Image Sensor Version 3 (ADC-IS-300-LP) - Quick Start Guide

Pre-setup checklist

- Image Sensor (included)
- Compatible security panel (additional hardware may be required)
- Alarm.com customer account with a service package that supports the Image Sensor
- Login and password for the Alarm.com account to which you will add the Image Sensor

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?.

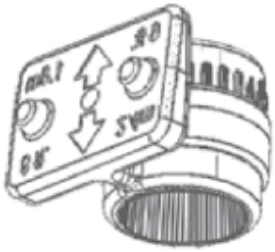
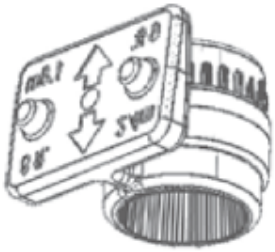
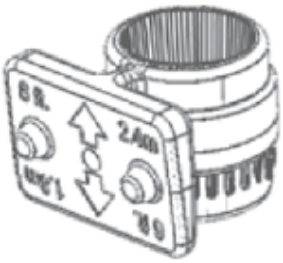
Panel enrollment

1. Install the Image Sensor daughterboard inside the customer's security panel (if required for the customer's panel type). Refer to the Daughterboard Installation guide for instructions.
2. Put the security panel in Add mode.
3. Insert the batteries into the Image Sensor. The Image Sensor LED will progress from Blinking Red to Solid Red to Blinking Yellow to Solid Yellow after it has successfully enrolled in the panel. See the LED Reference Guide for details.
4. After the Image Sensor LED has turned Solid Yellow, you must exit Add mode on the panel. The Image Sensor LED will alternate between Green and Yellow while the customer's device list is updated with Alarm.com. The LED will turn Solid Green when the Image Sensor has been successfully added to the customer's account. The Image Sensor is now ready to be tested.

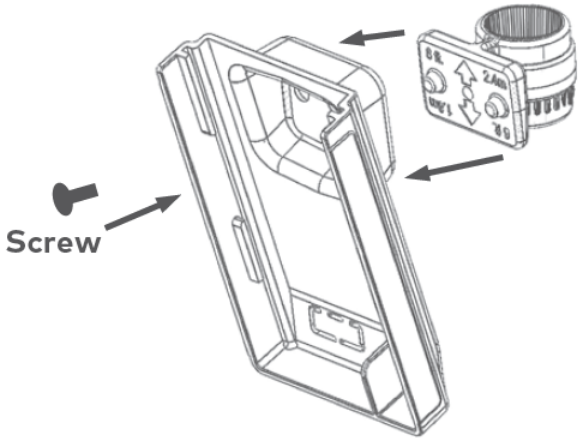
Note: If the Image Sensor is moved (tampered) after the LED has turned solid green, the Image Sensor enters Test mode and the LED turns red. The Image Sensor remains in Test mode for three minutes. The installation can be continued while the LED is red.

Mount the 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
Mounting Height	6 Feet	8 Feet	8 Feet
Angle	Shallow, 6°	Shallow, 6°	Deep, 18°
Bracket Orientation	Teeth Up 	Teeth Up 	Teeth Down 
Coverage Distance	30 to 35 ft.	30 to 35 ft.	15 to 20 ft.

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

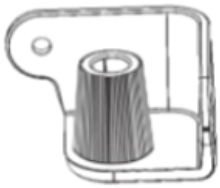


3. Determine the location to mount the sensor.
   - Best practices for installing Image Sensors: Do's and Don'ts

Do	Don't
▪ Center the target capture area in the middle of the frame. ▪ Enroll and install within 100 ft. of panel. Installation site conditions can reduce range considerably. ▪ Make sure people will walk across the sensor coverage area instead of directly toward the sensor. ▪ Avoid backlit conditions (for example, facing a window or other light source) because it may result in poor image quality.	▪ Set sensor on a flat surface. ▪ Set sensor across from mirrors or reflective surfaces. ▪ Face sensor toward or close to areas that have metallic objects or electronics (to avoid interference with RF communication). ▪ 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. ▪ Install outdoors. Sensor is for indoor use only.

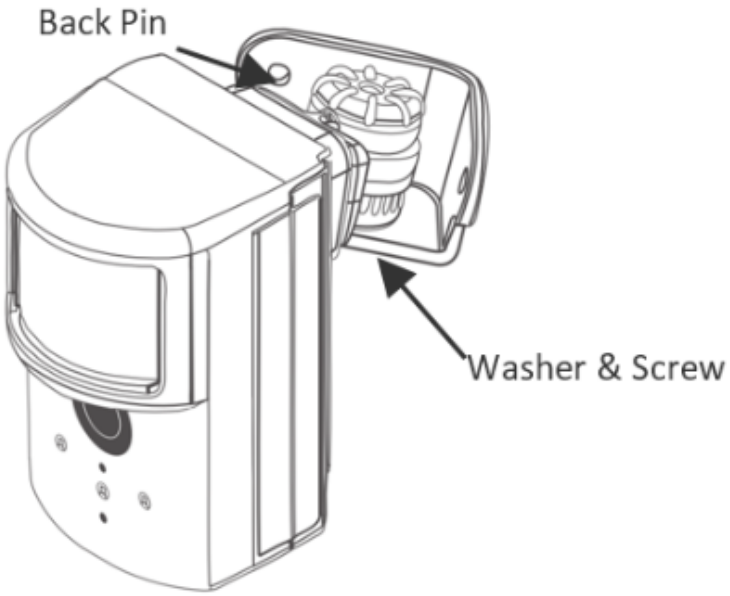
4. Choose applicable mounting bracket. The sensor hardware packet contains two mounting brackets for different mounting scenarios. Use the provided large screws and anchors to attach the bracket to the wall. Leave at least 3 inches of clearance above the sensor to allow for battery replacement without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

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).

PIR lens and camera coverage diagrams

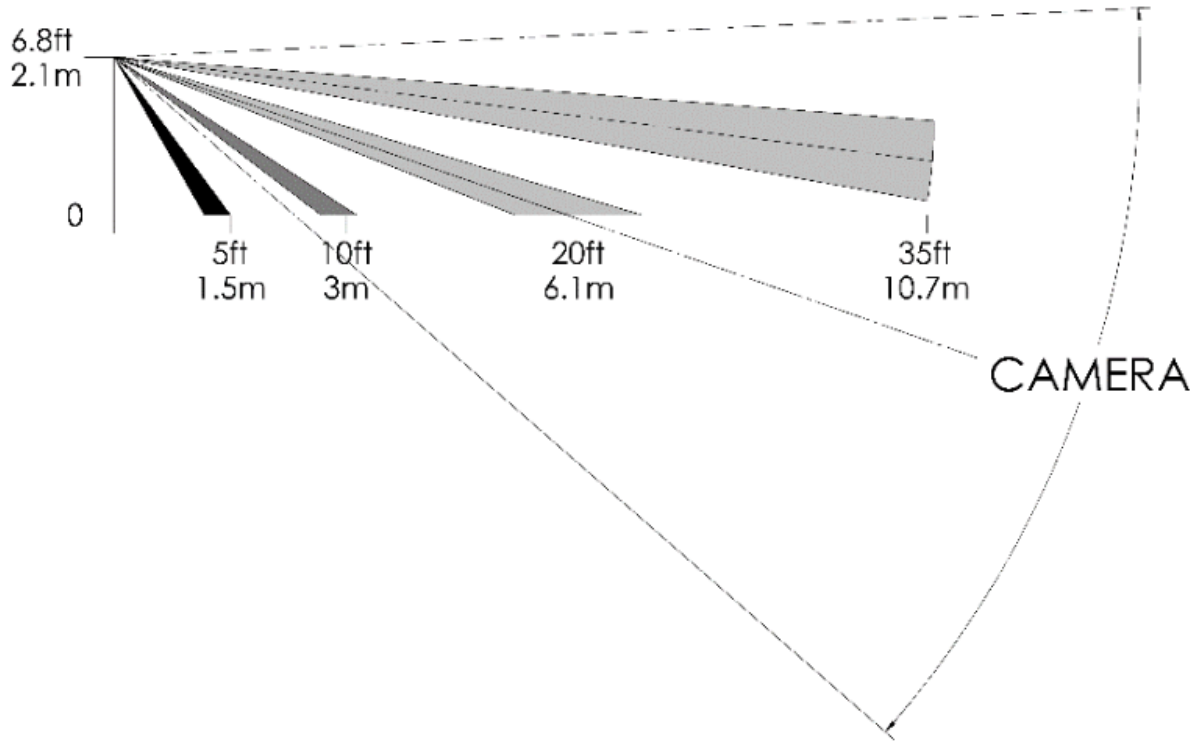


Figure 3. Side View: PIR Lens Coverage

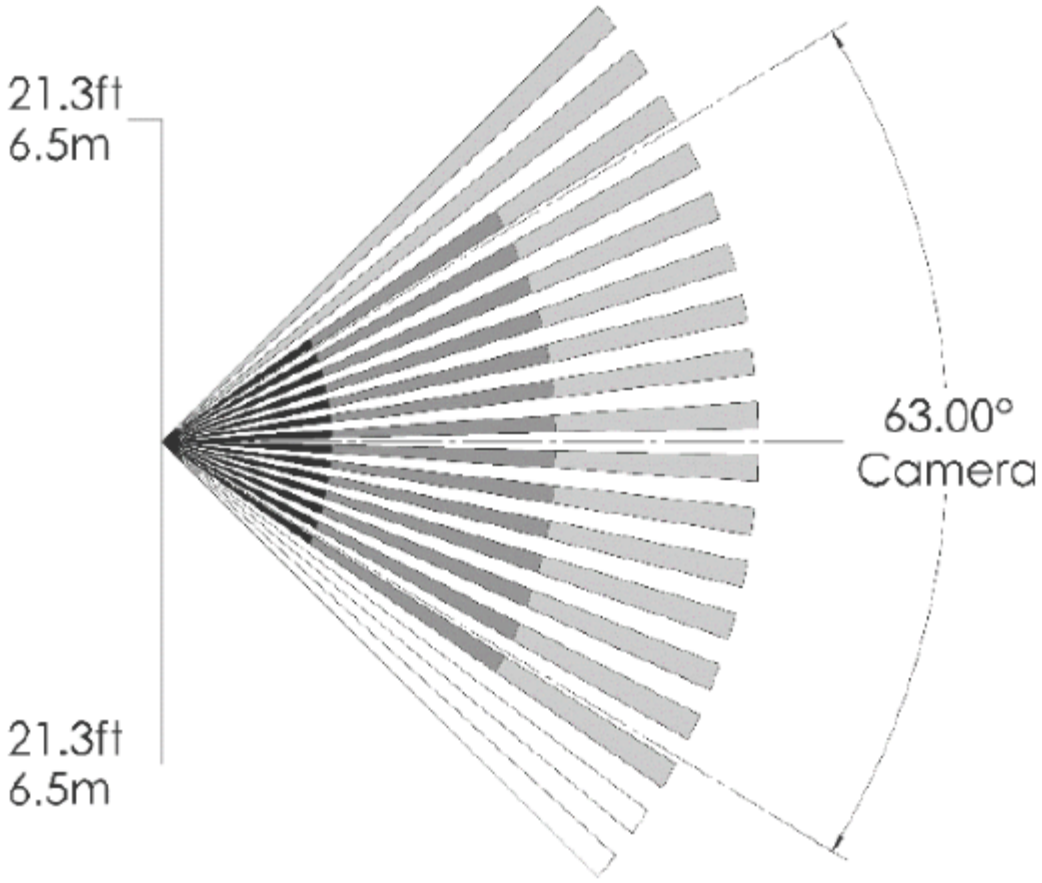


Figure 4. Top View: PIR Lens Coverage

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.

LED reference guide

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

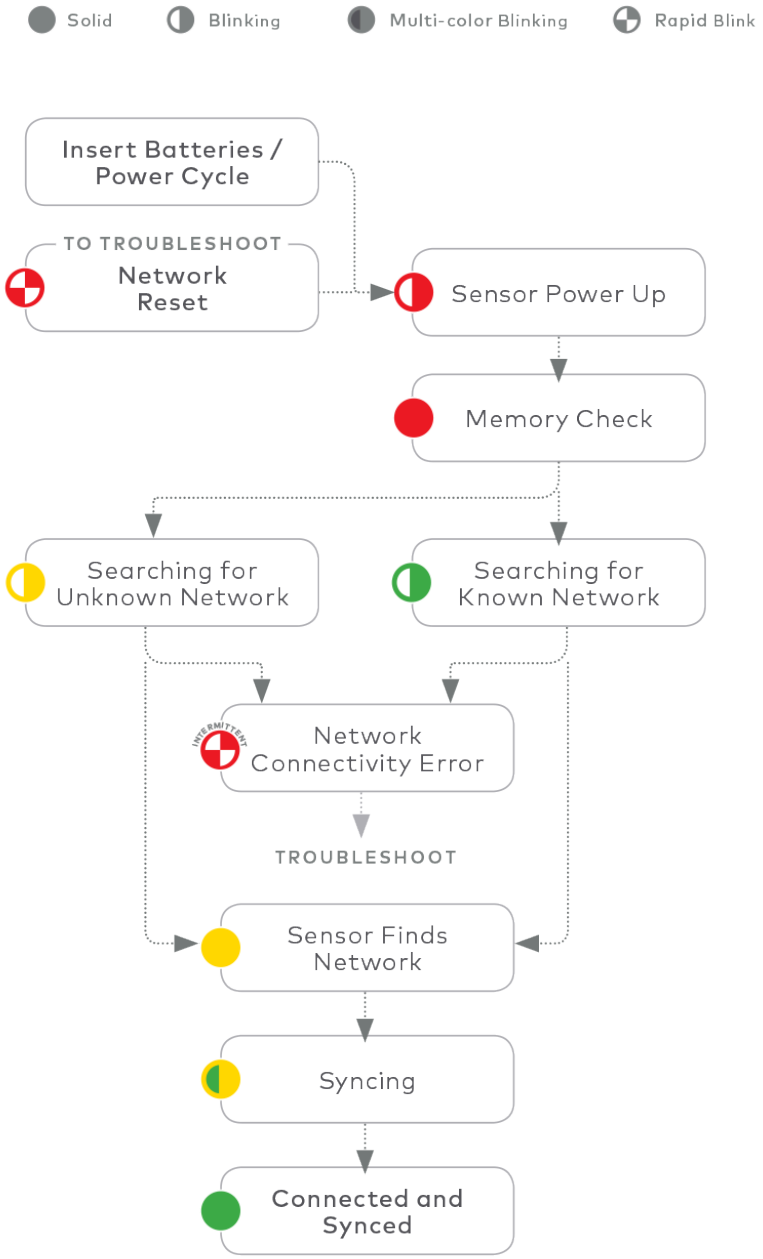
Solid Green
Connected and Synced | ~5 seconds

Troubleshooting

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

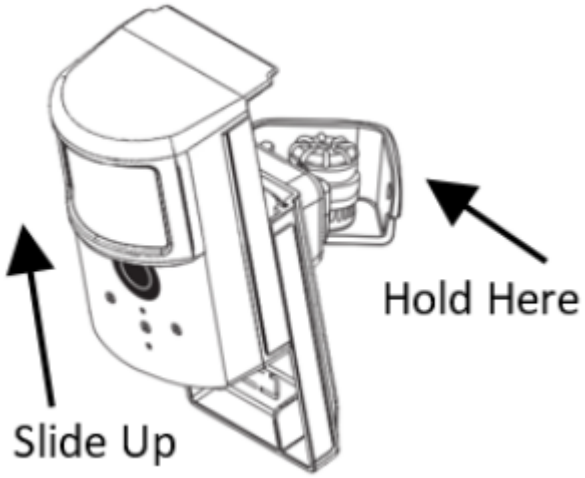
LED Status Chart

LED Pattern Key



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.
Replacing batteries	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. 

Resetting the Image Sensor

There are two ways to reset the Image Sensor.

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.

Delete an Image Sensor from a system

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.

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.

Questions?

Visit www.alarm.com/supportcenter for more information and for translations.