro App
Installer for Crestron PinPoint™ App

User Guide
Crestron Electronics, Inc.

Contents

Crestron Beacon Setup Pro App: Installer for Crestron PinPoint App

Introduction

This document explains how to use the Crestron Beacon Setup Pro app (for iPhone®, iPad®, and iPod® touch mobile devices) to configure rooms in Crestron Fusion® software for the Crestron PinPoint app. Throughout this document whenever "mobile device" is referenced it is referring to the iPhone, iPad, and iPod touch devices.

The Crestron Beacon Setup Pro app allows the user to setup Crestron beacons. These beacons will be associated with a room or location in Crestron Fusion. The Crestron PinPoint app is then used to detect and provide the beacon locations to the user.

The Crestron PinPoint app is a personal productivity assistant to be used for planning and completing the user's daily agenda of meetings and events.

The Crestron PinPoint app is used to do the following:

- Track the day and plan meetings

- Locate available meeting spaces

- Schedule meetings, reserve spaces, and invite attendees

- Join scheduled meetings using a mobile device (dial-in instructions in the event body required)

- Identify the meeting space you are physically in (option when deploying a PP-100 beacon or a Crestron device with an embedded PinPoint beacon)

- Control Crestron technology in a meeting space, specifically the Crestron AM-100 and AM-101 AirMedia® Presentation Gateways

The following devices are compatible with the Crestron Beacon Setup Pro App:

- PP-100 PinPoint Proximity Detection Beacon

- TSW-560, TSW-760, and TSW-1060 touch screens

- CCS-UC-1 Crestron Mercury™ conference system

Crestron Beacon Setup Pro App

The Crestron Beacon Setup Pro app is used by installers to configure PinPoint Beacons with Bluetooth® connectivity to work with the Crestron PinPoint app. The app allows users to do the following:

- Assign beacons to Crestron Fusion rooms

- Adjust the perceived power of the beacons to cover the exact size of a room

- Associate photos and maps with the room in Crestron Fusion

The Crestron Beacon Setup Pro app assigns a PP-100 beacon or a Crestron device with an embedded PinPoint beacon to spaces and allows the user to configure the strength of the beacon.

The Crestron Beacon Setup Pro app does the following:

- Creates an association between one or more PP-100 beacons or a Crestron device with an embedded PinPoint beacon and an existing Crestron Fusion configured room or space. When the Crestron PinPoint app ranges the beacon, it will recognize the space in which the user is located.

- Configures the beacon Bluetooth® signal strength so that in every location in the room (where a user might be referencing the Crestron PinPoint app) the app references the beacon properly to the space where you are located.

- Determines coverage for the beacon signal and any other configured beacons in-range.

- Adds photos that reference the space. Photos can be organized as wayfinding to show the following:

  o Floor plan showing the location of the room on its floor

  o Room entryway

  o Room imagery showing features and configurations (general "beauty" shot of the room)

Crestron Fusion Setup

Complete the following steps before using the Crestron Beacon Setup Pro app for installers:

- Complete the Crestron PinPoint configuration in the Crestron Fusion Configuration Web Client.

- Configure the SMTP server information in the Crestron Fusion Configuration Web Client. Crestron Fusion sends an email to the configured License Notification Email address to inform of any Crestron PinPoint license issues.

- Configure the Node tree structure on the server using the Crestron Fusion Setup Web Client. Nodes typically represent geographical or corporate divisions, campuses, buildings, and floors.

  When at a building Node, refer to the following:

  o Region information should be completely defined to include the Address at the building Node level. This information is inherited from other Nodes above it, as the Node geography dictates.

    The Crestron PinPoint app uses this information to locate available rooms if the configured Default Location in the App is not set to Current Location (GPS location). This expands the search area when the app is ranged to a beacon configured in the room, or as a parameter in a custom search.

  o GPS coordinates for the building should be entered based on its street address. The Crestron PinPoint app uses this information to locate available rooms for users who have maintained the default setting for Default Location as Current Location (GPS location).

- Configure the Room Types that commonly describe the meeting spaces in the organization. A number of Room Types are already predefined (Huddle, Conference, and Boardroom, etc.). Room classifications can be added or replaced with names, such as Executive Conference or Huddle with Videoconference, etc.

  Add rooms (spaces) to Nodes (for each room).

  o Enter a text value for Location to describe all spaces sharing the same approximate location (for example, 1 Main USA 2FL North), thereby using the same location value for all rooms that are physically close to each other.

  o Enter a text value for the Adjacent Location (if any), to describe the location of spaces that are adjacent to the Location specified (e.g., 1 Main USA 2FL South), thereby using the same adjacent location value for all rooms.

  o Enter a numeric value for Capacity. Capacity is typically the maximum number of persons that the space can accommodate.

  o Select a Room Type.

  o Configure the scheduling resource (room calendar) for the space.

    If Non Bookable is selected under Scheduling Details, the room is considered non-bookable in the Crestron PinPoint app. Availability of any space, bookable or nonbookable, is determined by the use of occupancy sensors, and Crestron Fusion does not return a room as an available space if it is currently occupied.

  o Configure AirMedia for the space (optional).

- The preferred method to configure AirMedia in the room is to install it as an asset configured for direct communications with the server using the Crestron Fusion driver (recommended for on-premises installations only, as communications are unencrypted). In this way, AirMedia notifies the server when the Security Code changes.

- If AirMedia is not connecting directly to the server as an asset, a value must be entered for AirMedia information. The value must be formatted as 10.0.0.1 1234. The IP Address is 10.0.0.1, followed by a blank space and then the nonrotating (fixed) Security Code (1234).

Crestron PinPoint uses the information to enable the one-touch **Present with AirMedia** button for the space. Note that Wi-Fi® connectivity from the mobile device to the AirMedia receiver is required.

o Add assets to the room.

   Crestron PinPoint displays and searches for any assets configured in the room if their asset type is indicated as searchable. For example, a DVD player, Whiteboard asset, or Video codec (e.g., Crestron RL® system) should be flagged searchable, but other infrastructure assets that users would not search for (such as a Touchpanel) should not.

- Configure connectivity to an on-premises Crestron Fusion server.

o To use the App without a VPN or local Wi-Fi connection, add a Crestron Fusion server and/or additional connection to the Internet via a static IP address in the company DMZ. Specifically exclude nonessential IIS root directories that could widen the attack surface of the server. For example, to disallow access to the Crestron Fusion Web Client, remove fusion/webclient files from the IIS directory.

o For the app to reach the server, consider naming the server on the DNS with the default name *fusion-mobile.company.tld,* where *company.tld* is the same as the email addresses used to log in to Crestron PinPoint. For example, user *joe@xyzcorp.com* would default to a server reachable at *fusion-mobile.xyzcorp.com.*

   The app attempts to use this naming convention to locate its server. If the DNS naming convention is not used, the user needs to specify a domain name and IP address of the server when starting the app for the first time. Additionally, if the company uses different authoritative DNSs internally from the Internet, then DNSs need to be pointed to the appropriate private (internal) and public (external) hosts.

NOTE: For more information on other procedures in Crestron Fusion, consult the embedded help accessed from Crestron Fusion, or contact the Crestron Fusion Support Group (FSG) at 855-754-5962 or email fsg@crestron.com.

Using the Crestron Beacon Setup Pro App

Supported Devices

The installation of the Crestron Beacon Setup Pro App requires the following:

- iPhone 4S (or later), iPad® (in iPhone mode, 3rd generation or later), iPad mini™ (or later), or iPod touch® (5th generation or later) devices, or Apple® device using an iOS® 7 operating system (or later, iOS 9 preferred) is required

  NOTE: iPad devices must have at least 1 GB of RAM for reliable performance.

- Bluetooth low-energy device connectivity to be enabled when used with a PP-100 beacon or a Crestron device with an embedded PinPoint beacon

- Mobile broadband or Wi-Fi network connection is required as needed for connection to the Crestron Fusion server

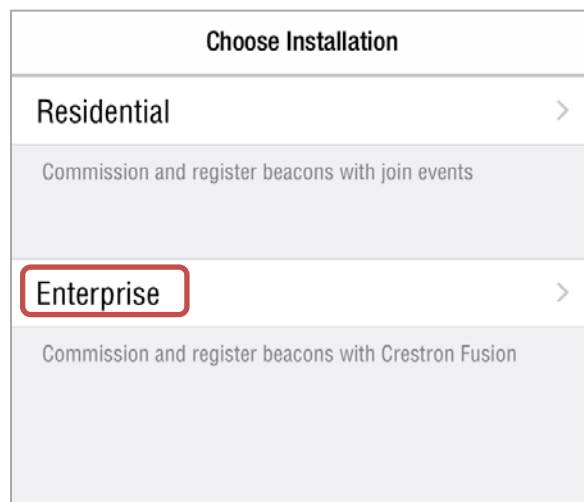- Crestron Fusion server installed on-premises must be configured with a valid SSL certificate and HTTPS

Installation

Download and install the Crestron Beacon Setup Pro app on your mobile device, according to the instructions provided by Crestron or the IT or AV department.

Sign On

1. Select **Enterprise** from the **Choose Installation** screen (the first time the app is launched) to configure an enterprise deployment for Crestron PinPoint.

   Choose Installation

Choose Installation	
Residential	>
Commission and register beacons with join events	
Enterprise	>
Commission and register beacons with Crestron Fusion	

   NOTE: Connect to a Wi-Fi connection or the carrier's network to connect the app to the Crestron Fusion server, respectively. If an on-premises server has been installed with a connection to the public Internet, a Wi-Fi connection is not necessary.

2. In the **Username** field, enter credentials for the corporate account in *username@company.com* email format.

> NOTE: The credentials may need to be supplied as *domain\username*, as directed by Crestron or the IT or A/V department.

3. In the **Password** field, enter the account password (typically the password used to log on from a computer or email account).

4. Click **Sign In**. A message displays stating "Authenticating…" and then "Success" once the App has contacted the Crestron Fusion server and confirmed permission to use the App.

   If the App is unable to locate the Crestron Fusion server, the user may be prompted to enter the hostname or IP address of the server. A specific server address will need to be provided by the Crestron Fusion administrator. This address may also be configured in the mobile device under Settings for the Beacon Setup Pro App as the Domain or IP Address.

The Company Tree page is displayed, and the first level of the configured Crestron Fusion node tree below the **Root** displays at the top of the page. Indicators (**+** / **-**) next to each node allow you to navigate, expand or collapse nodes in the tree, respectively.
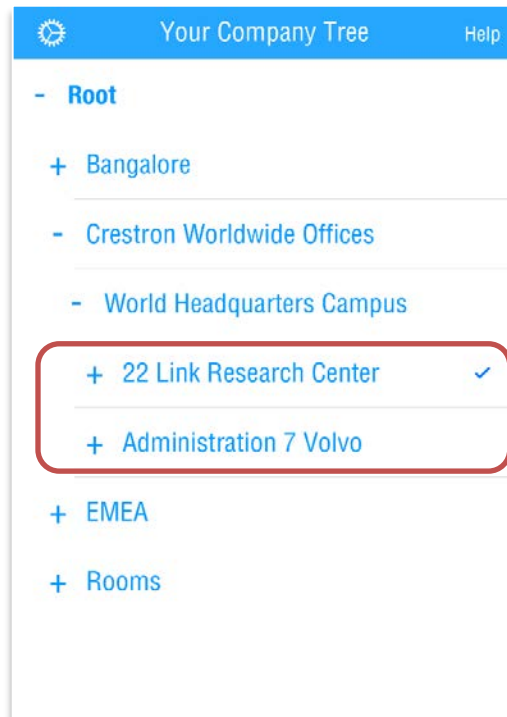
Configure Beacons

Add one or more PP-100 beacons or a Crestron device with an embedded PinPoint beacon to a Crestron Fusion room so that the Crestron PinPoint app can range the space.

1. Navigate the node tree by tapping the **+** until the buildings that contain the spaces to be configured are shown.

2. Mark (with a check ✓) the node representing each building to indicate it is set up as a unique building in the organization. This designation groups the IDs provisioned into the beacons by their building.

   a. To tag the Node as a building, tap and hold (perform a long-press) for at least two seconds on the node name to display the "Do you want to mark this node as a building?" prompt.

   b. Click **Continue**.

In the example below, the node **22 Link Research Center** is marked as a building, but the node **Administration 7 Volvo** is not marked as a building.
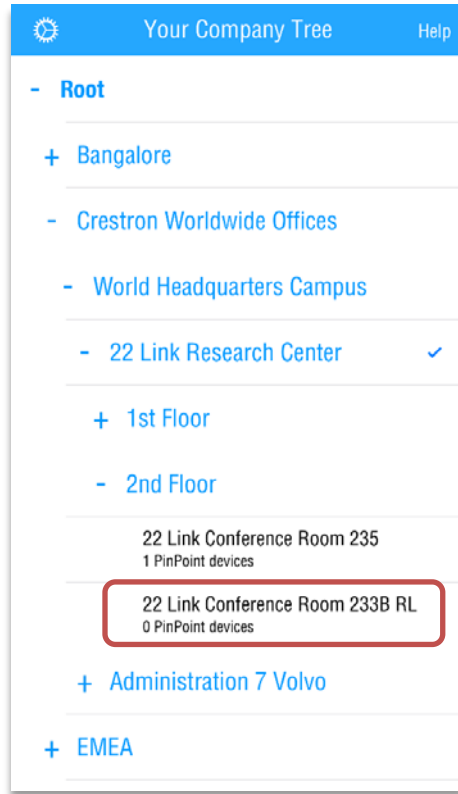
Node Marked by Check ✓ Indicates a Building to be Configured with Beacons

3. Open the building node by clicking the **+** next to the building name until the room in the tree to be configured is displayed.

In the example below, the room **22 Link Conference Room 233B RL** does not have any configured beacons.

Rooms with No Configured Beacons

4. Tap the room name. The screen updates to show a preview of the room photos and information about configured beacons.

In the example below, the room **22 Link Conference Room 233B RL** is in the process of being configured and no devices have been assigned or room images uploaded.

Room Photos and Configured Beacons
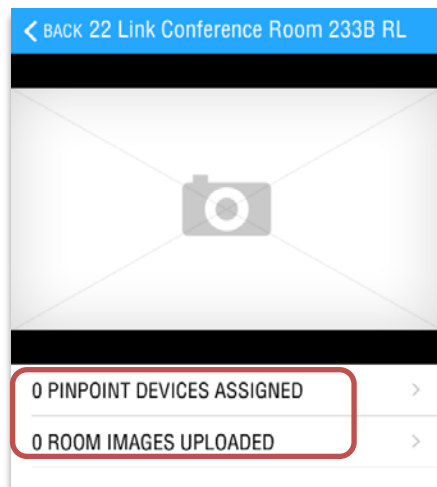
5. Plug in a new PP-100 beacon (optional) in the room to assign it to the space. Plugging in the beacon places the beacon in Admin mode. This step must be completed with the beacon in Admin mode within 20 seconds of being plugged in.

   A PP-100 beacon cannot be configured once the 20 seconds has passed. To configure the beacon, unplug and re-plug in the beacon so it is shown in Admin mode. A new beacon appears in the list.

   If a PP-100 beacon cannot be detected via the Crestron Beacon Setup Pro app or the app cannot pair with the beacon, the default factory values need to be restored as follows:

   a. On the mobile device, tap **Settings** and then **Bluetooth**, and locate the ID of the beacon in the Bluetooth pairing list.

   b. Tap the blue information icon ⓘ and then tap **Forget This Device**.

   c. Plug in the PP-100 beacon for 6 seconds.

   d. Unplug the PP-100 beacon for 6 seconds.

   e. Repeat steps c and d two times. The factory defaults should now be restored.

   NOTE: For more information on embedded devices, refer to your device's documentation.

The beacon placement best practices are as follows:

- The beacon should be located as close to the center of the room as possible. In large rooms where multiple beacons are necessary, divide the room into sections and install the beacon as close to the center of each division as possible.

- The beacon should not be installed in a sealed metal enclosure (such as the leg of modular furniture), as it may block or significantly degrade the beacon's signal.

- The beacon should be installed in an easily accessible location, as it must be unplugged to administer the beacon.

- To avoid tampering, the beacon should be installed in a location that is out of sight.

- If the beacon cannot be installed in the center of the room, install the beacon in a wall outlet on the window side of the room or the farthest wall from other rooms containing beacons (to reduce overlap). Install outlets with built-in USB connectors to reduce the profile of the beacon on the wall.

The example below shows a new Available beacon in Admin mode in the beacon list.

*Available Beacon in Admin Mode Ready to be Assigned to the Room*
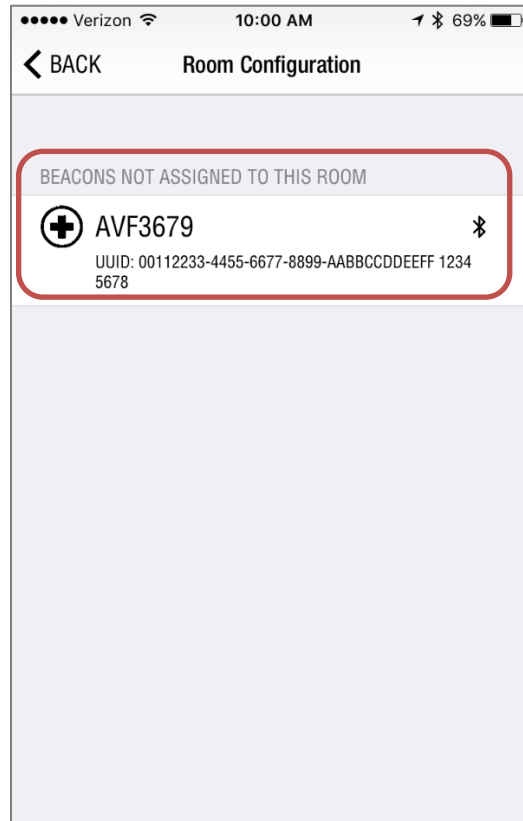
The beacon indicator icons are shown below:

Plus Sign in a Circle: This icon indicates the beacon is available for pairing with the selected room.

Check Mark: This icon indicates that the beacon is already paired with the selected room.

Admin Mode: This icon indicates the beacon is in Admin mode. When Admin Mode times out, the icon changes to a white, red, or green icon if the beacon has already been paired with the room, or the icon disappears from the list if it is already paired with another room.

Red Circle and Line: This icon indicates that a beacon is assigned to a different room and cannot be added to the current room.

White Circle: This icon indicates that the beacon is unplugged or out of range of the mobile device.

6. Tap the **Available** icon located next to the beacon ID to add the PP-100 beacon or a Crestron device with an embedded PinPoint beacon to the room.

    a. To delete a beacon from the room, swipe the beacon listed to the left.

    b. Tap **Delete** to remove the beacon from Crestron Fusion.

Nearby Beacon Assigned to Room
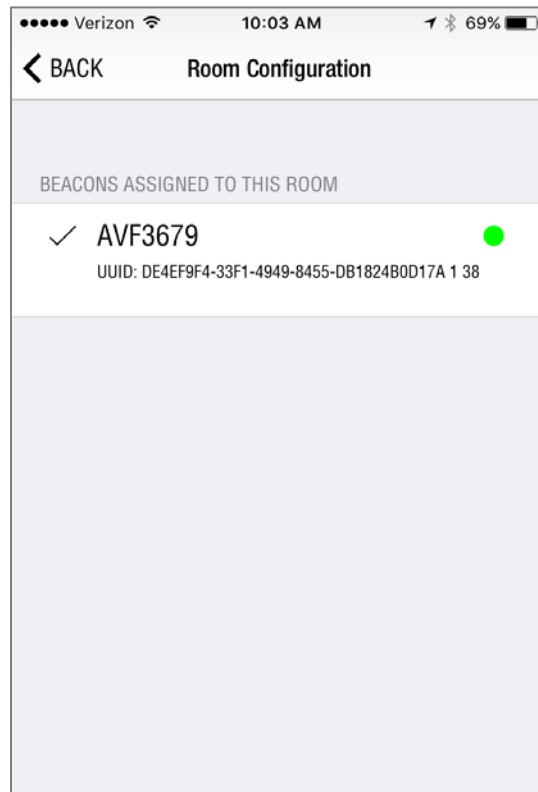
The indicator icons are shown below:

● **Green Circle**: This icon indicates that the mobile device is within the beacon detection area.

● **Red Circle**: This icon indicates that the mobile device can range the beacon, but it is not in the immediate detection area.

○ **White Circle**: This icon indicates that the beacon is unplugged or out of range of the mobile device.

7. With the beacon in Admin mode, tap the beacon to view its status.

The mobile device will offer to pair with the Bluetooth beacon. This is necessary to configure the beacon, as the mobile device uses its Bluetooth radio to communicate with the beacon.

Beacon Commissioning

8. Tap **Assign to Room** to configure the beacon.

9. Replace the temporary beacon name with a descriptive name (typically, the room name.)

Beacon Commissioning – Enable Calibrate Mode

10. Tap **Enable Calibrate Mode** to select a Beacon range (0 is the default).

> NOTE: Beacon range is determined by starting at the default (0), and then lowering the range to the point where a beacon is not ranged inside another adjoining room (next to, above, or below the room). The characteristics of the building construction impact the beacon power beyond the room. General guidelines for the facility are acquired as the beacons are installed over time.

Beacon Commissioning – Test Beacon Range
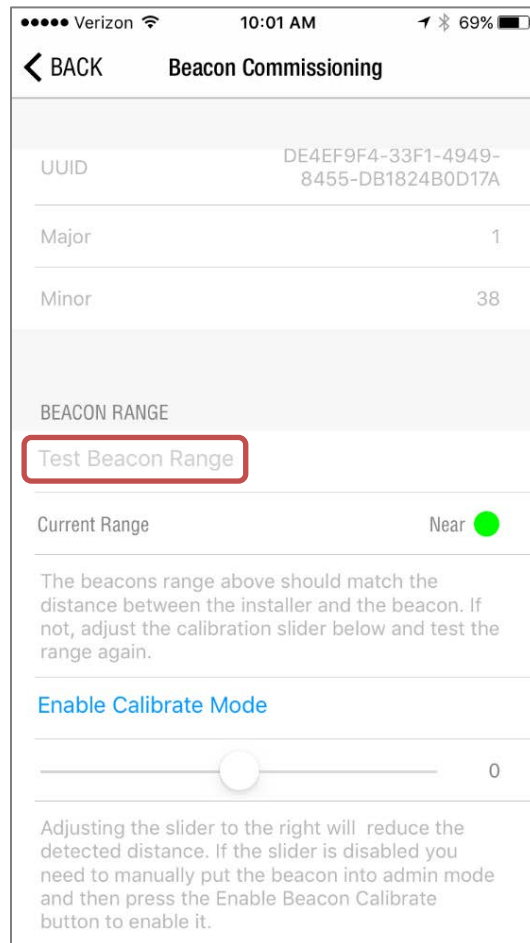
11. Tap **Test Beacon Range** to test the beacon's new range. The icon will be green whenever the beacon is in range.

12. Tap **< Back**. The beacon is added and shows its assigned name. The beacon should be in range (green) at every point in the room where a user might be holding their mobile device with the Crestron PinPoint app ranging the room (i.e., every potential seated or standing position).

13. Tap **< Back** to exit the beacon list, and save the beacon.

The example below shows the saved beacon assigned to the room.

Beacon Assigned to Room
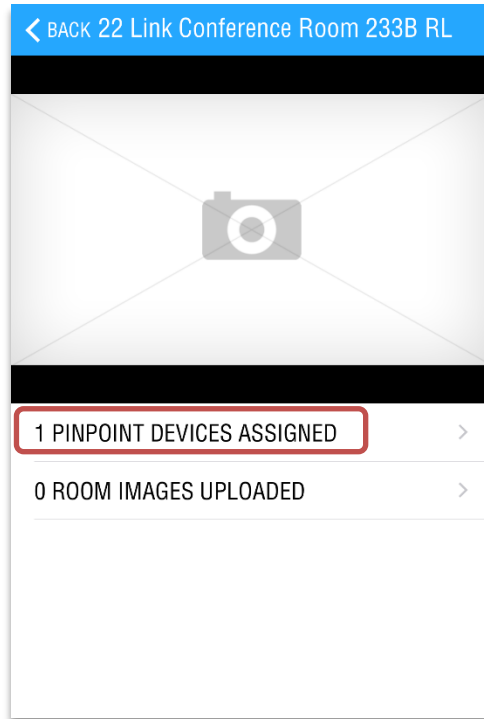
Add Room Image and Wayfinding Photos

This section explains how to add images to the space that are referenced in the Crestron PinPoint app. Each space offers two types of images that are displayed differently in the Crestron PinPoint app, as follows:

Image: This is typically a photo of the equipment in the room or the various room configurations. The Image Default is the photo prominently displayed on the Crestron PinPoint app user interface when a meeting is upcoming and is a "beauty shot" or common configuration view of the room. It is the first image displayed when there are multiple images for the room.

Wayfinding: This is typically one or more building or campus floor plan photos highlighting the room's location. The Wayfinding Default is the photo displayed when the room is selected. It is the first Wayfinding photo displayed when multiple photos are present for a room.

To add images to a space, do the following:

1. Tap **ROOM IMAGES UPLOADED >** to enter the manage images function.

2. Tap the large blue add icon ⊕ on the **Manage Room Images** page.

3. Use a mobile device to either add a new image by taking a photo, or add an existing image to the mobile device's Library.

The example below shows how to add an image to a mobile device.

Add an Image
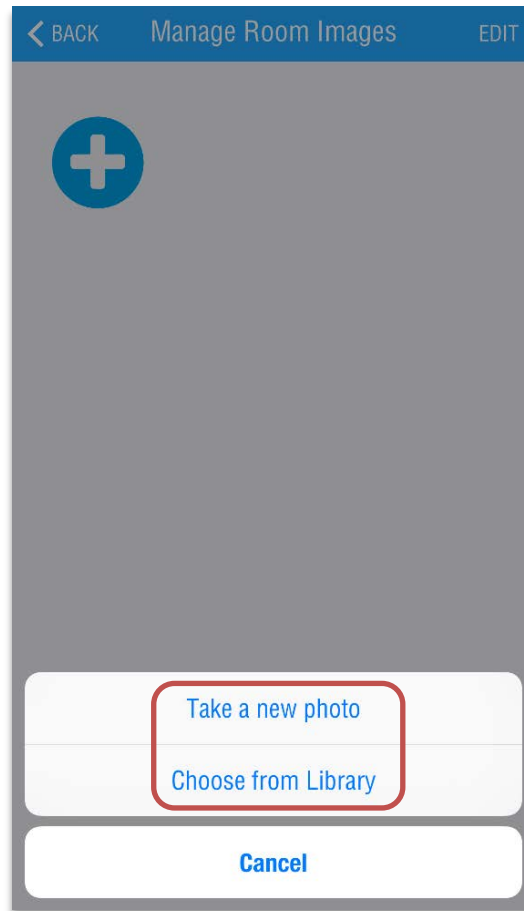
Add an Image Using the Camera on a Mobile Device

1. Tap **Take a new photo** to add a photo to the room. Use the mobile device's camera to frame the image and take a photo. The photo is displayed in a frame as a preview of how it displays in the Crestron PinPoint app.

2. To adjust the image, do the following:
   - Pinch to zoom and drag the photo to store as shown. If dissatisfied with the image, tap **Retake**.
   - When satisfied with the photo and framing, tap **Use Photo**.
   - To cancel this function and not add an image, tap **Retake** then tap **Cancel**.

3. Select the image type to be assigned to this photo.

Manage Room Images Window
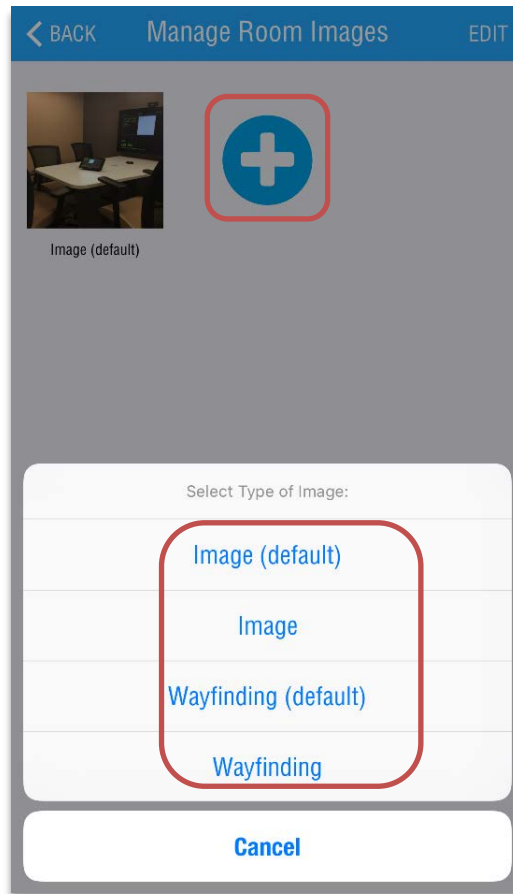
4. Once added, the new photo is displayed under **Manage Room Images**. To add another image, tap the large blue icon ⊕ on the **Manage Room Images** page.

Add Image from Library

1. To add an image already stored on a mobile device, tap **Choose from Library**. This is typically performed to add a **Wayfinding** or floor plan image saved from another application or from an email. The first time this option is selected, permission is required so that the application can access the images.

2. To locate the library images, browse the library.

3. Tap to select the image. A preview is displayed in a frame to show how the image displays in the Crestron PinPoint app.

   - Pinch to zoom and drag the photo to store as shown.

   - Tap **Choose** to add it to the room.

4. From the **Select Type of image** pop-up, select an image type. Once added, the image is displayed under **Manage Room Images**.

Multiple Room Images Added
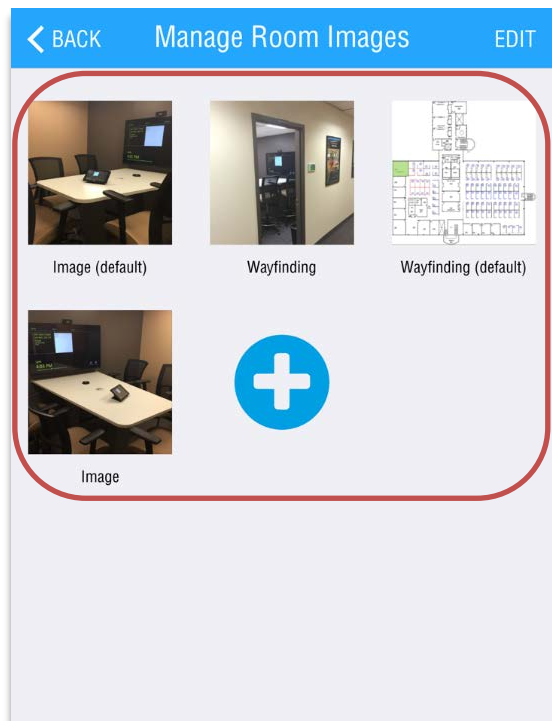
5. Tap **EDIT** to delete an image already uploaded; the existing images will bounce to indicate they are in edit mode, and a red X appears on each image.

6. To delete an image, tap the red X (delete icon) located in the upper right corner of each image to be deleted. When finished, tap **DONE**.

7. Tap **< Back**. The room images are saved and can be previewed here as they would be viewed in the Crestron PinPoint app.

Multiple Images Added with Image Default Displayed
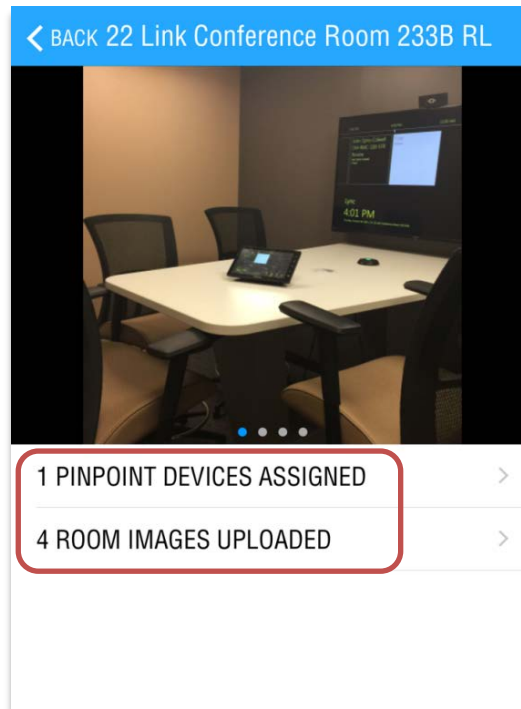
8. Tap **< Back**. Success is displayed and the room changes are saved.

Additional Information

On the main **PinPoint Install** screen, tap the gear icon located in the upper left corner to access settings.

If the program behaves unexpectedly, tap **Export Logs** to email a copy of the application log to fsg@crestron.com.

For more information on these and other procedures in Crestron Fusion, consult the embedded help accessed from the Crestron Fusion interface, or contact the Crestron Fusion Support Group (FSG) at 855-754-5962 or email fsg@crestron.com.