

## **AXIS P13 Series**

**AXIS P1364 Network Camera**

**AXIS P1365 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

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](http://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/](http://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 an unshielded network cable (UTP) and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. This equipment has also 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.

### 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 55022. 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 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 22.

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 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다. 적절히 접지된 STP (shielded twisted pair) 케이블을 사용하여 제품을 연결하십시오.

#### 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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Sweden

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[www.axis.com](http://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/](http://www.axis.com/techsup/)

#### Learn More!

Visit Axis learning center [www.axis.com/academy/](http://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

### 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 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.
- The power supply shall be plugged in to a socket outlet installed near the product and shall be easily accessible.
- Use a limited power source (LPS) with either a rated output power limited to  $\leq 100$  W or a rated output current limited to  $\leq 5$  A.

## 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](http://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.





### Installation Guide

This Installation Guide provides instructions for installing AXIS P1364 Network Camera or AXIS P1365 Mk II Network Camera on your network. For other aspects of using the product, see the User Manual available at [www.axis.com](http://www.axis.com)

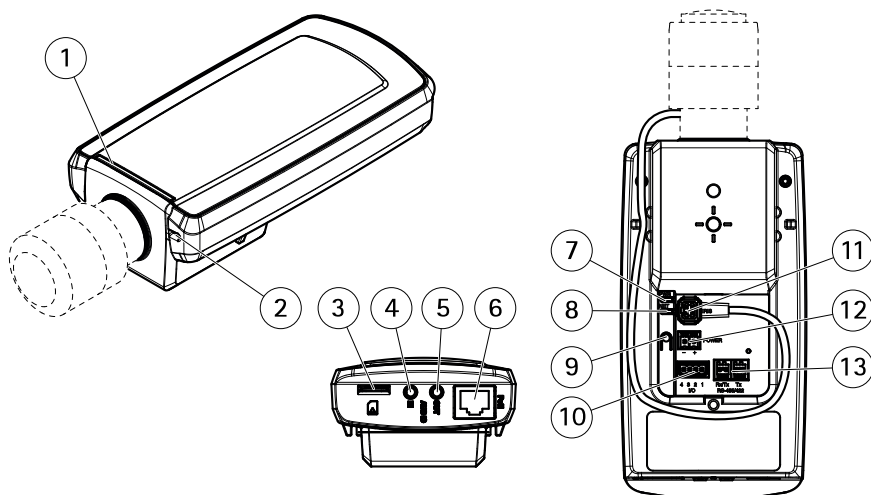
### Installation Steps

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 14*.
4. Install the hardware. See *page 17*.
5. Access the product. See *page 18*.
6. Set the focus. See *page 18*.

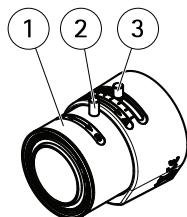
### Package Contents

- Network Camera
  - AXIS P1364
  - AXIS P1365 Mk II
- Connector kit
- Camera stand
- Allen key TR20
- Printed materials
  - Installation Guide (this document)
  - Extra serial number label (2x)
  - AVHS Authentication key

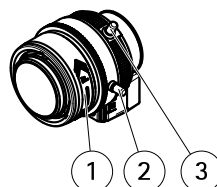
## Hardware Overview



- 1 Status LED
- 2 Built-in microphone
- 3 microSD card slot
- 4 Audio in
- 5 Audio out
- 6 Network connector (PoE)
- 7 Power LED
- 8 Network LED
- 9 Control button
- 10 I/O connector
- 11 Iris connector
- 12 Power connector (DC)
- 13 RS485/422 connector



AXIS P1364



AXIS P1365 Mk II

- 1 Focus ring
- 2 Lock screw for focus ring
- 3 Zoom puller

## 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. Flashes 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

The status LED flashes when the Focus Assistant is active.

Color	Indication
Red	The image is out of focus. Adjust the lens.
Amber	The image is close to focus. The lens needs fine tuning.
Green	The image is in focus.

Connectors and Buttons

For specifications and operating conditions, see *page 14*.

Network Connector

RJ45 Ethernet connector with Power over Ethernet (PoE).

NOTICE

Due to local regulations or the environmental and electrical conditions in which the product is to be used, a shielded network cable (STP) may be appropriate or required. All cables connecting the product to the network and that are routed outdoors or in demanding electrical environments 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  $\leq 100$  W or a rated output current limited to  $\leq 5$  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, 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](http://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 20*.
- 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

The Axis product is intended for indoor use.

Product	Temperature	Humidity
AXIS P1364	0 °C to 55 °C (32 °F to 131 °F)	10–85% RH (non-condensing)
AXIS P1365 Mk II	0 °C to 55 °C (32 °F to 131 °F)	10–85% RH (non-condensing)

Power Consumption

NOTICE

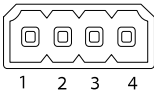
Use a limited power source (LPS) with either a rated output power limited to ≤100W or a rated output current limited to ≤5A.

Product	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3	DC
AXIS P1364	Max. 7.6 W, typical 4.3 W	8–28 V DC, max. 7.4 W, typical 4.1 W
AXIS P1365 Mk II	Max. 6.8 W, typical 3.6 W	8–28 V DC, max. 7.3 W, typical 4.2 W

Connectors

I/O Connector

4-pin terminal block

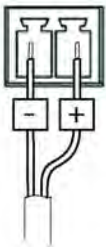


For an example diagram, see *Connection Diagrams on page 17*.

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)	3–4	Digital input – Connect to pin 1 to activate, or leave floating (unconnected) to deactivate.	0 to max 30 V DC
		Digital output – 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 30 V DC, open drain, 100 mA

Power Connector

2-pin terminal block for DC 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)

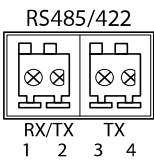


	1 Tip	2 Ring	3 Sleeve
Audio Input	Microphone/Line in		Ground
Audio Output	Line out (mono)		Ground

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	

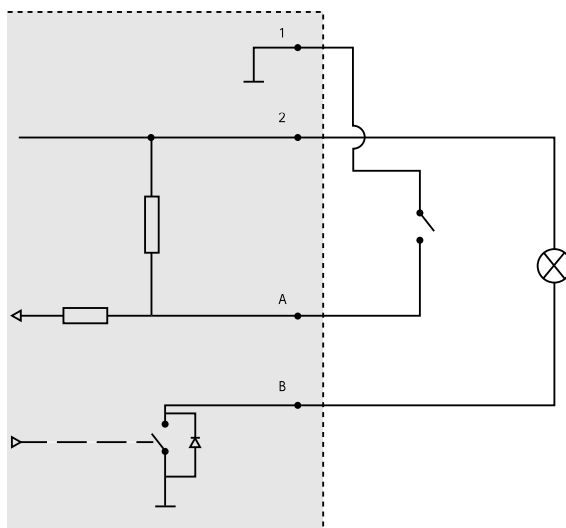
Important

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



## Connection Diagrams

### I/O Connector



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

## Install the Hardware

### NOTICE

- Due to local regulations or the environmental and electrical conditions in which the product is to be used, a shielded network cable (STP) may be appropriate or required. Any network cables that are routed outdoors or in demanding electrical environments shall be shielded (STP) and intended for their specific use. Make sure that the midspan is properly grounded. For information about regulatory requirements, see *Regulatory Information on page 2*.

### Note

- Make sure that the material is strong enough to support the weight of the camera.
- For more technical specifications, see the camera's User Manual, available on [www.axis.com](http://www.axis.com)

1. Prepare the wall or ceiling for installation of the stand. Use the stand as a template and mark the holes before drilling.
2. Route the network cable through the wall or ceiling. Leave approximately 30 cm (11.8 in) of cable for connecting the camera.
3. If connecting an auxiliary device, for example an I/O, audio, or external power device, to the camera, repeat the step above as applicable to the specific device.
4. Install the stand on the wall or ceiling and make sure that the screws and plugs are appropriate for the material (e.g. wood, metal, sheet rock, stone).
5. Install the camera on the stand and tighten the tripod screw.
6. Connect all cables to the camera.
7. Aim the camera in the right direction and use the supplied Allen key to tighten the ball joint.

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

## Adjust focus

Follow these instructions to set the focus and zoom.

If the camera is mounted so that you cannot look at the image and access the lens at the same time, use the Focus Assistant, see *Adjust focus with the Focus Assistant on page 19*.

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 puller and the lock screw for the focus ring on the lens by turning them counter-clockwise. See *Hardware Overview on page 10*.
5. Move the zoom puller and the focus ring to set zoom and focus and check the quality of the image in the image window.
6. Re-tighten the zoom puller and the lock screw for the focus ring.

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.

## Adjust focus with the Focus Assistant

### Note

- The view in front of the camera should not be changed during focus adjustment. If the camera is moved, or if a finger or other object is placed in front of the lens, restart the procedure.
- 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 Internet Dynamic DNS Service is enabled instead of the Focus Assistant.

For more information about AXIS Internet Dynamic DNS Service, see the User Manual available at [www.axis.com](http://www.axis.com)

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. Mount or place the camera so that it cannot be moved.
5. Loosen the zoom puller by turning it anti-clockwise. Move the puller to set the zoom level. Retighten the zoom puller.
6. Set the camera to its extreme distant-focus position by loosening the lock screw for the focus ring and turning the focus ring fully clockwise.
7. Press and quickly release the control button. When the status indicator flashes, the Focus Assistant is enabled.
8. Gently turn the focus ring anti-clockwise until it stops.
9. Turn the focus ring slowly clockwise until the status indicator flashes green.
10. To exit the Focus Assistant, press the control button. If you cannot access the control button, the Focus Assistant is switched off automatically after 15 minutes.
11. Re-tighten the lock screw for the focus ring.
12. Open the Live View page in the web browser and check the quality of the image.
13. On the Focus page, click **Fine-tune focus automatically** and wait until automatic fine tuning is completed.
14. Click **Enable iris**. If the button is inactive the iris is already enabled.
15. If needed, make further adjustments under the **Advanced** tab. See the online help for more information.

### 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](http://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** and click **Default**.

### Further Information

For the latest version of this document, see [www.axis.com](http://www.axis.com)

The User Manual is available at [www.axis.com](http://www.axis.com)

Visit [www.axis.com/techsup](http://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](http://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/](http://www.axis.com/warranty/)



Installation Guide

AXIS P13 Series

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Ver. M4.4

Date: February 2016

Part No. 1540127