

# INSTALLATION GUIDE

**AXIS M1011 STS Network Camera**

**AXIS M1011-W STS Network Camera**

**AXIS M1031-W STS Network Camera**

## About this Document

This document includes instructions for installing the AXIS M1011/M1031 STS on your network. Previous experience of networking will be beneficial when installing the product.

## Legal Considerations

Video and audio surveillance can be prohibited 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 and one (1) MPEG-4 decoder license. To purchase further licenses, contact your reseller.

## Electromagnetic Compatibility (EMC)

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: Re-orient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment to an outlet on a different circuit to the receiver. Consult your dealer or an experienced radio/TV technician for help. Shielded (STP) network cables must be used with this unit to ensure compliance with EMC standards. See *Radio Transmission Regulatory Information & EMC*, on page 12 for more information on this product's compliance with radio frequency and safety standards.

## 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.

## 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 documentation 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.

## RoHS

This product complies with both the European RoHS directive, 2002/95/EC, and the Chinese RoHS regulations, ACPEIP.



## WEEE Directive

The European Union has enacted a Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE Directive). This directive is applicable in the European Union member states.



The WEEE marking on this product (see right) or its documentation indicates that the product must not be disposed of together with household waste. To prevent possible harm to human health and/or the environment, the product must be disposed of in an approved and environmentally safe recycling process. For further information on how to dispose of this product correctly, contact the product supplier, or the local authority responsible for waste disposal in your area.

Business users should contact the product supplier for information on how to dispose of this product correctly. This product should not be mixed with other commercial waste. For more information, visit [www.axis.com/techsup/](http://www.axis.com/techsup/).

## Support

Should you require any technical assistance, please contact your STS operator. If your questions cannot be answered immediately, your operator will forward your queries through the appropriate channels to ensure a rapid response.

# Axis STS Network Camera Installation Guide

This installation guide provides instructions for installing your Axis STS Network Camera. The models covered by this guide are:

- AXIS M1011 STS
- AXIS M1011-W STS
- AXIS M1031-W STS

For more information on using your camera, please visit your operator's web portal.

## Installation steps

1. Check the package contents against the list below.
2. Study the overview for your camera.
3. Mount the camera and connect the cables.
4. Register the camera at your operator's web portal.
5. Configure the wireless connection (wireless models only).

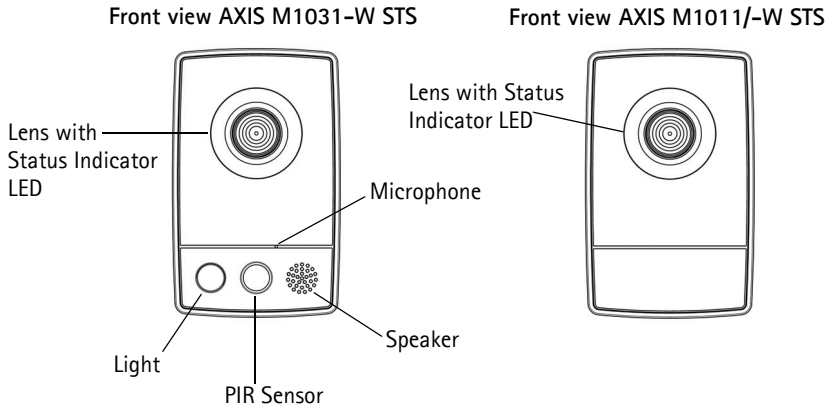
### Important!

This product must be used in compliance with local laws and regulations.

## 1 Package contents

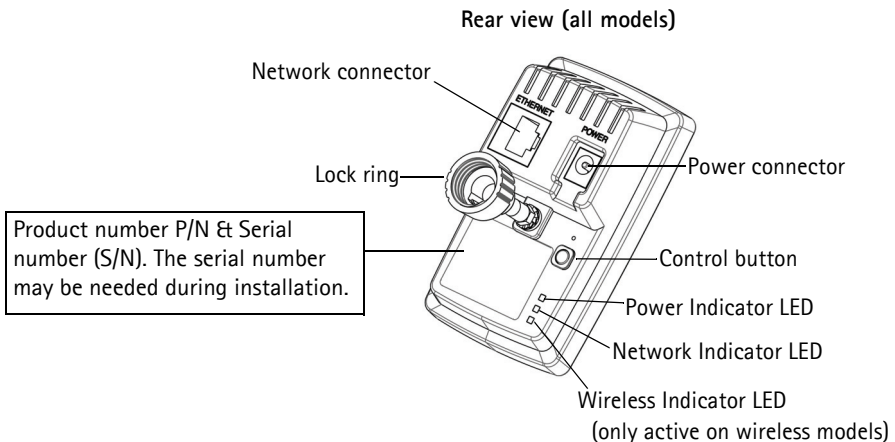
Item	Models/variants/notes
Network Camera	AXIS M1011 STS AXIS M1011-W STS AXIS M1031-W STS
Indoor power supply (country specific)	PS-H or PS-V Europe, UK, USA/Japan, Australia, Korea, Argentina, China
Power supply extension cable	1.8m (for PS-H only)
Network cable	1m (3.2 ft)
Camera stand	Including fitted extension section and 4 mounting screws/plugs
Flexible clamp	For shelf mounting
Printed Materials	Axis STS Network Camera Installation Guide (this document) Axis Warranty Document Owner Authentication Key document

## 2 Camera overview



### AXIS M1031-W STS Notes:

- The light (an illuminator LED) has a maximum lifespan of 30000 hours. It is not intended for constant operation.
- The Passive Infrared (PIR) sensor detects heat from moving objects and can be used to e.g. automatically switch on the light when triggered. Sensitivity range = up to 5m (16ft).
- Microphone & speaker - for half-duplex audio.



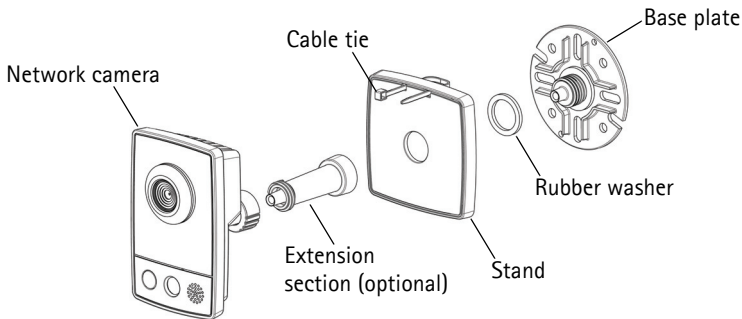
### Notes:

- Network connector - RJ-45 Ethernet connector. Shielded cables recommended.
- Power connector - Mini DC connector, 5.0-5.1V DC, max 1.5A. Center pin +.

## 3 Mount the camera

### Camera stand

The Axis STS Network Camera is shipped with the stand and extension section mounted. Depending on the required installation, disassemble the stand and follow the instructions for wall or shelf mounting below.

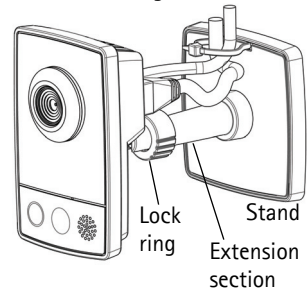


Make a note of the serial number (S/N) located on the product label. This number may be required during installation.

### Wall mounting

1. Unscrew the extension section to release the base plate from the stand.
2. Use the supplied screws to fix the base plate to a flat (horizontal or vertical) surface.
3. Attach the stand and optionally the extension section.
4. Attach the camera, adjust the angle and tighten the lock ring.
5. The stand is equipped with a cable tie to secure the cables once connected.

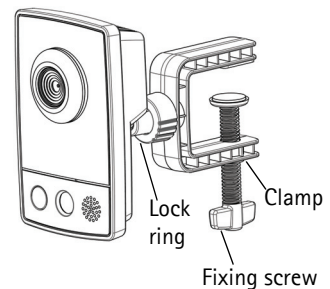
#### Wall mounting



### Shelf mounting

1. Position the clamp and tighten the fixing screw securely.
2. Attach the lock ring on the camera to the clamp.
3. Adjust the camera angle and tighten the lock ring.

#### Shelf mounting



## Connect the cables

1. Connect the camera to your home broadband router, using a shielded network cable - do **not** connect it directly to your computer. For the wireless models, this connection is temporary and allows the camera's wireless settings to be configured before connecting to the wireless network.
2. Connect the supplied indoor power supply to the power connector on the camera.
3. After power is applied, check that the Status LED on the front of the camera first shows orange, and is then unlit after approximately 10 seconds. If not, see page 10.

## 4 Register the camera at your operator's web portal

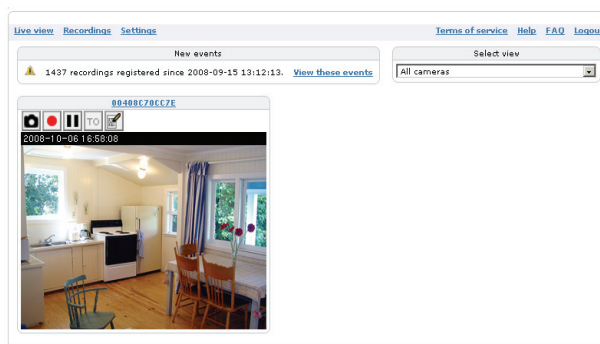
If your operator gave you specific instructions on how to register your camera, you should now follow those instructions. The steps and illustrations below are examples only and may differ from those provided by your operator.

1. Open a browser (e.g. Internet Explorer) and visit your operator's web portal, as in the example below.



2. If you do not already have an account, click on the appropriate link, which might be named e.g. "Create new account" or something similar.
3. Enter any information requested, as well as the camera's serial number and the "Owner authentication key", which can be found on the document supplied with the camera.
4. Accept the terms of the service and click on "Register" or similar.

After registration is complete, live images from your camera should be available within a few seconds. Note that the various features, settings, links etc., available in your account all depend on the subscription you have with your operator – some features might not be available.



- Notes:**
- If using Internet Explorer, you may need to approve the automatic installation of AMC (AXIS Media Control), which allows viewing of the video stream. You will need administrator rights on the computer to do this.
  - The document "Camera owner authentication key" contains a unique code that is associated with your camera. This code must be specified every time the camera is registered or unregistered, and should therefore be kept in a safe place.

## 5 Configure the wireless connection

For a wireless camera, the wireless settings should be configured while the camera is connected via the network cable. After the settings have been made, the cable can be disconnected. Configuring the camera via an unsecured wireless connection is not recommended, as passphrases and keys will be sent in plain text.

The wireless camera automatically senses the available network connections, and only allows one of these to be active at any one time. Connecting a network cable disables the wireless connection.

To configure the wireless settings – in your account at your operator's web portal, click on **Settings**. Then select the camera name, and click on **Wireless Settings**.

### Wireless network list

This list is the result of a network scan. Access points with a disabled SSID Broadcast will not appear unless the camera is associated with it. A network using unsupported security is shown in grey.

The screenshot shows the 'Wireless' settings page for a device with ID '00408C80B86A'. It features a table of detected wireless networks and a section for configuring the camera's wireless settings.

SSID	Mode	Security	Channel	Signal strength	Bit rate
axis	Master	off	3	70 %	
axis	Master	off	3	50 %	
Joe	Master	off	1	60 %	
sts	Master	WPA-PSK/WPA2-PSK	11	40 %	

Below the table is the 'Wireless settings' section with the following options:

- SSID:
- Security:  WPA-PSK  WEP  No security

Buttons for 'Rescan' and 'Save' are located at the bottom right of their respective sections.

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The list provides the following information:

- **SSID** – The name of a wireless network (or ad-hoc device). If the same name occurs several times this means that several access points for that network were found, in which case the camera cannot be configured to only associate with one particular access point.
- **Mode** – Indicates if the network node is an access point (Master) or an Ad-Hoc device.
- **Security** – Shows which type of security the network uses. See below for the supported security types.
- **Channel** – Shows the wireless channel currently in use.
- **Signal strength** – Shows the signal strength.
- **Bit rate** – Shows the bit rate in Mbit/s. This can only be shown for the access point currently in use. Note that the bit rate shown is the current rate, and that this value may vary over time.

To update the list, click the button **Rescan**.



## Wireless Settings

These settings control how the wireless camera interacts with the wireless network. Apart from identifying the wireless network, it is also possible to enable wireless encryption.

**SSID** - This is the name of the wireless network the camera is configured for. The field accepts up to 32 alphanumeric characters. The name must be exactly the same as that used in the wireless access point, or the connection will not be established.

Leaving this field blank means the camera will attempt to access the nearest unsecured network.

**Note:** SSID is sometimes shown as ESSID.

**Security** - The camera supports two security methods:

- WPA-PSK (recommended method)
- WEP

### WPA-PSK (Wi-Fi Protected Access - Pre-Shared Key)

In this method the camera uses a **pre-shared key** (PSK) for key management. The pre-shared key can be entered either as **Manual hex** - using 64 hexadecimal (0-9, A-F) characters, or as a **Passphrase** - using 8 to 63 ASCII characters.

The screenshot shows the 'Wireless settings' dialog box. The 'SSID' field is empty. Under 'Security', 'WPA-PSK' is selected with a radio button. Under 'WPA settings', 'Passphrase (8 to 63 ASCII chars)' is selected with a radio button. There are input fields for 'Key:' and 'Passphrase:'. A 'Save' button is at the bottom right.

### WEP (Wired Equivalent Protection)

**Authentication** - Select **Open** or **Shared Key**, depending on the method used by your access point. Not all access points have this option, in which case they probably use **Open**, which is sometimes known as SSID Authentication.

**Key length** - This sets the length of the key used for the wireless encryption, 64 or 128-bit. The encryption key length can sometimes be shown as 40/64 and 104/128.

**Active Transmit Key** - This selects which of the 4 keys the camera uses when transmitting.

The screenshot shows the 'Wireless settings' dialog box with 'WEP' selected under 'Security'. Under 'WEP settings', 'Authentication' is set to 'Open' and 'Key length' is set to '64 bit'. 'Active transmit key' is set to '1'. Under 'Key type', 'Manual (10 or 26-HEX chars)' is selected, with input fields for 'Key 1:', 'Key 2:', and 'Key 4:'. There are also fields for 'Key 3:' and 'Passphrase:'. A 'Save' button is at the bottom right.

**Key Type** - The key types available depend on the access point being used. The following options may be available:

- **Manual** - Allows you to manually enter the hex key (10 or 26 characters).
- **ASCII** - In this method the string must be exactly 5 characters for 64-bit WEP, or 13 characters for 128-bit WEP.
- **Passphrase** - The passphrase can contain up to 31 characters. In 64-bit WEP, the Passphrase generates 4 different keys. For 128-bit WEP, only 1 key is generated, which is then replicated for all 4 keys. Key generation is not standardized and may differ from brand to brand. Check that the generated keys are identical to those in your access point - if not, they must be entered manually.

## Complete the wireless installation

1. Check that the wireless settings in the camera correspond to the settings in the wireless access point/router.
2. Disconnect the network cable from the camera, which will now attempt to establish the wireless connection. This may take up to 3 minutes.
3. Refresh the web page to confirm the wireless connection. If the camera cannot be accessed after 3 minutes, reconnect the network cable and check that the wireless settings match those in the wireless access point/router.

## LED indications & troubleshooting

### Status LED

During startup, the Status LED on an Axis STS camera shows the following:

1. Unlit for approximately 10 seconds.
2. Orange for approximately 10 seconds.
3. Unlit.

When using default settings, the Status LED flashes green whenever someone is viewing images from the camera, or when a recording is in progress, otherwise it is unlit.

If the camera fails to connect to the system, the following may be indicated:

- 1 orange flash - the camera has not received an IP address. Check all cable connections. Check that the network LEDs on the camera and the router are lit.
- 2 (or 3) orange flashes - The camera has no access to the Internet and/or cannot be added to the service. If a computer connected to the same network has Internet access, this indicates that the camera's traffic is somehow being blocked. Check the settings in the broadband router, and also in other networking devices (if used) located between the camera and the Internet. The camera uses port 80 for its communication. Note that a proxy server cannot not be used between the camera and the Internet.

For all other status LED flash combinations, please contact your operator for further information.

## Network LED

The Network LED on the camera can indicate the following:

- Green flash - Connected to the network at 100 Mbps.
- Orange flash - Connected to the network at 10 Mbps.
- Red - Cable malfunction. Replace the cable.

## Wireless LED (wireless models only)

The wireless LED can indicate the following:

- Green flash - Connected to wireless network.
- Red - No network connection.
- Unlit - Connected via network cable.

## Resetting to the Factory Default Settings

This will reset all parameters in the camera to the Factory Default settings:

1. Disconnect power from the camera.
2. Press and hold the Control button and reconnect power.
3. Keep the Control button pressed until the Status LED shows amber (this may take up to 15 seconds).
4. Release the Control button. If the camera is connected to the Internet, the LED will go out after approximately 30 seconds. The camera has now been reset. If there is no Internet connection the Status LED will show an error - see above.

## Technical information

- The service requires either a broadband router that can assign the camera an IP address via DHCP, or an ISP that provides you with multiple public IP addresses.
- The camera does not configure NAT-traversal in routers.
- The camera cannot be used behind a proxy server.
- The camera requires port 80 to be open for outgoing traffic. If you can already browse the Internet from a PC, then no changes are required.
- The camera will function even if your ISP gives you a dynamic (DHCP) IP address that changes frequently.
- The camera generates almost no background traffic when not in active use. A so-called keep-alive packet is sent every second minute.

## Radio Transmission Regulatory Information & EMC

This equipment generates and radiates radio frequency energy, and must be installed and operated while maintaining a minimum body-to-camera distance of 3 feet (1 meter).

If this equipment causes 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: Re-orient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment to an outlet on a different circuit to the receiver. Consult your dealer or an experienced radio/TV technician for help. Shielded (STP) network cables must be used with this unit to ensure compliance with EMC standards.

Tested to comply with FCC Standards FOR HOME OR OFFICE USE. This product must be installed and used in strict accordance with the instructions given in the user documentation. This Axis product complies with the following radio frequency and safety standards:

### AXIS M1011

**USA** – This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his/her own expense will be required to take whatever measures may be required to correct the interference.

**Canada** – This Class B digital apparatus complies with Canadian ICES-003.

**Europe** – **CE** This digital equipment fulfills the requirements for radiated emission according to limit B of EN55022, and the requirements for immunity according to EN55024 residential and commercial industry.

**Japan** – This is a class B product based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

**Australia** – This electronic device meets the requirements of the Radio communications (Electromagnetic Compatibility) Standard AS/NZS CISPR22:2002

### AXIS M1011-W/M1031-W (Wireless)

**USA** – Federal Communications Commission FCC

This device complies with Part 15 of FCC Rules. Operation of the device is subject to the following two conditions:

- (1) This device may not cause harmful interference
- (2) This device must accept any interference that may cause undesired operation.

#### Information to user

This equipment has been tested 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:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

Caution – modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Canada** – This device complies with RSS-210 of Industry Canada. Operation is subject to the following conditions:

(1) This device may not cause interference, and

(2) this device must accept any interference, including interference that may cause undesired operation of the device.

**Europe** – EU Declaration of Conformity. Axis Communications AB declares that this terminal (Model name : M1031-W, M1011-W) fulfills the essential requirements according to directive R&TTE 1999/5/EC, with essential test suites as per standards:

EN 301 489 General EMC requirements for radio equipment,

ETS 300 328 Technical requirements for radio equipment.

**Japan** – This product complies with Technical Regulations Conformity Certification of Specified Radio equipment.

**Australia** – This electronic device meets the requirements of the Radio communications (Electromagnetic Compatibility) Standard AS/NZS 4771.



