

# USER'S GUIDE

## AXIS Cross Line Detection 1.1

## Notices

This manual is intended for administrators and users of AXIS Cross Line Detection 1.1. It includes instructions for using and managing the product on your network. Previous experience of networking will be of use when using this product. Some knowledge of UNIX or Linux-based systems may also be beneficial, for developing shell scripts and applications. Later versions of this document will be posted to the Axis Website, as required. See also the product's online help, available via the web-based interface.

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## Support

Should you require any technical assistance, please contact your Axis reseller. If your questions cannot be answered immediately, your reseller will forward your queries through the appropriate channels to ensure a rapid response. If you are connected to the Internet, you can:

- download user documentation and firmware updates
- find answers to resolved problems in the FAQ database. Search by product, category, or phrases
- report problems to Axis support by logging in to your private support area
- visit Axis Support at [www.axis.com/techsup](http://www.axis.com/techsup)

### AXIS Cross Line Detection



AXIS Cross Line Detection is a trip-wire application installable on Axis network cameras and encoders. The application detects moving objects that cross a virtual line making it possible to automatically trigger an event. AXIS Cross Line Detection will increase system efficiency by reducing bandwidth and storage needs and facilitate search of recorded events.

The Cross Line Detection can be uploaded and used in Axis products that support AXIS Application Platform. The Applications feature allows you to upload third party applications. For a complete list of products that support Axis Application Platform got to [www.axis.com](http://www.axis.com)

### Recommendations and limitations

Cross Line Detection should not be used in critical scenarios that may have life or death situations, nor should it be used to alert law enforcement. Cross Line Detection should not be used to monitor an entire restricted area, however it can be used to monitor an entry to a restricted area.

Cross Line Detection should only be installed in cameras that are not subject to excessive vibrations. Some conditions might affect the reliability of detection such as weather conditions (snow or rain), reflections, shadows conditions, if the object is too small or too large and if object movement is too slow or fast.

It is not recommended to run Cross Line Detection at the same time as the camera's included application Motion Detection or another Application Package installed in the camera because it increases load on the processor which might affect performance.

In order to configure AXIS Cross Line Detection, you need to have Windows<sup>®</sup>, Internet Explorer<sup>®</sup> and Axis Media Control (provided by the camera).

Cross Line Detection can only be installed on Axis products with firmware version 5.11 or later and into the platform used by Axis products.

### Installation

Follow these instructions to install:

1. Download AXIS Cross Line Detection application from [www.axis.com/applications](http://www.axis.com/applications)
2. Go to **Setup > Applications > Overview**
3. Under **Upload Application**, click the **Browse** button, locate the package file and then click the **Upload** button. Cross Line will show under **Installed Applications** and in the menu under **Overview**. Cross Line Detection will show a status of **Idle** until an event has been configured, see *Set up Event Configuration*, on page 4, the status will then show as **Running**.

#### Note:

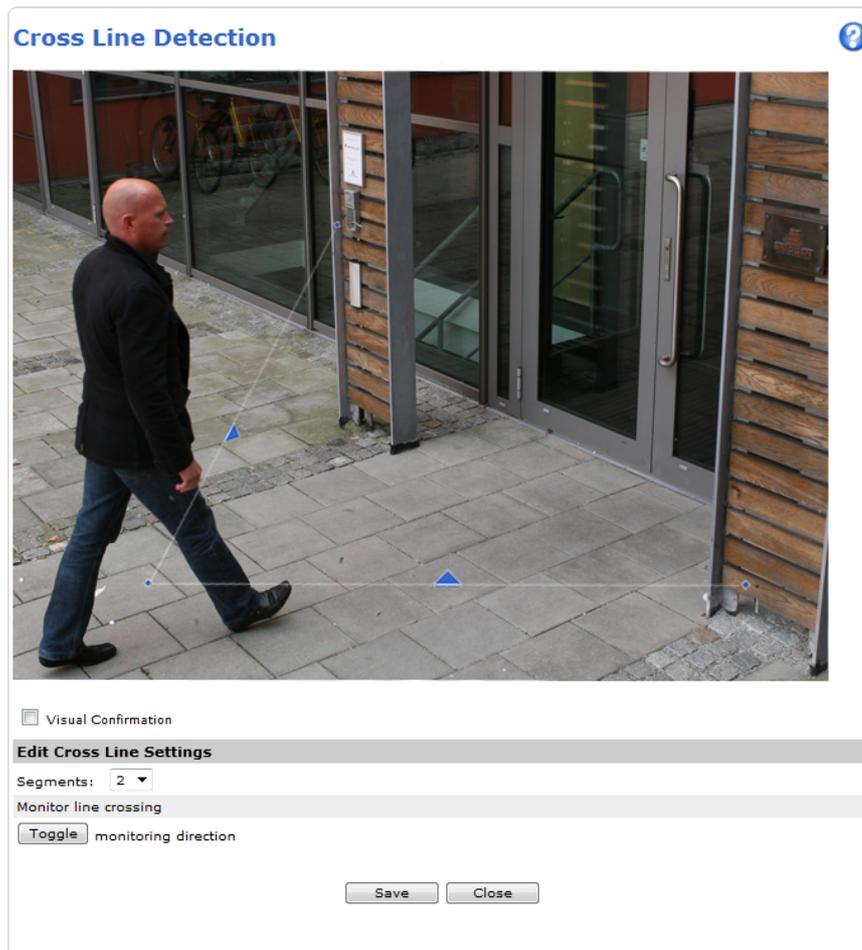
Only product administrators can upload new applications.

4. You will need a license code in order to start the application. The license code is included in your proof of purchase from your reseller. If you do not have a license code, you may acquire a 30-day trial license key from [www.axis.com](http://www.axis.com). You can later replace the trial-license once you have a valid license code.
5. If the camera has an internet connection you can do an **Automatic Installation** directly in the user interface. Type your license code together with additional information and press "Install".
6. If the camera does not have access to the Internet you will need to do **Manual Installation**. You can acquire the license key file at [www.axis.com/applications](http://www.axis.com/applications) from any computer with Internet access. You will need a valid license code and the device's serial number to receive a license key. Once you have downloaded the license key file, use "Browse" to locate the file on your computer and press "Install"

### Set up AXIS Cross Line Detection

The AXIS Cross Line Detection application must be started and setup before use. To start AXIS Cross Line Detection, select it in the list and click **Start**.

To set up AXIS Cross Line Detection navigate to the Settings page by clicking **Applications > Cross Line > Settings** and the link **Cross Line Detection Settings** under Application Settings.



### Settings

The steps required to set up the AXIS Cross Line Detection are as follows:

1. Select the number of segments from **Segments** drop-down list.
2. To position the line, click and drag it to the desired location in the image.
3. Click **Toggle** to change the direction the cross line will monitor.

The direction is represented by a blue arrow. Objects crossing the line, in the direction of the arrow, will trigger the alarm or event. If both arrows are present, both directions are monitored.

**Note:** The line will not trigger properly if positioned too close to the edge of the image.

Check the **Visual Confirmation** box to verify the line was setup correctly. The line will flash red when touched. To edit the Cross Line Detection setup, follow the above procedures, do not forget to click **Save** to retain the changes.

### Set up Event Configuration

To configure an alarm or event if the line has been touched, go to **Events > Action Rules**. Click the **Add...** button to open the Action Rule Setup dialog.

1. Under **General** give the event a descriptive name. (see online help files).
2. From the Trigger drop-down list select **Applications** and then **CrossLineDetection** from the drop-down list that appears.

**Note:** AXIS Cross Line Detection must either have a status of Idle or Running for the **CrossLineDetection** option to appear in the drop-down list.

3. Set the **Schedule** when the event is to be active, that is weekends, only after office hours, etc.
4. Set the **Actions Type** parameters, that is, set what the event should trigger when the line is touched, for example record video, send notification etc.
5. Click **OK** to save the event in the Action Rule List.

For more information about configuring events, refer to the camera's User's Manual or the online help for descriptions of each available option.

### Considerations when using Cross Line Detection

In order to achieve good detection rate and reduce false detections, consider the following:

- Install in Axis products that are not subject to excessive vibrations.
- The lighting condition (lux) should be within the Axis product's specifications. Add additional lighting if needed.
- Very slow or fast moving objects may not be detected.
- Very large or very small objects may not be detected.
- Heavy rain or snow may reduce detection rate.
- Placing the line too close to the video edge from where objects are entering may cause objects not be correctly detected.
- Various light phenomena such as sweeping car headlights, shadows or reflections may behave as moving objects and can give a false detection. You may need to adjust the position of the line, camera placement or camera view.

### System Integration

AXIS Cross Line Detection is conformant with Open API for software integration, including the ONVIF specification available at [www.onvif.org](http://www.onvif.org), as well as VAPIX® and AXIS Camera Application Platform from Axis Communications, specifications available at [www.axis.com](http://www.axis.com)

## Technical Specifications

Function/group	Item	Specification
Compatible products	Models	Axis fixed network cameras and video encoders that support AXIS Camera Application Platform. Complete list at <a href="http://www.axis.com">www.axis.com</a>
Setup & configuration		Windows <sup>®</sup> and Internet Explorer <sup>®</sup>
Application settings	Line setup	Virtual line setup with one or two segments
	Object direction	Configurable
	Verification of setup	Visual confirmation
Scenarios	Typical applications	General low-traffic areas such as building entrances, loading docks, parking lots
	Limitations	Weather conditions such as heavy rain or snow may affect detection accuracy
Camera considerations	Lighting conditions	Dependent on camera light sensitivity
	Camera placement	45 - 90° angle to object direction
Integration	Camera	Integrates with camera even management system. image upload, notification, I/O control
	Software	Open API for software integration, including the ONVIF specification available at <a href="http://www.onvif.org">www.onvif.org</a> , as well as VAPIX <sup>®</sup> and AXIS Camera Application Platform from Axis Communications, specifications available at <a href="http://www.axis.com">www.axis.com</a>  Please confirm if your preferred Video Management Software supports integration of AXIS Cross Line Detection.
General	Language	English
	Licenses	Cross line detection licenses for 1, 10 or 50 cameras.