

AXIS Parking Violation Detection

User Manual

AXIS Parking Violation Detection

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AXIS Parking Violation Detection

Solution overview

Solution overview

AXIS Parking Violation Detection

About AXIS Parking Violation Detection

About AXIS Parking Violation Detection

AXIS Parking Violation Detection lets you create custom detection zones to monitor traffic lanes and other areas automatically. Parking violations are displayed with a timer embedded in the video stream to your VMS.

AXIS Parking Violation Detection consists of a camera app and a desktop app. The camera app can be installed on compatible Axis network video devices that support the AXIS Camera Application Platform.

A complete list of compatible devices and firmware versions is available at axis.com/products/axis-parking-violation-detection/support-and-documentation

The desktop app is a Windows based app, and is used for configuration only.

AXIS Parking Violation Detection

Find the device on the network

Find the device on the network

To find Axis devices on the network and assign them IP addresses in Windows®, use AXIS IP Utility or AXIS Device Manager. Both applications are free and can be downloaded from axis.com/support.

For more information about how to find and assign IP addresses, see the document *How to assign an IP address and access your device* on the device page at axis.com.

Set a new password for the root account

Important

The default administrator username is **root**. If the password for root is lost, reset the device to factory default settings.

1. Type a password. Follow the instructions about secure passwords. See *Secure passwords* on page 5.
2. Retype the password to confirm the spelling.
3. Click **Create login**. The password has now been configured.

Secure passwords

Important

Axis devices send the initially set password in clear text over the network. To protect your device after the first login, set up a secure and encrypted HTTPS connection and then change the password.

The device password is the primary protection for your data and services. Axis devices do not impose a password policy as they may be used in various types of installations.

To protect your data we strongly recommend that you:

- Use a password with at least 8 characters, preferably created by a password generator.
- Don't expose the password.
- Change the password at a recurring interval, at least once a year.

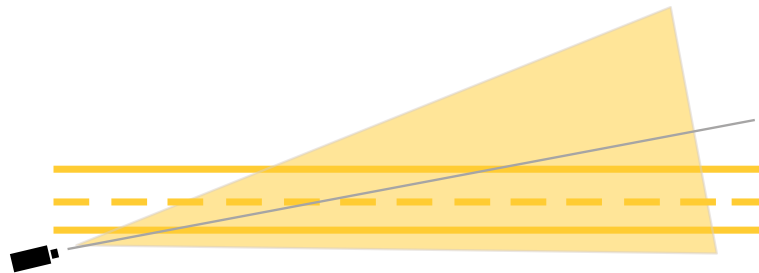
AXIS Parking Violation Detection

Get started

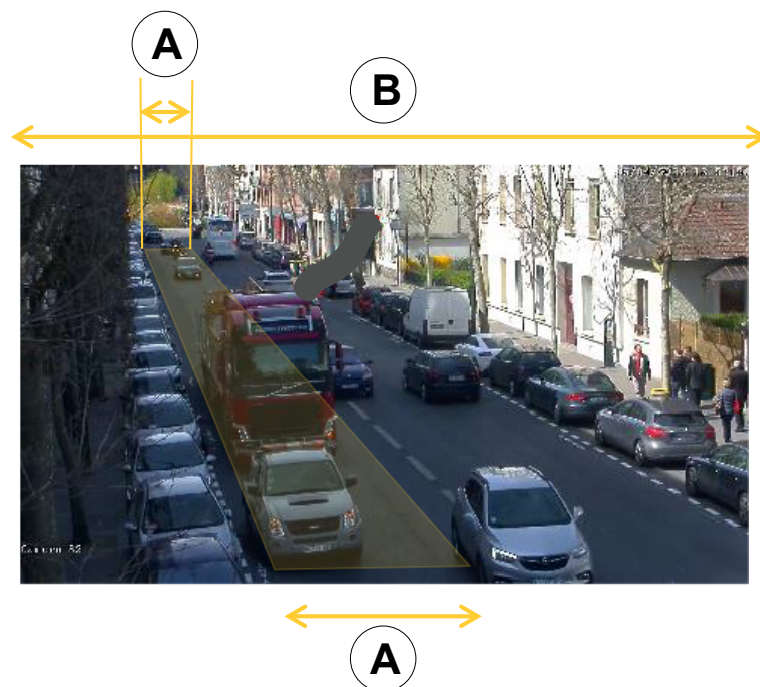
Get started

Camera mounting recommendations

- When you select the mounting location, remember that direct sunlight can distort the image, for example, during sunrise and sunset.
- Minimum mounting height: 3 metres.
- Maximum mounting height: 20 metres.
- Maximum detection distance: 20 x camera height.
- The camera's field of view must be the same or slightly angled to the direction of the traffic lanes.



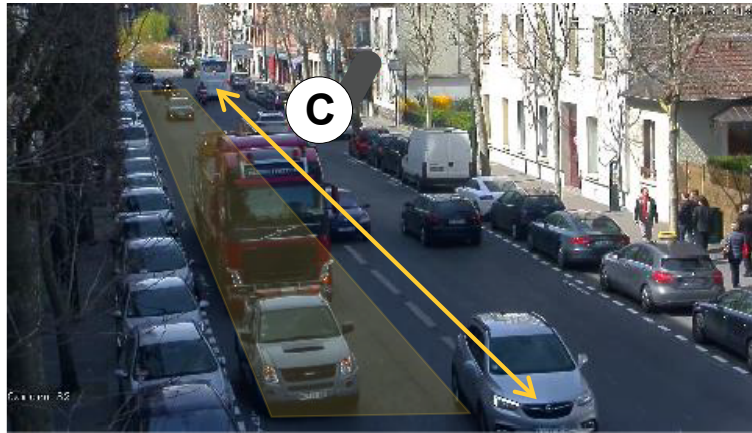
- The width of the lane (A) you want to monitor should be approximately the same width as a vehicle. Moreover, the width of the lane should be more than 5% of the total image width (B).



- The length of the lane (C) you want to monitor should be between 5 and 100 metres.

AXIS Parking Violation Detection

Get started



Download the desktop and camera apps

If not already signed in, you need to sign in to your MyAxis account to download the desktop app and the camera app.

1. Go to axis.com/products/axis-parking-violation-detection
2. Go to Software > Download.

Install the camera app

Note

- You can install the camera application either directly through the camera webpage or by using AXIS Device Manager.
- To install the app on the camera, you need administrator rights.



To watch this video, go to the web version of this document.

www.axis.com/products/online-manual/49377

Installing the camera application.

1. Go to the camera's webpage by clicking its IP number in the device list.
2. Go to Settings > Apps.
3. Click Add to upload the app installation file (.eap) to the camera.
4. Click Start to activate the app.

Note

For optimal performance, make sure that AXIS Parking Violation Detection is the only active app on the camera.

AXIS Parking Violation Detection

Get started

To activate the license, you need a license key that is generated by the license code and the Axis device serial number. If you don't have a license key on the computer, do the following:

1. Go to axis.com/applications
2. Go to **License key registration**.
3. Enter the license code and the serial number.
4. Save the license key file on the computer.
5. Go to the app page in the camera.
6. Click **Install** and browse to select the license file.

Install the camera app on multiple cameras

You can use both AXIS Device Manager and AXIS Camera Station to install the camera app on multiple cameras.

1. In AXIS Device Manager, go to the **Device Manager** tab. In AXIS Camera Station, go to **Configuration > Devices > Manage**.
2. Select the devices where to install AXIS Parking Violation Detection.
3. Enter username and password for the cameras.
4. Click [jigsaw piece icon] and select **Browse to Application**, click **Browse** and locate the downloaded app.

Install the desktop app

Locate **AXIS Parking Violation Detection Desktop.msi** in your downloads folder and click to install the desktop app.


Add a camera to the desktop app

Note

To add cameras you need administrator rights.

1. To open the **Add device** dialog, click **+**.
2. Select one or multiple cameras with the app installed and enter the username and password.
3. Click **Add**.

View live stream from a camera

1. Go to the device list in the desktop app.
2. Find the camera in the list and click 

Configuration tool

Click the road icon to access the configuration tool. When you configure the application for the first time, we recommend that you follow the steps in the tutorial.

If you want to load a previously saved configuration, go to *Save or load configurations on page 10*.

AXIS Parking Violation Detection

Get started



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Setting the perspective and editing detection zones in the desktop app.

Set the perspective in the scene

These steps are necessary for the camera to get an accurate perspective of the scene.

Note

The horizontal lines must be parallel to each other and have a tilt of maximum 35°.

1. Click the vertical line (V) and type a known vertical distance in the scene.
2. Move the vertical line to the location of the known distance.
3. Adjust the line using the anchor points to match the location in the scene.
4. Enter known horizontal distances for the two horizontal lines (H1, H2)
5. Move H1 to the top of the vertical line (V) and H2 to the bottom of the vertical line.
6. Adjust the lines using the anchor points to match the location in the scene.
7. Go to *Add detection zones to monitor* on page 9.

Add detection zones to monitor

Add detection zones where you want the app to monitor parking violations.

Note

The minimum length of a detection zone is 5 meters, and the maximum length is 100 meters. The width of a detection zone should be that of a normal car. You can optimize performance by keeping the maximum number of detection zones per view to 4.

1. Use the anchor points to adjust the detection zone so that it covers the area you want to monitor.
2. Optionally change the default lane ID to identify the detection zone.
3. Create additional detection zones.
4. Adjust the threshold value for the parking violation timer in the **Time threshold** field.

The threshold is the amount of time before a notification of a parking violation is sent and the timer starts. The minimum threshold is 30 seconds, and the maximum is 20 minutes (1,200 seconds).

Note

A higher detection sensitivity increases the number of alarms.

5. Adjust sensitivity according to the conditions of the scene. We recommend that you initially leave it on **Medium** for evaluation purposes.

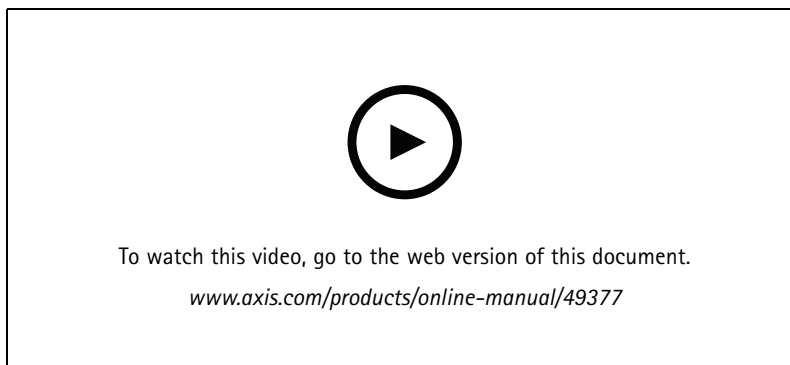
AXIS Parking Violation Detection

Get started

6. Click **Save**.

Configure PTZ cameras with preset positions

When using a PTZ camera, each preset position must be configured separately.



Configure AXIS Parking Violation Detection on a PTZ preset position.

Note

- For the application to detect any parking violations, the camera must stay in the preset position for at least 30 minutes.
 - To be detected for parking violation, a vehicle must be seen stopping in the scene.
1. Add the PTZ camera as described in *Add a camera to the desktop app on page 8*.
 2. Go to your VMS or the camera's webpage and move the PTZ camera to the preset position you want to configure. Make sure the camera remains in that preset position during the whole configuration.
 3. Select the preset position in the drop-down menu of the camera in the device list.
 4. Follow the instructions in *Set the perspective in the scene on page 9* and *Add detection zones to monitor on page 9*.
 5. Optionally repeat the configuration for other preset positions.

Save or load configurations

In the configuration tool, you can save and load configurations for backup or reuse with slight modifications in other devices.

Save configuration

Click ... and select **Save to file**.

Load configuration

Click ... and select **Load from file**.

Connect through a firewall

Click the cogwheel icon to access the **Maintenance** dialog box.


Type the relevant HTTP and HTTPS ports for the camera and desktop application.

AXIS Parking Violation Detection

Access the event log

Access the event log

In the event log you'll find the time, duration and snapshots of events for the current device.

1. Go to the device list.
2. Click 

AXIS Parking Violation Detection

Set up alarms in AXIS Camera Station

Set up alarms in AXIS Camera Station

This example explains how to set up a rule in **AXIS Camera Station** to alert the operator and record video when a parking violation occurs.

Before you start

You need:

- an Axis network camera with AXIS Parking Violation set up and running
- a computer with AXIS Camera Station installed

Add the camera to AXIS Camera Station

1. In AXIS Camera Station, add the camera. See the *user manual for AXIS Camera Station*.

Create a device event trigger

1. Click **+** and go to **Configuration > Recording and events > Action rules** and click **New**.
2. Click **Add** to add a trigger.
3. Select **Device event** from the list of triggers and click **Ok**.
4. In the **Configure device event trigger** section:
 - In **Device**, select the camera.
 - In **Event**, select **ParkingViolation**.
 - In **Trigger period**, set an interval time between two successive triggers. Use this function to reduce the number of successive recordings. If an additional trigger occurs within this interval, the recording will continue and the trigger period starts over from that point in time.
5. In **Filters**, set **active** to **Yes**.
6. Click **Ok**.

Create actions to raise alarms and record video

1. Click **Next**.
2. Click **Add** to add an action.
3. Select **Raise alarm** from the list of actions and click **Ok**.

Note

The alarm message is what the operator sees when an alarm is raised.

4. In the **Alarm message** section, enter an alarm title and description.
5. Click **Ok**.
6. Click **Add** to add another action.
7. Select **Record** from the list of actions and click **Ok**.
8. In the list of cameras, select the camera to use for recording.
9. Select a profile and set the prebuffer and postbuffer.
10. Click **Ok**.

AXIS Parking Violation Detection

Set up alarms in AXIS Camera Station

Note

The prebuffer is limited to 60 seconds. If the detection threshold is set to more than 60 seconds, the moment when the vehicle stops won't be recorded. To make sure it is recorded, go to **Schedule** and select **Always**.

Specify when the alarm is active

1. Click **Next**.
2. If you only want the alarm to be active during certain hours, select **Custom schedule**.
3. Select a schedule from the list.
4. Click **Next**.
5. Enter a name for the rule.
6. Click **Finish**.

AXIS Parking Violation Detection

Set up alarms in Genetec Security Center

Set up alarms in Genetec Security Center

This example explains how to set up a rule in Genetec Security Center to alert the operator and record video when a parking violation occurs.

Before you start

You need:

- an Axis network camera with AXIS Parking Violation Detection up and running, see *page 6*.
- a computer running Genetec Security Center.

Add the camera to Genetec Security Desk .

1. Log in to Genetec Security Desk.
2. Go to Tools > Config Tool > Video > Archive.
3. Right click Archiver and go to Add an entity > Video unit.
4. In the Manual add popup window:
 - 4.1 Select Manufacturer: Axis
 - 4.2 Select Product type: Other
 - 4.3 Type the IP address of the AXIS Camera
 - 4.4 Select HTTP port: 80 (default value)
 - 4.5 Authentication: select Specific
 - 4.6 Type Username and password
5. Click Add and close.

Once the camera is added to Security Desk, configure the event type displayed when an alarm is triggered.

1. Go to Archiver > Camera > Properties.
2. In Applications, select the AXIS Parking Violation Detection application.
3. In Application events: select incident type ParkingViolationDetection.
4. Click Apply to validate the configuration.
5. Restart the Security Center service to apply the modification.

Configure an alarm and display it in the Monitoring tab

1. Go to Security Desk > Options > Events.
2. Expand the Custom events list
3. Click:
 - **ParkingViolation ON:** An alarm will rise when an incident occurs (at the beginning of incident)
 - **ParkingViolation OFF:** An alarm will rise at the end of incident.
4. Verify that the column Display in tile for AXIS Parking Violation Detection events is checked (it should be checked by default). If not, check it. This action allows the alarm to be displayed on Monitoring in Security Desk.

AXIS Parking Violation Detection

Set up alarms in Genetec Security Center

5. Go to Security Desk > Monitoring
6. Double click on the camera you want to be displayed in the tile. Click on **Monitoring** in the bottom to configure the event to display in the monitoring interface.
7. Click on the camera that will raise the event.
8. In the **Alarm monitoring**, click on **ON** to display the event on top of **Monitoring**.

If your camera has monitoring activated, as soon as a **ParkingViolationDetection** event attached to the camera is received, Security Desk automatically shows the camera in the first free tile of the Monitoring Task.

Note

You can configure the monitored device to always be displayed in the same tile.

Configure event-to-action

An event-to-action links an action to a particular event. Configure a custom event to trigger an action when Security Desk receives an alarm from AXIS Parking Violation Detection.

1. Open the Genetec Config Tool and go to **System > General Settings**.
2. Go to **Actions** and click **+** (icon).
3. Select an AXIS Parking Violation Detection event type in the **When** drop-down list.
4. Click **Any entity** in the **From** menu, and select the AXIS camera that triggers the event.
5. In **Effective**, click **Always**, and set a schedule for when the event-to-action is active.
6. Click **Save**.

Validate you configuration

Make sure that the configuration is done according to the system specifications by simulating an incident or testing the user alarm. See *Test the VMS integration on page 16*

Enable metadata for Genetec Security Center

To send metadata from AXIS Parking Violation Detection to Genetec Security Desk:



1. Add a **Record Action Rule** in Genetec Security Desk.
2. Activate the event metadata in the AXIS Parking Violation Detection desktop app:
 - 2.1 Select the camera in the list.
 - 2.2 Click the settings icon.
 - 2.3 Click **Access plain config**
 - 2.4 Activate all three metadata types: **Preset**, **LaneID** and **StartDateTimeUTC**.
 - 2.5 Click **Save**
3. *Test the VMS integration on page 16.*

AXIS Parking Violation Detection

Test the VMS integration

Test the VMS integration

To test that the VMS integration works as expected you can trigger an event manually.

1. In the desktop app, go to the device list.
2. Choose a device and click .
3. To trigger the event, click .
4. Go to the VMS and check that the timer and the alert show up as expected.

AXIS Parking Violation Detection

Learn more

Learn more

Applications

AXIS Camera Application Platform (ACAP) is an open platform that enables third parties to develop analytics and other applications for Axis products. To find out more about available applications, downloads, trials and licenses, go to axis.com/applications.

To find the user manuals for Axis applications, go to axis.com.

Firmware options

Axis offers product firmware management according to either the active track or the long-term support (LTS) tracks. Being on the active track means continuously getting access to all the latest product features, while the LTS tracks provide a fixed platform with periodic releases focused mainly on bug fixes and security updates.

Using firmware from the active track is recommended if you want to access the newest features, or if you use Axis end-to-end system offerings. The LTS tracks are recommended if you use third-party integrations, which are not continuously validated against the latest active track. With LTS, the products can maintain cybersecurity without introducing any significant functional changes or affecting any existing integrations. For more detailed information about Axis product firmware strategy, go to axis.com/support/firmware.

AXIS Parking Violation Detection

Troubleshooting

Troubleshooting

If you can't find what you're looking for here, try the troubleshooting section at axis.com/support.

Change the number of alarms

By adjusting the sensitivity of the detection and the thresholds for when an alert should be triggered in the **Configuration** tool, you can increase or decrease the number of alarms triggered.

- To decrease the number of alarms: raise the **Threshold** or reduce the **Sensitivity** of the detection.
- To increase the number of alarms: lower the **Threshold** or increase the **Sensitivity** of the detection.

Increase performance

If the camera is running multiple camera applications, you may need to access the camera's webpage and switch them off in order to increase performance.

Note

AXIS Video Motion Detection 4 run by default on most AXIS cameras. The Q16 and Q17-series have AXIS Guard Suite running by default.

Update the application to the latest version

To take advantage of latest improvements, we recommend that you upgrade to the latest version of the application.

Download the latest versions of the camera app and the desktop app, see *Download the desktop and camera apps on page 7*.

Upgrade the firmware

Important

Preconfigured and customized settings are saved when the firmware is upgraded (provided that the features are available in the new firmware) although this is not guaranteed by Axis Communications AB.

Important

Make sure the product remains connected to the power source throughout the upgrade process.

Note

When you upgrade the product with the latest firmware in the active track, the product receives the latest functionality available. Always read the upgrade instructions and release notes available with each new release before upgrading the firmware. To find the latest firmware and the release notes, go to axis.com/support/firmware.

1. Download the firmware file to your computer, available free of charge at axis.com/support/firmware.
2. Log in to the product as an administrator.

