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## DSC Impassa Image Sensor Version 3 - Installation Guide

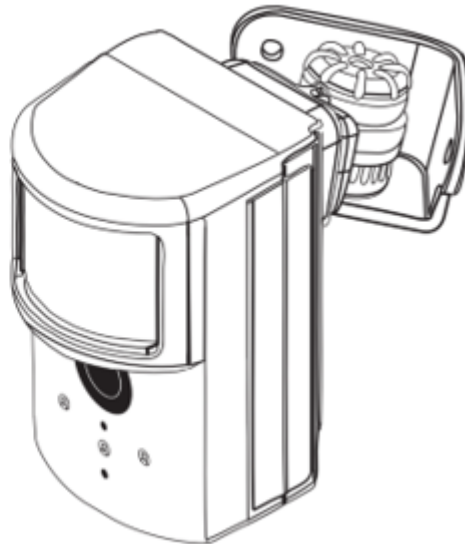
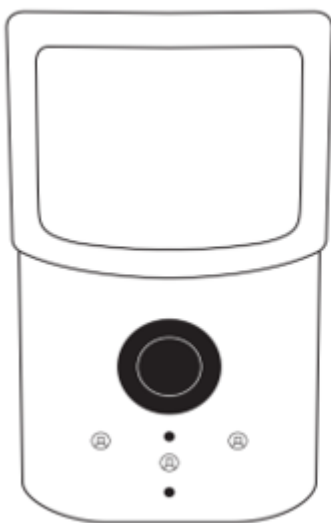
This guide contains instructions for installing an Image Sensor Version 3 (ADC-IS-300-LP) on a DSC Impassa panel.

### Product summary and technical specifications

The Image Sensor is a pet immune PIR (passive infrared) motion detector with a built-in camera designed to capture images during alarm or non-alarm events when motion is detected.

#### Product features:

- Communicates wirelessly to the security control panel
- 35 foot detection range with a 90 degree horizontal FOV
- Configurable PIR sensitivity and pet immunity settings
- Image: VGA 640x480 pixels
- Color Images (except in night vision)
- Night vision image capture with infrared flash (black & white)
- Tamper detection, walk test mode, supervision
- All systems can support up to three Image Sensors
- UL 639 certified



## Technical specifications:

- Alarm.com Model Number: ADC-IS-300-LP
- Power Source: Recommended 2 AA 1.5v Energizer Ultimate Lithium Batteries.
- Batteries: Refer to the Batteries section for details
- Operating Temperature Range: 60° to 80°F
- Weight: 3.1 oz. (with batteries and without mounting accessories)
- Dimensions: 3.1" h x 1.8" w x 2.3" d
- Supervisory Interval: 100 minutes (sensor), 3 hours (alarm hardwire)
- Wireless Signal Range: Greater than 400 ft open air
- Color: White
- Recommended Mounting Height and Angle: Refer to the Recommended Install Height and Angle Table
- Motion Profiles & Sensor Range: Refer to the PIR Sensitivity Settings Table

## Hardware compatibility requirements

### DSC Impassa panel

Must be on panel version 1.3+

### Alarm.com cellular module

Must be one of the following:

- 3G8080(I)
- CD8080(I)
- TL8055LT

## Service package requirement

Image capture features require a service package that includes one of the following Image Sensor add-ons:

- *Images - Alarms*: Includes upload of images from panel alarm events only.
- *Images - Limited*: Includes uploads of images from panel alarm events and disarm events.
- *Images - Plus*: Includes upload of images from panel alarm events, disarm events, and non-alarm events.

For additional information about Image Sensor add-ons, see [What image captures are included in each Images service package?](#).

## Installation: Preparing panel for enrollment

### Create Alarm.com customer account

Select service package (including an *Images* add-on) and register the Alarm.com module serial number on the Alarm.com Partner Portal.



## Install the proper hardware

To verify proper hardware is being used, see [Hardware Compatibility Requirements](#).

## Register module and test

Power up the panel and initiate a comm-test to ensure the Alarm.com module is properly installed and communicating with Alarm.com.

## Installation: Enrolling Image Sensor to panel

Image Sensors can be enrolled remotely using the Partner Portal or MobileTech app, or locally using the panel. For information about enrolling Image Sensors remotely, see [Enroll an Image Sensor on a DSC Impassa](#).

Daughterboard required for Rev6.0 (ADC-600T). No daughterboard required for Rev6.2 (ADC-620T).

To enroll the Image Sensor locally:

**Important:** For smoothest installation, learn in one Image Sensor at a time. Insert batteries only after initiating learn mode at the panel.

1. Verify the proper Alarm.com cellular module is being used. For more information about if the proper hardware is being used, see [Hardware Compatibility Requirements](#).
2. Put the panel into add mode. On the panel, enter the Interactive Services menu, which can be accessed via section 851 of Installer Programming.
  - To enter the menu using the keypad:
    - a. Press **[\*][8]**.
    - b. Enter the installer code.
    - c. Press **[851]** to enter the *Interactive Services* menu.
    - d. Scroll to *Image Sensor Setup*, then press **[\*]** to select.
    - e. Scroll to *Learn Image Sensor*, then press **[\*]**. The screen should display *Power up or reset I.S. now*.
3. Insert batteries into the Image Sensor. The LED on the Image Sensor progresses from blinking red to solid red to blinking yellow. This indicates the Image Sensor is in learn mode.
4. Wait approximately 20 seconds for the Image Sensor to enroll to the panel. The screen on the panel displays the following: *I.S. # Added as Sensor #*. The LED on the Image Sensor turns solid yellow indicating that it has successfully found the panel.
5. After the Image Sensor LED has turned solid yellow, you must exit Add Mode on the panel. The Image Sensor LED alternates between green and yellow while the customer's device list is updated with Alarm.com. The LED turns solid green when the Image Sensor has been successfully added to the customer's account.

**Note:** If you move (tamper) the Image Sensor after the LED has turned solid green, the Image Sensor enters test mode for 3 minutes indicated by red LED when motion is detected. You may continue with the mounting portion of the installation when in test mode. See the [Image Sensor LED Reference Chart](#) for more details.

6. After enrollment, be sure to keep the sensor and panel powered so the sensor can complete an initialization

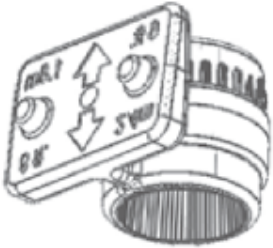
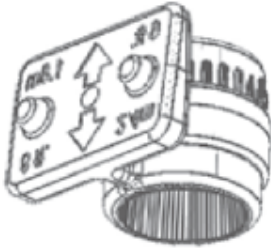
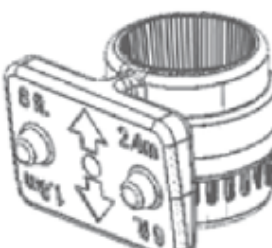


process with the Alarm.com Network Operations Center. This process takes several minutes. Images cannot be captured until initialization is complete. Check by verifying if the rules are confirmed on the Partner Portal or MobileTech.

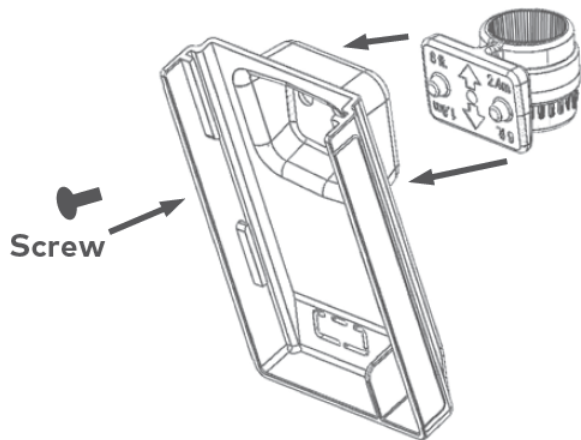
The sensor is now learned into the panel. Sensors are enrolled in group 5 by default. To change the sensor group, use the Zone Definitions menu via sections [001] through [004] in Installer Programming. Sensor groups can also be changed through the Alarm.com Partner Portal.

## Installation: Mounting Image Sensor

1. Choose the desired location and mounting angle for the Image Sensor using the information in the chart. There are three options:

Intended Operation	Pet Immunity	Larger Rooms	Smaller Rooms
<b>Mounting Height</b>	6 Feet	8 Feet	8 Feet
<b>Angle</b>	Shallow, 6°	Shallow, 6°	Deep, 18°
<b>Bracket Orientation</b>	Teeth Up 	Teeth Up 	Teeth Down 
<b>Coverage Distance</b>	30 to 35 ft.	30 to 35 ft.	15 to 20 ft.

2. Screw the bracket to the backplate of the Image Sensor.



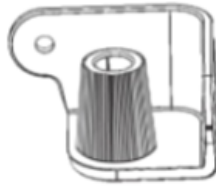
3. Determine the location to mount the sensor.
  - Best practices for installing Image Sensors: Do's and Don'ts

Do	Don't
<ul style="list-style-type: none"> <li>▪ Center the target capture area in the middle of the frame.</li> <li>▪ Enroll and install within 100 ft. of panel. Installation site conditions can reduce range considerably.</li> <li>▪ Make sure people will walk across the sensor coverage area instead of directly toward the sensor.</li> <li>▪ Avoid backlit conditions (for example, facing a window or other light source) because it may result in poor image quality.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Set sensor on a flat surface.</li> <li>▪ Set sensor across from mirrors or reflective surfaces.</li> <li>▪ Face sensor toward or close to areas that have metallic objects or electronics (to avoid interference with RF communication).</li> <li>▪ Install in an area where there are obstructions in front of or around the camera lens (for example, walls and ceilings within 90 degrees and 2 ft. around the camera). This type of installation will result in washed out night captures.</li> <li>▪ Install outdoors. Sensor is for indoor use only.</li> </ul>

4. Choose applicable mounting bracket. The sensor hardware packet contains two mounting brackets for different mounting scenarios. Use the provided large screws and anchors to attach the bracket to the wall. Leave at least 3 inches of clearance above the sensor to allow for battery replacement without uninstalling the mounting bracket.



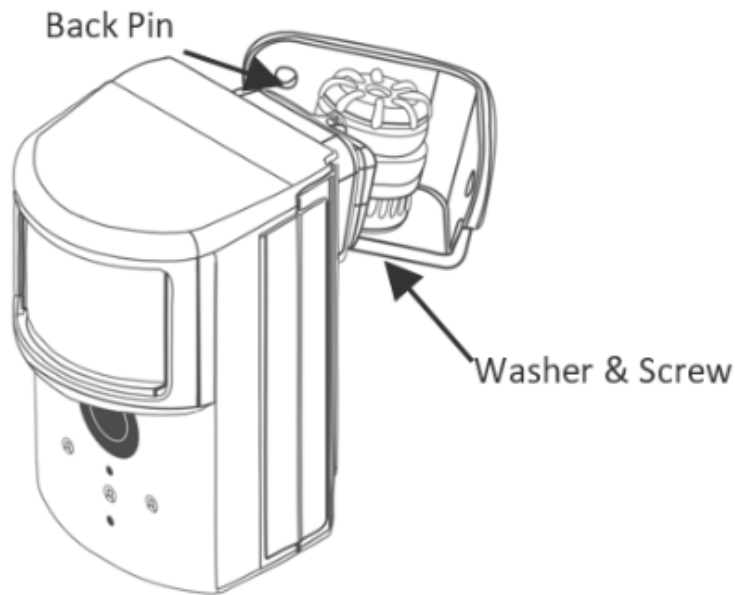
*Flat Wall Mount*



*Corner Wall Mount*

5. Place and secure the Image Sensor on the arm and secure the arm on the mounting bracket in the desired location. Adjust the horizontal positioning of the sensor to point towards the desired coverage area.
6. Secure the mounting arm location by sliding lock pin into the hole. Use the washer and remaining small screw to secure the lock pin by screwing upwards through the bottom of the hole in the mounting bracket.





7. Set the PIR Sensitivity Settings using the panel or remotely using the Partner Portal or MobileTech app. For information about setting the PIR Sensitivity Settings, see [Change Image Sensor sensitivity](#).

The following three options can be set:

**Normal**

Default setting

**High**

More sensitive motion profile with potential higher risk of false alarm.

**Low**

Less sensitive profile with pet immunity for pets up to 40 lbs.

## Verify and test Image Sensor setup

1. Verify that rules are confirmed via the Partner Portal or on MobileTech app.
  - Look for the word *Yes* in the Image Sensor Equipment List in the *Rules Confirmed* section. Resend rules if they are not confirmed.
2. Verify RF Coverage by checking that the signal strength is above 40%. The signal strength must be greater than 30% for sensor to function properly.
3. Conduct a walk test and test image captures.
  - To conserve the customer's monthly image upload quota, automatic alarm uploads are disabled for the first four hours after any new sensor (Image Sensor or other) is installed into the system. Installers can also test by requesting image uploads and motion image uploads via MobileTech app. Installers are required to be onsite to test by running a comm test at the panel.
4. Test night image captures by darkening the room as much as possible (turn off the lights and close the shades).

## Other feature compatibility ^



## Two-Way Voice Compatibility

Images cannot be transmitted while a Two-Way Voice call is in session. When the Image Sensor is installed on a system with Two-Way Voice over the cellular network, image transmission during an alarm may be interrupted by the two-way session. The image transmission resumes once the call has terminated.

## Pet immunity settings

Two parts to making the Image Sensor pet immune:

1. Set PIR sensitivity settings to *Low*.
2. Mount set at a height of 6 feet, and install the sensor with the 6 degree mounting angle.

## PIR activation and test mode

By default, the image sensor LED does not illuminate when activated by motion unless the sensor is in test mode. The LED can be enabled by tampering the device or on the panel for each Image Sensor on a customer's account. The Image Sensor must have successfully completed the enrollment process with a panel. When enabled, the red LED illuminates for 3 seconds upon motion activations (at most every 3 minutes while disarmed).

**To test the Image Sensor's PIR using the panel:**

1. Press **[\*][8]**.
2. Enter the installer code.
3. Press **[851]** to enter the *Interactive Services* menu.
4. Scroll to *Image Sensor Setup*, then press **[\*]** to select.
5. Scroll to *Image Sensor Settings*, then press **[\*]** to select.
6. Scroll through individual Image Sensors, then press **[\*]** to select an Image Sensor to test.
7. Scroll to *Test PIR*, then press **[\*]** to test the Image Sensor's PIR. The screen displays *I.S. [#] In Test For Next 3 Min* to indicate the test mode command is sent.

**Note:** It may take up to 30 seconds for test mode to take effect after requesting *Test PIR* at the panel.

## Tamper

A built-in accelerometer detects movement or repositioning of the Image Sensor and will initiate a tamper whenever a change in sensor orientation is detected. The tamper automatically clears after the sensor is returned to the upright position and no movement has been detected for 5 minutes. A tamper can also be cleared by resetting the sensor.

## Trouble conditions

By default, trouble conditions (malfunction, tamper & low battery) are displayed on the panel LCD. Enable or disable trouble condition messages on the control panel LCD via the Alarm.com Partner Portal. Trouble conditions are always



reported to the Alarm.com Customer Website and customers will receive tamper/low/malfunction notifications if they are subscribed, regardless of the panel setting.

**Batteries** ^

**Battery type**

The Image Sensor uses 2 AA 1.5v Energizer Ultimate Lithium batteries (UL compliant).

**Expected battery life**

Approximately 4 years with lithium batteries.

**Voltage thresholds**

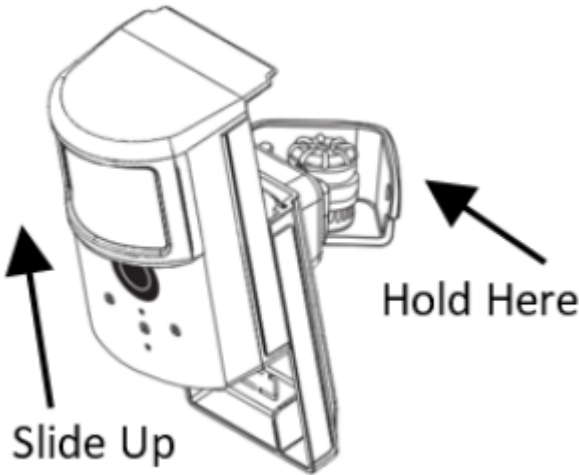
With lithium batteries, low battery alerts are issued at 3.05V. The sensor cannot operate when the voltage reads below 2.30V.

**Low battery notification**

Panel displays a low battery alert for the sensor and/or notifications are issued via the Alarm.com platform if the customer has subscribed to this notification type.

To replace the sensor batteries, slide the front of the sensor up off the sensor-back. Dispose of used batteries per the battery manufacturer instructions and following local regulations.

**Replacing batteries**













## Image Sensor LED reference chart^

### LED Reference Guide

#### Status

-  **Blinking Red**  
Sensor Power Up | ~3 seconds
-  **Solid Red**  
Memory Check | ~10 seconds
-  **Blinking Yellow**  
Searching for Unknown Network | ~2 minutes
-  **Blinking Green**  
Searching for Known Network | ~2 minutes
-  **Intermittent Rapid Blinking Red**  
Network Connectivity Error | Continuous  
See Troubleshooting section on page 9.
-  **Solid Yellow**  
Sensor Found Network | ~5 seconds
-  **Blinking Yellow & Green**  
Syncing | Up to 5 minutes
-  **Solid Green**  
Connected and Synced | ~5 seconds

#### Troubleshooting

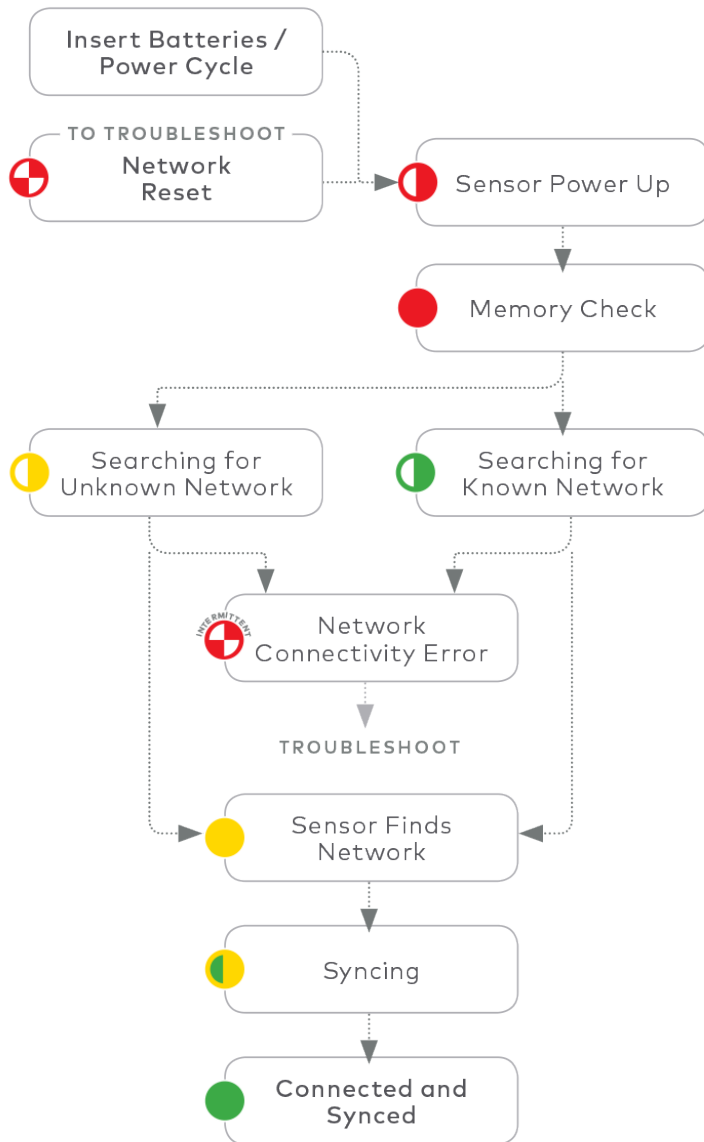
-  **Rapid Blinking Red**  
Network Reset | Hold the Reset button for 10 seconds or until the LED blinks rapidly.



# LED Status Chart

## LED Pattern Key

● Solid    ● Blinking    ● Multi-color Blinking    ● Rapid Blink



## Resetting the Image Sensor ^

There are two ways to reset the Image Sensor.



[https://answers.alarm.com/Partner/Installation\\_and\\_Troubleshooting/Image\\_Sensor/Image\\_Sensor\\_Version\\_3/DSC\\_Impassa...](https://answers.alarm.com/Partner/Installation_and_Troubleshooting/Image_Sensor/Image_Sensor_Version_3/DSC_Impassa...)

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## Power Cycle

If you have issues connecting the Image Sensor to the account, power cycle the Image Sensor in one of two ways:

- Take out and reinsert the batteries, or
- Use a paperclip to quickly press and release the Sensor Reset button. Only press the reset button if the LED has been off for at least 10 seconds and the panel is not in Add mode.

After a successful power cycle, the Image Sensor will enter the Sensor Power Up state (Blinking Red) followed by the memory check state.

## Network Reset

An Image Sensor must be network reset when it has been previously enrolled on a different panel. The Image Sensor indicates that it is enrolled on a panel by blinking green after the memory check.

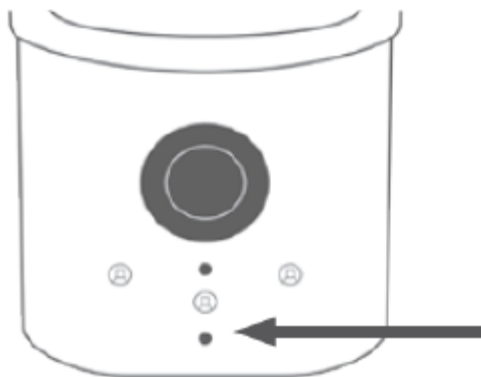
**Important:** A network reset only works if the Image Sensor is not actively communicating with a network. If the Image Sensor is within range of the original panel, it is required that the Image Sensor first be deleted from the panel it was previously learned into before being able to perform a network reset on the Image Sensor. See instructions on how to properly delete the Image Sensor from the panel.

To perform a network reset:

1. Power up the Image Sensor.
2. Press and hold the reset button down with a narrow tool (such as a paperclip) for a full 10 seconds or until the red LED flashes rapidly.
3. Release the reset button as soon as the red LED starts flashing rapidly. A successful network reset results in the LED blinking yellow after the memory check. Panel association is now cleared from the Image Sensor's memory and it should be available for enrollment.

After releasing the reset button, the Image Sensor enters sensor power-up mode (blinking red LED) followed by memory check (solid red LED) followed by either a blinking green or blinking yellow light. For the full list of status indicators and expected behaviors, see the Camera LED reference chart.





**Insert paperclip to  
access reset button.**

### **Deleting Image Sensor from panel<sup>^</sup>**

Instructions on how to properly delete and Image Sensor from a system. It is important to do the steps in order.

1. Delete the Image Sensor from the account using the panel's Interactive Services, Partner Portal, or MobileTech app.
2. Perform a network reset of the Image Sensor. This can only be completed after the Image Sensor is deleted from the account, or if the Image Sensor is out of range of its current network.



PIR lens and camera coverage diagrams ^

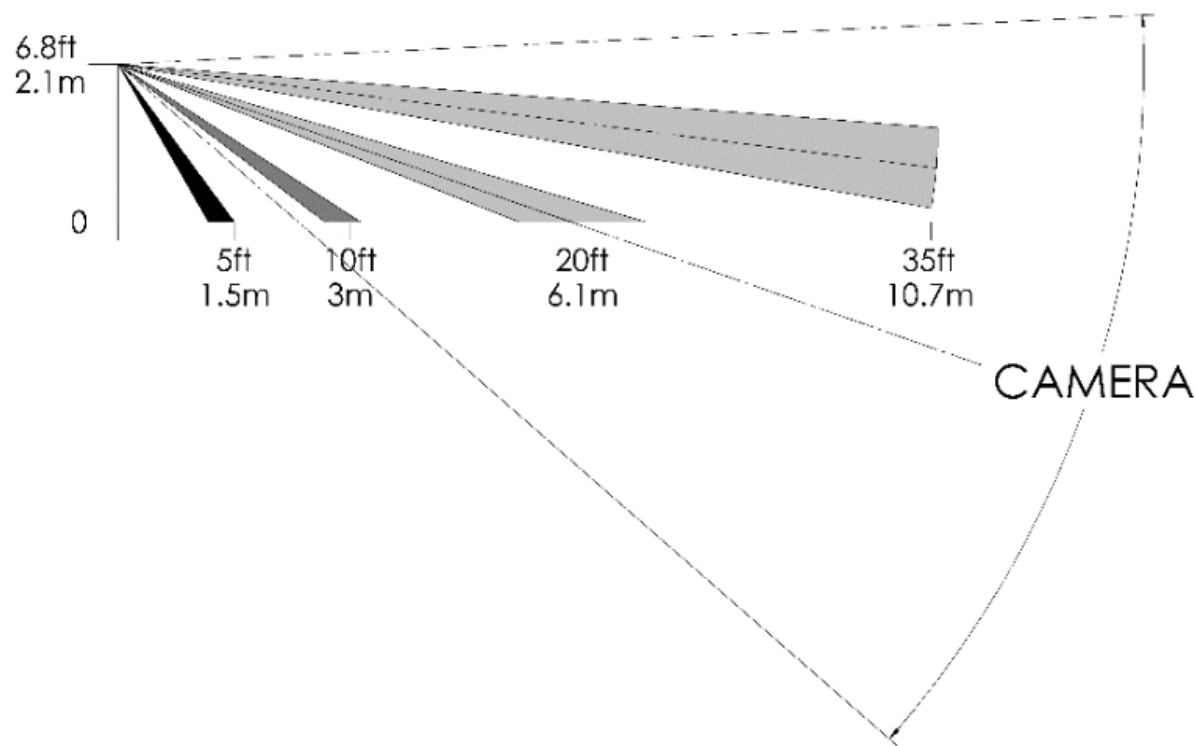


Figure 3. Side View: PIR Lens Coverage



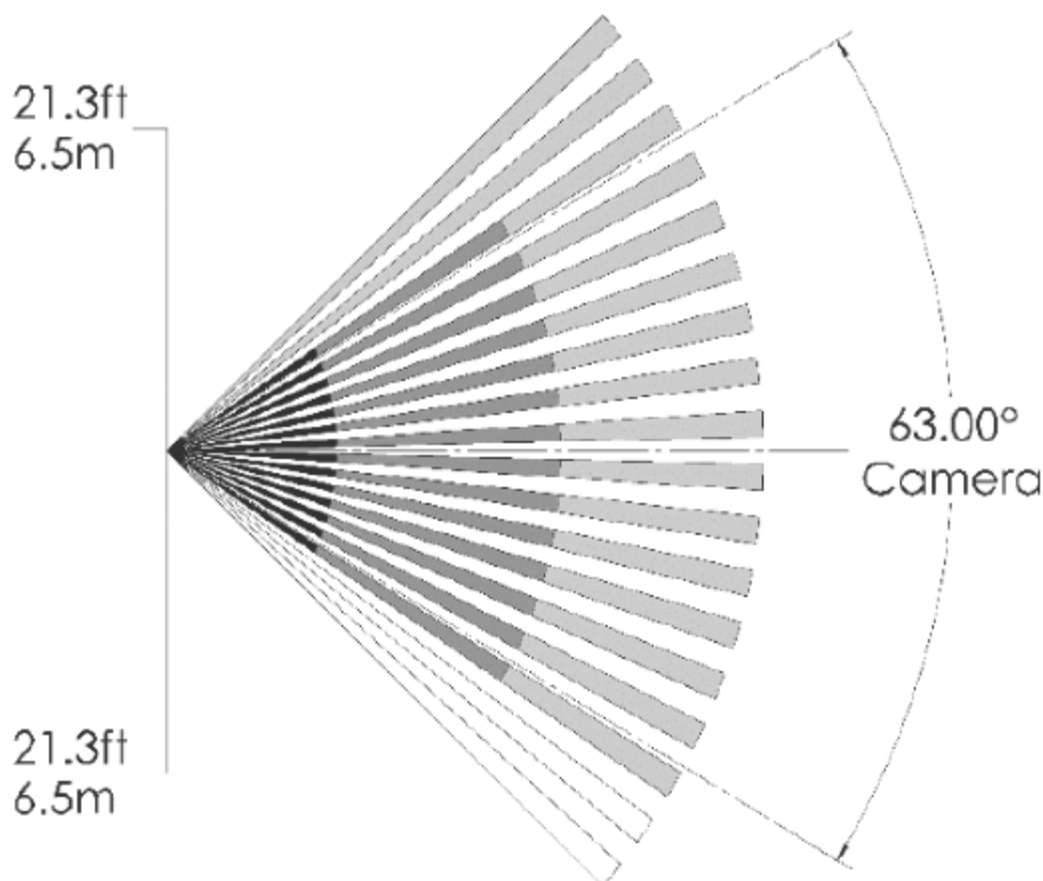


Figure 4. Top View: PIR Lens Coverage

As indicated in Figure 4, the camera coverage area is narrower than the PIR coverage area. When installing, mount sensor where subjects are likely to be centered in or across PIR and camera field of view.

## Troubleshooting^

### General troubleshooting steps

- Verify module signal strength
- Verify Image Sensor RF signal strength: The signal strength must be above 30% for the sensor to function properly.
- Verify Images service package: Image capture functionality depends on the customer's service package. Verify the proper Image Sensor service package is selected.

### Enrollment

- Verify sensor is receiving power: After inserting batteries, the sensor LED should illuminate or flash within 10 seconds.
- Verify sensor is not communicating with another network: If the sensor has been previously enrolled in a different



system or daughterboard, delete the sensor from the system and hold the sensor reset button for 10 seconds to clear the sensor from the old network before attempting to enroll the sensor in a new network. The sensor cannot be cleared if it is currently communicating with its network. In this case, the sensor must be deleted from the system first through the control panel or remote command.

### Sensor non-responsive

- **Verify range:** Verify in the panel's Image Sensor menu that the sensor is registering a strong signal. If the signal strength is low, move the non-responsive sensor closer to the control panel, verify signal strength, and see if communication resumes. If applicable, verify the Image Sensor daughterboard antenna is correctly routed as described in the installation procedure.
- **Replace batteries:** Check the battery level in the panel's Image Sensor menu, and install fresh Energizer Ultimate Lithium batteries if needed.

### Images not captured

- **Verify sensor rules:** Verify the Image Sensor initialization process has been completed. Verify rules have been confirmed in the *Rules Confirmed* column on the Partner Portal or MobileTech app. If not, resend Image Sensor rules. For more information about resending rules, see [Image Sensor Rules Not Confirmed](#).
- **Enable auto uploads:** During the first four hours after any sensor is enrolled onto the system, alarm images will not automatically be uploaded to Alarm.com. Automatic uploads are automatically enabled after four hours. For more information about enabling uploads sooner, see [Configure automatic Image Sensor uploads](#).

### False motion activations

- **Check Environmental Elements:** Heating or cooling elements may adversely affect sensor performance. Test sensor with and without these elements to determine interference. Check if there are any reflective surfaces facing the device (e.g., mirror).
- **Check Sensor Positioning:** The sensor may not be properly positioned to capture the desired motion. Check horizontal positioning of sensor and re-mount as necessary.
- **Check PIR Sensitivity Setting:** Verify that the proper sensor motion profile has been selected through the setup menu or select a less sensitive profile.

