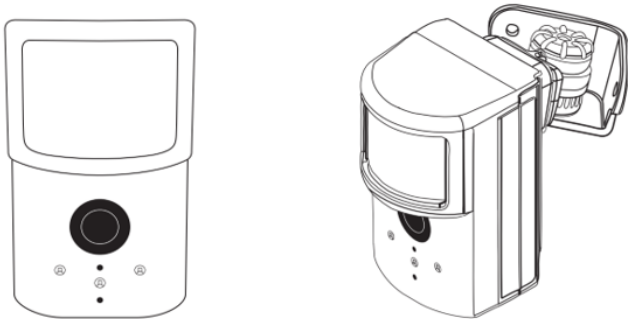


Interlogix Concord Image Sensor Installation Guide - ADC-IS-300-LP



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 two AA 1.5v Energizer Ultimate Lithium Batteries.



Batteries	Refer to the Batteries section for details
Operating temperature range	60°F 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 hardware)
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 and sensor range	Refer to the PIR Sensitivity Settings Table

Hardware compatibility requirements

Panel	Concord
Panel version	4.0+
Module firmware	<p>CDMA: 177 +</p> <p>HSPA: 183 +</p> <p>Important: Image Sensor is not supported for the Interlogix Concord module version 187. Future functionality will be brought via an Over-The-Air (OTA) firmware update. The Image Sensor daughterboard is built into modules with firmware versions 187, so no daughterboard will be required for Image Sensor functionality on firmware version 187.</p>
Extra hardware	Requires daughterboard with module versions 104.0+
Other	All Image Sensors must be enrolled in same partition.



Additional 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 ft, and install the sensor with the 6-degree mounting angle.

Batteries

Battery type

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

Expected battery life

Approximately four 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.

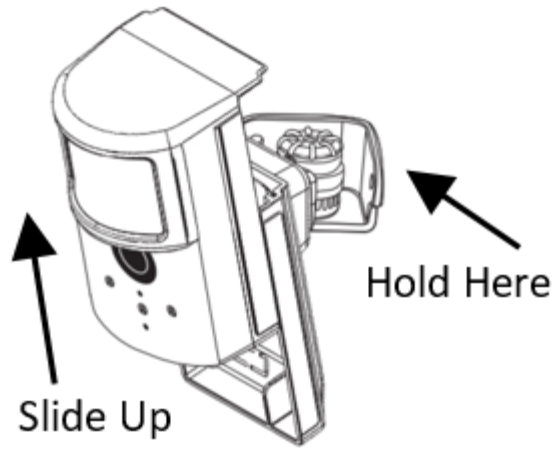
Low battery notification

Panel will display 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.













Camera LED reference chart

Camera LED Chart: Refer to this chart to understand the camera LED patterns.




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

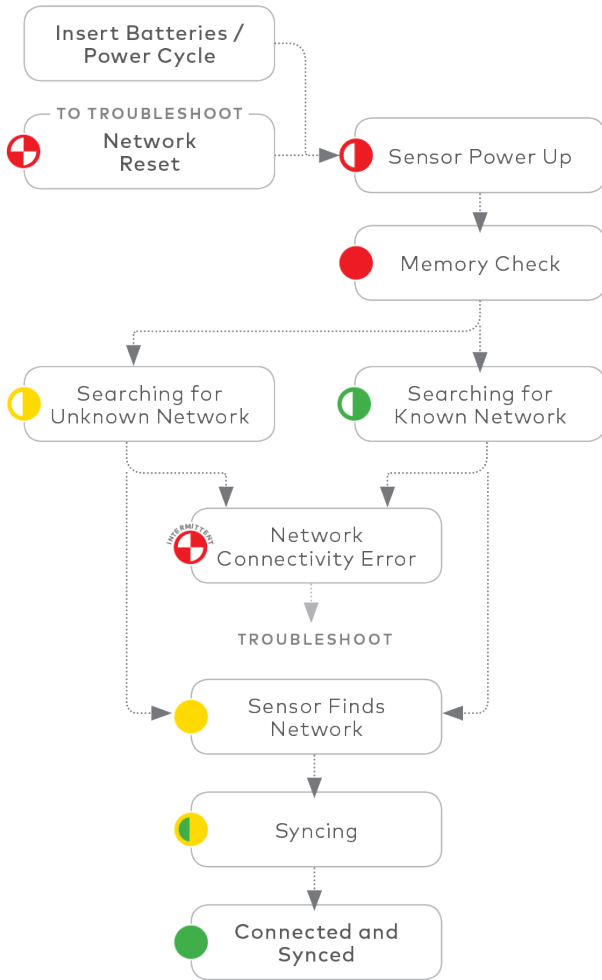
-  **Rapid Blinking Red**
Network Reset | Hold the Reset button for 10 seconds or until the LED blinks rapidly.



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/ADC/Partner/Installation_and_Troubleshooting/Image_Sensor/Image_Sensor_Version_3/Alarm.com_

Updated: Wed, 19 Jun 2019 01:35:34 GMT

Power Cycle

Power Cycle can be done by one of two ways:

- Take out and reinsert batteries.
- Press and release the sensor reset button.

Only initiate a power cycle if the LED has not been active in the last 10 seconds. After a power cycle, the Image Sensor will enter sensor power up state 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 will indicate that it is enrolled on a panel by blinking green after the memory check. In order to perform a network reset, press and hold the reset button for a full 10 seconds or until the red LED flashes rapidly. Release as soon as you see the rapidly flashing red LED. A successful network reset will result in the LED blinking yellow after the memory check (solid red LED).

A network reset will only work 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. After releasing the reset button, the Image Sensor will enter sensor power-up mode (blinking red LED) followed by memory check (solid red LED) followed by either a blinking green or blinking yellow light. See Camera LED Reference Chart for the full list of status indicators and expected behaviors.

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, via the Alarm.com Partner Portal, 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).

Test mode cannot be activated from the Concord panel.

Tamper and trouble conditions

Tamper

A built-in accelerometer detects movement or re-positioning 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.

Service package requirements

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

- Images - Alarms: Includes upload of images from alarm events only.
- Images - Plus: Includes upload of images from alarm events and non-alarm events

Installation: Preparing the panel for enrollment

1. Create Alarm.com Customer Account
 - Select service package (see [Service package requirements](#)) and register the Alarm.com module serial number on the Alarm.com Partner Portal.
2. Install Image Sensor Daughterboard if necessary
 - To verify if a daughterboard is needed, see [Hardware Compatibility Requirements](#). If a daughterboard is required, see [Interlogix Concord 4 Image Sensor Daughterboard Installation Guide](#).
3. 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 the Alarm.com NOC.

Installation: Enrolling Image Sensor to the Concord panel

After preparing the panel for enrollment, complete the following steps to enroll the Image Sensor into the Interlogix Concord:

1. Connect Daughterboard Alarm Wire if necessary. For more information, see [Interlogix Concord 4 Image Sensor Daughterboard Installation Guide](#).
2. Press button on IS daughterboard to enter Add Mode. The green LED Z2 will start a 4-blink pattern indicating that the daughterboard is in Add Mode.
3. Reset or insert the batteries into the image sensor. Z2 LED on the daughterboard will be solid for 60 seconds to indicate that the sensor has been added.
4. The LED on the Image Sensor will progress from blinking red to solid red to blinking yellow to solid yellow.

Note: The Image Sensor will not show in the panel's sensors menu as occupying a panel zone, but the zone must be reserved for the Image Sensor. It is enrolled starting with zone 92 and counts down. The Alarm.com Partner Portal equipment list will show the Image Sensor in its enrolled zone. By default, the sensors are enrolled in partition 1 and group 17. During step 6, the Image Sensors will be re-assigned to follow the partition and group of the hardwire.

5. To begin enrolling Image Sensor Alarm Hardwire in panel - Enter sensor enrollment menu in System Programming.
6. Select the partition number, zone number, and sensor group for the hardwire.



7. Trip daughterboard hardware by pressing button on top of daughterboard. The red LED Z1 on daughterboard will turn off when pressed.
8. Exit system programming. The Image Sensors will now be assigned to the group and partition of the hardwire.
9. 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.

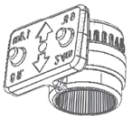
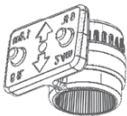
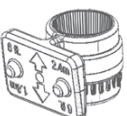
Note: If you move (tamper) the Image Sensor after the LED has turned solid green, the Image Sensor will enter test mode for 3 minutes indicated by red LED when motion is detected. You may continue with the mounting portion of the installation when in test mode. See the Image Sensor LED Reference Chart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

Image Sensors may be enrolled in groups 15, 17, 20, or 25. The Image Sensors must follow the partition and group of the alarm hardwire and cannot be individually configured.

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 will take several minutes. Images cannot be captured until initialization is complete. Check by verifying if the rules are confirmed on the Partner Portal or MobileTech.

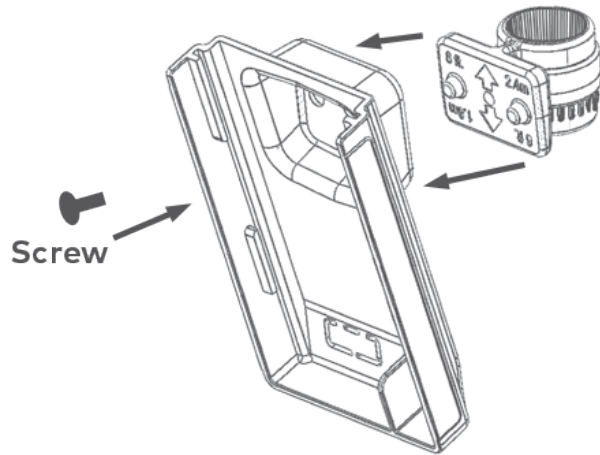
Installation: Mounting the Image Sensor

1. Determine the desired mounting angle – 3 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 bracket to backplate.



3. Determine location to mount the sensor.

**Best Practices for Installing Image Sensor:
Do's and Don'ts**



DO:

- 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.



DON'T:

- 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.

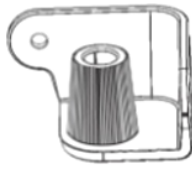
4. Choose applicable mounting bracket. The sensor hardware packet contains two mounting brackets for different mounting scenarios. Use the provided large screws and anchors to attach the bracket to the wall.



- Leave at least 3 inches of clearance above the sensor to allow for battery replacement without uninstalling the mounting bracket.

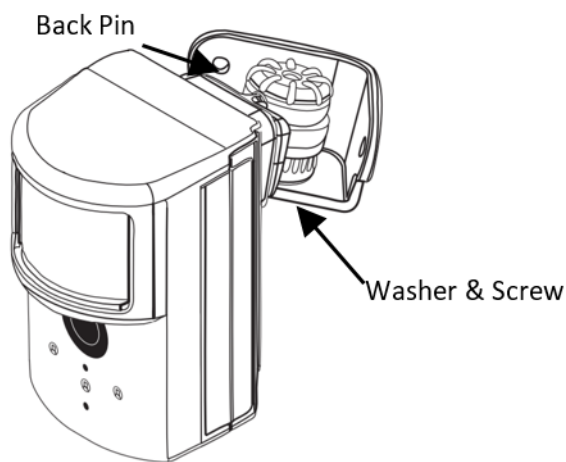


Flat Wall Mount



Corner Wall Mount

5. Place sensor with arm on mounting bracket. 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 PIR Sensitivity Settings – 3 options that can be set through the panel or on the Partner Portal:

PIR Sensitivity Settings Table	
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.



8. Verify and Test Image Sensor Setup

- a. Verify that rules are confirmed via the Partner Portal or MobileTech app. Resend rules if they are not confirmed.
- b. 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.
- c. Conduct walk test - 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. Installers are required to be onsite to test by running a comm test at the panel.
- d. Test night captures.

Deleting the Image Sensor from the panel

Delete the Image Sensor from the account using the panel's Interactive Services, Partner Portal, or MobileTech app.

Perform a network reset of the Image Sensor. See instructions on how to network reset an Image Sensor. You will only be able to do this after you've completed step 1 or if the Image Sensor is out of range of its current network.

PIR lens and camera coverage diagrams

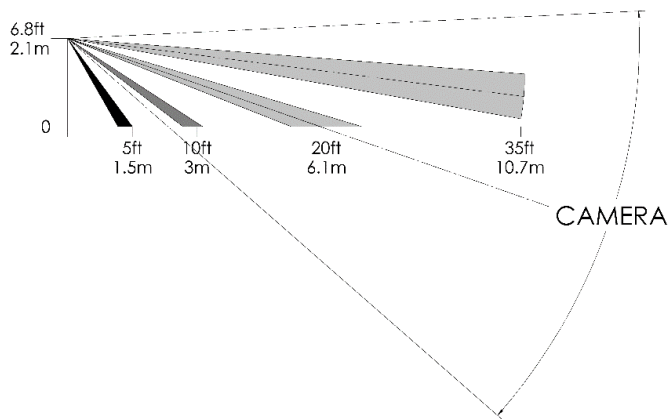


Figure 3.Side View: PIR Lens Coverage



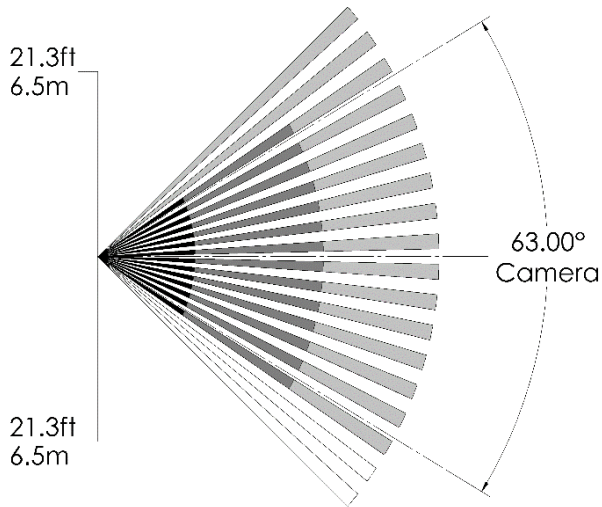


Figure 4. Top View: PIR Lens Coverage

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. Be sure 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 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: Under the *Image Sensor Setup* menu, scroll to *Image Sensor Settings*, select the sensor and verify under *Signal* that the sensor is registering a strong signal. If signal strength is low, move non-responsive sensor



closer to control panel, verify signal strength and see if communication resumes. Be sure that Image Sensor daughterboard antenna is correctly routed as indicated in step 5 of the installation procedure.

- Replace Batteries: Check battery level at the panel (under *Image Sensor Settings*) and install fresh sensor batteries.

Images not captured

- Verify Sensor Rules: Verify the sensor initialization process has been completed. On the Partner Portal, verify rules have been confirmed using the “Rules Confirmed” column. If not, resend Image Sensor rules.
- 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. Enable uploads sooner from the Partner Portal.

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.

