

## **AXIS V5938 PTZ Network Camera**

## **User Manual**

# AXIS V5938 PTZ Network Camera

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# AXIS V5938 PTZ Network Camera

## Installation

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### Installation



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

[www.axis.com/products/online-manual/58263#t10170584](http://www.axis.com/products/online-manual/58263#t10170584)

*Installation video for the product.*

# AXIS V5938 PTZ Network Camera

## Get started

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### Get started

#### 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, go to *How to assign an IP address and access your device*.

#### Browser support

You can use the device with the following browsers:

	Chrome™	Firefox®	Edge™	Safari®
Windows®	recommended	recommended	x	
macOS®	recommended	recommended	x	x
Linux®	recommended	recommended	x	
Other operating systems	x	x	x	x*

\*Supported in iOS and iPadOS

If you need more information about recommended browsers, go to *AXIS OS Portal*.

#### Access the device

1. Open a browser and enter the IP address or host name of the Axis device.  
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 4*.
3. The live view page opens in your browser.

#### 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. See *Reset to factory default settings on page 18*



To watch this video, go to the web version of this document.  
[www.axis.com/products/online-manual/58263#t10098905](http://www.axis.com/products/online-manual/58263#t10098905)

*Support tip: Password security confirmation check*

# AXIS V5938 PTZ Network Camera

## Get started

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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.

### Webpage overview



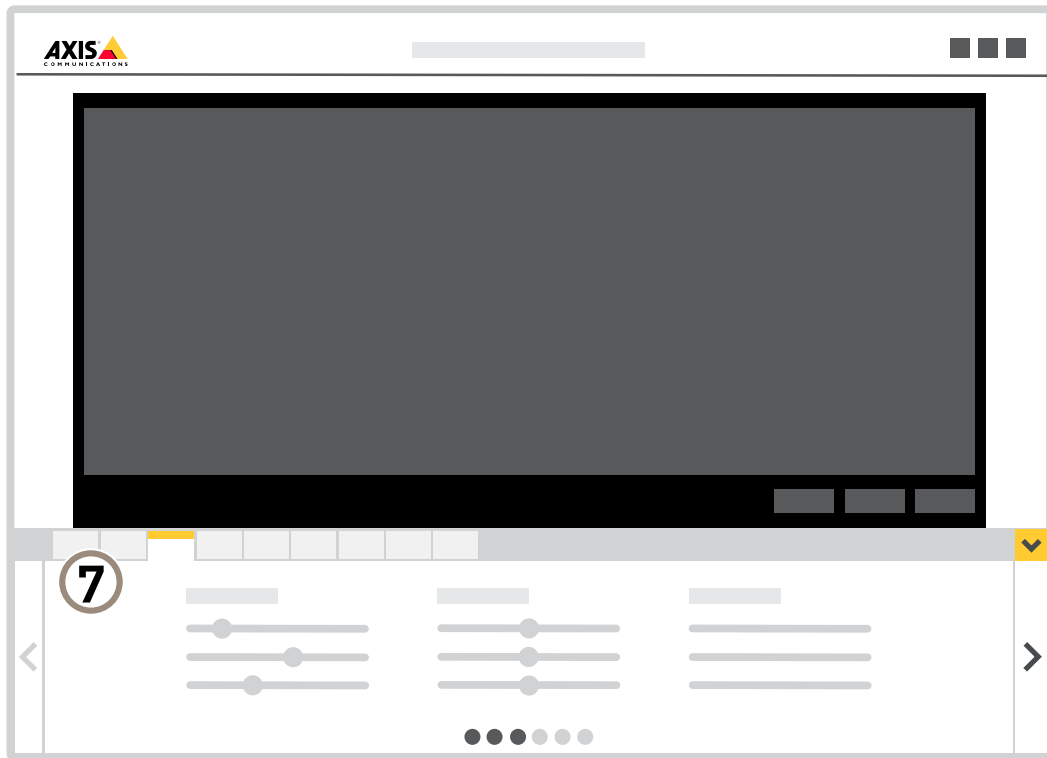
- 1 Live view control bar
- 2 Live view

# AXIS V5938 PTZ Network Camera

## Get started

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- 3 *Product name*
- 4 *User information, color themes, and help*
- 5 *Video control bar*
- 6 *Settings toggle*



- 7 *Settings tabs*

# AXIS V5938 PTZ Network Camera

## Additional settings

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### Additional settings

#### Adjust the image

This section includes instructions about how to configure your device. If you want to learn more about how certain features function, go to *Learn more on page 13*.

#### Reduce noise in low-light conditions

To reduce noise in low-light conditions, you can adjust one or more of the following settings:

##### Note

A high max shutter value can result in motion blur.

- To slow down the shutter speed, set max shutter to the highest possible value.
- Reduce sharpness in the image.

##### Note

When you reduce the max gain, the image can become darker.

- Set the max gain to a lower value.
- Open the aperture.

#### Reduce motion blur in low-light conditions

To reduce motion blur in low-light conditions, adjust one or more of the following settings in **Settings > Image > Exposure**:

##### Note

When you increase the gain, image noise also increases.

- Set **Max shutter** to a shorter time, and **Max gain** to a higher value.

If you still have problems with motion blur:

- Increase the light level in the scene.
- Mount the camera so that objects move toward it or away from it rather than sideways.

#### Maximize the details in an image

##### Important

If you maximize the details in an image, the bitrate will probably increase and you might get a reduced frame rate.

- Make sure to select the capture mode that has the highest resolution.
- Set the compression as low as possible.
- Select MJPEG streaming.
- Turn off Zipstream functionality.

#### Stabilize a shaky image with Electronic Image Stabilization (EIS)

Electronic Image Stabilization (EIS) can be used in environments where the product is mounted in an exposed location and subject to vibrations, for example, wind or passing traffic. Turn on EIS to get a smoother and steadier image without blur.

# AXIS V5938 PTZ Network Camera

## Additional settings

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EIS also reduces the file size of the compressed image and lowers the bitrate of the video stream.

### Note

When EIS is turned on the image is cropped slightly, lowering the maximum resolution.

1. Go to **Settings > Image > Image correction**.
2. Turn on EIS.

### Show an image overlay

You can add an image as an overlay in the video stream.

1. Go to **Settings > Overlay**.
2. Click **Image list**.
3. Upload an image and click **Done**.
4. Click **Create overlay**.
5. Select **Image** and click **Create**.
6. Select the image from the drop-down list.
7. To position the image overlay, choose **Custom** or one of the presets.
8. Click **Create**.

### Show the pan or tilt position as a text overlay

You can show the pan or tilt position as an overlay in the image.

1. Go to **Settings > Overlay** and click **Create overlay**.
2. Select **Text** and click **Create**.
3. In the text field, type #x to show the pan position.  
Type #y to show the tilt position.
4. Choose appearance, text size, and alignment.
5. The current pan and tilt positions show up in the live view image and in the recording.

## Adjust the camera view (PTZ)

### Limit the pan, tilt, and zoom movements

If there are parts of the scene that you don't want the camera to reach, you can limit the pan, tilt, and zoom movements. For example, you want to protect the privacy of residents in an apartment building, which is located close to a parking lot that you intend to monitor. To limit the movements, go to **Settings > PTZ > Limits**.

### Control the camera with VISCA

There are two ways to control this camera with VISCA:

**VISCA over IP** – Select this to communicate over the Ethernet.

**VISCA over serial** – Select this to communicate over serial connection.



# AXIS V5938 PTZ Network Camera

## Additional settings

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### Control the camera with VISCA over IP

#### Note

Using the IP protocol for PTZ control increases the risk of unauthorized access. It enables UDP on ports 52380 and 52381, which allows anyone on the network to change settings without having to log in to the camera.

1. Go to **Settings > System > Accessories**.
2. Turn on **VISCA**.
3. Select **VISCA over IP**.

### Control the camera with VISCA over serial

1. Connect a serial cable to the RS232 connector.
2. Go to **Settings > System > Accessories**.
3. Turn on **VISCA**.
4. Select **VISCA over serial**.
5. Select the camera's **Position in series**.
  - Select **Point to point** if the device is directly connected to the VISCA controller.
  - Select **Endpoint** if the device is the last device in the daisy chain.
  - Select **In-chain (daisy chain)** if the device is in the middle of the daisy chain.
6. Select **Baud rate**.

## View and record video

This section includes instructions about how to configure your device. To learn more about how streaming and storage works, go to *Streaming and storage on page 13*.

### Reduce bandwidth and storage

#### Important

If you reduce the bandwidth it can result in loss of details in the picture.

1. Go to live view and select **H.264**.
2. Go to **Settings > Stream**.
3. Do one or more of the following:

#### Note

The zipstream settings are used for both H.264 and H.265.

- Turn on **dynamic GOP** and set a high **GOP length** value.
- Increase the **compression**.
- Turn on **dynamic FPS**.

#### Note

Web browsers do not support H.265 decoding. Use a video management system or application supporting H.265 decoding.

# AXIS V5938 PTZ Network Camera

## Additional settings

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### View a live video stream on a monitor

Your camera can transmit a live video stream to a monitor even without a network connection.

- Connect an external monitor using the HDMI connector or the SDI connector.

### Set up network storage

To store recordings on the network, you need to set up your network storage.

1. Go to **Settings > System > Storage**.
2. Click **Setup** under **Network storage**.
3. Enter the IP address of the host server.
4. Enter the name of the shared location on the host server.
5. Move the switch if the share requires a login, and enter username and password.
6. Click **Connect**.

### Record and watch video

To record video you must first set up network storage, see *Set up network storage on page 10*, or have an SD card installed.

#### Record video

1. Go to the live view.
2. To start a recording, click **Record**. Click again to stop the recording.

#### Watch video

1. Click **Storage > Go to recordings**.
2. Select your recording in the list and it will play automatically.

### Set up rules and alerts

You can create rules to make your device perform an action when certain events occur. A rule consists of conditions and actions. The conditions can be used to trigger the actions. For example, the device can start a recording or send an email when it detects motion, or show an overlay text while the device is recording.

#### Trigger an action

1. Go to **Settings > System > Events** to set up a rule. The rule defines when the device will perform certain actions. Rules can be setup as scheduled, recurring, or for example, triggered by motion detection.
2. Select the **Condition** that must be met to trigger the action. If you specify more than one condition for the rule, all of the conditions must be met to trigger the action.
3. Select which **Action** the device should perform when the conditions are met.

#### Note

If you make changes to an active rule, you have to restart the rule for the changes to take effect.

#### Note

If you change the definition of a stream profile that is used in a rule, you have to restart all the rules that use that stream profile.

# AXIS V5938 PTZ Network Camera

## Additional settings

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### Audio

#### Add audio to your recording

Turn on audio:

1. Go to **Settings > Audio** and turn on **Allow audio**.
2. Go to **Input > Type** and select your audio source.

Edit the stream profile which is used for the recording:

3. Go to **Settings > Stream** and click **Stream profiles**.
4. Select the stream profile and click **Audio**.
5. Select the checkbox and select **Include**.
6. Click **Save**.
7. Click **Close**.

# AXIS V5938 PTZ Network Camera

## Cleaning recommendations

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### Cleaning recommendations

**NOTICE**

Never use harsh detergent, for example gasoline, benzene, or acetone.

1. Use a can of compressed air to remove any dust or loose dirt from the device.
2. If necessary, clean the lens with a soft cloth dampened with lukewarm water.

**Note**

Avoid cleaning in direct sunlight or at elevated temperatures, as this may cause stains when the water droplets dry.

# AXIS V5938 PTZ Network Camera

[Learn more](#)

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[Learn more](#)

## Capture modes

Capture mode defines the maximum resolution and maximum frame rate available in the Axis product. The capture mode also affects light sensitivity. A capture mode with a high maximum frame rate has reduced light sensitivity and vice versa.

Which capture mode to choose depends on the requirements of frame rate and resolution for the specific surveillance setup. For specifications about available capture modes, see the product's datasheet at [axis.com](http://axis.com).

## Overlays

### Note

Overlays are not included in the video stream when using SIP calls.

### Note

Image and text overlay will not be displayed on video stream over HDMI.

### Note

Image and text overlay will not be displayed on video stream over SDI.

Overlays are superimposed over the video stream. They are used to provide extra information during recordings, such as a timestamp, or during product installation and configuration. You can add either text or an image.

## Streaming and storage

### Video compression formats

Decide which compression method to use based on your viewing requirements, and on the properties of your network. The available options are:

#### Motion JPEG

### Note

To ensure support for the Opus audio codec, the Motion JPEG stream is always sent over RTP.

Motion JPEG, or MJPEG, is a digital video sequence that is made up of a series of individual JPEG images. These images are then displayed and updated at a rate sufficient to create a stream that shows constantly updated motion. For the viewer to perceive motion video the rate must be at least 16 image frames per second. Full motion video is perceived at 30 (NTSC) or 25 (PAL) frames per second.

The Motion JPEG stream uses considerable amounts of bandwidth, but provides excellent image quality and access to every image contained in the stream.

#### H.264 or MPEG-4 Part 10/AVC

### Note

H.264 is a licensed technology. The Axis product includes one H.264 viewing client license. To install additional unlicensed copies of the client is prohibited. To purchase additional licenses, contact your Axis reseller.

H.264 can, without compromising image quality, reduce the size of a digital video file by more than 80% compared to the Motion JPEG format and by as much as 50% compared to the MPEG-4 standard. This means that less network bandwidth and storage space are required for a video file. Or seen another way, higher video quality can be achieved for a given bitrate.

#### H.265 or MPEG-H Part 2/HEVC

# AXIS V5938 PTZ Network Camera

## Learn more

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### Note

H.265 is licensed technology. The Axis product includes one H.265 viewing client license. To install additional unlicensed copies of the client is prohibited. To purchase additional licenses, contact your Axis reseller.

### How do Image, Stream, and Stream profile settings relate to each other?

The **Image** tab contains camera settings that affect all video streams from the product. If you change something in this tab, it immediately affects all video streams and recordings.

The **Stream** tab contains settings for video streams. You get these settings if you request a video stream from the product and don't specify for example resolution, or frame rate. When you change the settings in the **Stream** tab, it doesn't affect ongoing streams, but it will take effect when you start a new stream.

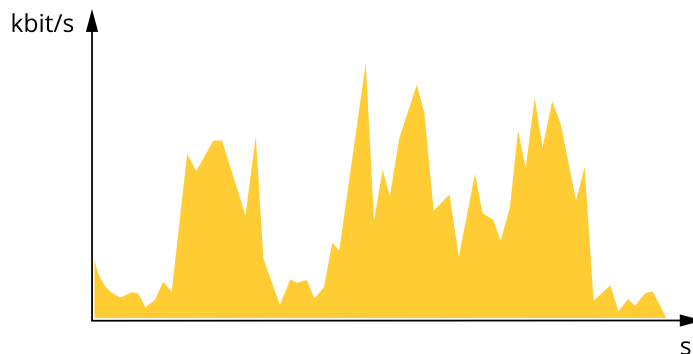
The **Stream profiles** settings override the settings from the **Stream** tab. If you request a stream with a specific stream profile, the stream contains the settings of that profile. If you request a stream without specifying a stream profile, or request a stream profile that doesn't exist in the product, the stream contains the settings from the **Stream** tab.

### Bitrate control

With bitrate control, you can manage the bandwidth consumption of your video stream.

#### Variable bitrate (VBR)

With variable bitrate, the bandwidth consumption varies based on the level of activity in the scene. The more activity in the scene, the more bandwidth you need. You are guaranteed constant image quality but it requires storage margins.



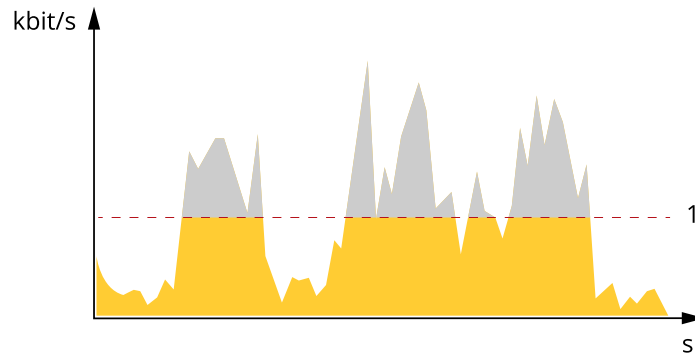
#### Maximum bitrate (MBR)

With maximum bitrate, you can set a target bitrate to handle bitrate limitations in your system. You may see a decline in image quality or frame rate when the instantaneous bitrate is kept below the specified target bitrate. You can choose to either prioritize image quality or frame rate. We recommend that you configure the target bitrate to a higher value than the expected bitrate. This gives you a margin for additional complexity that needs to be captured.

# AXIS V5938 PTZ Network Camera

Learn more

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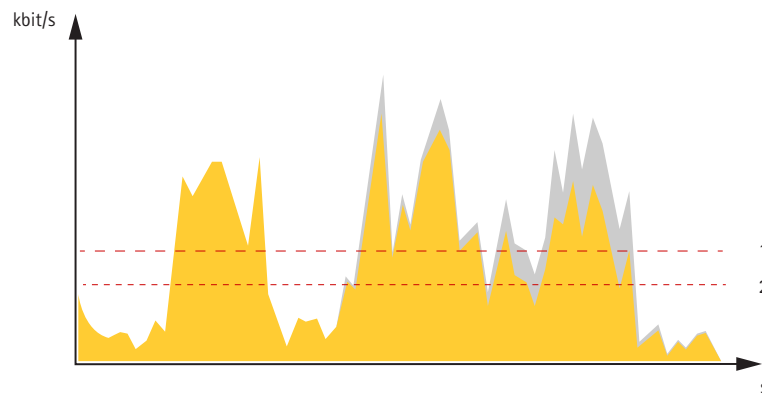


1 Target bitrate

## Average bitrate (ABR)

With average bitrate, the bitrate is automatically adjusted over a longer timescale. This is so you can meet the specified target and provide the best video quality based on your available storage. Bitrate is higher in scenes with a lot of activity, compared to static scenes. You are more likely to get better image quality when needed when using the average bitrate option. You can define the total storage required to store the video stream for a specified amount of time (retention time) when image quality is adjusted to meet the specified target bitrate. Specify the average bitrate settings in one of the following ways:

- To calculate the estimated storage need, set the target bitrate and the retention time.
- To calculate the average bitrate, based on available storage and required retention time, use the target bitrate calculator.



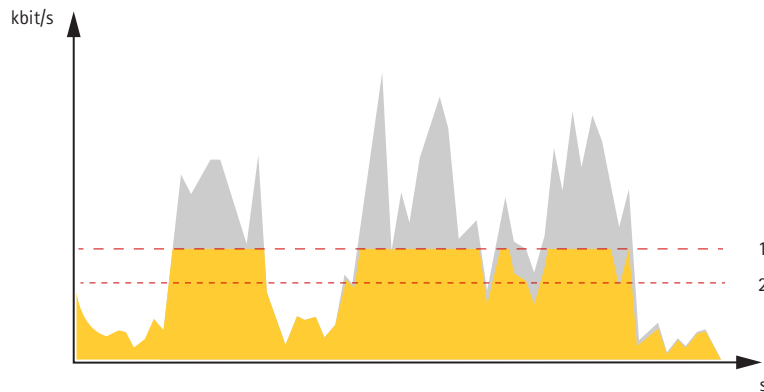
1 Target bitrate  
2 Actual average bitrate

You can also turn on maximum bitrate and specify a target bitrate within the average bitrate option.

# AXIS V5938 PTZ Network Camera

Learn more

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- 1 Target bitrate
- 2 Actual average bitrate

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

To find the user manuals for Axis applications, go to [axis.com](http://axis.com).

### Note

- Several applications can run at the same time but some applications might not be compatible with each other. Certain combinations of applications might require too much processing power or memory resources when run in parallel. Verify that the applications work together before deployment.



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

[www.axis.com/products/online-manual/58263#t10001688](http://www.axis.com/products/online-manual/58263#t10001688)

*How to download and install an application*





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

[www.axis.com/products/online-manual/58263#t10001688](http://www.axis.com/products/online-manual/58263#t10001688)

*How to activate an application licence code on a device*

## Autotracking

With autotracking, the camera automatically zooms in on and tracks moving objects, for example a vehicle or a person. You can manually select an object to track, or set up trigger areas and let the camera detect moving objects. The application is best suited for open areas with no obscuring objects and where movement is unusual. When the camera doesn't track an object, it returns to its home position.

### Important

- Autotracking is designed for areas with a limited amount of movement.

# AXIS V5938 PTZ Network Camera

## Troubleshooting

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### Troubleshooting

#### Reset to factory default settings

**Important**

Reset to factory default should be used with caution. A reset to factory default resets all settings, including the IP address, to the factory default values.

To reset the product to the factory default settings:

1. Disconnect power from the product.
2. Press and hold the control button while reconnecting power. See *Product overview on page 22*.
3. Keep the control button pressed for 15–30 seconds until the status LED indicator flashes amber.
4. Release the control button. The process is complete when the status LED indicator turns green. The product has been reset to the factory default settings. If no DHCP server is available on the network, the default IP address is 192.168.0.90.
5. Use the installation and management software tools to assign an IP address, set the password, and access the video stream.

The installation and management software tools are available from the support pages on [axis.com/support](https://axis.com/support).

It is also possible to reset parameters to factory default through the web interface. Go to **Settings > System > Maintenance** and click **Default**.

#### 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](https://axis.com/support/firmware).

#### Check the current firmware

Firmware is the software that determines the functionality of network devices. One of your first actions when troubleshooting a problem should be to check the current firmware version. The latest version may contain a correction that fixes your particular problem.

To check the current firmware:

1. Go to the product's webpage.
2. Click the help menu .
3. Click **About**.

#### 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.

# AXIS V5938 PTZ Network Camera

## Troubleshooting

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

AXIS Device Manager can be used for multiple upgrades. Find out more at [axis.com/products/axis-device-manager](http://axis.com/products/axis-device-manager).



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

[www.axis.com/products/online-manual/58263#t10095327](http://www.axis.com/products/online-manual/58263#t10095327)

*How to upgrade the firmware*

1. Download the firmware file to your computer, available free of charge at [axis.com/support/firmware](http://axis.com/support/firmware).
2. Log in to the product as an administrator.
3. Go to **Settings > System > Maintenance**. Follow the instructions on the page. When the upgrade has finished, the product restarts automatically.

## Technical issues, clues and solutions

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

### Problems upgrading the firmware

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Firmware upgrade failure	If the firmware upgrade fails, the device reloads the previous firmware. The most common reason is that the wrong firmware file has been uploaded. Check that the name of the firmware file corresponds to your device and try again.
Problems after firmware upgrade	If you experience problems after a firmware upgrade, roll back to the previously installed version from the <b>Maintenance</b> page.

### Problems setting the IP address

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The device is located on a different subnet	If the IP address intended for the device and the IP address of the computer used to access the device are located on different subnets, you cannot set the IP address. Contact your network administrator to obtain an IP address.
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# AXIS V5938 PTZ Network Camera

## Troubleshooting

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The IP address is being used by another device

Disconnect the Axis device from the network. Run the ping command (in a Command/DOS window, type `ping` and the IP address of the device):

- If you receive: `Reply from <IP address>: bytes=32; time=10...` this means that the IP address may already be in use by another device on the network. Obtain a new IP address from the network administrator and reinstall the device.
- If you receive: `Request timed out`, this means that the IP address is available for use with the Axis device. Check all cabling and reinstall the device.

Possible IP address conflict with another device on the same subnet

The static IP address in the Axis device is used before the DHCP server sets a dynamic address. This means that if the same default static IP address is also used by another device, there may be problems accessing the device.

### The device cannot be accessed from a browser

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Cannot log in

When HTTPS is enabled, ensure that the correct protocol (HTTP or HTTPS) is used when attempting to log in. You may need to manually type `http` or `https` in the browser's address field.

If the password for the user `root` is lost, the device must be reset to the factory default settings. See *Reset to factory default settings on page 18*.

The IP address has been changed by DHCP

IP addresses obtained from a DHCP server are dynamic and may change. If the IP address has been changed, use AXIS IP Utility or AXIS Device Manager to locate the device on the network. Identify the device using its model or serial number, or by the DNS name (if the name has been configured).

If required, a static IP address can be assigned manually. For instructions, go to [axis.com/support](http://axis.com/support).

Certificate error when using IEEE 802.1X

For authentication to work properly, the date and time settings in the Axis device must be synchronized with an NTP server. Go to **Settings > System > Date and time**.

### The device is accessible locally but not externally

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To access the device externally, we recommend using one of the following applications for Windows®:

- AXIS Companion: free of charge, ideal for small systems with basic surveillance needs.
- AXIS Camera Station: 30-day trial version free of charge, ideal for small to mid-size systems.

For instructions and download, go to [axis.com/vms](http://axis.com/vms).

### Problems with streaming

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Multicast H.264 only accessible by local clients

Check if your router supports multicasting, or if the router settings between the client and the device need to be configured. The TTL (Time To Live) value may need to be increased.

No multicast H.264 displayed in the client

Check with your network administrator that the multicast addresses used by the Axis device are valid for your network.

Check with your network administrator to see if there is a firewall preventing viewing.

Poor rendering of H.264 images

Ensure that your graphics card is using the latest driver. The latest drivers can usually be downloaded from the manufacturer's website.

Color saturation is different in H.264 and Motion JPEG

Modify the settings for your graphics adapter. Go to the adapter's documentation for more information.

# AXIS V5938 PTZ Network Camera

## Troubleshooting

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Lower frame rate than expected

- See *Performance considerations on page 21*.
- Reduce the number of applications running on the client computer.
- Limit the number of simultaneous viewers.
- Check with the network administrator that there is enough bandwidth available.
- Lower the image resolution.
- Log in to the device's webpage and set a capture mode that prioritizes frame rate. Changing the capture mode to prioritize frame rate might lower the maximum resolution depending on the device used and capture modes available.
- The maximum frames per second is dependent on the utility frequency (60/50 Hz) of the Axis device.

Can't select H.265 encoding in live view

Web browsers do not support H.265 decoding. Use a video management system or application supporting H.265 decoding.

## Performance considerations

When setting up your system, it is important to consider how various settings and situations affect the performance. Some factors affect the amount of bandwidth (the bitrate) required, others can affect the frame rate, and some affect both. If the load on the CPU reaches its maximum, this also affects the frame rate.

The following factors are the most important to consider:

- High image resolution or lower compression levels result in images containing more data which in turn affects the bandwidth.
- Rotating the image in the GUI will increase the product's CPU load.
- Access by large numbers of Motion JPEG or unicast H.264 clients affects the bandwidth.
- Simultaneous viewing of different streams (resolution, compression) by different clients affects both frame rate and bandwidth.

Use identical streams wherever possible to maintain a high frame rate. Stream profiles can be used to ensure that streams are identical.

- Accessing Motion JPEG and H.264 video streams simultaneously affects both frame rate and bandwidth.
- Heavy usage of event settings affects the product's CPU load which in turn affects the frame rate.
- Using HTTPS may reduce frame rate, in particular if streaming Motion JPEG.
- Heavy network utilization due to poor infrastructure affects the bandwidth.
- Viewing on poorly performing client computers lowers perceived performance and affects frame rate.
- Running multiple AXIS Camera Application Platform (ACAP) applications simultaneously may affect the frame rate and the general performance.

## Contact support

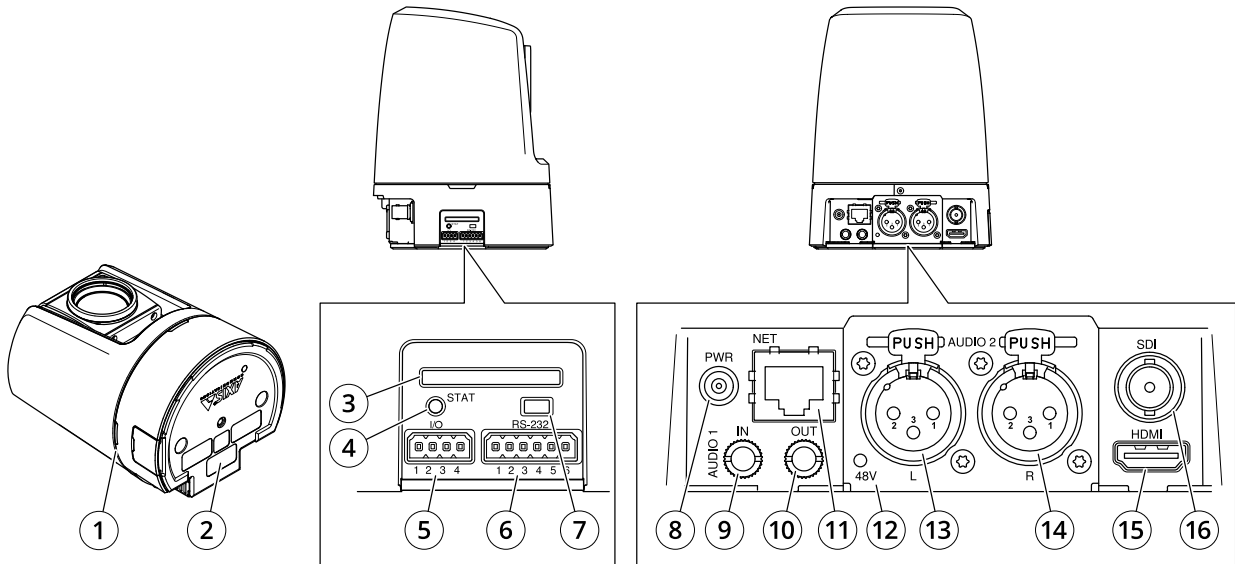
Contact support at [axis.com/support](http://axis.com/support).

# AXIS V5938 PTZ Network Camera

## Specifications

### Specifications

#### Product overview



- 1 Tally LED (3x)
- 2 Part number (P/N) & Serial number (S/N)
- 3 SD card slot (SDHC)
- 4 Status LED indicator
- 5 I/O connector
- 6 VISCA connector (RS-232)
- 7 Control button
- 8 Power connector
- 9 3.5 mm, unbalanced audio in
- 10 3.5 mm, unbalanced audio out
- 11 Network connector
- 12 Microphone phantom power LED (XLR)
- 13 XLR, balanced audio in (left)
- 14 XLR, balanced audio in (right)
- 15 HDMI connector
- 16 BNC connector (SDI)

#### LED indicators

Status LED	Indication
Unlit	Connection and normal operation.
Green	Shows steady green for 10 seconds for normal operation after startup completed.
Amber	Steady during startup. Flashes during firmware upgrade or reset to factory default.
Amber/Red	Flashes amber/red if network connection is unavailable or lost.
Red	Firmware upgrade failure.

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Microphone power LED	Indication
Unlit	Phantom power off.
Blue	Phantom power on.

### Note

- The tally LED (indication LED) only indicates network transmission. If video or audio is only transmitted through HDMI or SDI the tally LED will be unlit.

Tally LED	Indication
Unlit	Camera idle.
Red	Active network transmission or recording.

## SD card slot

### NOTICE

- Risk of damage to SD card. Do not use sharp tools, metal objects, or excessive force when inserting or removing the SD card. Use your fingers to insert and remove the card.
- Risk of data loss and corrupted recordings. Do not remove the SD card while the product is running. Unmount the SD card from the product's webpage before removal.

This product supports SD/SDHC/SDXC cards.

For SD card recommendations, see [axis.com](http://axis.com).



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## Buttons

### Control button

The control button is used for:

- Resetting the product to factory default settings. See *Reset to factory default settings on page 18*.
- Connecting to an AXIS Video Hosting System service. To connect, press and hold the button for about 3 seconds until the status LED flashes green.

## Connectors

### BNC connector

The BNC connector is used for connecting broadcast equipment using SDI. Connect a 75 Ohm coaxial SDI cable.

### CAUTION

The connector may be hot during normal operation in elevated ambient temperatures.

### HDMI connector

Use the HDMI™ connector to connect a display or public view monitor.

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### Network connector

RJ45 Ethernet connector.

### Audio connector

3.5 mm connector

- **Audio in** – 3.5 mm input for a digital microphone, an analog mono microphone, or a line-in mono signal (left channel is used from a stereo signal).
- **Audio in** – 3.5 mm input for a stereo microphone, or a line-in stereo signal.
- **Audio out** – 3.5 mm output for audio (line level) that can be connected to a public address (PA) system or an active speaker with a built-in amplifier. A pair of headphones can also be attached. A stereo connector must be used for audio out.



#### Audio input

1 Tip	2 Ring	3 Sleeve
Unbalanced microphone (with or without electret power) or line	Electret power if selected	Ground
Digital signal	Ring power if selected	Ground

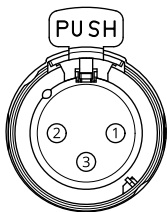
#### Audio output

1 Tip	2 Ring	3 Sleeve
Stereo unbalanced line, "left"	Stereo unbalanced line, "right"	Ground

For audio in, the left channel is used from a stereo signal.

#### XLR connector

- **Left** – 3-pin XLR connector for balanced audio input. Use left connector for mono.
- **Right** – 3-pin XLR connector for balanced audio input.



Pin	1	2	3
Function	Ground	Balanced Microphone Hot (+) In	Balanced Microphone Cold (-) In

#### I/O connector

Use the I/O connector with external devices in combination with, for example, motion detection, event triggering, and alarm notifications. In addition to the 0 V DC reference point and power (DC output), the I/O connector provides the interface to:



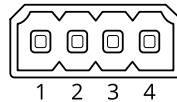
# AXIS V5938 PTZ Network Camera

## Specifications

**Digital input** – For connecting devices that can toggle between an open and closed circuit, for example PIR sensors, door/window contacts, and glass break detectors.

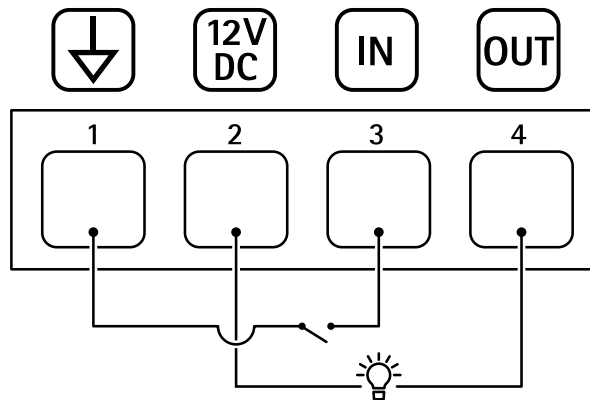
**Digital output** – For connecting external devices such as relays and LEDs. Connected devices can be activated by the VAPIX® Application Programming Interface, through an event or from the product's webpage.

4-pin terminal block



Function	Pin	Notes	Specifications
DC ground	1		0 V DC
DC output	2	Can be used to power auxiliary equipment. Note: This pin can only be used as power out.	12 V DC Max load = 25 mA
Digital Input	3	Connect to pin 1 to activate, or leave floating (unconnected) to deactivate.	0 to max 30 V DC
Digital Output	4	Internally connected to pin 1 (DC ground) when active, and floating (unconnected) when inactive. If used with an inductive load, e.g., a relay, connect a diode in parallel with the load, to protect against voltage transients.	0 to max 30 V DC, open drain, 100 mA

Example



- 1 DC ground
- 2 DC output 12 V, max 25 mA
- 3 Digital input
- 4 Digital output

### Power connector

DC connector. Use the supplied adapter.

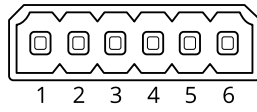
### VISCA connector (RS-232)

6-pin terminal block for the RS232 serial interface. This is used to control the camera using the VISCA protocol.

# AXIS V5938 PTZ Network Camera

## Specifications

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Function	Pin	Notes
TXD1	1	VISCA input
RXD1	2	
GND	3	Ground
TXD2	4	VISCA output
RXD2	5	
GND	6	Ground

