

AXIS P13 Series

AXIS P1354 Network Camera

AXIS P1357 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

Every care has been taken in the preparation of this document. Please inform your local Axis office of any inaccuracies or omissions. Axis Communications AB cannot be held responsible for any technical or typographical errors and reserves the right to make changes to the product and manuals without prior notice. Axis Communications AB makes no warranty of any kind with regard to the material contained within this document, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Axis Communications AB shall not be liable nor responsible for incidental or consequential damages in connection with the furnishing, performance or use of this material. This product is only to be used for its intended purpose.

Intellectual Property Rights

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.

Trademark Acknowledgments

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Regulatory Information

Europe

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

- Electromagnetic Compatibility (EMC) Directive 2004/108/EC. See *Electromagnetic Compatibility (EMC) on page 2*.
- Low Voltage (LVD) Directive 2006/95/EC. 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 B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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 B). The product shall be connected using a shielded network cable (STP) that is properly grounded.

Cet appareil numérique est conforme à la norme CAN NMB-3 (classe B). 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 B limit of EN 55022. The product shall be connected using a shielded network cable (STP) that is properly grounded.

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 B limit of AS/NZS CISPR 22. The product shall be connected using a shielded network cable (STP) that is properly grounded.

Japan

この装置は、クラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをして下さい。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, Safety of Information Technology Equipment. If its connecting cables are routed outdoors, the product shall be grounded either through a shielded network cable (STP) or other appropriate method.

The power supply used with this product shall fulfill the requirements for Safety Extra Low Voltage (SELV) and Limited Power Source (LPS) according to IEC/EN/UL 60950-1.

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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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.

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Safety Instructions

▲WARNING

- The Axis product shall be installed by a trained professional.

NOTICE

- The Axis product shall be used in compliance with local laws and regulations.
- To use the Axis product outdoors, or in similar environments, it shall be installed in an approved outdoor housing.
- Store the Axis product in a dry and ventilated environment.
- Avoid exposing the Axis product to shocks or heavy pressure.
- Do not install the product on unstable 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.
- Do not use chemicals, caustic agents, or aerosol cleaners.
- Use a clean cloth dampened with pure water for cleaning.
- Use only accessories that comply with 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 by 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 BR/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.

⚠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.

Installation Guide

This Installation Guide provides instructions for installing AXIS P1354/P1357 Network Camera on your network. For other aspects of using the product, see the User Manual available at www.axis.com

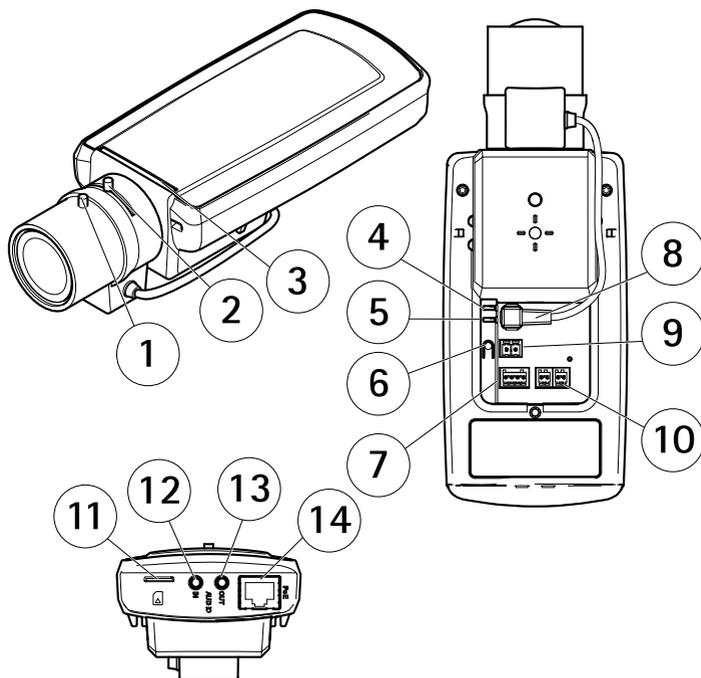
Installation Steps

1. Make sure the package contents, tools and other materials necessary for the installation are in order. See *page 9*.
2. Study the hardware overview. See *page 10*.
3. Study the specifications. See *page 13*.
4. Install the hardware. See *page 16*.
5. Access the product. See *page 17*.
6. Set the focus. See *page 17*.

Package Contents

- Network Camera
 - AXIS P1354
 - AXIS P1357
- Terminal block connector
 - 4-pin connector block for connecting external devices to the I/O terminal connector
 - 2x terminal connector 2-pin STR 2.5 mm BP AB
- Power block connector 2-pin
- Camera stand
- Tools
 - Allen key
- Printed materials
 - Installation Guide (this document)
 - Extra serial number label (2x)
 - AVHS Authentication key

Hardware Overview



- 1 Focus puller
- 2 Zoom puller
- 3 LED indicator
- 4 Power LED
- 5 Network LED
- 6 Control button
- 7 I/O terminal block
- 8 Iris connector
- 9 Power connector*
- 10 RS485/422
- 11 SD card slot (microSD)
- 12 Audio in
- 13 Audio out
- 14 Network connector PoE

* Not used for -E versions.

LED Indicators

Note

- The Status LED can be configured to be unlit during normal operation. To configure, go to **Setup > System Options > Ports & Devices > LED**. See the online help for more information.
- 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
Green	Steady green for normal operation.
Amber	Steady during startup and when restoring settings.

Network LED	Indication
Green	Steady for connection to a 100 Mbit/s network. Flashes for network activity.
Amber	Steady for connection to a 10 Mbit/s network. Flashes for network activity.
Unlit	No network connection.

Power LED	Indication
Green	Normal operation.
Amber	Flashes green/amber during firmware upgrade.

Status LED Behavior for Focus Assistant

Color	Indication
Green	Focus Assistant is enabled The lens is optimally adjusted
Amber	The camera has been moved, or an object has been placed in front of the lens. Exit and restart the Focus Assistant. The lens is less optimally adjusted.
Red	The camera has been moved, or an object has been placed in front of the lens. Exit and restart the Focus Assistant. The lens is poorly adjusted.

Connectors and Buttons

For specifications and operating conditions, see *page 13*.

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, time lapse recording 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** – An alarm 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**).

Power Connector

2-pin terminal block for power input. 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

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.

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

RS485/RS422 Connector

Two terminal blocks for RS485/RS422 serial interface used to control auxiliary equipment such as pan-tilt devices.

SD Card Slot

NOTICE

- Risk of damage to SD card. Do not use sharp tools or excessive force when inserting or removing the SD card.
- Risk of data loss. To prevent data corruption, the SD card should be unmounted before removal. To unmount, go to **Setup > System Options > Storage > SD Card** and click **Unmount**.

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

For SD card recommendations, see www.axis.com

Control Button

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

The control button is used for:

- Enabling the Focus Assistant. Press and very quickly release the Control button
- Resetting the product to factory default settings. See *page 19*.
- Connecting to an AXIS Video Hosting System service or AXIS Internet Dynamic DNS Service. For more information about these services, see the User Manual.

Specifications

Operating Conditions

Note

The Axis product is intended for indoor use. To use the camera outdoors, it must be installed in an approved outdoor housing. Please see www.axis.com for more information on outdoor housings.

Products	Temperature	Humidity
AXIS P1354 AXIS P1357	0 °C to 50 °C (32 °F to 122 °F)	10-85% RH (non-condensing)

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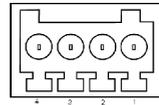
Power Consumption

Products	DC	PoE
AXIS P1354	8-28 V DC	max 7.2 W IEEE 802.3af/802.3at Type 1 Class 3
AXIS P1357	8-28 V DC	max 7.9 W IEEE 802.3af/802.3at Type 1 Class 3

Connectors

I/O Connector

4-pin terminal block



For an example diagram, see *Connection Diagrams* on page 16.

Function	Pin	Notes	Specifications
0 V DC (-)	1		
DC output	2	Can be used to power auxiliary equipment. Note: This pin can only be used as power out.	3.3 V DC Max load = 50 mA
Digital Input	3	Connect to pin 1 to activate, or leave floating (unconnected) to deactivate.	0 to max 40 V DC
Digital Output	4	Connected to pin 1 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 40 V DC, open drain, 100 mA

Power Connector

2-pin terminal block for power input. 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

3.5 mm audio connectors (stereo)

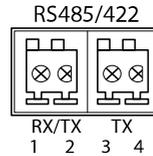


	1 Tip	2 Ring	3 Sleeve
Audio Input	Microphone/Line in		Ground
Audio Output	Line out (mono)		Ground

RS485/422 Connector

Two 2-pin terminal blocks for RS485/RS422 serial interface. The serial port can be configured to support:

- Two-wire RS485 half duplex
- Four-wire RS485 full duplex
- Two-wire RS422 simplex
- Four-wire RS422 full duplex point to point communication



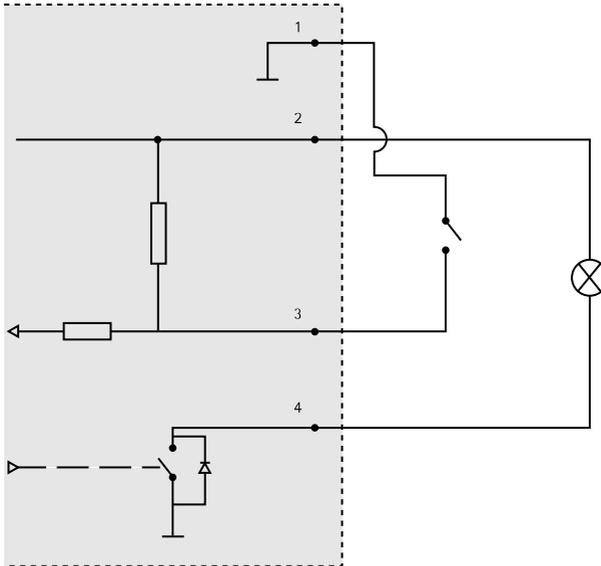
Function	Pin	Notes
RS485B alt RS485/422 RX(B)	1	RX pair for all modes (combined RX/TX for 2-wire RS485)
RS485A alt RS485/422 RX(A)	2	
RS485/RS422 TX(B)	3	TX pair for RS422 and 4-wire RS485
RS485/RS422 TX(A)	4	

Important

The recommended maximum cable length is 30 m (98.4 ft).

Connection Diagrams

I/O Connector



- 1 0 V DC (-)
- 2 DC output 3.3 V, max 50 mA
- 3 Digital input 0 to max 40 V DC
- 4 Digital output 0 to max 40 V DC, open drain, 100 mA

Install the Hardware

Connect the Cables

1. Connect external input/output devices if required, such as alarm devices. For information about the terminal connector pins, see *page 14*.
2. Connect an active speaker and/or external microphone if required.
3. Connect the camera to the network using a shielded network cable.
4. Connect power, using one of the methods listed below:
 - PoE (Power over Ethernet). PoE is automatically detected when the network cable is connected.

- Connect an external power adapter to the power connector block. For wiring information, see *page 14*.
5. Check that the indicator LEDs indicate the correct conditions, see *LED Indicators on page 11*.

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

The product can be used with most operating systems and browsers. The recommended browsers are

- 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

Adjust Focus

To adjust the zoom and focus follow these instructions:

Note

- Set the focus as precise as possible with the focus puller or Focus Assistant before starting automatic fine tuning. Using the focus puller normally gives the best result.
- The iris should always be opened to its maximum while focusing. This gives the smallest depth of field and thus the best conditions for correct focusing.

1. Open the product's home page and go to **Setup > Basic Setup > Focus**.
2. Under the **Basic** tab, click **Open iris**. If the button is inactive the iris is already open.
3. If focus has been set before, click **Reset** to reset the back focus.
4. Loosen the zoom and focus pullers (see *Hardware Overview on page 10*) on the lens by turning them counter-clockwise. Move the pullers to set zoom and focus and check the quality of the image in the image window.
If the camera is mounted so that one cannot look at the image and move the pullers at the same time, use the Focus Assistant instead. See .
5. Loosen the zoom puller and the lock screw for the focus ring (see *Hardware Overview on page 10*) on the lens by turning them counter-clockwise. Move the zoom puller and the focus ring to set zoom and focus and check the quality of the image in the image window.
If the camera is mounted so that you cannot look at the image and move the zoom puller and the focus ring at the same time, use the Focus Assistant instead. See .
6. Re-tighten the zoom and focus pullers.

7. On the Focus page, click **Fine-tune focus automatically** and wait until automatic fine tuning is completed.
8. Click **Enable iris**. If the button is inactive the iris is already enabled.
9. If needed, make further adjustments under the **Advanced** tab. See the online help for more information.

Focus Assistant

To focus using the Focus Assistant, follow the instructions in steps 1–3 on *page 17* before you start with the steps below.

Note

- The view in front of the camera should not be changed during focus adjustment (steps 5 and 6). If the camera is moved, or if a finger or other object is placed in front of the lens, steps 3–7 below will have to be repeated.
- If movements in front of the camera cannot be avoided, the Focus Assistant should not be used.
- If the control button is not released within two seconds, AXIS Dynamic DNS Service is enabled instead of the Focus Assistant.
- If the camera is mounted so that the control button cannot be accessed, you can still use the Focus Assistant. Follow the instructions but mount the camera after step 4 (pressing the control button) instead and skip step 7.

1. Mount or place the camera so that it cannot be moved.
2. Loosen the zoom puller by turning it anti-clockwise. Move the puller to set the zoom level. Retighten the zoom puller.
3. Set the camera to its extreme distant-focus position by loosening the focus puller and turning the focus ring fully clockwise.
4. Press and quickly release the control button. When the status indicator flashes green, the Focus Assistant is enabled. If the status indicator flashes either red or amber before you are able to adjust the lens, skip to step 7 to exit the Focus Assistant and repeat steps 3–7.
5. Gently turn the focus ring anti-clockwise until it stops.
6. Finally, turn the focus ring slowly clockwise until the status indicator flashes green or amber (not red).
7. To exit the Focus Assistant, press the control button. The Focus Assistant is switched off automatically after 15 minutes.
8. Retighten the focus puller.
9. Open the Live View page in the web browser and check the quality of the image.
10. Continue with steps 6–8 on *page 17*.

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.
6. Refocus the product.

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

Further Information

The User Manual is available at www.axis.com

Visit www.axis.com/techsup to check if there is updated firmware available for your network product. To see the currently installed firmware version, go to **Setup > About**.

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

Warranty Information

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

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