AXIS 205 Network Camera

Goes anywhere your network goes

AXIS 205
Network Camera

AXIS
COMMUNICATIONS

Make your network smarter

Introduction

Focus guide (see page 6)

Status indicator (surrounding the focus ring)

Focus ring (see page 6)

Serial number

Mounting screw

Network indicator

Control button

Power indicator

Power connector

Network connector
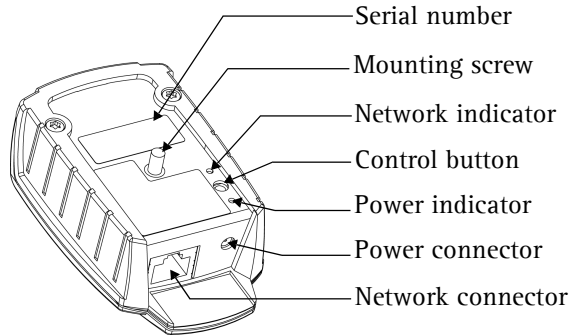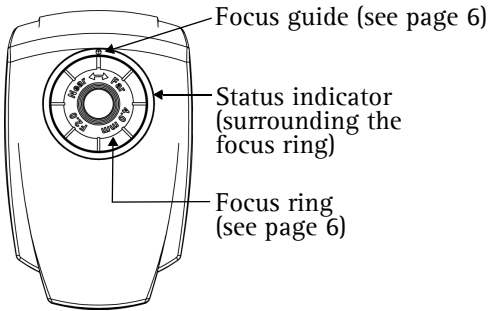
Hardware Inventory

The items supplied with the AXIS 205 are listed below. Please contact your dealer if anything is missing or damaged.

Item	Description/type	Quantity	Notes
Network Camera	AXIS 205 Network Camera	1	
Power adapter	PS-H	1	Country-specific. Please ensure the correct adapter is used.
Printed Materials	AXIS 205 Network Camera Installation Guide	1	
	Axis Warranty	1	
Stand	Includes extension section and 3 mounting screws.	1	Ready assembled.
Lock washer	Used between camera and stand.	1	

Mounting

To mount on a horizontal surface, place the lock washer between the stand and the camera and screw the camera onto the stand. Loosen the swivel joint lock ring, angle the camera as required and gently re-tighten the lock ring. To mount on a wall, first unscrew and remove the stand extension (see the illustration below.) Angle and fasten the camera as for surface mounting.

Surface mounting

Lock washer

Swivel joint

Lock ring for swivel joint

Stand extension (removable)

Wall mounting

Lock washer
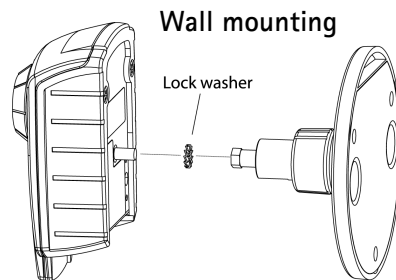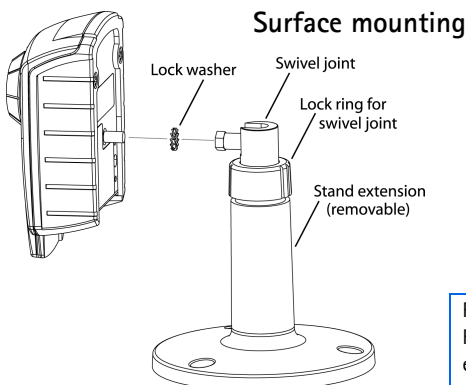
Please note that the AXIS 205 is intended for **indoor use only**. Furthermore, it must always be positioned so that it is not exposed to direct sunlight or strong halogen light.

Installation

The AXIS 205 is designed for installation on an Ethernet network. This involves assigning the product an IP address, either via an automated network service (e.g. DHCP) or manually. The available methods are described below.

For the advanced user!

Upon delivery, the AXIS 205 is set to obtain a dynamic IP address via DHCP. When using a broadband router (NAT-box) that includes a DHCP server, the camera will receive an IP address when power is applied. If a dynamic IP address is not obtained, the IP address will default to 192.168.0.90. After power has been applied, push the control button, wait 20 seconds and a link to your camera will be registered at the Axis Internet Dynamic DNS service. You should then visit www.axiscam.net and follow the instructions found there. See also the complete installation procedure as described below.

The Axis Internet Dynamic DNS Service

Axis recommends using the Axis Internet Dynamic DNS Service when installing the AXIS 205. The service provides a one-click procedure that installs the camera and makes it available on your local network and on the Internet - simply by pressing the control button on the rear of the camera. The camera receives its own URL (web address), which can then be used to access it. The camera can be unregistered from the service at any time.

Requirements

To use the Axis Internet Dynamic DNS Service the following is required:

• A LAN (Local Area Network), with or without a DHCP server

• An Internet connection that does not require a proxy server for HTTP access.

Please consult your network administrator to check if your network meets the specified requirements or not. If not, the AXIS 205 must be installed manually. See page 4.

Some connection types, such as PPPoE (Point-to-Point Protocol over Ethernet), require an Internet sharing device (e.g. a NAT-box) for managing ISP login.

Installation Procedure

Please note that this procedure will send the AXIS 205's IP address, firmware version, product type and serial number to the Axis Internet Dynamic DNS Service.

1. Connect the AXIS 205 to your local network, using a standard network cable.

2. Connect the power adapter to the camera and connect to the main power supply.

3. Wait for the Status indicator on the front of the camera to show a steady green, whereupon the camera will have received a dynamic IP address from a DHCP server on your network. If after 20 seconds the Status indicator remains yellow, the camera's IP

address has not been set dynamically and will instead default to 192.168.0.90 - which may be possible to use, depending on your network. Alternatively, set a valid IP address manually (see page 4) and continue with step 4 below.

4. Now push the control button on the rear panel <u>once</u>. The Status indicator on the front of the camera will blink green while it connects to the Axis Internet Dynamic DNS service. When the registration process succeeds, the indicator returns to steady green. In case of failure, see below.

5. Using an Internet connected PC, you now have 60 minutes to visit **www.axiscam.net** where you will be guided through the remainder of the procedure. Please have the serial number of your product ready and follow the instructions on the screen.

Terms of Service

Axis Communications provides the Axis Internet Dynamic DNS Service subject to the terms and conditions as specified during the registration process. By completing the registration process and clicking the **"I agree"** button, you indicate your agreement to be bound by the terms and conditions of service.

Registration

After registration is complete, your camera will have received its own DNS name, which can then be used to access it over the Internet. An example of a DNS name is http://axis123456.axiscam.net/. The numbers 123456 in the example correspond to the last six digits in the serial number on the product's label. Click on the DNS name to open a new window showing the main camera web page.

The registration service web page also shows the other available information about your AXIS 205, i.e. its public IP address and the private IP address used on your local network. If the IP address of your PC is on a different IP address segment than the one used for your camera, it might not be possible to access it, unless it is also accessible from the Internet.

The DNS name provided for your Axis camera is valid for two weeks by default. If you wish to remove it before this time, select **Remove currently registered DNS name**. This option is found in the settings under **System Options > Network > TCP/IP > Axis Internet Dynamic DNS Service**. To keep the product's DNS name, please follow the **Registration instructions** found on the DNS service's web pages.

Note: Please note that once your AXIS 205 has been registered at the Axis Internet Dynamic DNS Service, it will automatically contact the service again every time its IP address changes, regardless of whether this is due to an automatic change (DHCP) or a manual change. This can be disabled from the settings under **System Options > Network > TCP/IP > Axis Internet Dynamic DNS Service**. As long as this setting is disabled, the Dynamic DNS service will not be notified if the IP address for your camera changes, which means the camera will not be accessible via the registered DNS name.

What to do if registration fails

If step 4 in the registration process fails, the Status indicator on the front of the camera will blink red for 10 seconds, after which it returns to steady green. In this case, the camera was unable to contact the Axis Internet Dynamic DNS Service. It may still be possible to access the camera locally via the default IP address. Otherwise, the IP address must be set manually, using one of the methods described below. See also the troubleshooting section.

Manual Installation using AXIS IP Utility

Important!

> Although it may be possible to use the default IP address 192.168.0.90, please consult your network administrator to obtain a suitable IP address for your network and your particular subnet.

AXIS IP Utility is a software application that quickly and simply installs an Axis device onto your local network. Download the latest version, free of charge, from www.axis.com

1. Connect the AXIS 205 to your local network using a standard network cable.

2. Connect the power adapter to the camera and plug into the main power supply.

3. Start AXIS IP Utility. The following window appears:

4. In the first field, enter the serial number found on the AXIS 205's label (see the illustration below.) This number always starts with 00408C and is followed by 6 characters unique to your unit. Enter the remainder of the number, (e.g. 181000) so that the whole number reads something like 00408C181000.

5. Enter the IP address for your AXIS 205 and click **Set IP.** The utility now prompts you to restart your camera and then displays a message confirming that the IP address has been set. To view the camera's home page, click the button provided. Configure the remaining network parameters from the setup tools.

Manual Installation with ARP and Ping

As an alternative to the AXIS IP Utility, the AXIS 205 can be installed using the ARP and Ping commands, as described below.

1. Locate the label (see the illustration) containing the product's serial number. You must know this to set the IP address.

2. Connect a network cable to your AXIS 205 and attach it to the network.

Serial number same as MAC/Ethernet address; e.g. 00408c181000 = 00-40-8c-18-10-00

3. From a **Windows** computer on your network, open a **Command Prompt** and enter the commands shown below.

Example:

```
c:\WINNT>arp -s 192.168.0.125 00-40-8c-18-10-00
c:\WINNT>ping -l 408 -t 192.168.0.125
```

For **Unix/Linux,** enter the following: (note that you must be the root user and that the ping length must be 408.)

Example (for Linux):

```
>arp -s 192.168.0.125 00:40:8c:18:10:00 temp
>ping -s 408 192.168.0.125
```

Note: In some Unix/Linux systems, the arp command can be located in a directory that is not on the command path; e.g: /usr/sbin/arp

4. Now connect the power adapter to the camera and plug into your main power supply. No more than 2 minutes should have elapsed since the ARP command was run. Text similar to the following is then displayed in the window:

```
c:\WINNT>arp -s 192.168.0.125 00-40-8c-18-10-00
c:\WINNT>ping -l 408 -t 192.168.0.125
Pinging 192.168.0.125 with 408 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Reply from 192.168.0.125: bytes=408 time<10ms TTL=64
Reply from 192.168.0.125: bytes=408 time<10ms TTL=64
```

5. Press Ctrl+C to stop Ping. Ensure that the Power Indicator is permanently lit and that the Network Indicator flashes intermittently. The IP address has now been set. You should now also set the remaining network parameters from the camera's setup tools.

Accessing the Camera from a Browser

Open a browser and type in the IP address used to install the camera, as shown in the example below. This opens the **Live View** page, which shows live video from the camera, and provides a link to the **setup** tools. See the **online help** for more information.
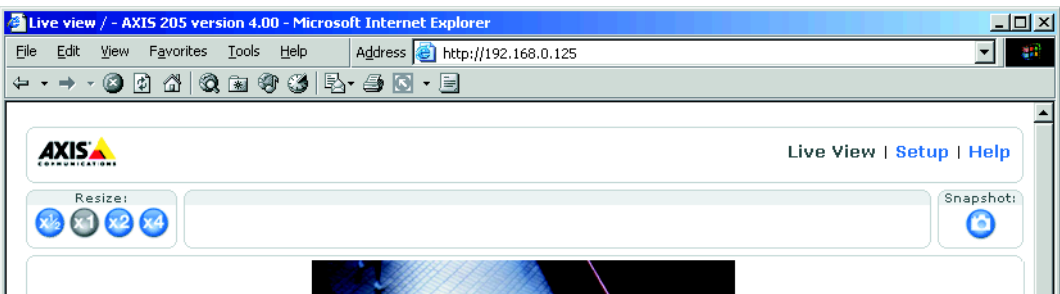
The Factory Default Settings

If it becomes necessary to reset your AXIS 205 to the **Factory Default** settings, this can be done by clicking the **Restore** button, found in **System Options - Maintenance**, or by pressing the **Control** button, found on the rear panel of the camera. Follow the instructions below to reset to the factory default settings using the Control button:
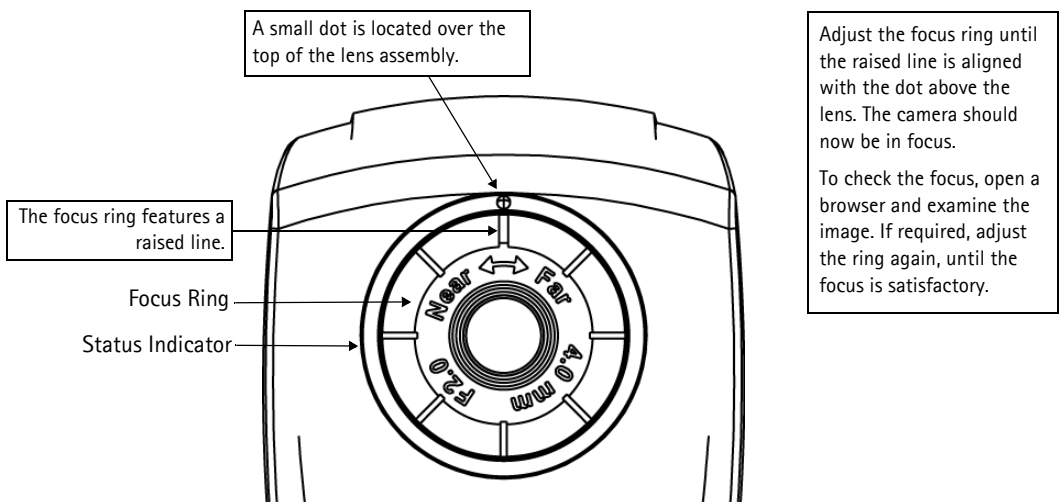
1. Disconnect the power cable from the AXIS 205.

2. Press and hold the Control button and reconnect the power cable.

3. Keep the button pressed until the Status Indicator displays *yellow* (this may take up to 15 seconds), then release the button. When the Status Indicator displays *green* (which can take up to 1 minute) the camera will have been reset to the factory default settings.

Note: Resetting to the factory default settings with the <u>Control</u> button causes all parameters (including the IP address) to be reset. The camera must then be re-installed. Using the <u>Restore</u> button in the setup tools will save the IP address, the default router, the subnet mask, the Ethernet/MAC address and all users and their passwords.

Focusing

Important!

The AXIS 205 may be used **indoors only**, and must always be positioned where it is not exposed to direct sunlight or strong halogen light. Exposure to direct sunlight or halogen light may cause permanent damage to the CMOS image sensor in the AXIS 205. Damage as a result of exposure to strong light is not covered by the Axis warranty.

A small dot is located over the top of the lens assembly.

The focus ring features a raised line.

Focus Ring

Status Indicator

Adjust the focus ring until the raised line is aligned with the dot above the lens. The camera should now be in focus.

To check the focus, open a browser and examine the image. If required, adjust the ring again, until the focus is satisfactory.

Troubleshooting

This section provides information on how to solve problems you might experience with your AXIS 205 Network Camera.

Problems, Possible Causes and Remedial Actions

Symptoms	Possible causes	Remedial actions
The AXIS 205 cannot be accessed via a browser after installing with the Axis Internet Dynamic DNS service.	Faulty power or network connection.	Check that the power indicator shows steady green and that the network indicator LED flashes intermittently, either orange or green. Check all cables and connections. Try Pinging the camera's IP address (see the next page), and/or use the same network cable to Ping some other known unit on your network.
	A proxy server is preventing communication with the Axis Internet Dynamic DNS service, and the camera has not been correctly registered.	Check with your network administrator if a proxy server is blocking access. A proxy server should be configured to allow the AXIS 205 to access the Axis Internet Dynamic DNS service via HTTP. After correctly configuring the proxy server, please reinstall the camera and try again. See also page 4.
The AXIS 205 cannot be accessed from a browser after setting the IP address manually.	The IP address is already in use by another device.	Disconnect the camera from the network. Run the Ping utility (as described below) and follow the appropriate recommendations.
	The IP address is not located on the same subnet as the one for the workstation from which you are setting the IP address.	If Ping returns "Destination host unreachable", the diagnosis is probably correct. If the IP addresses for the camera and your workstation are on different subnets, you will not be able to set the IP address. Please contact your network administrator for advice. In Windows, you can check the IP address and subnet mask used for your workstation by typing the following in a Command prompt: **ipconfig /all** (Win 2000, Win XP), or **winipcfg** (other Windows versions).
	Possible problem with your proxy server.	Try disabling the proxy default in your browser.
	Faulty connection.	See the first item above.
The AXIS 205 works locally, but not externally.	Firewall protection	Check the Internet firewall with your system administrator.
	Default routers required.	Check if the default router settings need to be configured.
	Subnet mask not specified.	Add the subnet mask in the network settings.
After successful registration at the Axis Internet Dynamic DNS service, the camera stops being accessible via its registered DNS name.	The option for automatically updating the Axis Dynamic Server on IP address change has been disabled, and the IP address has changed.	Press the control button again to re-register the camera at the AXIS Dynamic DNS Service. Follow the installation instructions. This will re-enable automatic updates to the DNS service.
The Power indicator is not constantly lit.	Faulty or incorrect power supply.	Verify that you are using the correct Axis power supply.
The Status and Network indicators flash every 0.5 seconds.	Hardware failure.	Contact your Axis reseller.
No image using Refresh and/or slow updating of images.	Too many simultaneous users.	Reduce the maximum number of simultaneous viewers, in **System Options > Users**. Alternatively, reduce the frame rate allowed to each viewer, in **Video & Image > Image Settings**.
Blurry imgaes.	Poor focus.	Refocus the camera. See page 6.
Noisy images.	Insufficient light.	Increase lighting at the point of installation. Camera performance is best in the range 100–3.000 lux.

Symptoms	Possible causes	Remedial actions
Poor quality images.	Display properties incorrectly configured for desktop.	Open the Display Properties in your desktop and configure your display to show at least 16-bit color.
No images in browser.	ActiveX disabled.	In Microsoft Internet Explorer, ensure that ActiveX has not been disabled in the Internet Options menu.
Broad vertical white lines appear across the image.	Too much light. This can happen e.g. with sunlight reflexes.	Exposure to sunlight or strong halogen light will cause serious damage to the CMOS sensor. Reposition your camera in a more shaded location. **Note:** damage caused to the AXIS 205 by exposure to direct sunlight or halogen light is not covered by the product warranty.

Note: If you still have a problem after reading this information, please contact your reseller, or visit the Axis Support Web at www.axis.com/techsup/

Pinging Your IP Address

By sending a packet to the specified address and waiting for a reply, the *Ping* utility can determine whether a specific IP-address is accessible or if there is a conflict.

Follow the instructions below to use Ping to troubleshoot TCP/IP problems on your network:

1. Start a Command prompt and type `ping x.x.x.x`, where `x.x.x.x` is the IP address used to install the camera.

2. If you receive the reply `destination host unreachable,` then the camera is not accessible on your subnet. The unit must be reinstalled, using an unoccupied IP address that is valid for use on the same subnet as the workstation from which you are attempting to perform the installation. Please consult your network administrator.

If this does not solve the problem, underline disconnect the camera from the network and run Ping again. See the table below for an interpretation of the results.

Ping Reply	Interpretation and recommendation
Reply from <IP address>: bytes=32 time<10 ms TTL=64	This IP address is already in use and cannot be used again. Please obtain a new IP address.
Request timed out	This IP address is not used and is available for use with your Axis camera. If you already installed the unit using this IP address, the installation may have failed. Reinstall the unit. Also check all cabling.

Note: To start a Windows Command Prompt (also known as a DOS prompt), click the **Start** button, then click **Run** and then type **cmd**.