

AXIS Q3505-SVE Mk II Network Camera

Installation Guide

Legal Considerations

Video and audio surveillance can be regulated by laws that vary from country to country. Check the laws in your local region before using this product for surveillance purposes.

This product includes one (1) H.264 decoder license and one (1) AAC decoder license. To purchase further licenses, contact your reseller.

Liability

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Axis AB has intellectual property rights relating to technology embodied in the product described in this document. In particular, and without limitation, these intellectual property rights may include one or more of the patents listed at www.axis.com/patent.htm and one or more additional patents or pending patent applications in the US and other countries.

This product contains licensed third-party software. See the menu item "About" in the product's user interface for more information.

This product contains source code copyright Apple Computer, Inc., under the terms of Apple Public Source License 2.0 (see www.opensource.apple.com/aps/). The source code is available from <https://developer.apple.com/bonjour/>

Equipment Modifications

This equipment must be installed and used in strict accordance with the instructions given in the user documentation. This equipment contains no user-serviceable components. Unauthorized equipment changes or modifications will invalidate all applicable regulatory certifications and approvals.

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Regulatory Information

Europe

CE This product complies with the applicable CE marking directives and harmonized standards:

- Electromagnetic Compatibility (EMC) Directive 2014/30/EU. See *Electromagnetic Compatibility (EMC) on page 2*.
- Low Voltage (LVD) Directive 2014/35/EU. See *Safety on page 3*.
- Restrictions of Hazardous Substances (RoHS) Directive 2011/65/EU. See *Disposal and Recycling on page 3*.

A copy of the original declaration of conformity may be obtained from Axis Communications AB. See *Contact Information on page 3*.

Electromagnetic Compatibility (EMC)

This equipment has been designed and tested to fulfill applicable standards for:

- Radio frequency emission when installed according to the instructions and used in its intended environment.
- Immunity to electrical and electromagnetic phenomena when installed according to the instructions and used in its intended environment.

USA

This equipment has been tested using a shielded network cable (STP) and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. The product shall be connected using a shielded network cable (STP) that is properly grounded.

Canada

This digital apparatus complies with CAN ICES-3 (Class A). The product shall be connected using a shielded network cable (STP) that is properly grounded. Cet appareil numérique est conforme à la norme NMB ICES-3 (classe A). Le produit doit être connecté à l'aide d'un câble réseau blindé (STP) qui est correctement mis à la terre.

Europe

This digital equipment fulfills the requirements for RF emission according to the Class A limit of EN 55032. The product shall be connected using a shielded network cable (STP) that is properly grounded. Notice! This is a Class A product. In a domestic environment this product may cause RF interference, in which case the user may be required to take adequate measures.

This product fulfills the requirements for emission and immunity according to EN 50121-4 and IEC 62236-4 railway applications.

This product fulfills the requirements for immunity according to EN 61000-6-1 residential, commercial and light-industrial environments.

This product fulfills the requirements for immunity according to EN 61000-6-2 industrial environments.

This product fulfills the requirements for immunity according to EN 55024 office and commercial environments.

Australia/New Zealand

This digital equipment fulfills the requirements for RF emission according to the Class A limit of AS/NZS CISPR 32. The product shall be connected using a shielded network cable (STP) that is properly grounded. Notice! This is a Class A product. In a domestic environment this product may cause RF interference, in which case the user may be required to take adequate measures.

Japan

この装置は、クラスA 情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。本製品は、シールドネットワークケーブル(STP)を使用して接続してください。また適切に接地してください。

Korea

이 기기는 가정용(B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다. 적절히 접지된 STP (shielded twisted pair) 케이블을 사용하여 제품을 연결 하십시오.

Safety

This product complies with IEC/EN/UL 60950-1 and IEC/EN/UL 60950-22, Safety of Information Technology Equipment. The product shall be grounded either through a shielded network cable (STP) or other appropriate method.

Disposal and Recycling

When this product has reached the end of its useful life, dispose of it according to local laws and regulations. For information about your nearest designated collection point, contact your local authority responsible for waste disposal. In accordance with local legislation, penalties may be applicable for incorrect disposal of this waste.

Europe



■ This symbol means that the product shall not be disposed of together with household or commercial waste. Directive 2012/19/EU on waste electrical and electronic equipment (WEEE) is applicable in the European Union member states. To prevent potential harm to human health and the environment, the product must be disposed of in an approved and environmentally safe recycling process. For information about your nearest designated collection point, contact your local authority responsible for waste disposal. Businesses should contact the product supplier for information about how to dispose of this product correctly.

This product complies with the requirements of Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS).

China



This product complies with the requirements of the legislative act Administration on the Control of Pollution Caused by Electronic Information Products (ACPEIP).

Contact Information

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223 69 Lund
Sweden

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Fax: +46 46 13 61 30

www.axis.com

Support

Should you require any technical assistance, please contact your Axis reseller. If your questions cannot be answered immediately, your reseller will forward your queries through the appropriate channels to ensure a rapid response. If you are connected to the Internet, you can:

- download user documentation and software updates
- find answers to resolved problems in the FAQ database. Search by product, category, or phrase
- report problems to Axis support staff by logging in to your private support area
- chat with Axis support staff
- visit Axis Support at www.axis.com/techsup/

Learn More!

Visit Axis learning center www.axis.com/academy/ for useful trainings, webinars, tutorials and guides.

Safety Information

Read through this Installation Guide carefully before installing the product. Keep the Installation Guide for future reference.

Hazard Levels

▲DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

▲WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

▲CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

Indicates a situation which, if not avoided, could result in damage to property.

Other Message Levels

Important

Indicates significant information which is essential for the product to function correctly.

Note

Indicates useful information which helps in getting the most out of the product.

Safety Instructions

▲CAUTION

Be careful of sharp metal edges. Use cut-resistant gloves during installation.

NOTICE

- The Axis product shall be used in compliance with local laws and regulations.
- Store the Axis product in a dry and ventilated environment.
- Do not install the product on unstable poles, brackets, surfaces or walls.
- Use only applicable tools when installing the Axis product. Using excessive force with power tools could cause damage to the product.
- Use only accessories that comply with the technical specification of the product. These can be provided by Axis or a third party.
- Use only spare parts provided by or recommended by Axis.
- Do not attempt to repair the product yourself. Contact Axis support or your Axis reseller for service matters.

Transportation

NOTICE

- When transporting the Axis product, use the original packaging or equivalent to prevent damage to the product.

Battery

The Axis product uses a 3.0 V CR2032 lithium battery as the power supply for its internal real-time clock (RTC). Under normal conditions this battery will last for a minimum of five years.

Low battery power affects the operation of the RTC, causing it to reset at every power-up. When the battery needs replacing, a log message will appear in the product's server report. For more information about the server report, see the product's setup pages or contact Axis support.

The battery should not be replaced unless required, but if the battery does need replacing, contact Axis support at www.axis.com/techsup for assistance.

Lithium coin cell 3.0 V batteries contain 1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME), CAS no. 110-71-4.

⚠WARNING

- Risk of explosion if the battery is incorrectly replaced.
- Replace only with an identical battery or a battery which is recommended by Axis.
- Dispose of used batteries according to local regulations or the battery manufacturer's instructions.

Dome Cover

NOTICE

- Be careful not to scratch, damage or leave fingerprints on the dome cover because this could decrease image quality. If possible, keep the protective plastic on the dome cover until the installation is complete.
- Do not clean a dome cover that looks clean to the eye and never polish the surface. Excessive cleaning could damage the surface.
- For general cleaning of the dome cover it is recommended to use a non-abrasive, solvent-free neutral soap or detergent mixed with pure water and a soft, clean cloth. Rinse well with pure lukewarm water. Dry with a soft, clean cloth to prevent water spotting.
- Never use harsh detergents or alcohols (isopropyl, butyl, propyl) and avoid cleaning the dome cover in direct sunlight or at elevated temperatures.

Installation Guide

This Installation Guide provides instructions for installing AXIS Q3505-SVE Mk II Network Camera on your network. For other aspects of using the product, see the User Manual available at www.axis.com

Package Contents

For optional accessories see axis.com

- AXIS Q3505-SVE Mk II Network Camera
- Screw bit TR20
- I/O connector
- Connector guard
- Adhesive gasket
- Extra cable gaskets
 - Cable Gasket M20
 - Cable Gasket M20–3mm
- Printed materials
 - Installation Guide (this document)
 - Drill template
 - Extra serial number label (2x)
 - AVHS Authentication key

Recommended Tools

NOTICE

Stainless steel is corrosion-resistant, but extraneous rust can appear if the material is handled incorrectly. Use stainless tools to avoid rust stains or pitting corrosion.

- Resitorx key TR20

Optional Accessories

- AXIS T94U01D Pendant Kit
- AXIS T94U02D Pendant Kit
- AXIS T91F67 Pole Mount
- AXIS T91F61 Wall Mount
- AXIS Dome Intrusion Switch B

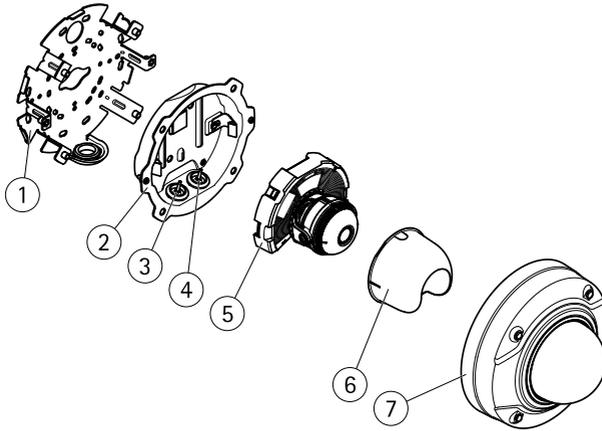
AXIS Q3505-SVE Mk II Network Camera

- AXIS Q3505-SVE Mk II Smoked Dome
- Multi-connector cable for connection of I/O and audio

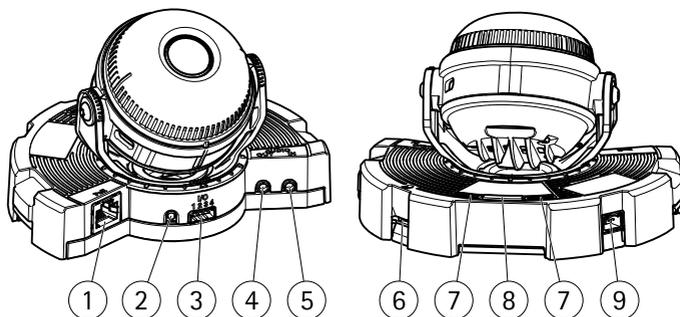
For information about available accessories, see www.axis.com

Hardware Overview

For specifications of the hardware components, see *Technical Specifications on page 14.*



- 1 *Mounting bracket*
- 2 *Unit casing*
- 3 *Cable gasket, network cable*
- 4 *Cable gasket, multicable*
- 5 *Camera unit*
- 6 *View protection*
- 7 *Dome cover*



- 1 Network connector
- 2 Control button
- 3 I/O connector
- 4 Audio in connector
- 5 Audio out connector
- 6 SD card slot
- 7 Status LED
- 8 Function button
- 9 Not used

LED Indicators

Note

- The Status LED can be configured to flash while an event is active.
- The Status LED can be configured to flash for identifying the unit. Go to **Setup > System Options > Maintenance** .

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.

Status LED behavior and buzzer signal for leveling assistant

For information on the function button used for leveling the image, see *page 12*.

AXIS Q3505-SVE Mk II Network Camera

Color	Buzzer	Camera position
Fixed green	Continuous beep	Level
Flashing green	Fast beeps	Almost level
Flashing orange	Medium beeps	Not level
Flashing red	Slow beeps	Far from level

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. Disconnect power or unmount the SD card from the Axis product's webpages before removal.

This product supports microSD/microSDHC/microSDXC cards (not included).

For SD card recommendations, see www.axis.com

Buttons

Control Button

For location of the control button, see *Hardware Overview on page 10*.

The control button is used for:

- Resetting the product to factory default settings. See *page 21*.
- Connecting to an AXIS Video Hosting System service or AXIS Internet Dynamic DNS Service. For more information about these services, see the User Manual.

Function Button

The function button has multiple functions:

- **As leveling Assistant** – This function helps to ensure the image is level. Press the button for about 2 seconds to start the leveling assistant and press again to stop. The status LED (see *page 11*) and buzzer signal assist leveling of the image. The image is level when the buzzer beeps continuously.
- **To view the Status LED** – Press the button once to light up the Status LEDs. Press again to turn them off. The LEDs will turn off automatically after 10 seconds.

Connectors

Network Connector

RJ45 Ethernet connector with Power over Ethernet (PoE).

NOTICE

The product shall be connected using a shielded network cable (STP). All cables connecting the product to the network shall be intended for their specific use. Make sure that the network devices are installed in accordance with the manufacturer's instructions. For information about regulatory requirements, see *Electromagnetic Compatibility (EMC)* on page 2.

I/O 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:

- **Digital output** – For connecting external devices such as relays and LEDs. Connected devices can be activated by the VAPIX® Application Programming Interface, output buttons on the Live View page or by an Action Rule. The output will show as active (shown under **System Options > Ports & Devices**) if the alarm device is activated.
- **Digital input** – For connecting devices that can toggle between an open and closed circuit, for example: PIRs, door/window contacts, glass break detectors, etc. When a signal is received the state changes and the input becomes active (shown under **System Options > Ports & Devices**).

Audio Connector

The Axis product has the following audio connectors:

- **Audio in (pink)** – 3.5 mm input for a mono microphone, or a line-in mono signal.
- **Audio out (green)** – 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 stereo connector must be used for audio out.

3.5 mm audio connectors (stereo)



AXIS Q3505-SVE Mk II Network Camera

	1 Tip	2 Ring	3 Sleeve
Audio Input	Balanced: 'Hot' signal Microphone/Line in Unbalanced: Microphone/Line in	Balanced: 'Cold' signal Microphone/Line in Unbalanced: Unused	Ground
Audio Output	Line out, mono (stereo connector compatible)	Line out, mono (stereo connector compatible)	Ground

The internal microphone is used by default; the external microphone is used when connected. It is possible to disable the internal microphone by connecting a plug to the microphone input.

Multicable (sold separately)

The multicable can be purchased from an Axis reseller for connecting external equipment to the Axis product. The cable provides the following connectors:

Audio connector – See *Connectors on page 13*

I/O connector – See *Connectors on page 13*

Power connector – Not used.

Technical Specifications

You can find the latest version of the technical specifications at www.axis.com

Operating Conditions

Product	Classification	Temperature	Humidity
AXIS Q3505-SVE Mk II	IEC 60529 IP6K9K NEMA 250 4X-rated	– 50°C to 60°C (– 58°F to 140°F)	10-100% RH (non-condensing)

Power consumption

NOTICE

Use a limited power source (LPS) with either a rated output power limited to ≤ 100 W or a rated output current limited to ≤ 5 A.

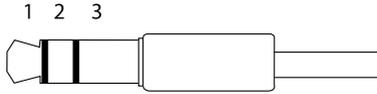
AXIS Q3505-SVE Mk II Network Camera

Product	PoE
AXIS Q3505-SVE Mk II	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1, Class 3, max. 11.4 W

Connectors

Audio Connector

3.5 mm audio connectors (stereo)

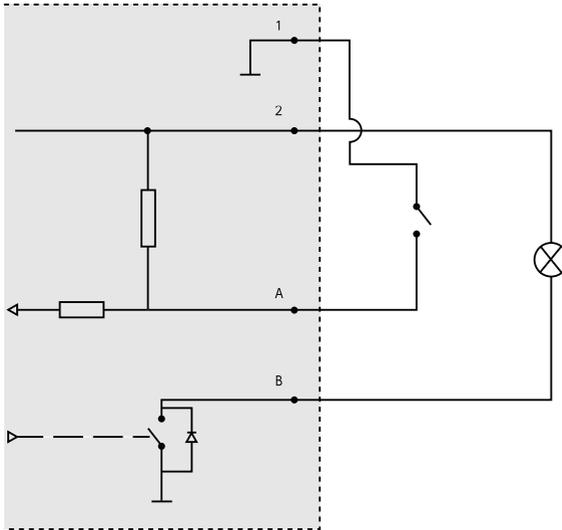


	1 Tip	2 Ring	3 Sleeve
Audio Input	Balanced: 'Hot' signal Microphone/Line in Unbalanced: Microphone/Line in	Balanced: 'Cold' signal Microphone/Line in Unbalanced: Unused	Ground
Audio Output	Line out, mono (stereo connector compatible)	Line out, mono (stereo connector compatible)	Ground

The internal microphone is used by default; the external microphone is used when connected. It is possible to disable the internal microphone by connecting a plug to the mic input.

Connection Diagrams

I/O Connector



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

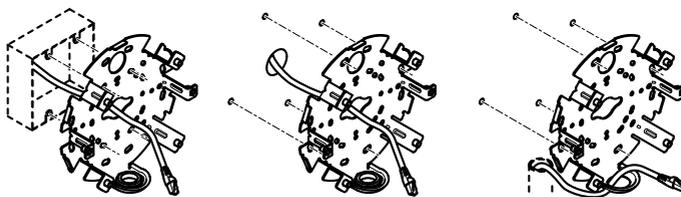
Install the Hardware

Mounting bracket

The mounting bracket has eight holes along the edge that should be used for fastening the bracket to a wall.

To mount the bracket on a junction box, there are also holes for these mounting options:

- Standard-sized US double gang junction box
- Standard-sized US single gang junction box
- 4" square box
- 4" octagon box



Depending on whether you want to use a junction box, or route the cables through or along the wall, follow the relevant instructions below.

To mount the camera on a junction box:

1. Attach the adhesive gasket to the back of the mounting bracket.
2. Route the network cable (and the multicable if required) through the junction box and through the hole in the mounting bracket.
3. Attach the mounting bracket to the junction box with appropriate stainless screws.

To route cables through the wall:

1. Using the drill template drill 4 holes for mounting the bracket, and a hole for routing the cables through the wall.
2. Attach the adhesive gasket to the back of the mounting bracket.
3. Route the network cable (and the multicable if required) through the wall and through the hole in the mounting bracket.
4. Attach the mounting bracket to the wall with appropriate stainless screws.

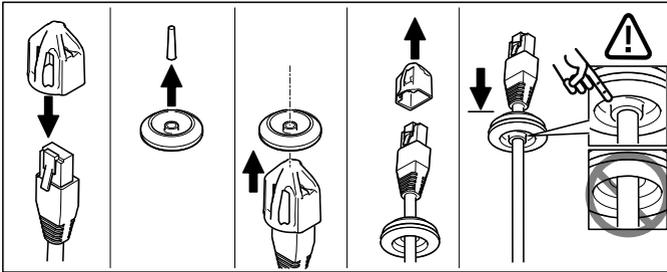
To route the cables along the wall and through the side hole on the mounting bracket:

1. Attach the adhesive gasket to the back of the mounting bracket.
2. Unscrew the plug from the side hole on the mounting bracket.
3. Route the network cable (and the multicable if required) through the conduit and through the hole in the mounting bracket.
4. Attach the mounting bracket to the wall with appropriate stainless screws.
5. Attach the conduit to the mounting bracket.

Connect cables and attach camera to mounting bracket

1. Insert the microSD card in the camera unit (optional).
2. Remove the cable gasket for the network cable from the unit casing, see *Hardware Overview on page 10*.
3. Pull to remove the tab on the gasket, and use the provided connector guard to push the network cable through the gasket. Pull the network cable back slightly so that the cable gasket adjusts itself on the cable.

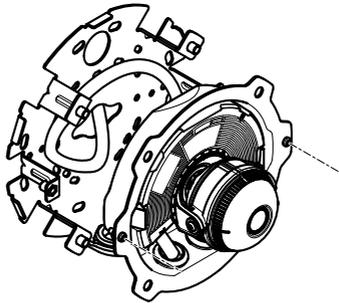
AXIS Q3505-SVE Mk II Network Camera



NOTICE

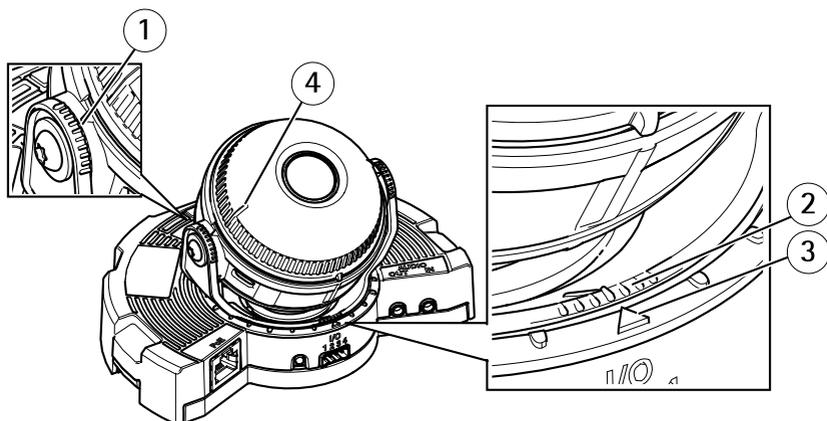
Not pulling the cable back could cause water to seep in and damage the product.

4. If using a multicable, remove the other cable gasket from the unit casing and discard it.
5. Pull the cables through the unit casing and attach the cable gaskets to the unit casing.
6. Connect the cables to the camera unit.
7. Pull the springs aside in the unit casing and attach the camera unit to the unit casing, pulling the cables through the cable gaskets to shorten them as required.



8. Wind up the cable slack along the mounting bracket and attach the unit casing to the mounting bracket with the two screws.
9. Verify that the cable gaskets are correctly mounted against the unit casing and the cables.

Adjust the camera angle



- 1 Lines on optic holder that indicate an increment in the tilt angle by 10°
- 2 Small lines on optic mount that indicate a pan increment of 3°
- 3 Lines on optic mount that indicate a pan increment of 15°
- 4 Lines on lens cover to help ensure camera is level

1. Pan, tilt and rotate the camera to cover the area under surveillance. It is possible to pan 360° , and tilt to an angle of 90° .
2. Pan and rotate the lens to adjust the image.
3. Use the two lines on the lens cover to ensure that the camera is level. To activate the leveling assistant, press the function button. See *Function Button* on page 12.

Attach Dome Cover

1. Attach the view protection to the camera unit.
2. Make sure the gasket in the dome cover is clean and sits securely in place.
3. Place the dome cover on the unit casing and tighten the screws to 2.0 Nm (1.5 lb ft) with the supplied TR20 screw bit.
4. Remove the protective film from the dome cover.

Access the Product

AXIS IP Utility and AXIS Camera Management are recommended methods for finding Axis products on the network and assigning them IP addresses in Windows®. Both applications are free and can be downloaded from www.axis.com/techsup

AXIS Q3505-SVE Mk II Network Camera

The product can be used with most operating systems and browsers. We recommend the following browsers:

- Internet Explorer® with Windows®
- Safari® with OS X®
- Chrome™ or Firefox® with other operating systems.

For more information about using the product, see the User Manual available at www.axis.com

Set focus and zoom

These instructions are valid if you have selected **Optical zoom** for installation during camera startup.

1. Go to **Setup > Video & Audio**.
2. On the focus page go to the **Basic** tab.
3. Set the zoom level using the slider.

Note

Movements in front of the camera should be avoided when performing autofocus.

4. Click **Perform autofocus**.
5. If the result is not satisfactory, go to the **Advanced** tab.

On the **Advanced** tab, focus can be adjusted manually:

1. Click **Open iris** to open the iris to its maximum position. This gives the smallest depth of field and provides the best conditions for focusing.
2. Focus is set in the **Focus window**. Use the mouse to move and resize the focus window.
3. Click in the **Focus position** bar to focus on a desired location.
4. When satisfied, click **Enable iris** to enable the iris.

Set focus and zoom limits

These instructions are valid if you have selected **Optical zoom** for monitoring during camera startup.

To set focus and zoom for a new preset position:

1. Go to **PTZ > Preset Positions** and set the focus and zoom for your preferred area in the camera image.
2. Enter a name for your preset position in the **Current position** field and select **Use current position as Home**.
3. Click **Add** to add your current position as a preset position.
4. Select your preset position in the **Available positions** drop-down list.

5. Click **Go to** to set the camera in your preset position.
6. Click **Save**.

To set limits for focus and zoom:

1. Go to **Video & Audio > Focus & Zoom**.
2. Select a value in the drop-down list for **Zoom limit** to limit the camera's maximum zoom area.
The digital zoom level is indicated with the letter **D**.
3. To preview the zoom limit, click **Go to** this position.
4. Select a value in the drop-down list for **Focus near limit** to prevent the camera from focusing on objects that are too close.
5. Click **Save**.

Note

You can still set focus and zoom in **Video & Audio > Focus & Zoom**, but your settings are not saved after camera restart.

Reset to Factory Default Settings

Important

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

Note

The installation and management software tools are available from the support pages on www.axis.com/techsup

To reset the product to the factory default settings:

1. Disconnect power from the product.
2. Press and hold the control button and reconnect power. See *Hardware Overview on page 10*.
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. Using the installation and management software tools, assign an IP address, set the password, and access the video stream.

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

Further information

- For the latest version of this document, see www.axis.com
- The user manual is available at www.axis.com
- To check if there is updated firmware available for your product, see www.axis.com/support
- For useful online trainings and webinars, see www.axis.com/academy

Warranty Information

For information about Axis' product warranty and thereto related information, see www.axis.com/warranty/

