

## **AXIS Direction Detector**

## **User Manual**

# AXIS Direction Detector

## Table of Contents

---

<b>Solution overview</b> .....	3
AXIS Direction Detector .....	3
<b>How to mount the camera</b> .....	4
<b>Find the device on the network</b> .....	7
Access the device .....	7
Secure passwords .....	7
Install the application on the camera .....	7
<b>Additional settings</b> .....	9
How to set date and time .....	9
How to set up a user account .....	9
How to set up the counter .....	9
How to adjust the counting area .....	10
About multiple camera setup .....	10
How to trigger an event .....	11
How to set up a schedule .....	11
How to anonymize people .....	11
How to copy the application settings to another camera .....	12
<b>How to validate the system</b> .....	13
How to validate the counter .....	13
How to fine-tune the counter .....	13
<b>About the statistics</b> .....	14
Connect a camera to a folder in AXIS Store Data Manager .....	14
How to download statistics .....	14
<b>Troubleshooting</b> .....	15
How to restart the application .....	15
How to reset the application .....	15
How to backup the settings .....	15
How to restore the settings .....	15
How to generate a log report .....	16
How to manage your license .....	16
<b>About the light web interface</b> .....	17
<b>People counting apps API</b> .....	18
Common examples .....	18
API specification .....	20

# AXIS Direction Detector

## Solution overview

---

### Solution overview



*An overview of the different devices, applications, and tools needed for a complete system.*

### AXIS Direction Detector

AXIS Direction Detector is an analytic software that monitors in what direction people are passing under a camera. If a person is moving in one of the directions, the application can trigger an alarm.

AXIS Direction Detector includes AXIS People Counter functionality.



# AXIS Direction Detector

## How to mount the camera

---

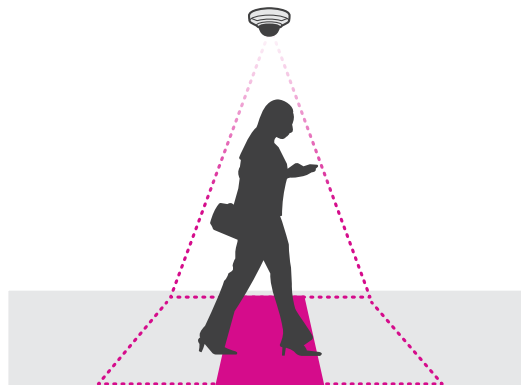
### How to mount the camera

#### NOTICE

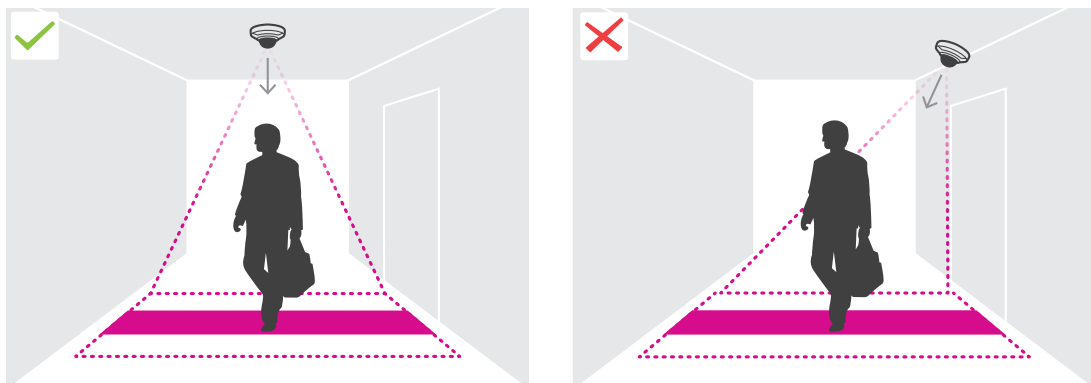
The application is designed for retail scenarios where it counts objects with the characteristics of an adult pedestrian. The exact height limitation of the object depends on camera model, camera lens, and the selected counter sensitivity.

In addition to the instructions in the camera's Installation Guide, there are some important steps to follow for the application to behave in the expected way:

- We recommend that you install the camera at a minimum height of 270 cm (8.9 ft).
- As a rule-of-thumb, the camera covers an area as wide as the camera's mounting height. For details about a specific camera model, see the **Camera selector for retail analytics tool** available at [www.axis.com](http://www.axis.com)
- After installation, the covered area can be increased depending on the camera's zoom setting.
- If the camera is mounted high enough, you can get a coverage width of 8 meters. You can cover even wider entrances by using multiple counters.
- The camera must be mounted straight above the point where people pass.



- Make sure the camera is facing straight down, in line with the ceiling.



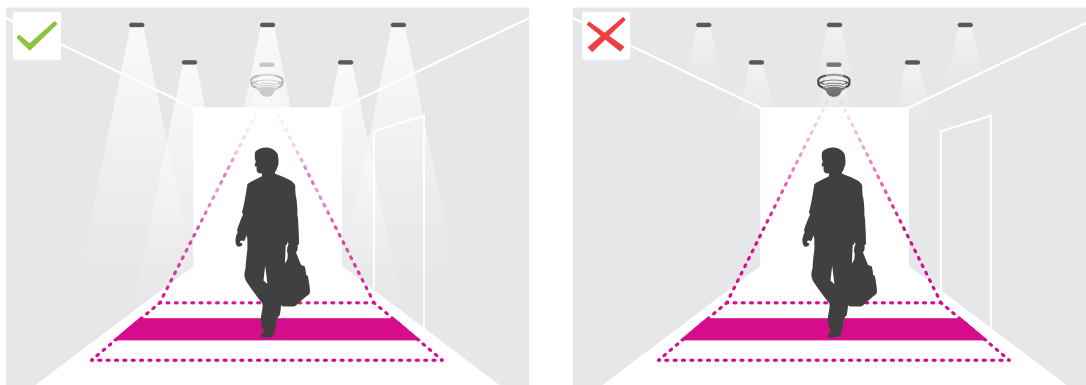
- If you install the application before you install the camera, you can use the counting area indicated in the live view to position the camera. The counting area should go from left to right, perpendicular to the path where people cross.

# AXIS Direction Detector

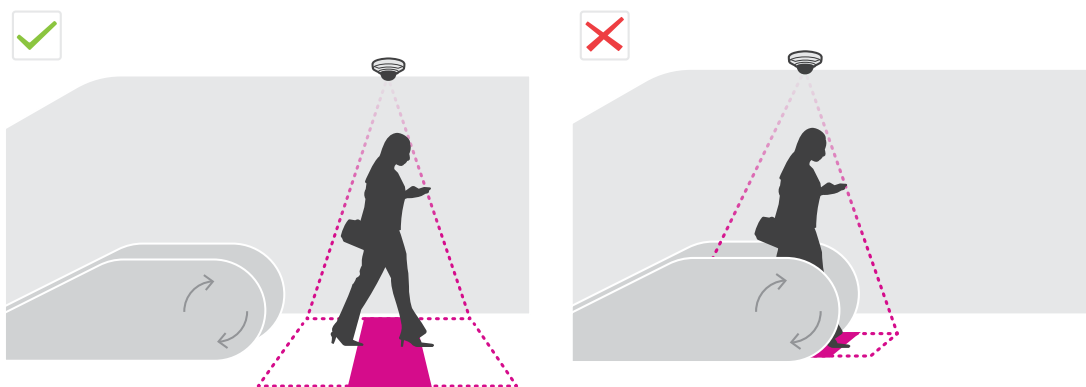
## How to mount the camera

---

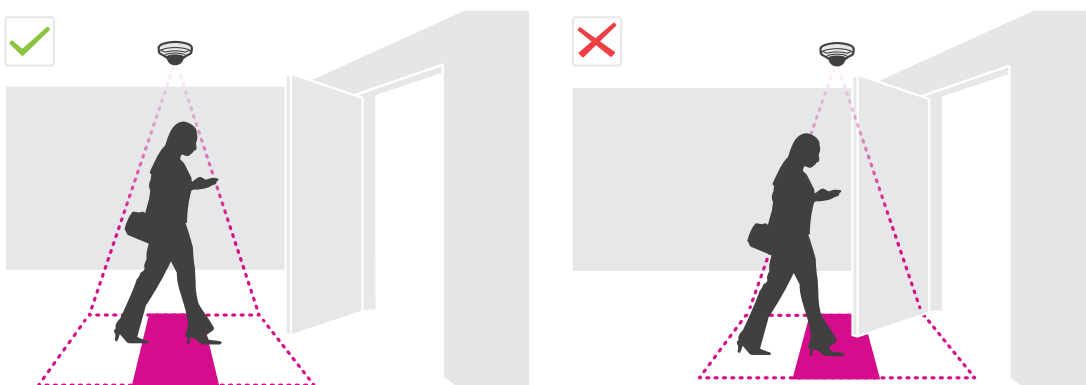
- Make sure there is sufficient white light or IR illumination on site.



- Make sure that there are no continuously moving objects in the counting area. For example, do not install the camera above an escalator.



- Make sure there are no moving objects interfering in the counting area. For example, do not install the camera too close to a door.

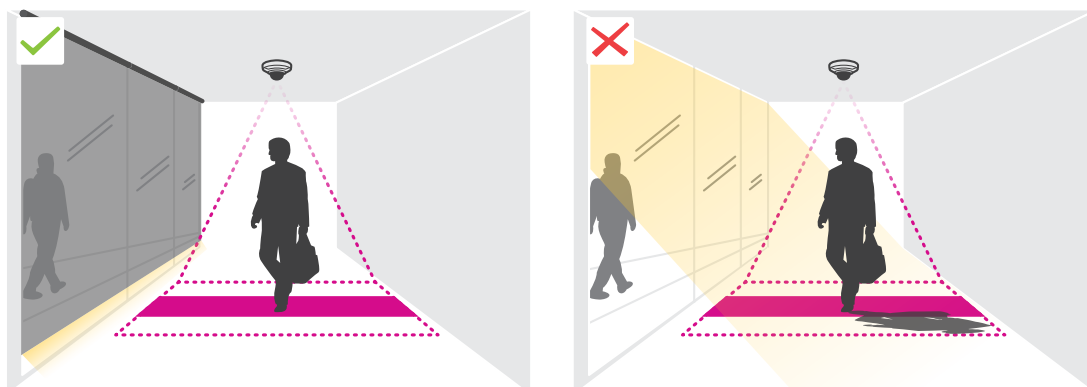


- Avoid getting very strong light, like sunlight, and sharp shadows in the camera view.

# AXIS Direction Detector

## How to mount the camera

---



# AXIS Direction Detector

## 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](http://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](http://axis.com).

### Access the device

1. Open a browser and enter the IP address or host name of the Axis device.

If you have a Mac computer (OS X), go to Safari, click Bonjour and select the device from the drop-down list. To add Bonjour as a browser bookmark, go to **Safari > Preferences**.

If you do not know the IP address, use AXIS IP Utility or AXIS Device Manager to find the device on the network.

2. Enter the username and password. If you access the device for the first time, you must set the root password. See *Set a new password for the root account* on page 7.
3. The live view page opens in your browser.

### 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.

### 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 7.
2. Retype the password to confirm the spelling.
3. Click **Create login**. The password has now been configured.

### Install the application on the camera

#### Note

- The license is only valid for one camera. You cannot activate the license on another camera without a new registration key.
- To install applications on the camera you need administrator rights.

# AXIS Direction Detector

## Find the device on the network

---

1. Install the camera on your network..
2. Go to the camera's webpage in your browser, see the User Manual for the camera.
3. For products with firmware 7.10 or later, go to **Settings > Apps**.

For products with firmware 6.50 or previous, go to **Setup > Applications** .

4. Upload the application file (.eap) to the camera.
5. Activate the license. If you're online, enter the license code. The application automatically activates the license.

### How to activate the license when you're offline

To activate the license when you're offline, you need a license key. If you don't have a license key on the computer, do the following:

1. Go to [www.axis.com/applications](http://www.axis.com/applications)
2. Go to **License key registration**. You need the license code and the Axis device serial number.
3. Save the license key file on the computer and select the file when the application asks for it.

### Access the application settings

1. In the camera's webpage, go to **Settings > Apps**, select the application and click **Open**.



# AXIS Direction Detector


## Additional settings

---

### Additional settings


#### How to set date and time

The date and time settings are important for your camera to keep the correct time for a longer period of time, and for the statistics to be attributed to the correct time.

1. To set the date and time you need to go to the camera's webpage.
  - For products with firmware 7.10 or later, go to **Settings > System > Date and time**.
  - For products with firmware 6.50 or previous, go to **Setup > System Options > Date & Time**.
2. For detailed instructions about the user account, go to the product's built-in help .
1. In the camera's webpage, go to **Setup > System Options > Date & Time**.
2. In the application, go to **Settings > General** and select the correct time zone.

#### How to set up a user account

In the camera you can set up different account privileges so that unauthorized personnel can view statistics but not change any settings of the counter.

1. To set up a user account, go to the camera's webpage.
  - For products with firmware 7.10 or later, go to **Settings > System > Users**.
  - For products with firmware 6.50 or previous, go to **Setup > System Options > Security > Users**.
2. For detailed instructions about the user account, go to the camera's built-in help .

#### How to set up the counter

To check if the application is calibrated for your camera, go to the **Camera selector for retail analytics** tool at [www.axis.com](http://www.axis.com)

1. In the application's webpage, go to **Settings > General**.
2. Make sure **Status** is on.
3. In the **Name** field, type the name of the camera or location.  
This can be for example "Axis\_Main\_entrance\_T\_building". All cameras need to have unique names.
4. Set **Calibration mode**. Do one of the following:
  - If the application is calibrated for your camera, select **Height setting**. Type the mounting height in the **Visual height** field.
  - If the application is not calibrated, select **Manual setting** and click **Setup**. Place a person underneath the camera and adjust the size of the yellow box so that it covers just one person.
5. If you need to zoom in, do one of the following:
  - Turn on **Digital zoom** and click **Setup**.
  - If the camera has optical zoom, you need to go to the camera's webpage to adjust the zoom.
6. Set **Direction** in to **Up** or **Down**, depending on the direction of the people passing by in live view.

# AXIS Direction Detector

## Additional settings

---

7. To adjust the counting area, go to *How to adjust the counting area on page 10*.

### How to adjust the counting area

#### Note

The camera model and the mounting height both limit how much you can adjust the counting area.

In the live view image, the counting area is indicated by two blue lines and a red area. A person needs to pass through the red area to be counted.

Use the curvature settings to change the shape so that it is natural for people to pass through the counting area. Keep the curvature as close to a straight angle as possible.

1. Go to **Settings > Counting area**.
2. To move the entire counting area up or down, use the **Line offset** slider. How much it can be moved depends on the counting area size.
3. To adjust the height of the counting area, use the **Counting area height** slider.
4. To adjust the width of the counting area, use the **Counting area width** slider. How much it can be changed will depend on the camera's mounting height.
5. To use a curved counting area, turn on the **Curved line** and then use the **Radius** slider to adjust the radius.
6. To change the direction of the curvature, click on the **Radius** icon.
7. Press the **Submit** button when you are done, otherwise the settings are not saved.
8. The counter may need to be fine-tuned for best performance, see *How to validate the system on page 13*.

### About multiple camera setup

#### NOTICE

You can only use this feature with cameras of the same model.

If you need to cover a wide entrance with several counters you can set up multiple cameras, also called **Neighbour counters**. To calculate how many cameras are needed to cover the entire width of the entrance, use the **Camera selector for retail analytics** tool available at [axis.com/tools](https://axis.com/tools)

The master camera overrides the following settings on the slave cameras:

- Visual height
- Counter sensitivity
- Digital zoom
- Network & time
- Line offset
- Counting zone height
- Counting schedule

### How to set up multiple cameras

1. Mount the cameras side by side following the measurements indicated by the camera selector tool.
2. Go to the master camera's application webpage and select **Settings > Advanced > Neighbour counters**.

# AXIS Direction Detector

## Additional settings

---

3. Select **Enable as master**.
4. For each slave camera, you have to go to **Settings > Advanced > Neighbour counters > Display camera credential** and copy the following credentials:
  - IP address: the camera's URL
  - Username: automatically set to **AxisAnalytics**
  - Password: automatically generated
5. Go back to the master camera's webpage and paste the credentials into the form under **Neighbour counters**.
6. If the cameras are configured to send data to AXIS Store Data Manager, make sure that only the master camera is connected. The master camera automatically uploads the data from all the slave cameras as one single unit.
7. When you have connected all cameras, go to **Calibrate slave position**.
8. Calibrate the cameras by dragging the view of the slave camera over the master camera view. We recommend to use an object, such as a sheet of paper, in the middle of the floor as reference when matching the video streams.
9. Once the calibration is done, go to **Live view** in the master camera to view all of the slave cameras.

If you cannot see the video stream from the slave cameras in the master camera, make sure that there are no other connections to the slave cameras running.

### How to trigger an event

1. Go to **Settings > AXIS Direction Detector** to access the camera's webpage.
2. In the event setup, use the trigger **Applications**.
3. Follow the built-in instructions to set up an event in the camera.

### How to set up a schedule

The application automatically disables the counting functionality when it gets dark. If you want to limit the counting further, you can set up a schedule.

1. Go to **Settings > Schedule**.
2. Select start and stop times by moving the slider. You can set individual schedules for each day of the week by selecting **Per day schedule** and then move the corresponding slider.

#### How to disable the application on a specific day of the week

Deselect the checkbox next to the slider.

### How to anonymize people

You can configure the application so that people can no longer be identified from the camera. There are two levels of anonymization; soft and hard.

#### Anonymize soft

This feature blocks all video streams and images from the camera. The live view still shows a blurred image which means you can still see what is going on but you can't identify people.

1. Go to **Maintenance > Anonymize**.
2. Click **Anonymize soft**.

# AXIS Direction Detector

## Additional settings

---

3. To go back to normal mode, click **Reset anonymization**. Only users with an administrator account can do this.

### Anonymize hard

#### Important

Anonymize hard removes all administrator users, locks the root password, and can only be reversed by doing a reset to factory default on the camera.

1. Go to **Maintenance > Anonymize**.
2. Click **Anonymize hard**.

## How to copy the application settings to another camera

Use the copy functionality if you want to copy the application settings to, for example, other cameras in the same store with the same mounting height. Camera-specific settings, such as the application license and camera name, are not included.

1. To copy the application settings, go to **Maintenance > Parameter backups**.
2. Click **Copy**. The computer saves the file in your browser's default folder for downloads.

# AXIS Direction Detector

## How to validate the system

---

### How to validate the system

#### Note

Before you validate the system, make sure you have mounted the camera according to the recommendations. See *How to mount the camera on page 4*.

When you have installed and set up all cameras in the building, we recommend that you validate the accuracy and fine-tune the system. This is likely to increase the accuracy or identify any problems with the counters.

To get an overview, go to **Statistics** and look at the counting data for a couple of days back. If the difference between number of persons going in and out is <5% it's a good first indication that the system is configured correctly.

If the difference is greater than that, go to *How to validate the counter on page 13*.

### How to validate the counter

1. Go to Live view.
2. Click on the **Test accuracy** button.
3. Click **Hide** to hide the automatic counter.
4. Click **Start** and manually count 100 or more passages by pressing the up and down arrows on your keyboard. You can also use the **In** and **Out** buttons.
5. Click **Reset** if you need to start over and **Result** when you are done.
6. Check the accuracy table. Under normal circumstances, the total accuracy percentage should not be less than 95 %.
7. If you're not satisfied with the accuracy of the counter, go to *How to fine-tune the counter on page 13*.

### How to fine-tune the counter

1. Go to *How to mount the camera on page 4* and make sure it's not the physical mounting that is making the counter not work correctly.
2. Go to **Settings > General**.
3. Go to the **Counter sensitivity** slider, or click **Setup** if the counter is running in manual mode, and do one of the following:
  - If the counter is counting too many compared to the control figure, decrease the counter sensitivity with about 20 units or increase the size of the yellow box slightly.
  - If the counter is counting too few compared to the control figure, increase the counter sensitivity with about 20 units or decrease the size of the yellow box slightly.
4. Go to *How to validate the counter on page 13* to revalidate the accuracy.

# AXIS Direction Detector

## About the statistics

---

### About the statistics

There are several ways to use the statistics from the counter:

- In the application's webpage, view real-time counting data in the built-in graphs.
- View built-in graphs in day and week view from the statistics page. The data is updated in real time.  
Data is available on the camera for up to 90 days and updated every 15 minutes. The data is stored in 15-minute bins representing the in and out counts for the 15-minute periods.
- View graphs of historical data directly on the camera.
- Download data through an open API.
- Use AXIS Store Data Manager, a software package that acts as a central point to store and manage data collected from all cameras. See *Connect a camera to a folder in AXIS Store Data Manager on page 14*.
- Use AXIS Store Reporter, a statistical web-based solution, for managing and monitoring historical data.
- Download statistics to your computer, see *How to download statistics on page 14*.

### Connect a camera to a folder in AXIS Store Data Manager

To perform this task, the application must be installed on the camera.

1. In AXIS Store Data Manager, go to **Sources** and get the **Folder connection identifier** and the **Folder connection password** for the folder you want to connect to.
2. In the camera's webpage, go to **Settings > Apps** and open the application's webpage.
3. In the application's webpage, go to **Settings > Reporting**.
4. To enable pushing data to a server, select **Enabled**.
5. Enter the web address for AXIS Store Data Manager, for example `https://[systemintegrator1].asdm.axis.com/datamanager` where [systemintegrator1] is replaced by a unique name.
6. Enter the **Folder connection identifier** and **Folder connection password**.
7. To test the connection, click **Run test**.
8. Click **Submit**.

### How to download statistics

1. Go to **Statistics > Download statistics**.
2. Select the file format:
  - If you select .xml, .csv or .json format you can also select the time interval.
  - File format .cnt is a proprietary, binary format, available for compatibility reasons.
3. Select date in the calendar. The data is presented in a new tab in your browser.
4. If you want to save the data as a local file on the computer, right-click and select **Save as**. The browser saves the file in the default download folder.

If you want to download all available data, click **Download all** next to the file format.

# AXIS Direction Detector

## Troubleshooting

---

### Troubleshooting

If you can't find what you're looking for here, try the troubleshooting section at [axis.com/support](https://axis.com/support).

Issue	Action
The software does not upload to AXIS Store Data Manager.	The most common reason is network communication problems. Run the connection test under <b>Settings &gt; Reporting</b> to get information about the root cause for the problem.
The software does not count.	Make sure the instructions for how to mount the camera has been followed, see <i>How to mount the camera on page 4</i> .
The software does not count correctly.	Make sure people are passing the entire counting zone crossing both blue lines. They should not pass out to the left or to the right.
There's no video stream in live view.	Make sure no one else is watching the video or that you have a video stream to a VMS or other ongoing recording. Check if the camera has a limited number of viewers or video streams allowed at the same time.
The software prompts me with a warning saying that the frame rate is too low.	<ol style="list-style-type: none"><li>1. Make sure the scene has sufficient lighting. If the scene is too dark, the camera does not deliver enough frames per second for the application to work.</li><li>2. If the processor in the camera has a high workload, the application might suffer. When streaming video from the camera make sure to open only one stream at a time.</li></ol>
The software does not count after changing parameters.	After changing the parameters the software may need to run up to 10 minutes before the counting accuracy is optimal.
I still cannot get the software to count.	If you have followed the advice above and still cannot get the software to work, contact your Axis reseller.

### How to restart the application

If the counting is inaccurate or the web interface unusually slow, you can try restarting the running services or restart the camera.

Go to **Maintenance > Restart**.

### How to reset the application

Go to **Maintenance > Reset** and do one of the following:

- To clear all counting data from the camera, click **Clear data**.
- To restore all settings of the application to default, click **Restore settings**.

### How to backup the settings

1. To backup the application settings, go to **Maintenance > Parameter backups**.
2. Click **Backup**. The computer saves the file in your browser's default folder for downloads.

### How to restore the settings

1. Go to **Maintenance > Parameter backups**.

# AXIS Direction Detector

## Troubleshooting

---

2. Browse to select the previously saved backup file and then click **Restore**.

### How to generate a log report

If you have any trouble with your camera you can generate a log report.

1. Go to **Maintenance > Logs**.
2. Click **Generate logs**.
3. The browser saves the file on the default download browser on the computer.
4. Attach the log report when submitting an issue to support.

### How to manage your license

Go to **Maintenance > Registration**.

- To register a license, click on the **Registration page**.
- If you want to remove you license from this product, click **Clear registration**.
- If you have an updated license, click **Renew license**.



# AXIS Direction Detector

## About the light web interface

---

### About the light web interface

There is a light-weight version of the web interface at the URL `http://<servername>/people-counter/lite/index.html`. These pages can for instance be used to embed the application into systems, for example AXIS Camera Station or Milestone's XProtect Smart Client.

There are four pages available:

- `http://<servername>/people-counter/lite/day.html`: The page shows the day plot, the same plot that can be seen on the **Statistics** page.
- `http://<servername>/people-counter/lite/week.html`: The page shows the week plot, the same plot that can be seen on the **Statistics** page.
- `http://<servername>/people-counter/lite/count.html`: A page that shows the live count for the current day.
- `http://<servername>/people-counter/lite/liveview.html`: A slim version of the live view page that shows live count and the video stream with the counting area as overlay.

The menu at the bottom of the pages can be disabled by appending `?clean` to the URL:s above, e.g. `http://<servername>/people-counter/lite/liveview.html?clean`. You can also add a `lang` tag before `lite` to display these pages in other languages, example `http://<servername>/people-counter/cn/lite/liveview.html`

# AXIS Direction Detector

## People counting apps API

---

### People counting apps API

The following applications include People counter functionality:

**AXIS People counter** – Intended for retail environments, like stores or shopping malls, or other environments where you want to count people.

**AXIS Occupancy Estimator** – Keeps track of how many people are currently occupying a closed area. The application can also estimate how long the average person spends in the area.

**AXIS Direction Detector** – Monitors in what direction people are passing under a camera. If a person is moving in one of the directions, the application can trigger an alarm.

**AXIS Tailgating Detector** – Detects if more than one person passes under a camera during a predefined time interval. If the application detects more than one person it can trigger an alarm.

**AXIS Random Selector** – Detects when someone is leaving the premises and randomly determines if that person should be scheduled for inspection or not.

### Common examples

#### Note

The value of `<appname>` in the different examples specifies the application according to the table below.

Value	Application
<code>people-counter</code>	AXIS People Counter
<code>occupancy-estimator</code>	AXIS Occupancy Estimator
<code>direction-detector</code>	AXIS Direction Detector
<code>tailgating-detector</code>	AXIS Tailgating Detector
<code>random-selector</code>	AXIS Random Selector

#### Example

Request real time data from People Counter.

#### Request

```
http://<servername>/local/<appname>/api?live-sum.json
```

#### Return

```
{
  "serial": "00408CAC512B",
  "name": "Exit south",
  "timestamp": "20170503112756",
  "in": 12,
  "out": 318
}
```

See *Request real-time data on page 20* for more information.

#### Example

List all days of data available in People Counter.

#### Request

```
http://<servername>/local/<appname>/api?list-cnt.json
```

#### Return

```
{
```

# AXIS Direction Detector

## People counting apps API

---

```
"timestamp" : "20170513132513",  
"days":["20170510", "20170511", "20170513"]  
}
```

See *List available data on page 20* for more information.

### Example

Request historical data for the 12th to the 15th of May 2017.

### Request

```
http://<servername>/local/<appname>/.api?export-cnt&date=20170512-20170515
```

See *Download binary data on page 21* for more information.

### Example

Request all available historical data.

### Request

```
http://<servername>/local/<appname>/.api?export-cnt&date=all
```

See *Download binary data on page 21* for more information.

### Example

Request historical CSV data for the 12th and the 15th of May 2017 with 15-minute resolution.

### Request

```
http://<servername>/local/<appname>/.api?export-csv&date=20170512,20170515&res=15m
```

See *Request CSV data on page 21* for more information.

### Example

Request historical data for all available days, with 24-hour resolution.

### Request

```
http://<servername>/local/<appname>/.api?export-csv&date=all&res=24h
```

See *Request CSV data on page 21* for more information.

### Example

Request historical XML data for the 12th and the 15th of May 2017 with 15-minute resolution.

### Request

```
http://<servername>/local/<appname>/.api?export-xml&date=20170512,20170515&res=15m
```

See *Request XML data on page 22* for more information.

### Example

Request Live view information from People Counter.

### Request

```
http://<servername>/local/<appname>/.api?cntpos.json
```

### Response

```
{  
  "width":320,  
  "height":240,  
  "left":0,  
  "right":296,  
  "top":88,  
  "bottom":224,  
  "yfirst":88,  
  "ylast":152,  
  "radius":0
```

# AXIS Direction Detector

## People counting apps API

---

```
}
```

See [Live view information on page 24](#) for more information.

### API specification

#### Request real-time data

Returns JSON file with real time counting data.

##### Request

`http://<servername>/local/<appname>/api?live-sum.json`

The value of <appname> specifies the application according to the table below.

Value	Application
people-counter	AXIS People Counter
occupancy-estimator	AXIS Occupancy Estimator
direction-detector	AXIS Direction Detector
tailgating-detector	AXIS Tailgating Detector
random-selector	AXIS Random Selector

##### Return

```
{  
  "serial": "<camera-serial>",  
  "name": "<counter-name>",  
  "timestamp": "<timestamp>",  
  "in": <in>,  
  "out": <out>  
}
```

Return value descriptions

Value	Description
<camera-serial>	camera serial number
<counter-name>	name of the counter
<timestamp>	time in the camera in the format YYYYMMDDhhmmss
<in>	number of people passing in until now today
<out>	number of people passing out until now

#### List available data

Returns a list of days where data exists.

##### Request

`http://<servername>/local/<appname>/api?list-cnt.json`

The value of <appname> specifies the application according to the table below.

Value	Application
people-counter	AXIS People Counter
occupancy-estimator	AXIS Occupancy Estimator

# AXIS Direction Detector

## People counting apps API

---

Value	Application
direction-detector	AXIS Direction Detector
tailgating-detector	AXIS Tailgating Detector
random-selector	AXIS Random Selector

### Return

```
{  
  "timestamp" : "<timestamp>",  
  "days":["YYYYMMDD", [..] "YYYYMMDD"]  
}
```

### Return value descriptions

Value	Description
<timestamp>	time in the camera in the format YYYYMMDDhhmmss
<days>	an array of days where there exists

## Download binary data

This script returns a binary data file for the given date(s), to be used in AXIS Store Data Manager

### Request

`http://<servername>/local/<appname>/api?export-cnt&date=<date>`

The value of <appname> specifies the application according to the table below.

Value	Application
people-counter	AXIS People Counter
occupancy-estimator	AXIS Occupancy Estimator
direction-detector	AXIS Direction Detector
tailgating-detector	AXIS Tailgating Detector
random-selector	AXIS Random Selector

### Request parameter descriptions

Parameter	Description
<date>	a date of the form YYYYMMDD
	a date interval of the form YYYYMMDD-YYYYMMDD
	comma separated dates of the form YYYYMMDD, [..], YYYYMMDD
	all for all available data

### Return

A binary data file for the given date(s).

## Request CSV data

Returns historical data in CSV format

### Request

`http://<servername>/local/<appname>/api?export-csv[&date=<date>][&res=<res>]`

# AXIS Direction Detector

## People counting apps API

---

The value of <appname> specifies the application according to the table below.

Value	Application
people-counter	AXIS People Counter
occupancy-estimator	AXIS Occupancy Estimator
direction-detector	AXIS Direction Detector
tailgating-detector	AXIS Tailgating Detector
random-selector	AXIS Random Selector

Request parameter descriptions

Parameter	Description
<date>	a date of the form YYYYMMDD
	a date interval of the form YYYYMMDD-YYYYMMDD
	comma separated dates of the form YYYYMMDD, [ . . ], YYYYMMDD
	all (default) for all available data
<res>	15m (default) for data in 15 minute bins
	1h for data in 1 hour bins
	24h for data in 1 day bins

### Return

This script returns data in plain text, comma-separated values. The first line contains a description of each element, and the following lines contain the corresponding data for the chosen time interval and resolution.

### Request XML data

Returns historical data in XML format

#### Request

`http://<servername>/local/<appname>/api?export-xml [&date=<date>] [&res=<res>]`

The value of <appname> specifies the application according to the table below.

Value	Application
people-counter	AXIS People Counter
occupancy-estimator	AXIS Occupancy Estimator
direction-detector	AXIS Direction Detector
tailgating-detector	AXIS Tailgating Detector
random-selector	AXIS Random Selector

Request parameter descriptions

# AXIS Direction Detector

## People counting apps API

---

Parameter	Description
<date>	a date of the form YYYYMMDD
	a date interval of the form YYYYMMDD-YYYYMMDD
	comma separated dates of the form YYYYMMDD, [ . . ], YYYYMMDD
	all (default) for all available data
<res>	15m (default) for data in 15 minute bins
	1h for data in 1 hour bins
	24h for data in 1 day bins

### Return

This script returns data in XML format. The DTD file can be found at <http://<servername>/local/<appname>/appdata.dtd>.

### Request JSON data

Returns historical data in JSON format

#### Request

`http://<servername>/local/<appname>/api?export=json[&date=<date>][&res=<res>]`

The value of <appname> specifies the application according to the table below.

Value	Application
people-counter	AXIS People Counter
occupancy-estimator	AXIS Occupancy Estimator
direction-detector	AXIS Direction Detector
tailgating-detector	AXIS Tailgating Detector
random-selector	AXIS Random Selector

### Request parameter descriptions

Parameter	Description
<date>	a date of the form YYYYMMDD
	a date interval of the form YYYYMMDD-YYYYMMDD
	comma separated dates of the form YYYYMMDD, [ . . ], YYYYMMDD
	all (default) for all available data
<res>	15m (default) for data in 15 minute bins
	1h for data in 1 hour bins
	24h for data in 1 day bins

### Return

This script returns data in JSON format.

# AXIS Direction Detector

## People counting apps API

---

### Clear counting data

#### Request

`http://<servername>/local/<appname>/.apioperator?clear-data`

The value of <appname> specifies the application according to the table below.

Value	Application
people-counter	AXIS People Counter
occupancy-estimator	AXIS Occupancy Estimator
direction-detector	AXIS Direction Detector
tailgating-detector	AXIS Tailgating Detector
random-selector	AXIS Random Selector

#### Return

OK

### Live view information

Returns information about the placement of the lines in Live view.

#### Request

`http://<servername>/local/<appname>/.api?cntpos.json`

The value of <appname> specifies the application according to the table below.

Value	Application
people-counter	AXIS People Counter
occupancy-estimator	AXIS Occupancy Estimator
direction-detector	AXIS Direction Detector
tailgating-detector	AXIS Tailgating Detector
random-selector	AXIS Random Selector

#### Response

```
{  
  "width":<width>,  
  "height":<height>,  
  "left":<left>,  
  "right":<right>,  
  "top":<top>,  
  "bottom":<bottom>,  
  "yfirst":<yfirst>,  
  "ylast":<ylast>,  
  "radius":<radius>  
}
```

Return value descriptions

Value	Description
<width>	dimension of the video stream
<height>	



# AXIS Direction Detector

## People counting apps API

---

Value	Description
<left>	x coordinates in pixels forstart and stop for the blue lines in Live view
<right>	
<top>	y coordinates in pixels for the two blue lines in Live view
<bottom>	
<yfirst>	y coordinates in pixels for the top and bottom of the red counting area, disregarding curvature
<ylast>	
<radius>	radius in pixels describing the curvature of the red counting area, as measured in the center of the area on both axes, or if the area is not curved

### Show the system log

#### Request

`http://<servername>/local/<appname>/.apioperator?show-logs`

The value of <appname> specifies the application according to the table below.

Value	Application
people-counter	AXIS People Counter
occupancy-estimator	AXIS Occupancy Estimator
direction-detector	AXIS Direction Detector
tailgating-detector	AXIS Tailgating Detector
random-selector	AXIS Random Selector

#### Return

Displays the system logs.

### Generate a log archive

#### Request

`http://<servername>/local/<appname>/.apioperator?generate-logs`

The value of <appname> specifies the application according to the table below.

Value	Application
people-counter	AXIS People Counter
occupancy-estimator	AXIS Occupancy Estimator
direction-detector	AXIS Direction Detector
tailgating-detector	AXIS Tailgating Detector
random-selector	AXIS Random Selector

#### Return

A log archive

# AXIS Direction Detector

## People counting apps API

---

### List people counter parameters

#### Request

`http://<servername>/local/<appname>/api?params.json`

The value of <appname> specifies the application according to the table below.

Value	Application
<code>people-counter</code>	AXIS People Counter
<code>occupancy-estimator</code>	AXIS Occupancy Estimator
<code>direction-detector</code>	AXIS Direction Detector
<code>tailgating-detector</code>	AXIS Tailgating Detector
<code>random-selector</code>	AXIS Random Selector

#### Return

A JSON object of all the People Counter related parameters.

### Set people counter parameters

The post format has a format where pairs and values need to be specified, best described by an example:

`&p1=Counter.Enable&v1=1&p2=Counter.Height&v2=280&setparams=needstobeincluded`

#### Note

For Firmware-version 5.60 and later, use: `setparams&Counter.Height=280` instead.

#### Request

`http://<servername>/local/<appname>/apioperator?setparams`

The value of <appname> specifies the application according to the table below.

Value	Application
<code>people-counter</code>	AXIS People Counter
<code>occupancy-estimator</code>	AXIS Occupancy Estimator
<code>direction-detector</code>	AXIS Direction Detector
<code>tailgating-detector</code>	AXIS Tailgating Detector
<code>random-selector</code>	AXIS Random Selector

#### Return

OK

