The Alarm.com Image Sensor communicates over a radio frequency (RF) to the Image Sensor daughterboard attached to the Alarm.com gateway module. For proper operation, the Image Sensor requires a minimum of 30% signal strength. Over 40% is recommended. The signal strength reading can be verified via the Alarm.com Dealer Website and directly on the control panel. While there are no repeaters to increase Image Sensor RF range, proper antenna orientation can significantly enhance signal strength and performance. This trouble shooting guide applies to Image Sensor version 2 and version 2.2 models (ADC-IS-200 and ADC-IS-221).

Verifying RF Signal Strength

On the **Dealer Website**, pull up the customer account and click “Equipment” under the “Customer Support” section. On the “Image Sensor” tab, the Image Sensor List table shows the signal strength as last reported by the daughterboard. Click “Request Latest Info” to retrieve the most updated information from the system. This signal strength reading represents an average of the last 5 signal readings reported to the daughterboard. To request a real-time signal strength reading from the sensor, click “Image Sensor Signal Strength History” from the AirFX Remote Toolkit Image Sensor Commands list. Once on the signal strength page, click “Request Signal Strength from System”. The reading may take a few minutes to come back, but will be an instant reading from the sensor on its current signal strength. This command is useful for verifying signal strength while determining the best mounting location for the sensor.

On **MobileTech**, pull up the customer account and select “Image Sensor.” You then can select any Image Sensor currently enrolled in the panel to verify its signal strength or select “Request Latest Info” to retrieve the most updated information from the system. This signal strength reading represents an average of the last 5 signal readings reported to the daughterboard.

From the **Simon XT 1.3 & up**, check signal strength under “System Programming” → [Installer Code] → “Interactive Services” → “Image Sensor Setup” → “Image Sensor Settings” → “Image Sensor #[X]” → [signal information]. This signal strength reading represents an average of the last 5 signal readings reported to the daughterboard. When verifying signaling for a mounting location, put the sensor in walk test mode (via the panel menu or by tampering the sensor) and perform a walk test to ensure that the readings at the panel are reflecting the current sensor location.

From the **Simon XTi**, check signal strength under “Programming” → [Installer Code] → “Interactive Services” → “Image Sensor” → “Status” → “[X][Sensor Name]” → “Signal Strength”. This signal strength reading represents an average of the last 5 signal readings reported to the daughterboard. When verifying signaling for a mounting location, put the sensor in walk test mode (via the panel menu or by tampering the sensor) and perform a walk test to ensure that the readings at the panel are reflecting the current sensor location.

On the **Concord 4.0 & up**, signal strength cannot be verified through the panel. You can check signal strength through the Dealer Website or MobileTech.

On **Qolsys IQ Panel**, signal strength can be checked under “Settings” → [Installer Code] → “System Test” → “Image Sensor Test” → “View” button → “Image Sensor Status” page. Signal strength is listed on the Image Sensor Status page. This signal strength reading represents an average of the last 5 signal readings reported to the daughterboard. When verifying signaling for a mounting location, put the sensor in walk test mode (via the panel menu or by tampering the sensor) and perform a walk test to ensure that the readings at the panel are reflecting the current sensor location.
On the **DSC Impassa**, signal strength for each Image Sensor is found under *8 → Installer Code → 851* (to enter the Interactive Services menu) → “Image Sensor Setup” → “Image Sensor Settings” → select individual Image Sensor → scroll to see signal strength. This signal strength reading represents an average of the last 5 signal readings reported to the daughterboard. When verifying signaling for a mounting location, put the sensor in walk test mode (via the panel menu or by tampering the sensor) and perform a walk test to ensure that the readings at the panel are reflecting the current sensor location.

On the **DSC PowerSeries Neo**, signal strength for each Image Sensor is found under *8 → Installer Code → 851* (to enter the Interactive Services menu) → “Image Sensor Setup” → “Image Sensor Settings” → select individual Image Sensor → scroll to see signal strength. This signal strength reading represents an average of the last 5 signal readings reported to the daughterboard. When verifying signaling for a mounting location, put the sensor in walk test mode (via the panel menu or by tampering the sensor) and perform a walk test to ensure that the readings at the panel are reflecting the current sensor location.

On the **DSC Touch**, signal strength can be checked under “Settings” → [Installer Code] → “System Test” → “Image Sensor Test” → “View” button → “Image Sensor Status” page. Signal strength is listed on the Image Sensor Status page. This signal strength reading represents an average of the last 5 signal readings reported to the daughterboard. When verifying signaling for a mounting location, put the sensor in walk test mode (via the panel menu or by tampering the sensor) and perform a walk test to ensure that the readings at the panel are reflecting the current sensor location.

### Enabling Extended Range

When combined with daughterboard firmware v105.0 & up, Image Sensor V2 and V2.2 (ADC-IS-200-LP and ADC-IS-221-LP) offers an “Extended Range” option that switches the default communication speed from 100kbps to 40kbps. This feature can be used for systems with RF range issues and is only available on Simon XT/XTi, Concord, DSC Impassa, DSC Neo, DSC Touch, and Qolsys IQ Panel.

On the **Dealer Website**, pull up the customer account and click “AirFX™ Remote Toolkit” under the “Customer Support” section. Then select “Image Sensor Configuration & Settings” under “Image Sensor Settings” section. You can enable Extended Range from in the “System Settings” section at the bottom of this page. Select Enable from the drop-down menu and click “Send Command.” Note that the “Send Command” button will only be selectable if the customer’s system meets compatibility requirements (daughterboard firmware v105.0 & up and only ADC-IS-200-LP, ADC-IS-200-IQ, ADC-IS-221-LP, and ADC-IS-221-IQ Image Sensors are enrolled in panel).

From the **Simon XT**, enable extended range under “System Programming” → “Interactive Services” → “Image Sensor Setup” → “Extended Range Option.” Enabling will only be possible if the system meets all compatibility requirements.

From the **Simon XTi**, enable extended range under “Programming” → “Interactive Services” → “Image Sensor” → “Extended Range.” Enabling will only be possible if the system meets all compatibility requirements.

On the **Concord**, extended range can only be enabled via the Dealer Site.

On the **Qolsys IQ Panel**, extended range can only be enabled via the Dealer Site.
On the **DSC Impassa**, enable extended range by entering *8 → Installer Code → 851 (to enter the Interactive Services menu) → “Image Sensor Setup” → “Extended Range Option”.

On the **DSC PowerSeries Neo**, enable extended range by entering *8 → Installer Code → 851 (to enter the Interactive Services menu) → “Image Sensor Setup” → “Extended Range Option”.

On the **DSC Touch**, extended range can only be enabled via the Dealer Site.

**Antenna Configuration: Daughterboard**

It is important to be sure that Image Sensor Daughterboard’s white antenna is pulled away from the Alarm.com module. Follow the panel-specific antenna routing guidelines to optimize sensor range.

On the **Simon XT**, the antenna should be pulled down off the Alarm.com module and routed in a “J” shape to the left towards the corner of the panel (when looking at the panel from behind).

On the **Simon XTi**, Bend the antenna at a 90° angle ¼ of an inch from the edge of the daughterboard. The daughterboard antenna should rest inside the panel’s plastic casing, parallel to the panel.

On the **Concord**, route the white daughterboard antenna by pointing the wire diagonally from the daughterboard towards the corner closest to the terminal block. Keep in mind that the Image Sensors will need to communicate directly with the daughterboard (no repeaters) and mount gateway accordingly.
On the Qolsys IQ Panel, the Image Sensor RF daughterboard hardware is built-in and there is no antenna to configure.

On the DSC Impassa, there is little space for making any adjustments since the Image Sensor daughterboards are installed on the module by the manufacturer. If you are having issues, ensure that the two antennas are not touching and try putting them as far apart from each other as possible.

On the DSC PowerSeries Neo, the antenna is configured out of the manufacturing. If you are having issues route the white daughterboard antenna by pointing the wire diagonally from the daughterboard towards the long wall of the plastic enclosure away from the cable antenna. Keep in mind that the Image Sensors will need to communicate directly with the daughterboard (no repeaters).

On the DSC Touch, the Image Sensor RF daughterboard hardware is built-in and there is no antenna to configure.

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