

AXIS Q6054-E Mk III PTZ Network Camera

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AXIS Q6054-E Mk III PTZ Network Camera

Product overview

Product overview

注意

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

- 1 *Hook for safety wire*
- 2 *Network connector (High PoE)*
- 3 *Ground screw*
- 4 *Unit holder (3x)*
- 5 *Part number (P/N) & Serial number (S/N)*
- 6 *Power button*
- 7 *Heater*
- 8 *Control button*
- 9 *Status LED indicator*
- 10 *SD card slot*
- 11 *Dome*

AXIS Q6054-E Mk III PTZ Network Camera

Find the device on the network

Find the device on the network

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

For more information about how to find and assign IP addresses, go to [How to assign an IP address and access your device](#).

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 [.](#)
3. The live view page opens in your browser.

Secure passwords

重要

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

重要

The default administrator username is `root`. If the password for root is lost, reset the device to factory default settings. See [.](#)

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Find the device on the network



要观看此视频，请转到本文档的网页版本。

www.axis.com/products/online-manual/42115#t10098905

Support tip: Password security confirmation check

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

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Additional settings

Additional settings

Webpage overview

- 1 *Live view control bar*
 - 2 *Live view*
 - 3 *Product name*
 - 4 *User information, color themes, and help*
 - 5 *Video control bar*
 - 6 *Settings toggle*
-
- 7 *Settings tabs*

Need more help?

You can access the built-in help from the device's webpage. The help provides more detailed information on the device's features and their settings.

Image quality

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.

重要

- 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

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Additional settings

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.

Select exposure mode

There are different exposure mode options in the camera that adjusts aperture, shutter speed, and gain to improve image quality for specific surveillance scenes. Go to **Settings > Image > Exposure** and select between the following exposure modes:

- For most use cases, select **Automatic** exposure.
- If you need full control of all parameters, mostly useful for scenes with little change in lighting, select **Manual**.

Benefit from IR light in low-light conditions using night mode

Your camera uses visible light to deliver color images during the day. As the available light diminishes, you can set the camera to automatically shift to night mode, in which the camera uses both visible light and near-infrared light to deliver black-and-white images. Since the camera uses more of the available light it can deliver brighter, more detailed, images.

1. Go to **Settings > Image > Day and night**, and make sure that the **IR cut filter** is set to **Auto**.
2. To determine at what light level you want the camera to shift to night mode, set the **Day-night shift priority** to **Day**, **Night** or **None**.

Reduce noise in low-light conditions

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

- Adjust the trade-off between noise and motion blur. Go to **Settings > Image > Exposure** and move the **Blur-noise trade-off** slider toward **Low noise**.
- Set the exposure mode to automatic.

注

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.

注

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

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

Maximize the details in an image

重要

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

- Go to **Settings > Image > Capture mode** and make sure to select the capture mode that has the highest resolution.

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Additional settings

- Go to **Settings > Stream > General** and set the compression as low as possible.
- Go to **Live view settings > Video format** and select MJPEG streaming.
- Go to **Settings > Stream > H.264 encoding** and turn off Zipstream functionality.

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.

Image without WDR.

Image with WDR.

注

- 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. 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.

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.

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

注

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.

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.

Show a text overlay in the video stream when the device detects motion

This example explains how to display the text “Motion detected” when the device detects motion.

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Additional settings

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 the overlay text:

4. Go to **Settings > Overlay**.
5. Select **Create overlay** and select **Text overlay**.
6. Enter #D in the text field.
7. Choose text size and appearance.
8. To position the text overlay, choose **Custom** or one of the presets.

Create an action rule:

9. Go to **Settings > System > Events > Action rules**.
10. Create an action rule with **AXIS Video Motion Detection** as trigger.
11. From the list of actions, select **Overlay text**.
12. Type “Motion detected” .
13. Set the duration.

注

If you update the overlay text it will be automatically updated on all video streams dynamically.

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.

Pan, tilt, and zoom (PTZ)

See above the horizon

In some cases, you might want to look above the default upper tilt limit to see above the horizon.

1. Go to **Settings > PTZ > Limits**
2. Set the upper limit to the maximum value and click **Save**.

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Additional settings

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

注

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 older MPEG formats. 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.

Reduce bandwidth and storage

重要

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

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](#).

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Additional settings

Record and watch video

To record video you must first set up network storage, see , 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.

Events

Set up rules for events

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.

To learn more, check out our guide *Get started with rules for events*.

Trigger an action

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

注

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

Record video when the camera detects motion

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

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*.

Create an action rule:

1. Go to **Settings > System > Events** and add an action rule.
2. Type a name for the action rule.

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Additional settings

3. From the list of triggers, select **Applications** and then select **AXIS Video Motion Detection (VMD)**.
4. From the list of actions, select **Record video**.
5. Select an existing stream profile or create a new one.
6. Enable and set the pre-trigger time to 5 seconds.
7. Enable **While the rule is active**.
8. Enable and set the post-trigger time to 60 seconds.
9. Select **SD card** from the list of storage options.
10. Click **Ok**.

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.

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:

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

Create an action rule:

1. Go to **Settings > System > Events > Action rules** and add an action rule.
2. Type a name for the action rule.
3. From the list of triggers, select **Applications** and then select **AXIS Video Motion Detection (VMD)**.
4. From the list of actions, select **PTZ Control** and then select **Preset Position**.
5. Select the preset position you want the camera to go to.
6. Click **Ok**.

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:

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Additional settings

4. Go to **Settings > Apps** and open **AXIS Video Motion Detection**.
5. Create a profile that covers the entrance of the gate and then save the profile. If you need help, see the *user manual for AXIS Video Motion Detection 4*.

Create a rule:

6. Go to **Settings > System > Events** and add a rule.
7. Name the rule “Gatekeeper” .
8. In the trigger list, select **Applications** and then select the previously created motion detection profile.
9. In the action list, select the previously created preset position.
10. Click **OK**.

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.

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

Create an action rule:

3. Go to **Settings > System > Events** and add an action rule.
4. Type a name for the action rule.
5. From the list of triggers, select **Detectors** and then select **Shock detection**.
6. From the list of schedules, select **After Hours**.
7. From the list of actions, select **Send Video Clip**.
8. Select an existing stream profile or create a new one.
9. Enable and set the pre-trigger time to 5 seconds.
10. Enable **While the rule is active**.
11. Enable and set the post-trigger time to 60 seconds.
12. Select an existing recipient or create a new one.
13. Click **OK**.

Applications

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 help.axis.com.

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Additional settings

注

- 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.

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Troubleshooting

Troubleshooting

Reset to factory default settings

重要

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 .
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

重要

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.

重要

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

重要

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

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Troubleshooting

注

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



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.
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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.
---------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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Troubleshooting

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

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 .

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.

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Troubleshooting

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

- See .
- 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.

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.

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.

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Specifications

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

注意

- 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.

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Buttons

Control button

The control button is used for:

- Resetting the product to factory default settings. See .

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 .

Connectors

Network connector

RJ45 Push-pull Connector (IP66) with High Power over Ethernet (High PoE).

注意

Use the supplied midspan.

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Specifications

注意

To comply with the IP66-rated design of the camera and maintain the IP66 protection, the supplied RJ45 Push-pull Connector (IP66) shall be used. Alternatively, use the RJ45 IP66-rated cable with premounted connector which is available from your Axis reseller. Do not remove the plastic network connector shield from the camera.

