

AXIS P5655-E PTZ Network Camera

User Manual

AXIS P5655-E PTZ Network Camera

Table of Contents

Installation	3
Get started	4
Find the device on the network	4
Access the device	4
Webpage overview	5
Additional settings	7
Adjust the image	7
View and record video	9
Adjust the camera view (PTZ)	10
Events	11
Audio	15
Learn more	16
Privacy masks	16
Overlays	16
Pan, tilt, and zoom (PTZ)	16
Streaming and storage	16
Applications	19
Troubleshooting	21
Reset to factory default settings	21
Check the current firmware	21
Upgrade the firmware	21
Technical issues, clues and solutions	22
Performance considerations	23
Specifications	25
Product overview	25
LED indicators	26
SD card slot	26
Buttons	26
Connectors	26

AXIS P5655-E PTZ Network Camera

Installation

Installation



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

www.axis.com/products/online-manual/42640#t10170649

Installation video for the product.

AXIS P5655-E PTZ Network Camera

Get started

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.

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 21*



To watch this video, go to the web version of this document.
www.axis.com/products/online-manual/42640#t10098905

Support tip: Password security confirmation check

AXIS P5655-E PTZ Network Camera

Get started

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

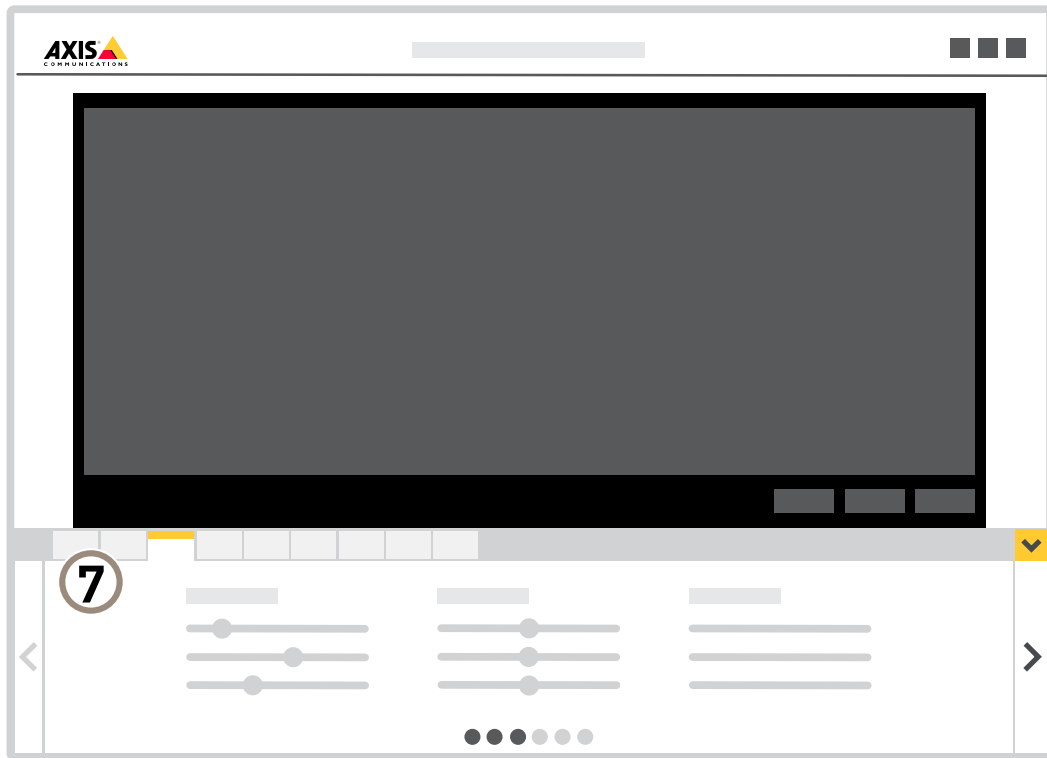


- 1 Live view control bar
- 2 Live view

AXIS P5655-E PTZ Network Camera

Get started

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



- 7 Settings tabs

AXIS P5655-E PTZ Network Camera

Additional settings

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 16*.

Adjust the focus faster with focus recall areas

To save the focus settings at a specific pan/tilt range, add a focus recall area. Each time the camera moves into that area it recalls the previously saved focus. It's enough to cover half of the focus recall area in the live view.

We recommend the focus recall feature in the following scenarios:

- When there is a lot of manual operation in live view, for example with a joystick.
- Where PTZ preset positions with manual focus are not efficient, for example movements where the focus setting changes continuously.
- In low-light scenarios, where the autofocus is challenged by the lighting conditions.

Important

- The focus recall overrides the camera's autofocus at the specific pan/tilt range.
- A preset position overrides the focus setting saved in the focus recall area.
- The maximum number of focus recall areas is 20.

Create a focus recall area


1. Pan, tilt, and zoom into the area where you would like to have focus.

As long as the focus recall button shows a plus  , you can add a focus recall area in that position.

2. Adjust the focus.
3. Click the focus recall button.

Delete a focus recall area

1. Pan, tilt, and zoom into the focus recall area you want to delete.

The focus recall button toggles to minus when the camera detects a focus recall area:  .

2. Click the focus recall button.

Handle scenes with strong backlight

Dynamic range is the difference in light levels in an image. In some cases the difference between the darkest and the brightest areas can be significant. The result is often an image where either the dark or the bright areas are visible. Wide dynamic range (WDR) makes both dark and bright areas of the image visible.

AXIS P5655-E PTZ Network Camera

Additional settings



Image without WDR.



Image with WDR.

Note

- WDR can cause artifacts in the image.
 - WDR may not be available for all capture modes.
1. Go to **Settings > Image > Wide dynamic range**.
 2. Turn on WDR.
 3. Use the **Local contrast** slider to adjust the amount of WDR.
 4. If you still have problems, go to **Exposure** and adjust the **Exposure zone** to cover the area of interest.

Find out more about WDR and how to use it at axis.com/web-articles/wdr.

Hide parts of the image with privacy masks

You can create one or several privacy masks to hide parts of the image.



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

www.axis.com/products/online-manual/42640#t10106902

How to create a privacy mask

AXIS P5655-E PTZ Network Camera

Additional settings

1. Go to **Settings > Privacy mask**.
2. Click **New**.
3. Adjust the size, color, and name of the privacy mask according to your needs.



How to change the appearance of the mask

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. **Include** the text overlay.
6. The current pan and tilt positions show up in the live view image and in the recording.

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 16*.

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:
 - Turn on the Zipstream functionality and select the desired level.

Note

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

AXIS P5655-E PTZ Network Camera

Additional settings

- 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.

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.


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**.

Create a guard tour with preset positions

A guard tour displays the video stream from different preset positions either in a predetermined or random order, and for configurable periods of time.

1. Go to **Settings > PTZ > Guard tours**.
2. Click **+**.
3. To edit the guard tour's properties, click .
4. Type a name for the guard tour and specify the pause length in minutes between each tour.

AXIS P5655-E PTZ Network Camera

Additional settings

5. If you want the guard tour to go to the preset positions in a random order, turn on **Shuffle**.
6. Click **Done**.
7. Click **Add** to add the preset positions that you want in your guard tour.
8. Click **Done** to exit the guard tour settings.
9. To schedule the guard tour, go to **System > Events**.



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

www.axis.com/products/online-manual/42640#t1011157

Events

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.

Direct the camera to a preset position when the camera detects motion

This example explains how to set up the camera to go to a preset position when it detects motion in the image.



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

www.axis.com/products/online-manual/42640#t10101129

Make sure that **AXIS Video Motion Detection** is running:

1. Go to **Settings > Apps > AXIS Video Motion Detection**.
2. Start the application if it is not already running.
3. Make sure you have set up the application according to your needs. If you need help, see the *user manual for AXIS Video Motion Detection 4*.

Add a preset position:

AXIS P5655-E PTZ Network Camera

Additional settings

Go to **Settings > PTZ** and set where you want the camera to be directed by creating a preset position.

Create a rule:

1. Go to **Settings > System > Events > Rules** and add a rule.
2. Type a name for the rule.
3. In the list of conditions, select a video motion detection condition under **Application**.
4. From the list of actions, select **Go to preset position**.
5. Select the preset position you want the camera to go to.
6. Click **Save**.

Direct the camera and open the lock to a gate when someone is nearby

This example explains how to direct the camera and open a gate when someone wants to enter during daytime. This is done by connecting a PIR detector to the product's input port and a switch relay to the product's output port via the multicable.

Required hardware

- Multicable (sold separately), see *Multiconnector on page 26*.
- Mounted PIR detector
- Switch relay connected to the gate lock, in this case the switch is normally closed (NC)
- Connecting wires

Physical connection

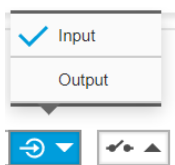
1. Remove the plug from the camera's multi-connector and connect the multicable.
2. Connect the wires from the PIR detector to the input pin, see *Multiconnector on page 26*.
3. Connect the wires from the switch to the output pin, see *Multiconnector on page 26*.

Configure I/O ports

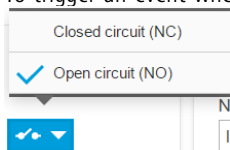
You need to connect the switch relay to the camera from the camera's webpage. First, configure the I/O ports:

Set the PIR detector to an input port

1. Go to **System > I/O ports**.



2. Select **Input** in the **Port 1** drop-down list.
3. Give the input module a descriptive name, for example "PIR detector".
4. To trigger an event whenever the PIR detector senses motion, select **Open circuit** in the drop-down list.

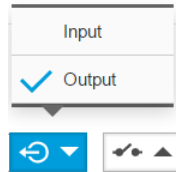


AXIS P5655-E PTZ Network Camera

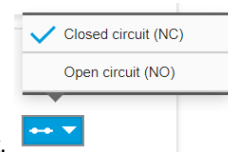
Additional settings

Set the switch relay to an output port

1. Go to **System > I/O ports**.



2. Select **Output** in the Port 2 drop-down list.
3. Give the output module a descriptive name, for example "Gate switch".



4. To open the gate whenever an event is triggered, select **Closed circuit** in the drop-down list.

Create the preset position

1. Go to **Settings > PTZ > Preset positions**.
2. Create the preset position that covers the entrance of the gate and name it, for example, "Gate entrance".

Create rules

For the camera to open the gate when the PIR detector senses someone nearby, you need to create a rule in the camera:

1. Go to **Settings > System > Events** and add a rule.
2. Type a name for the rule, for example "Open gate".
3. In the list of conditions, select **PIR detector**.
4. In the list of actions, select **Toggle I/O once**.
5. In the list of ports, select **Gate switch**.
6. Set state to **Active**.
7. Set the duration.
8. Click **Save**.
9. Create another rule with the name "Direct the camera to the gate".
10. Select the same input signal as before, but as action select the previously created "Gate entrance" preset position.
11. Click **Save**.

Record video when the camera detects loud noises

This example explains how to set up the camera to start recording to the SD card five seconds before it detects loud noise and to stop one minute after.

Turn on audio:

1. Set up the stream profile to include audio, see *Add audio to your recording on page 15*.

Turn on audio detection:

AXIS P5655-E PTZ Network Camera

Additional settings

1. Go to **Settings > System > Detectors > Audio detection**.
2. Adjust the alarm level according to your needs.

Create a rule:

1. Go to **Settings > System > Events** and add a rule.
2. Type a name for the rule.
3. In the list of conditions, under **Audio**, select **Audio Detection**.
4. In the list of actions, under **Recordings**, select **Record video**.
5. Select the stream profile where audio has been turned on.
6. Set the prebuffer time to 5 seconds.
7. Set the postbuffer time to 60 seconds.
8. In the list of storage options, select **SD card**.
9. Click **Save**.

Zoom in on a specific area automatically with gatekeeper

This example explains how to use the gatekeeper functionality to make the camera zoom in automatically on the license plate of a car that passes through a gate. When the car has passed, the camera zooms out to the home position.

Create the preset positions:

1. Go to **Settings > PTZ > Preset positions**.
2. Create the home position that includes the entrance of the gate.
3. Create the zoomed-in preset position so that it covers the area in the image where you assume that the license plate will appear.

Create a motion detection profile:

1. Go to **Settings > Apps** and open **AXIS Video Motion Detection**.
2. Create a profile that covers the entrance of the gate and then save the profile.

Create a rule:

1. Go to **Settings > System > Events** and add a rule.
2. Name the rule "Gatekeeper".
3. In the list of conditions, under **Application**, select the motion detection profile.
4. In the list of actions, under **Preset positions**, select **Go to preset position**.
5. Select a **Video channel**.
6. Select the **Preset position**.
7. To make the camera wait a while before it returns to the home position, select **Home timeout**, and set a time.
8. Click **Save**.

AXIS P5655-E PTZ Network Camera

Additional settings

Record video when the camera detects impact

Shock detection allows the camera to detect tampering caused by vibrations or shock. Vibrations due to the environment or to an object can trigger an action depending on the shock sensitivity range, which can be set from 0 to 100. In this scenario, someone is throwing rocks at the camera after hours and you would like to get a video clip of the event.

Turn on shock detection:

1. Go to **Settings > System > Detectors**.
2. Turn on shock detection, and set a value for the shock sensitivity.

Create a rule:

1. Go to **Settings > System > Events** and add a rule.
2. Type a name for the rule.
3. In the list of conditions, under **Device status**, select **Shock detected**.
4. Click **+** to add a second condition.
5. In the list of conditions, under **Scheduled and recurring**, select **Scheduled event**.
6. In the list of schedules, select **After hours**.
7. In the list of actions, under **Recordings**, select **Record video while the rule is active**.
8. Select a **Camera**.
9. Set the prebuffer time to 5 seconds.
10. Set the postbuffer time to 60 seconds.
11. Select where to save the recordings.
12. Click **Save**.

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 P5655-E PTZ Network Camera

Learn more

Learn more

Privacy masks

A privacy mask is a user-defined area that prevents users from viewing a part of the monitored area. In the video stream, privacy masks appear as blocks of solid color or blurred image elements.

The privacy mask is relative to the pan, tilt, and zoom coordinates, so regardless of where you point the camera, the privacy mask covers the same place or object.

You'll see the privacy mask on all snapshots, recorded video, and live streams.

You can use the VAPIX® application programming interface (API) to turn off the privacy masks.

Important

If you use multiple privacy masks it may affect the product's performance.

Overlays

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.

Pan, tilt, and zoom (PTZ)

Guard tours

A guard tour displays the video stream from different preset positions either in a predetermined or random order, and for configurable periods of time. Once started, a guard tour continues to run until stopped, even when there are no clients (web browsers) viewing the images.

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

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 P5655-E PTZ Network Camera

Learn more

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.

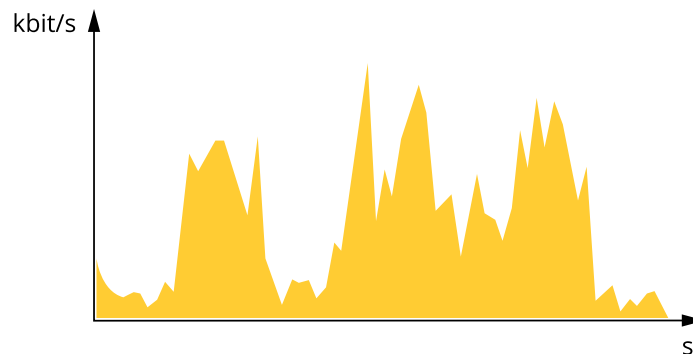
The **Stream profiles** settings override the settings from the **Stream** tab. If you request a stream with a specific stream profile, the stream contains the settings of that profile. If you request a stream without specifying a stream profile, or request a stream profile that doesn't exist in the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

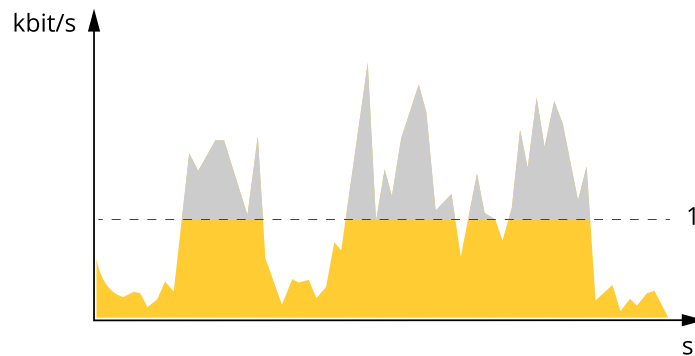


Maximum bitrate (MBR)

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 P5655-E PTZ Network Camera

Learn more

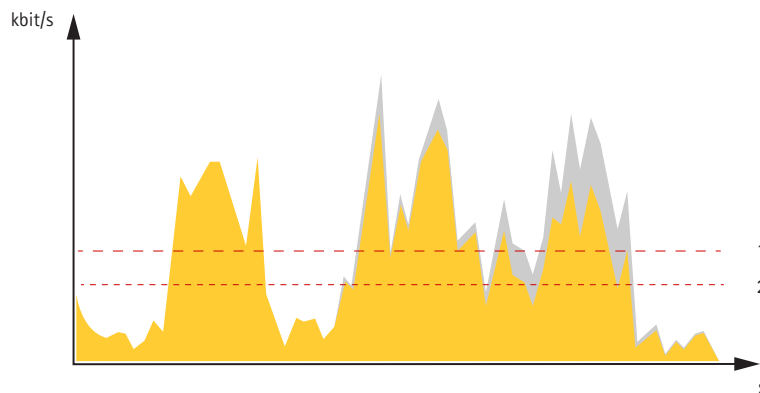


1 Target bitrate

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.

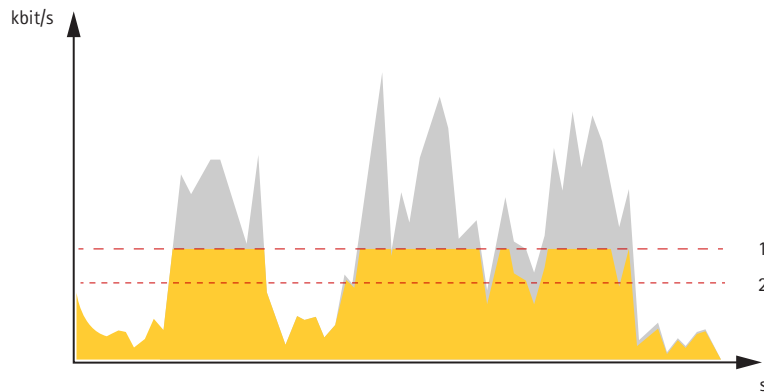


1 Target bitrate
2 Actual average bitrate

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

AXIS P5655-E PTZ Network Camera

Learn more



- 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.

To find the user manuals for Axis applications, go to 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/42640#t10001688

How to download and install an application

AXIS P5655-E

Learn more



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

www.axis.com/products/online-manual/42640#t10001688

How to activate an application licence code on a device

AXIS P5655-E PTZ Network Camera

Troubleshooting

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. Press and hold the control button and the power button for 15–30 seconds until the status LED indicator flashes amber. See *Product overview on page 25*.
2. Release the control button but continue to hold down the power button until the status LED indicator turns green.
3. Release the power button and assemble the product.
4. The process is now complete. 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. Using the installation and management software tools to assign an IP address, set the password and access the video stream.

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

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.

Important

Make sure the cover is attached during upgrade to avoid installation failure.

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.

AXIS P5655-E PTZ Network Camera

Troubleshooting

AXIS Device Manager can be used for multiple upgrades. Find out more at axis.com/products/axis-device-manager.



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

www.axis.com/products/online-manual/42640#t10095327

How to upgrade the 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.
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.

Problems upgrading the firmware

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 setting the IP address

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.
---	---

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 <code>ping</code> 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

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 <code>http</code> or <code>https</code> 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 21*.

AXIS P5655-E PTZ Network Camera

Troubleshooting

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 .
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

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.

Problems with streaming

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.
Lower frame rate than expected	<ul style="list-style-type: none">• See <i>Performance considerations on page 23</i>.• 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.
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.
- Removing or attaching the cover will restart the camera.
- 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.

AXIS P5655-E PTZ Network Camera

Troubleshooting

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.

AXIS P5655-E PTZ Network Camera

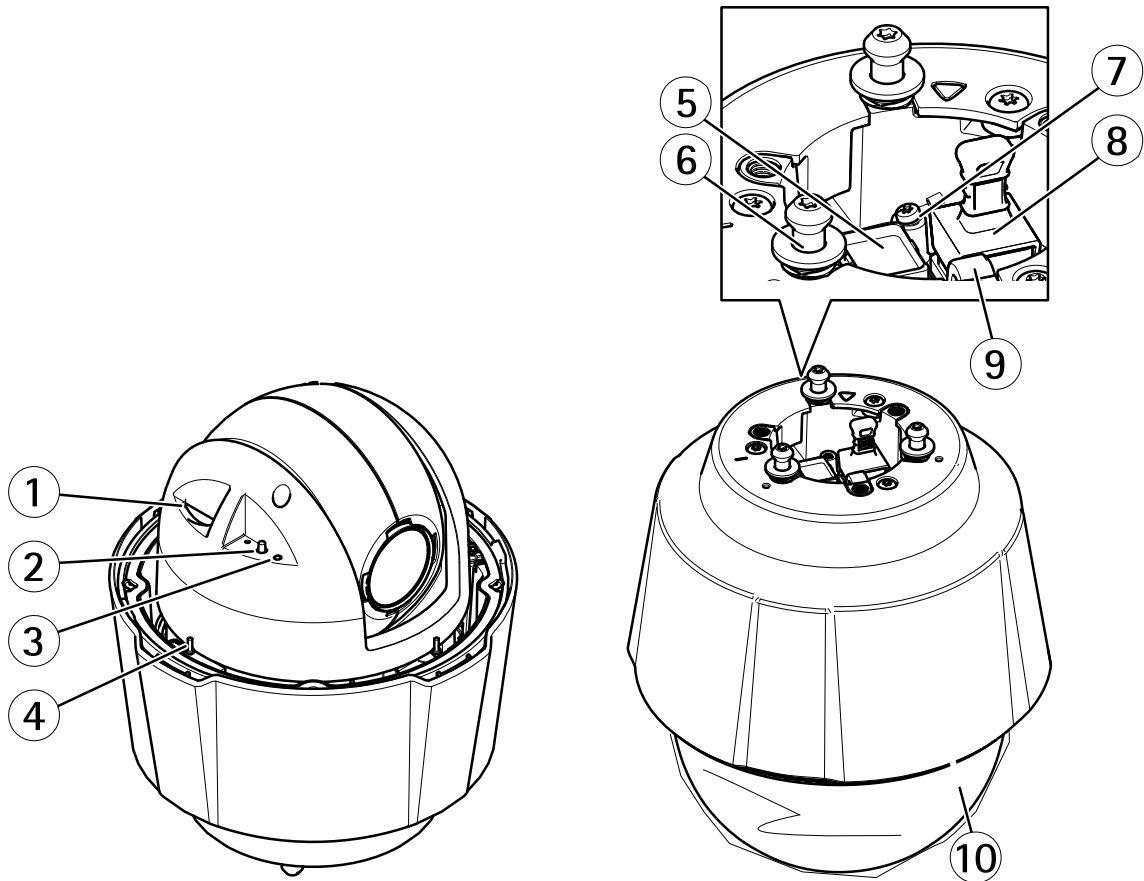
Specifications

Specifications

Product overview

NOTICE

Make sure the dome is attached in operation mode, otherwise focus may be affected.



- 1 SD memory card slot
- 2 Control button
- 3 Status LED indicator
- 4 Power button
- 5 Network connector (PoE+)
- 6 Mounting screws (3)
- 7 Ground screw
- 8 Multi-connector with cover (Do not remove the cover unless an I/O-cable is connected)
- 9 Hook for safety wire
- 10 Dome

AXIS P5655-E PTZ Network Camera

Specifications

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.

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.



SD, SDHC, and SDXC Logos are trademarks of SD-3C LLC. SD, SDHC and SDXC are trademarks or registered trademarks of SD-3C, LLC in the United States, other countries or both.

Buttons

Control button

The control button is used for:

- Resetting the product to factory default settings. See *Reset to factory default settings on page 21*.

Power button

Press and hold the power button to temporarily power the product when the dome cover is removed. The power button is also used with the control button to reset the camera to factory default settings. See *page 21*.

Connectors

Network connector

RJ45 Ethernet connector with Power over Ethernet Plus (PoE+).

Multiconnector

Terminal connector for connecting external equipment:

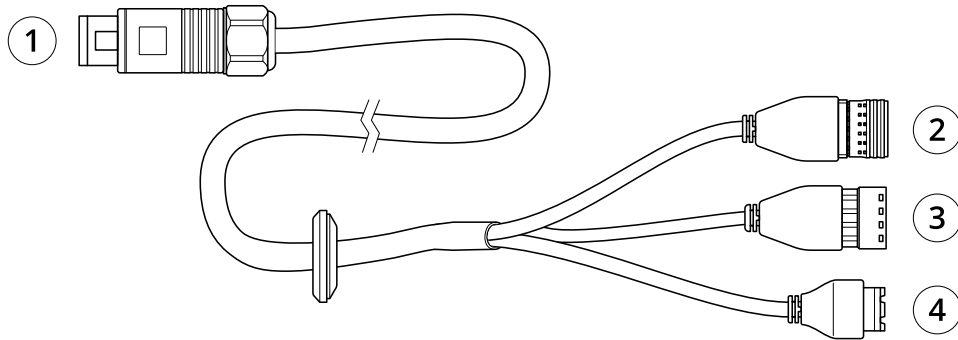
- Audio equipment
- Input/Output (I/O) devices
- AC/DC power supply

AXIS P5655-E PTZ Network Camera

Specifications

When connecting external equipment, a separately sold Axis Multicable C I/O Audio Power 1 m/ 5 m or a separately sold Axis 10-pin Push-pull System Connector is required in order to maintain the product's IP rating. For more information, see *Multicable connectors* on page 27 and *Axis 10-pin push-pull system connector (sold separately)* on page 28.

Multicable connectors



Multicable overview

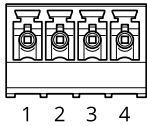
- 1 Camera multiconnector
- 2 I/O terminal block
- 3 Audio terminal block
- 4 Power connector

The multicable provides the following connectors:

Power connector – 2-pin terminal block used for power input. The polarity of the cables does not matter. Use a Safety Extra Low Voltage (SELV) compliant limited power source (LPS) with either a rated output power limited to ≤ 100 W or a rated output current limited to ≤ 5 A.



Audio connector – 4-pin terminal block used for audio in and audio line out. This can be connected to a public address (PA) system or an active speaker with a built-in amplifier.



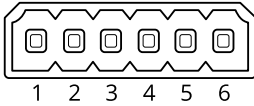
Function	Pin	Notes
Audio In	1	Balanced or unbalanced input for a mono microphone or line signal
Audio Line Out	3	Can be connected to a public address (PA) system or an active speaker with a built-in amplifier
GND	2, 4	Ground

I/O terminal connector – Use with external devices in combination with, for example, tampering alarms, 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:

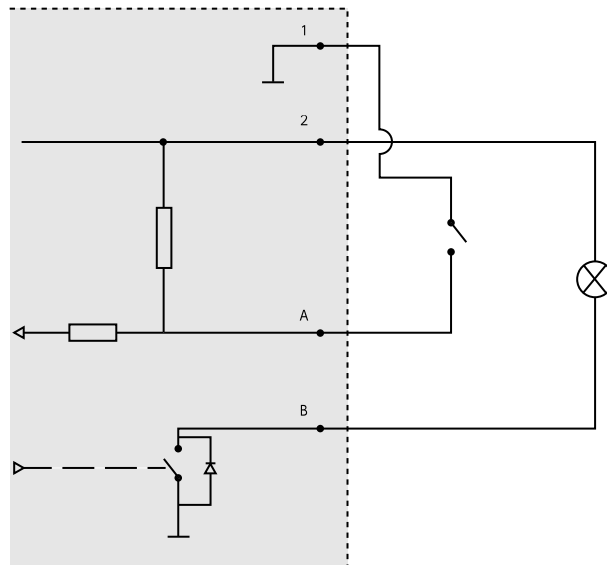
AXIS P5655-E PTZ Network Camera

Specifications

- Digital output – For connecting external devices such as relays and LEDs. Connected devices can be activated by the VAPIX® Application Programming Interface or from the product's webpage.
- Digital input – For connecting external devices that can toggle between an open and closed circuit, for example PIR detectors, door/window contacts, and glass break detectors.



Function	Pin	Notes	Specifications
0 V DC (-)	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 =50 mA
Configurable (Input or Output)	3-6	Digital input – Connect to pin 1 to activate, or leave floating (unconnected) to deactivate.	0 to max 30 V DC
		Digital output – Internally connected to pin 1 (DC ground) when active, and floating (unconnected) when inactive. If used with an inductive load, e.g. a relay, a diode must be connected in parallel with the load, for protection against voltage transients.	0 to max 30 V DC, open drain, 100 mA



- 1 0 V DC (-)
- 2 DC output 12 V, max 50 mA
- A I/O configured as input
- B I/O configured as output

Axis 10-pin push-pull system connector (sold separately)

When connecting external equipment to the Axis product, an Axis 10-pin Push-Pull System Connector (sold separately) is required in order to maintain the product's IP rating.

Mounting the wires requires a crimp tool. To get detailed mounting instructions of the wires, go to axis.com/support.

AXIS P5655-E PTZ Network Camera

Specifications

Connect the 10-pin push-pull system connector to the product's multi-connector. To locate the multi-connector go to .

10-pin push-pull system connector



Function	Pin	Notes	Specifications
AC/DC Power input	9, 10	The input is polarity independent. Use a Safety Extra Low Voltage (SELV) compliant limited power source (LPS) with either a rated output power limited to ≤ 100 W or a rated output current limited to ≤ 5 A.	24 V AC/DC
Configurable (Input or Output)	3 - I/O 1	Digital input - Connect to pin 8 to activate, or leave floating (unconnected) to deactivate.	0 to max 30 V DC
	5 - I/O 2 6 - I/O 3 7 - I/O 4	Digital output - Connected to pin 8 when activated, floating (unconnected) when deactivated. If used with an inductive load, e.g. a relay, a diode must be connected in parallel with the load, for protection against voltage transients.	0 to max 30 V DC, open drain, 100 mA
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 = 50 mA
GND	8	Ground for audio and I/O	
Audio Line Out	4	Can be connected to a public address (PA) system or an active speaker with a built-in amplifier	
Audio In	1	Unbalanced input for a mono microphone or line signal	

