



Aimetis Outdoor Object Tracker Installation & Usage Guide

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1

Overview

Aimetis Outdoor Object Tracker (AOOT) provides reliable outdoor object tracking, classification and alarming for Axis network cameras and encoders. The embedded application detects and classifies moving objects within a predefined area of interest, making it possible to automatically trigger an event. Analytics metadata can be streamed to a Video Management Software (VMS), reducing the CPU load of the server. Additionally, an embedded Rule engine allows the application to trigger alarms directly inside the camera. To simplify analytics setup, a real time visual display showing detection and tracking performance is available.

Important: Consult the compatible device list: <http://www.aimetis.com/Embedded/outdoor-motion-detection--devices.aspx> and see [Devices with versions of the AXIS Camera Application Platform compatible with Aimetis embedded analytics](#)

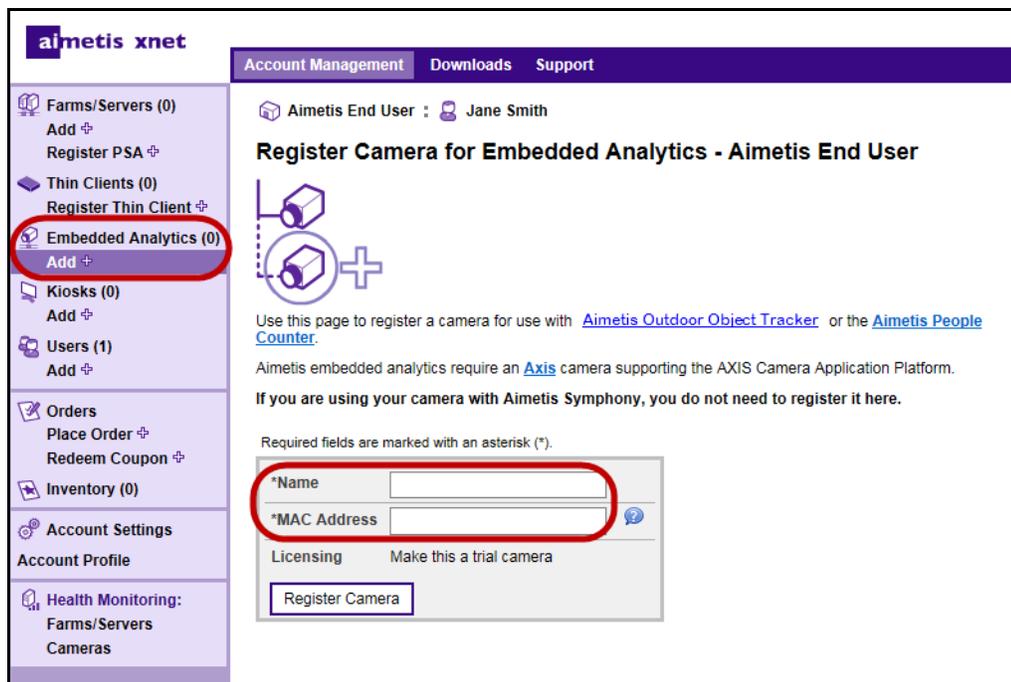
Installation

1. Browse to <https://www.aimetis.com/xnet>.
2. Log in to your Xnet account. If you do not have an account, create one before continuing.
3. Within the Xnet, click on the **Downloads** tab.
4. Click **Aimetis Outdoor Object Tracker** on the left. You will see a list of downloads.
5. Download the file ending in “eap”. This is the installation package.
6. Connect to your camera using your Web browser.
7. Click **Setup**, and then **Applications**.
8. Click **Close File** and select the file you saved from Aimetis.
9. Click **Upload Package**. The application appears in the list.
10. Under **Installed Applications**, select **Outdoor Object Tracker**.
11. Click **Start**. In the left pane, under **Applications**, click **Outdoor Object Tracker**. The Application Settings: Aimetis Outdoor Object Tracker page opens. Click **Outdoor Object Tracker Settings**.

Licensing

Important: Aimetis provides you with a trial license for 30 days of usage (720 hours over an indefinite time).

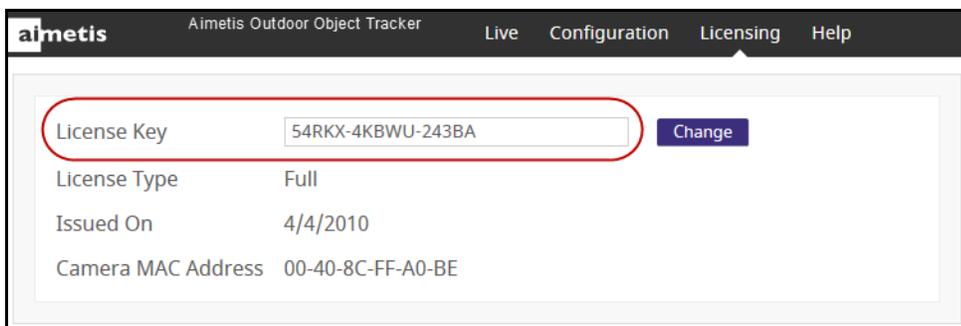
1. In a web browser, enter the IP address of your camera. The camera interface opens.
2. Open the Aimetis Outdoor Object Tracker interface and select **Licensing**.
3. Copy the Camera MAC Address.
4. Log into the [Aimetis Xnet](#) and select the **Account Management** tab.
5. In the sidebar, select **Embedded Analytics**.
6. Click **Add**.
7. Enter the name of the camera and the MAC address you copied from the Aimetis Outdoor Object Tracker licensing page.



8. Click **Register Camera**. A message verifying that your camera has been registered is displayed.
9. In the sidebar, select **Embedded Analytics**. You will see a table listing information about the camera you have registered.
10. Write down or copy the value under License Key. This is your license key.
11. Return to the web page with the Aimetis Outdoor Object Tracker licensing page. Enter the license key.
12. Click **Save**.

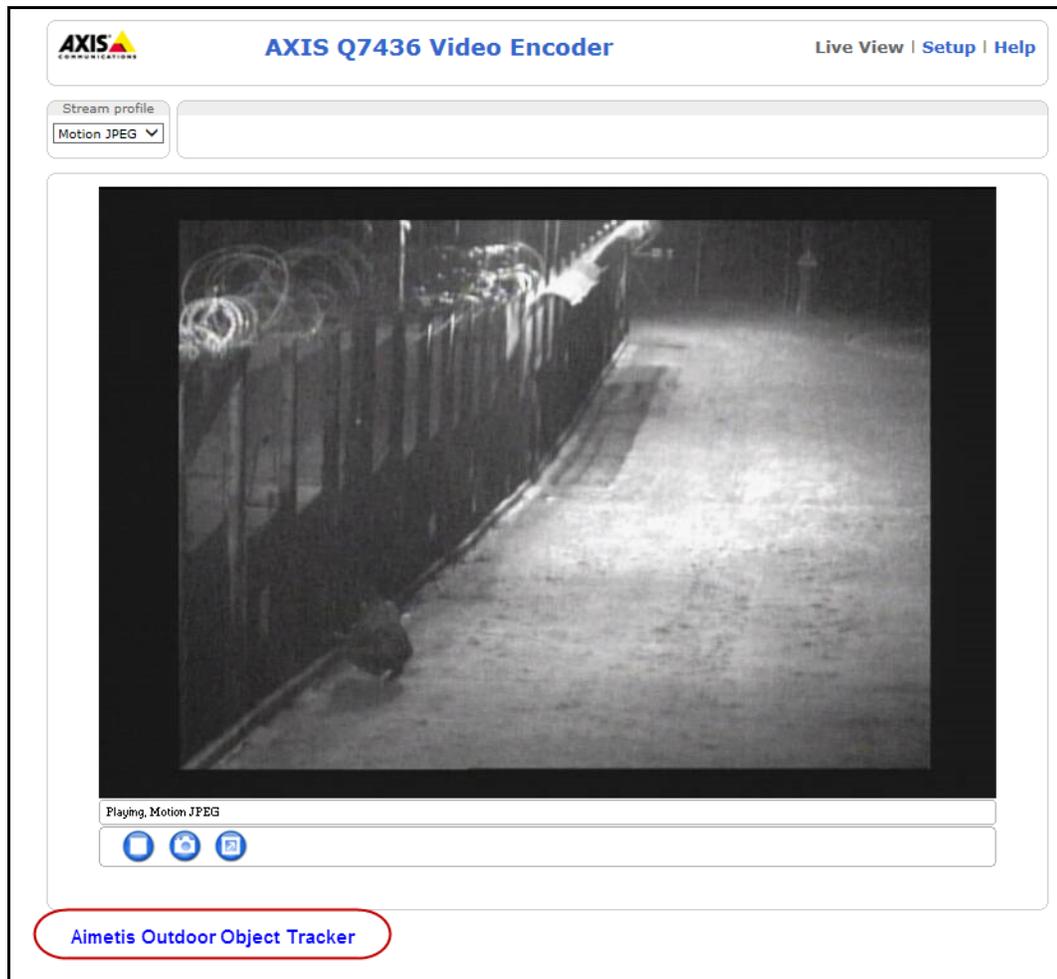
Upgrading from a Trial License

1. In a web browser, enter the IP address of your camera. The camera interface opens.
1. Open the Aimetis Outdoor Object Tracker interface and select **Licensing**.
2. Log into the [Aimetis Xnet](#) and select the **Account Management** tab.
3. In the sidebar, select **Embedded Analytics**.
4. Select the quantity of licenses for the Aimetis Outdoor Object Tracker, and click **Complete Order**.
5. A message is displayed indicating that the license transfer is complete. Copy the license key number and paste it into the **License Key** field of the License dialog box in the Aimetis Outdoor Object Tracker screen.



How to Access the Application on Your Camera

1. In a web browser, enter the IP address of your camera. The camera interface opens in **Live View** mode.
2. Click the **Aimetis Outdoor Object Tracker** link at the bottom of the camera interface.



Application Window

Live

Presents a live view of the area. The **Show Mask** option displays the area designated by the processing mask, where objects will be tracked in the scene.

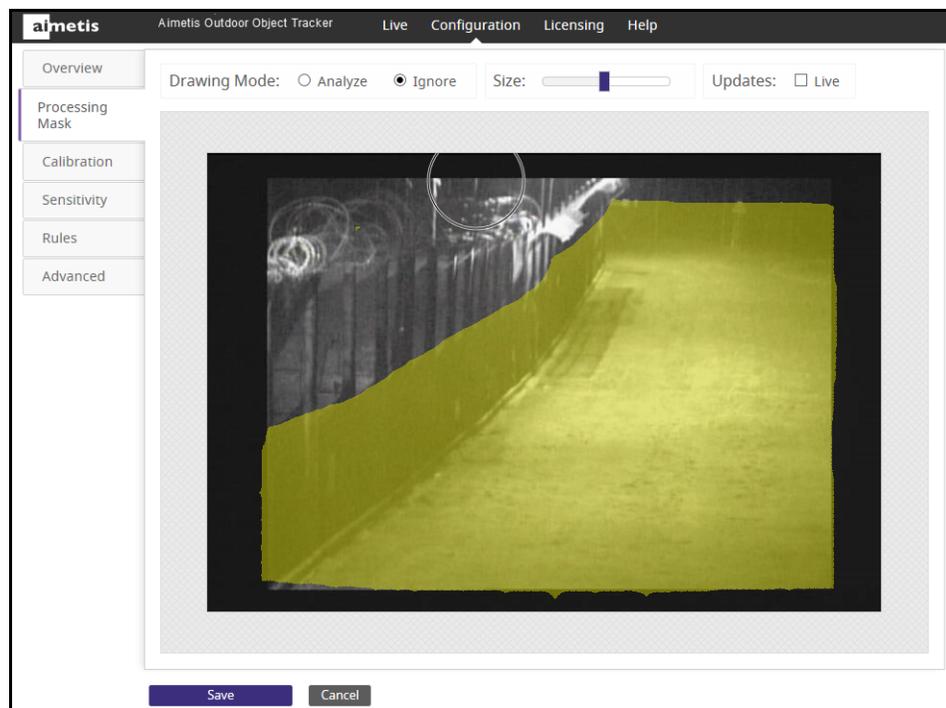


Configuration> Overview

Indicates the default settings for:

- **FPS** - Indicates how many frames will be analyzed by the system. Typically the default value should not be altered. However, in many cases the analysis frame rate can be reduced to conserve CPU. Doing this may negatively alter the video analytic performance.
- **Analysis Resolution** - Indicates the resolution under which analysis of the video takes place. This will be the same resolution at which the video image is recorded.

Configuration> Processing Mask

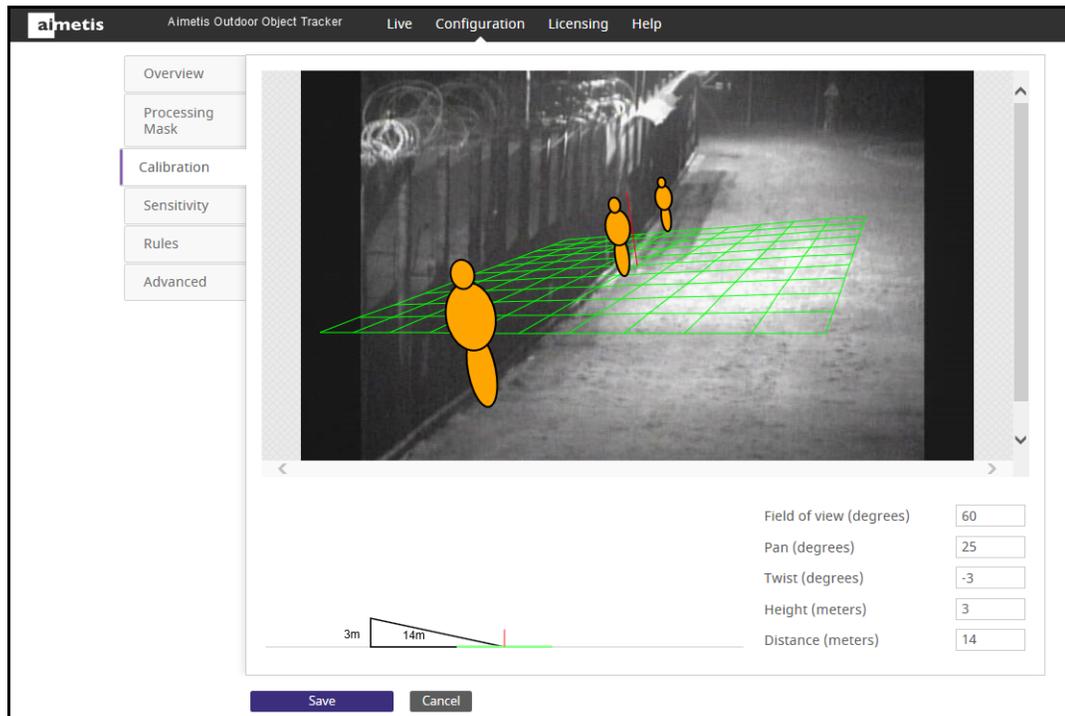


Defines the area (in yellow) of the image where activity is to be detected.

- **Analyze** - When selected, allows you to draw a yellow area (mask) using your mouse where objects will be tracked.
- **Ignore** - When selected, allows you to erase a yellow area using your mouse where you do not want objects tracked.
- **Size** - Indicates the size of circle corresponding to your mouse pointer when drawing or erasing a mask (area in yellow).
- **Updates: Live** - Changes from a static image of the scene to a live image. Useful if you want to change the current image.

Configuration > Calibration

The interactive section allows you to adjust the grid and reference person size to match the underlying scene. Using your mouse, you drag the triangle icon (for height and distance) up and down and left and right.



- Grid lines are 1 meter apart and automatically displayed over scene.
- Reference person icon - An orange colored form representing person size and position in an image. Three populate the image automatically. Move the reference people icons to various positions in the image, foreground and background representing how people would naturally occur in the scene.
- **Field of View** - If you increase the value, you must drag the camera icon closer (down) to get the correct person size. If you decrease the value, you must drag the camera icon further away for the same rough size. If you obtain the exact camera position by measuring the actual height and distance, then you must adjust the value in the **Field of view** to make the reference people icons the right size in the scene.
- **Pan** - Movement of the camera from left to right or right to left around the imaginary vertical axis that runs through the camera. When the camera is pointed at the ground, it basically tilts the ground plane. When the camera is closer to horizontal, it looks more like a rotation of the ground plane.
- **Twist** - Rotation of the camera around the axis that extends directly out of the camera through the center of the view. Useful in an angled view when the camera is twisted a bit so that a vertical line in the world does not correspond to up-down in the image. Also useful if the ground in the image appears to tilt a bit from left to right.
- **Height** and **Distance** - Values correspond to the movements of the triangle icon in the interactive section.

Configuration > Sensitivity

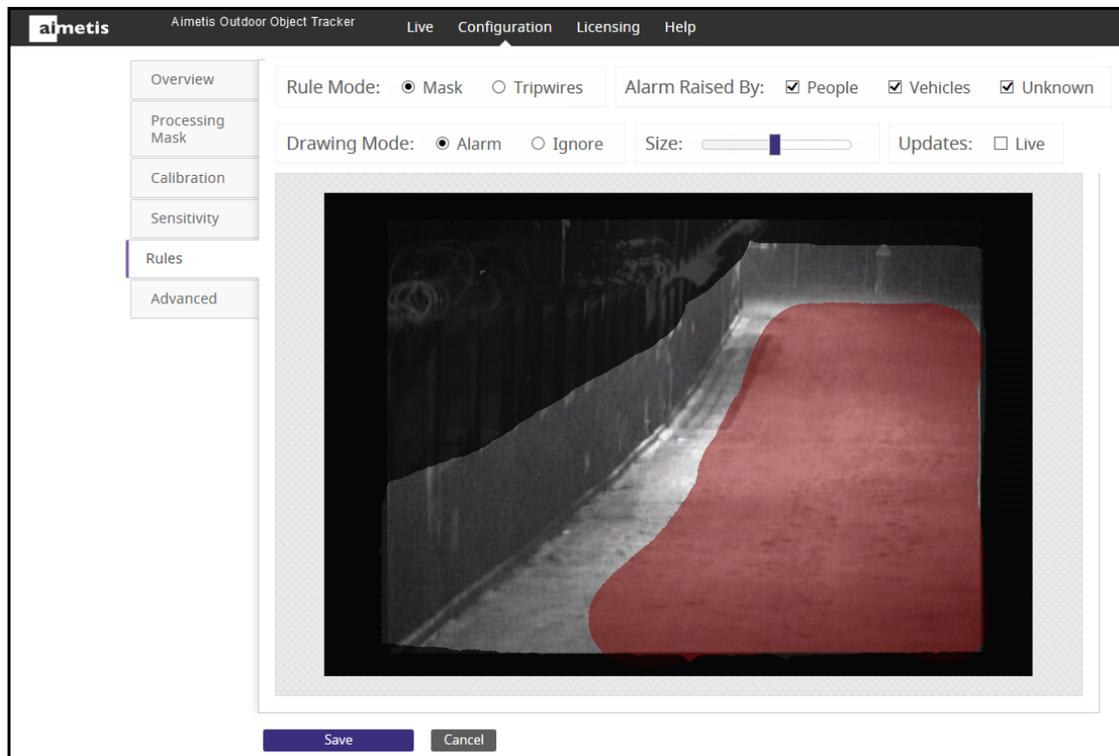
| Sensitivity | Usage |
|--------------------|--|
| Object Contrast | Move the slider to the right to increase sensitivity in the camera view to distinguish objects that appear similar to the background (such as a dark background and a person in dark clothing). |
| Object Motion | Move the slider to the left to reduce false alarms like a moving tree branches or flags in the camera view. Move the slider to the right to increase sensitivity to all moving objects. |
| Background Motion | Move the slider to the left to reduce tracking objects caused by environmental changes such as moving clouds or lighting changes. (Note that slow moving objects might not be tracked.) Move the slider to the right to track slow moving objects. (Note that environmental changes like cloud movement or lighting changes might get tracked as objects and therefore result in false alarms.) |
| Shadow Suppression | Enable this option so that moving shadows in the environment (clouds, lighting changes) will not be detected as motion. |
| Snow Suppression | Enable this option so that falling snow will not be detected as motion. |

Configuration > Rules

Defines the area (in red) of the image where alarms will occur if an object is tracked. The area in red cannot be greater than the processing mask (in yellow). **Rule Mode** allows you to alarm either on a masked area or using a virtual tripwire.

Mask

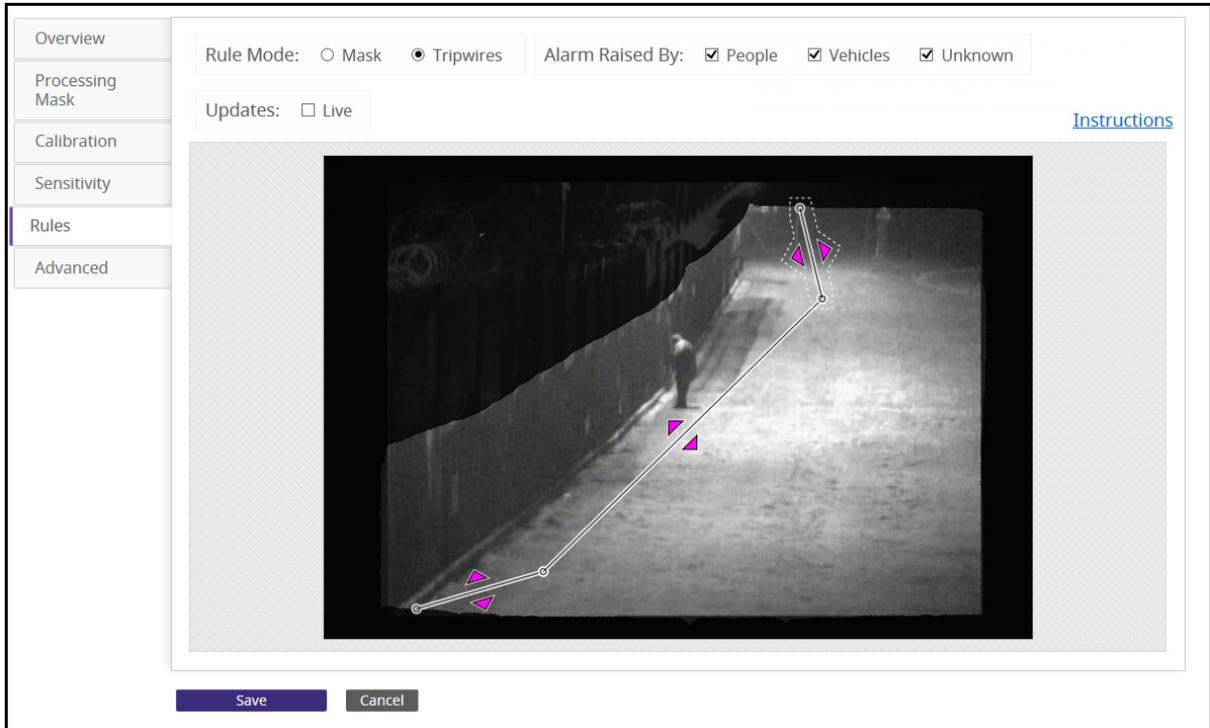
Allows you to mask an area in the scene where alarms will be activated when objects are tracked.



- **Alarm** - When selected, allows you to draw a red area (mask) using your mouse where an alarm will be activated when an object is tracked.
- **Ignore** - When selected, allows you to erase a red area using your mouse where you do not want an alarm activated.
- **Size** - Indicates the size of circle corresponding to your mouse pointer when drawing or erasing a mask (area in red).
- **Updates: Live** - Changes from a static image of the scene to a live image. Useful if you want to change the current image.

Tripwires

Allows you to draw virtual tripwires across the scene. When crossed, alarms will be activated.



- To add a tripwire, hold down the left mouse button and move your mouse across the image.
- To delete a tripwire, select the line and press the Delete key on your keyboard.
- To reposition a tripwire, press the Ctrl key on your keyboard and click the left mouse button over an endpoint of the tripwire. Move your mouse across the image.
- **Updates: Live** - Changes from a static image of the scene to a live image. Useful if you want to change the current image.

| | |
|-------------------|---|
| Create | Hold down left mouse button and move across image |
| Select | Click a tripwire |
| Delete | Select a tripwire and press the Delete key |
| Reposition | Hold down Ctrl key and left mouse button over an endpoint |
| | Close |

Configuration > Advanced

These settings are only for administrators managing system configuration or for Aimetis technical support.

- **Show XML** - Displays the current analytic settings and allows you to modify them in XML.
- **Import XML** - Allows you to load an analytic engine state XML from disk and manually modify the XML. Once you click OK, the XML is applied to the analytic.
- **Export XML** - Allows you to save the current analytic settings state XML. You can then easily share configuration and, if necessary, submit the XML to Aimetis Support if you have trouble with the configuration.

Starting and Stopping Aimetis Outdoor Object Tracker

1. In the camera interface, click **Setup**, and then **Applications**.
2. Under **Installed Applications**, select **Aimetis Outdoor Object Tracker**.
3. Click the **Start** or **Stop** buttons as necessary.

