

## **AXIS C8210 Network Audio Amplifier**

## **User Manual**

# AXIS C8210 Network Audio Amplifier

## Solution overview

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### Solution overview



To watch this video, go to the web version of this document.

[www.axis.com/products/online-manual/47555#t10140088](http://www.axis.com/products/online-manual/47555#t10140088)

*An overview of how network audio works.*

# AXIS C8210 Network Audio Amplifier

## Installation

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### Installation



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*Installation video for the product.*

# AXIS C8210 Network Audio Amplifier

## Find the device on the network

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### Find the device on the network

To find Axis devices on the network and assign them IP addresses in Windows®, use AXIS IP Utility or AXIS Device Manager. Both applications are free and can be downloaded from [axis.com/support](http://axis.com/support).

For more information about how to find and assign IP addresses, go to *How to assign an IP address and access your device*.

### Browser support

You can use the device with the following browsers:

	Chrome™	Firefox®	Edge™	Safari®
Windows®	recommended	recommended	x	
macOS®	recommended	recommended	x	x
Linux®	recommended	recommended	x	
Other operating systems	x	x	x	x*

*\*Supported in iOS and iPadOS*

If you need more information about recommended browsers, go to *AXIS OS Portal*.

# AXIS C8210 Network Audio Amplifier

## Access the device

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### Access the device

1. Open a browser and enter the IP address or host name of the Axis device.
2. Enter the username and password. If you access the device for the first time, you must set the root password. See *Set a new password for the root account on page 5*.

### Set a new password for the root account

#### Important

The default administrator username is **root**. If the password for root is lost, reset the device to factory default settings. See *Reset to factory default settings on page 17*



To watch this video, go to the web version of this document.

[www.axis.com/products/online-manual/47555#t10098905](http://www.axis.com/products/online-manual/47555#t10098905)

*Support tip: Password security confirmation check*

1. Type a password. Follow the instructions about secure passwords. See *Secure passwords on page 5*.
2. Retype the password to confirm the spelling.
3. Click **Save**. The password has now been configured.

### Secure passwords

#### Important

Axis devices send the initially set password in clear text over the network. To protect your device after the first login, set up a secure and encrypted HTTPS connection and then change the password.

The device password is the primary protection for your data and services. Axis devices do not impose a password policy as they may be used in various types of installations.

To protect your data we strongly recommend that you:

- Use a password with at least 8 characters, preferably created by a password generator.
- Don't expose the password.
- Change the password at a recurring interval, at least once a year.

# AXIS C8210 Network Audio Amplifier

## Device setup

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### Device setup

This section describes the settings you can make on the device's webpage. Go to [https://\[IP address of your device\]](https://[IP address of your device]) to access the device's webpage.

### Change the root password

1. Log in to the product's webpage and go to **System > Users**.
2. For the root user, click **Edit**.
3. Enter a new password and save.

### Set up a new zone

1. Log in to the audio device that you want to set as the leader in the audio system.
2. Go to **Audio > System settings**.
3. Edit the leader audio device:
  - 3.1 Click the pencil.
  - 3.2 Enter audio device name and enter username and password.
  - 3.3 Click **Apply**
4. If possible, change to **Multicast**.
5. Add audio devices to the audio system:
  - 5.1 Under **Available audio devices**, click the plus sign to add an audio device to the zone. If your device is not listed, click **Add device manually** to add the device.
  - 5.2 For each audio device, set the audio device name and enter username and password for that device.
  - 5.3 Click **Apply**.

### Set volume and gain

#### Volume

1. Go to **Audio > System overview**.
2. Use the slider **System** under **Volume** to set the system volume.

#### Gain

1. Go to **Audio > Device settings**.
2. On the **Output**, set the **Output gain**.
3. On the **Input** tab, set the **Input gain**.
4. Go to **Audio > System overview**.
5. Use the sliders beside a follower to adjust the gain for an audio device.

# AXIS C8210 Network Audio Amplifier

## Device setup

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### Prepare an audio clip link

Audio clips can be set to play when an event occurs.

To prepare an audio clip link:

1. Go to **Audio > Audio clips**.
2. Click  for an audio clip.
3. Set the volume and number of times to repeat the clip.
4. Click the copy icon to copy the link.

### Set up direct SIP (P2P)

VoIP (Voice over IP) is a group of technologies that enables voice and multimedia communication over IP networks. For more, see *Voice over IP (VoIP) on page 14*.

In this product VoIP is enabled through the SIP protocol. For more information about SIP, see *Session Initiation Protocol (SIP) on page 14*.

There are two types of setups for SIP. Peer-to-peer is one of them. Use peer-to-peer when the communication is between a few user agents within the same IP network and there is no need for extra features that a PBX-server could provide. For information on how to set it up, see *Peer-to-peer SIP (P2PSIP) on page 14*.

1. Go to **VoIP > SIP settings** and select **Enable SIP**.
2. In **Call timeout**, set the number of seconds that a call will last before it ends if there is no answer.
3. To allow the device to receive incoming calls, select **Allow incoming calls**.
4. Set the number of seconds before timeout for incoming calls.
5. Click **Save**.
6. In **Port settings**, enter the **SIP port number** and **SIP TLS port number**.

#### Note

- **SIP port** – for SIP sessions. Signalling traffic through this port is non-encrypted. The default port number is 5060.
  - **SIP TLS port** – for SIPS and TLS secured SIP sessions. Signalling traffic through this port is encrypted with Transport Layer Security (TLS). The default port number is 5061.
  - **RTP start port** – Enter the port used for the first RTP media stream in a SIP call. The default start port for media transport is 4000. Some firewalls might block RTP traffic on certain port numbers. A port number must be between 1024 and 65535.
7. Click **Save**.
  8. In **NAT traversal**, select the protocols you want to enable for NAT traversal.

#### Note

Use NAT traversal when the device is connected to the network from behind a NAT router or a firewall. For more information see *NAT traversal on page 15*.

### Set up SIP through a server (PBX)

VoIP (Voice over IP) is a group of technologies that enables voice and multimedia communication over IP networks. For more, see *Voice over IP (VoIP) on page 14*.

In this product VoIP is enabled through the SIP protocol. For more information about SIP, see *Session Initiation Protocol (SIP) on page 14*.

# AXIS C8210 Network Audio Amplifier

## Device setup

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There are two types of setups for SIP. A PBX-server is one of them. Use a PBX-server when the communication should be between an infinite number of user agents within and outside the IP network. Additional features could be added to the setup depending on the PBX-provider. For more information see, *Private Branch Exchange (PBX) on page 14*.

1. Request the following information from your PBX provider:
  - User ID
  - Domain
  - Password
  - Authentication ID
  - Caller ID
  - Registrar
  - RTP start port
2. Go to **VoIP > SIP accounts > Create account**.
3. Enter a **Name** for the account.
4. Select **Registrar**.
5. Select a transport mode.
6. Add the account information from the PBX provider.
7. Click **Save**.
8. Set up the SIP settings the same way as for peer-to-peer. See *Set up direct SIP (P2P) on page 7* for more information.

## Stop audio with DTMF

This example explains how to:

- Configure DTMF on a device.
- Set up an event to stop the audio when a DTMF command is sent to the device.

### Note

SIP must be activated before you can use this action rule.

### Note

For more information about events see *Set up rules and alerts on page 15*.

1. Go to **VoIP > DTMF**.
2. Select peer-to-peer or registrar account.
3. Click the pencil next to the SIP account.
4. Click **Add**.
5. In the **Name** field, enter "stop audio".
6. In the **Sequence** field, enter "1".
7. Click **Apply** and then **OK**.
8. Go to **Events > Management > Action rules** and click **Add**.

# AXIS C8210 Network Audio Amplifier

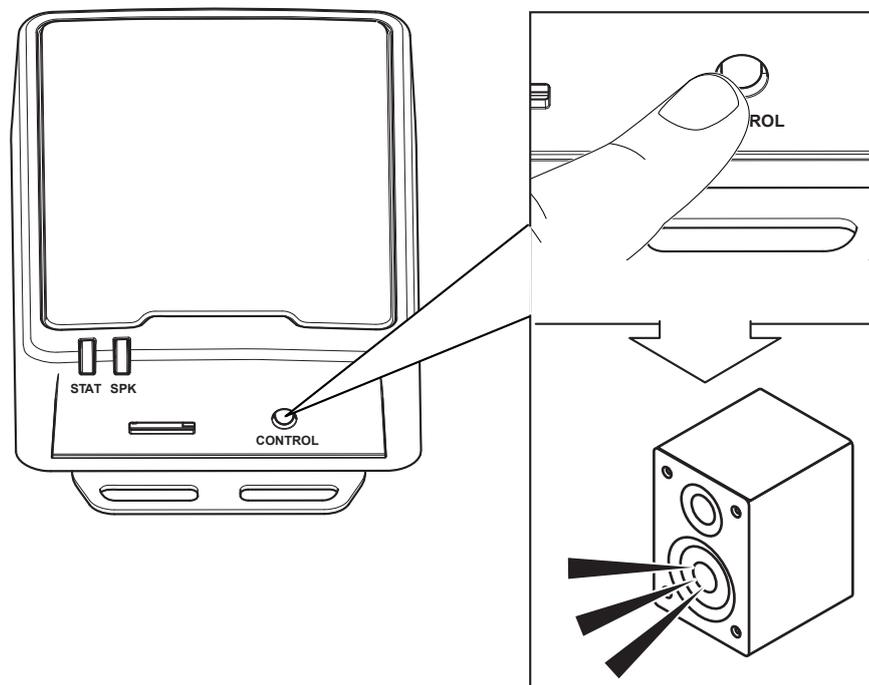
## Device setup

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9. In the Name field, enter "DTMF stop audio".
10. From the list of triggers, select **Call**, **DTMF** and "stop".
11. From the list of actions, select **Stop audio clip** and then click **OK**.

### Test the impedance

Test the impedance before you use the amplifier for the first time or when you have changed the speaker setup, connected to the amplifier. The SPK LED will flash green when an impedance test is required. Perform the impedance test by pressing the control button until you hear tones from the speaker.



# AXIS C8210 Network Audio Amplifier

## Site setup

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### Site setup

Included in the product (runs inside the device) is AXIS Audio Manager Edge, offering zone management, content management, content scheduling and remote monitoring.

For more detailed information:

- Visit the *AXIS Audio Manager Edge – User Manual*

For a complete overview of software management options:

- Visit *Audio Management Software*

# AXIS C8210 Network Audio Amplifier

## Integration

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### Integration

#### Play audio when a camera detects motion

This example explains how to set up the audio device to play an audio clip when an Axis network camera detects motion.

##### Prerequisites

- The Axis audio device and Axis network camera are located on the same network.
- The motion detection application is configured and running in the camera.

Prepare an audio clip link:

1. Go to **Audio > Audio clips**.
2. Click the link icon for an audio clip.
3. Set the volume and number of times to repeat the clip.
4. Click the copy icon to copy the link.

##### Example

The link will have this format:

```
http://[audiodeviceIP]/axis-cgi/playclip.cgi?location=camera_clicks.mp3&repeat=2  
&volume=45
```

Create an action rule:

1. In the webpage of the camera, go to **Settings > System > Events**.
2. Go to **Recipients** and add a recipient.
3. Type a name for the recipient, for example "Speaker".
4. Select **HTTP** from the **Type** drop-down list.
5. Paste the configured link from the audio device in the **Host** field.
6. Enter the user name and password of the audio device.
7. Click **Save**.
8. Go to **Rules** and add a rule.
9. Type a name for the action rule, for example "Play clip".
10. From the **Condition** list, select a video motion detection alternative under **Applications**.

##### Note

If there are no options for video motion detection, then go to **Apps**, click **AXIS Video Motion Detection** and turn on motion detection.

11. From the **Action** list, select **Send notification through HTTP**.
12. Under **Recipient**, select your recipient.
13. Click **Save**.

# AXIS C8210 Network Audio Amplifier

## Integration

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### Set up audio in AXIS Camera Station

This example explains how to:

- Add an Axis network audio device to AXIS Camera Station and associate it with an Axis network camera.
- Create a button in the camera's live view in AXIS Camera Station, that makes the audio device play an audio clip.

#### **NOTICE**

This system setup is suitable for non-life critical systems, for example intruder alarms or staff and customer address. Specific guidelines and standards (local to the installation) have to be met for implementation in critical systems, such as fire evacuation.

Limitations:

- Audio sent from AXIS Camera Station to an AXIS network audio device cannot be recorded.
  - An audio device must be associated with a camera in AXIS Camera Station.
  - You can only associate one audio device per camera.
  - There is no volume control for the audio device in AXIS Camera Station.
1. Add an AXIS network audio device to AXIS Camera Station:
    - 1.1 In AXIS Camera Station, click  and select **Configuration**.
    - 1.2 Go to **Devices > Add devices**.
    - 1.3 Select the network audio device from the list and click **Add**.
    - 1.4 Go to **Other devices** to check that the audio device has been added to the list.
  2. Associate the audio device with a camera:
    - 2.1 In AXIS Camera Station, go to **Devices > Streaming profiles** and select the camera that you want to associate the audio device with.
    - 2.2 In the device's streaming profile, select the audio device from the **Speaker** drop-down.
    - 2.3 Click **Apply**.
    - 2.4 To test the association, go to the camera's **Live view** in AXIS Camera Station and click the **Speak** button. When you speak into the computer's microphone, the audio device plays the audio.
  3. Prepare audio clip link:
    - 3.1 Go to **Audio > Audio clips**.
    - 3.2 Click the link icon for an audio clip.
    - 3.3 Set the volume and number of times to repeat the clip.
    - 3.4 Click the copy icon to copy the link.
  4. Create a button that triggers the audio clip:
    - 4.1 In AXIS Camera Station, go to **Configuration > Recording and events > Action rules** and click **New**.
    - 4.2 Click **Add** to add a trigger.
    - 4.3 In the list of triggers, select **Action button** and click **OK**.
    - 4.4 If a button has been created, then select **Create new button** and click **Next**.

# AXIS C8210 Network Audio Amplifier

## Integration

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- 4.5 Select **Command** button and click **Next**.
- 4.6 Enter the button details, for example:
  - Button label: Staff to till
  - Tooltip: Call staff to come to till
  - Add to camera: select the camera associated with the audio device.
  - Add to map.
  - Click **OK**.

### Note

You can associate the button with multiple maps or cameras.

- 4.6 Click **Next**.
- 4.7 Click **Add** to add an action.
- 4.8 In the list of actions, select **Send HTTP Notification** and click **OK**.
- 4.9 Paste the configured link from the audio device in the **URL** field.
- 4.10 Check **Authentication required** and enter the **User name** and **Password** of the audio device.
- 4.11 Click **OK**.
- 4.12 Click **Next** twice.
- 4.13 Enter a **Name** for the rule and click **Finish**.

In the camera's live view in AXIS Camera Station, there is now a button labelled **Staff to till**. When you click the button, the audio device plays the audio clip.

# AXIS C8210 Network Audio Amplifier

Learn more

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Learn more

## Voice over IP (VoIP)

Voice over IP (VoIP) is a group of technologies that enables voice communication and multimedia sessions over IP networks, such as the internet. In traditional phone calls, analog signals are sent through circuit transmissions over the Public Switched Telephone Network (PSTN). In a VoIP call, analog signals are turned into digital signals to make it possible to send them in data packets across local IP networks or the internet.

In the Axis product, VoIP is enabled through the Session Initiation Protocol (SIP) and Dual-Tone Multi-Frequency (DTMF) signaling.

## Session Initiation Protocol (SIP)

The Session Initiation Protocol (SIP) is used to set up, maintain and terminate VoIP calls. You can make calls between two or more parties, called SIP user agents. To make a SIP call you can use, for example, SIP phones, softphones or SIP-enabled Axis devices.

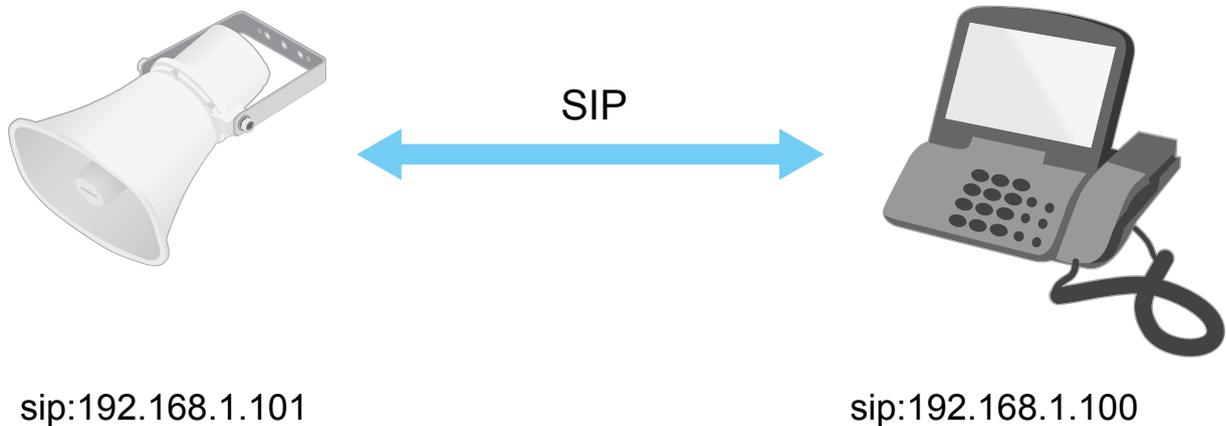
The actual audio or video is exchanged between the SIP user agents with a transport protocol, for example RTP (Real-Time Transport Protocol).

You can make calls on local networks using a peer-to-peer setup, or across networks using a PBX.

## Peer-to-peer SIP (P2PSIP)

The most basic type of SIP communication takes place directly between two or more SIP user agents. This is called peer-to-peer SIP (P2PSIP). If it takes place on a local network, all that's needed are the SIP addresses of the user agents. A typical SIP address in this case would be `sip:<local-ip>`

Example



You can set up a SIP-enabled phone to call an audio device on the same network using a peer-to-peer SIP setup.

## Private Branch Exchange (PBX)

When you make SIP calls outside your local IP network, a Private Branch Exchange (PBX) can act as a central hub. The main component of a PBX is a SIP server, which is also referred to as a SIP proxy or a registrar. A PBX works like a traditional switchboard, showing the client's current status and allowing for example call transfers, voicemail, and redirections.

The PBX SIP server can be set up as a local entity or offsite. It can be hosted on an intranet or by a third party provider. When you make SIP calls between networks, calls are routed through a set of PBXs, that query the location of the SIP address to be reached.

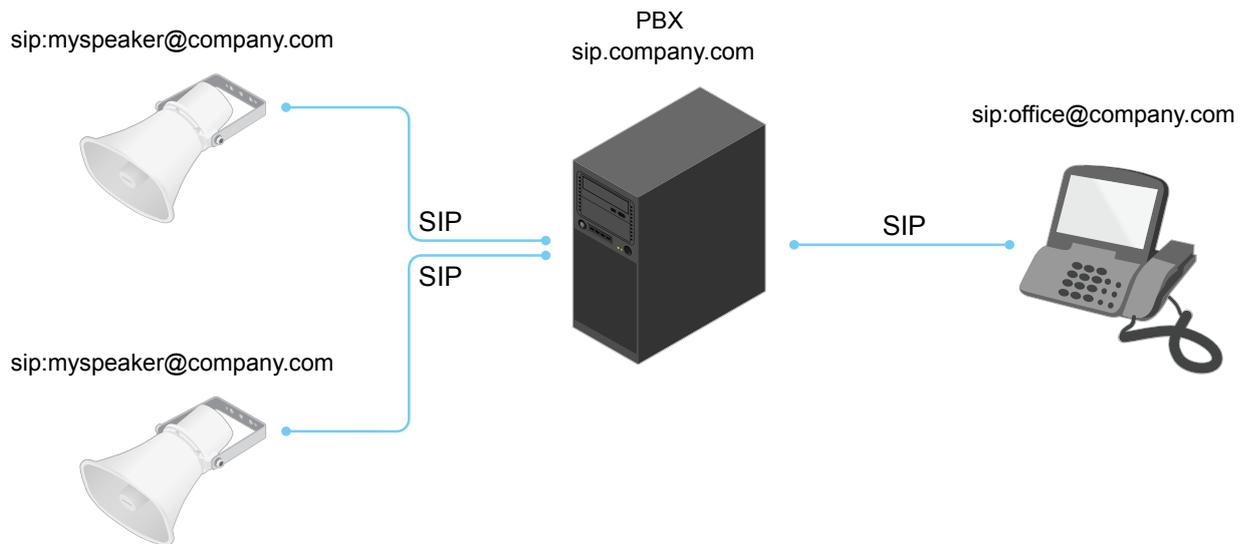
# AXIS C8210 Network Audio Amplifier

## Learn more

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Each SIP user agent registers with the PBX, and can then reach the others by dialing the correct extension. A typical SIP address in this case would be `sip:<user>@<domain>` or `sip:<user>@<registrar-ip>`. The SIP address is independent of its IP address and the PBX makes the device accessible as long as it is registered to the PBX.

### Example



## NAT traversal

Use NAT (Network Address Translation) traversal when the Axis device is located on an private network (LAN) and you want to access it from outside of that network.

### Note

The router must support NAT traversal and UPnP®.

Each NAT traversal protocol can be used separately or in different combinations depending on the network environment.

- **ICE** (The ICE Interactive Connectivity Establishment) protocol increases the chances of finding the most efficient path to successful communication between peer devices. If you also enable STUN and TURN, you improve the ICE protocol's chances.
- **STUN** - STUN (Session Traversal Utilities for NAT) is a client-server network protocol that lets the Axis device determine if it is located behind a NAT or firewall, and if so obtain the mapped public IP address and port number allocated for connections to remote hosts. Enter the STUN server address, for example, an IP address.
- **TURN** - TURN (Traversal Using Relays around NAT) is a protocol that lets a device behind a NAT router or firewall receive incoming data from other hosts over TCP or UDP. Enter TURN server address and the login information.

## Set up rules and alerts

You can create rules to make your device perform actions when certain events occur. A rule consists of conditions and actions. The conditions can be used to trigger the actions. For example, the device can play an audio clip according to a schedule or when it receives a call, or send an email if the device changes IP address.

# AXIS C8210 Network Audio Amplifier

Learn more

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## Applications

AXIS Camera Application Platform (ACAP) is an open platform that enables third parties to develop analytics and other applications for Axis products. To find out more about available applications, downloads, trials and licenses, go to [axis.com/applications](http://axis.com/applications).

To find the user manuals for Axis applications, go to [axis.com](http://axis.com).



To watch this video, go to the web version of this document.

[www.axis.com/products/online-manual/47555#t10001688](http://www.axis.com/products/online-manual/47555#t10001688)

*How to download and install an application*



To watch this video, go to the web version of this document.

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*How to activate an application licence code on a device*

# AXIS C8210 Network Audio Amplifier

## Troubleshooting

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### Troubleshooting

#### Reset to factory default settings

**Important**

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

To reset the product to the factory default settings:

1. Disconnect power from the product.
2. Press and hold the control button while reconnecting power. See *Product overview on page 20*.
3. Keep the control button pressed for 10 seconds until the status LED indicator turns amber for the second time.
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. Use the installation and management software tools to assign an IP address, set the password, and access the product.

It is also possible to reset parameters to factory default through the web interface. Go to **Maintenance > Maintenance actions** and click **Restore** to reset to factory default values but keep the IP address, or **Default** to reset all values including the IP address.

#### Check the current firmware

Firmware is the software that determines the functionality of network devices. One of your first actions when you troubleshoot a problem should be to check the current firmware version. The latest version may contain a correction that fixes your particular problem.

To check the current firmware:

1. In the device's webpage, go to **Overview**.
2. Check the **Firmware version**.

#### Upgrade the firmware

**Important**

Preconfigured and customized settings are saved when the firmware is upgraded (provided that the features are available in the new firmware), although this is not guaranteed by Axis Communications AB.

**Important**

Make sure the device remains connected to the power source throughout the upgrade process.

**Note**

When you upgrade the device with the latest firmware, the device receives the latest functionality available. Always read the upgrade instructions and release notes available with each new release before you upgrade the firmware. To find the latest firmware and the release notes, go to [axis.com/support/firmware](http://axis.com/support/firmware)

1. Download the latest firmware file to your computer, available free of charge at [axis.com/support/firmware](http://axis.com/support/firmware)
2. Log in to the device as an administrator.
3. Go to **System > Maintenance > Firmware upgrade** and follow the instructions on the page. When the upgrade has finished, the device restarts automatically.

# AXIS C8210 Network Audio Amplifier

## Troubleshooting

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### Technical issues, clues and solutions

If you can't find what you're looking for here, try the troubleshooting section at [axis.com/support](http://axis.com/support).

#### Problems upgrading the firmware

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Firmware upgrade failure	If the firmware upgrade fails, the device reloads the previous firmware. The most common reason is that the wrong firmware file has been uploaded. Check that the name of the firmware file corresponds to your device and try again.
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#### Problems setting the IP address

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The device is located on a different subnet	If the IP address intended for the device and the IP address of the computer used to access the device are located on different subnets, you cannot set the IP address. Contact your network administrator to obtain an IP address.
The IP address is being used by another device	Disconnect the Axis device from the network. Run the ping command (in a Command/DOS window, type <code>ping</code> and the IP address of the device): <ul style="list-style-type: none"><li>• If you receive: <code>Reply from &lt;IP address&gt;: bytes=32; time=10...</code> this means that the IP address may already be in use by another device on the network. Obtain a new IP address from the network administrator and reinstall the device.</li><li>• If you receive: <code>Request timed out</code>, this means that the IP address is available for use with the Axis device. Check all cabling and reinstall the device.</li></ul>
Possible IP address conflict with another device on the same subnet	The static IP address in the Axis device is used before the DHCP server sets a dynamic address. This means that if the same default static IP address is also used by another device, there may be problems accessing the device.

#### The device cannot be accessed from a browser

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Cannot log in	When HTTPS is enabled, ensure that the correct protocol (HTTP or HTTPS) is used when attempting to log in. You may need to manually type <code>http</code> or <code>https</code> in the browser's address field.  If the password for the user <code>root</code> is lost, the device must be reset to the factory default settings. See <i>Reset to factory default settings on page 17</i> .
The IP address has been changed by DHCP	IP addresses obtained from a DHCP server are dynamic and may change. If the IP address has been changed, use AXIS IP Utility or AXIS Device Manager to locate the device on the network. Identify the device using its model or serial number, or by the DNS name (if the name has been configured).

#### The device is accessible locally but not externally

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To access the device externally, we recommend using one of the following applications for Windows®:

- AXIS Camera Station: 30-day trial version free of charge, ideal for small to mid-size systems.

For instructions and download, go to [axis.com/vms](http://axis.com/vms).

#### Problems with sound files

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Can't upload media clip	The following audio clip formats are supported: <ul style="list-style-type: none"><li>• au file format, encoded in <math>\mu</math>-law and sampled with 8 or 16 kHz.</li><li>• wav file format, encoded in PCM audio. It supports encoding as 8 or 16-bit mono or stereo and sample rate of 8 to 48 kHz.</li><li>• mp3 file format, in mono or stereo with bitrate of 64 kbps to 320 kbps and sample rate of 8 to 48 kHz.</li></ul>
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# AXIS C8210 Network Audio Amplifier

## Troubleshooting

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Media clips are played with different volumes      A sound file is recorded with a certain gain. If your audio clips have been created with different gains, they will be played with a different loudness. Make sure that you use clips that have the same gain.

### Performance considerations

When setting up your system, it is important to consider how various settings and situations affect the amount of needed bandwidth (the bitrate) required.

The following factors are the most important to consider:

- Heavy network utilization due to poor infrastructure affects the bandwidth.
- Running multiple AXIS Camera Application Platform (ACAP) applications simultaneously may affect the the general performance.

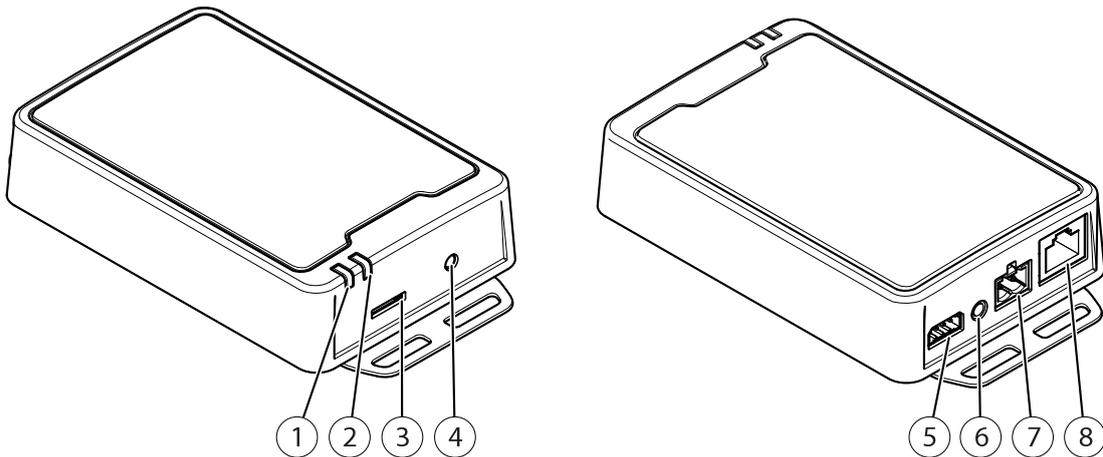
# AXIS C8210 Network Audio Amplifier

## Specifications

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### Specifications

#### Product overview



- 1 *Status LED indicator*
- 2 *Speaker LED*
- 3 *SD memory card slot*
- 4 *Control button*
- 5 *I/O connector*
- 6 *Audio-in connector*
- 7 *Speaker connector*
- 8 *Network connector*

#### LED Indicators

Status LED	Indication
Unlit	Unlit for normal operation.
Green	Steady green for normal operation.
Amber	Steady during startup and when restoring settings.
Red	Slow flash for failed upgrade.
Red/Green	Flashes red/green fast when identifying an audio device is selected.

SPK LED	Indication
Green	Steady green for normal operation. Flashes (two short green flashes and one long without light) when the impedance has not been calibrated.
Red	Flashes red when the overcurrent protection has been tripped.

# AXIS C8210 Network Audio Amplifier

## Specifications

### 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. Unmount the SD card from the product's webpage before removal.

For SD card recommendations, see [axis.com](http://axis.com).



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### Buttons

#### Control button

The control button is used for:

- Calibrating the speaker test. Press and release the control button and a test tone is played.
- Resetting the product to factory default settings. See *Reset to factory default settings on page 17*.

### Connectors

#### Network connector

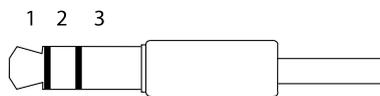
RJ45 Ethernet connector with Power over Ethernet Plus (PoE+).

#### 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 the Installation Guide at [www.axis.com](http://www.axis.com).

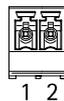
#### Audio connector

- Audio in – 3.5 mm input for a mono microphone, or a line-in mono signal (left channel is used from a stereo signal).



	1 Tip	2 Ring	3 Sleeve
Audio Input	Microphone/Line in	Microphone bias voltage	Ground

2-pin terminal block for speaker out.



# AXIS C8210 Network Audio Amplifier

## Specifications

Function	Pin	Notes
Speaker out (-)	1	
Speaker out (+)	2	

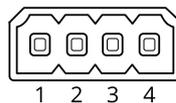
### I/O connector

Use the I/O connector with external devices in combination with, for example, motion detection, event triggering, and alarm notifications. In addition to the 0 V DC reference point and power (DC output), the I/O connector provides the interface to:

**Digital input** – For connecting devices that can toggle between an open and closed circuit, for example PIR sensors, door/window contacts, and glass break detectors.

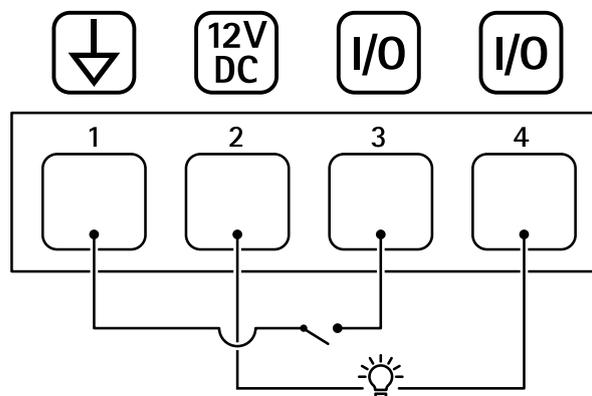
**Digital output** – For connecting external devices such as relays and LEDs. Connected devices can be activated by the VAPIX® Application Programming Interface, through an event or from the product's webpage.

4-pin terminal block



Function	Pin	Notes	Specifications
DC ground	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 – Internally connected to pin 1 (DC ground) when active, and floating (unconnected) when inactive. If used with an inductive load, e.g., a relay, connect a diode in parallel with the load, to protect against voltage transients.	0 to max 30 V DC, open drain, 100 mA

Example



- 1 DC ground
- 2 DC output 12 V, max 50mA
- 3 I/O configured as input

# AXIS C8210 Network Audio Amplifier

## Specifications

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4 I/O configured as output

# AXIS C8210 Network Audio Amplifier

## API commands

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### API commands

VAPIX® is Axis' own open API (Application Programming Interface). You can control almost all functionality available in Axis devices through VAPIX®. To get access to the complete VAPIX® documentation, join Axis Developer Community at [axis.com/developer-community](http://axis.com/developer-community)

Enter the commands in a web browser, and replace <deviceIP> with the IP address or host name of your device.

#### Important

The API commands execute immediately. If you restore or reset your device all settings will be lost. For example action rules.

#### Example

Restart the device

#### Request

```
http://<deviceIP>/axis-cgi/restart.cgi
```

#### Example

Restore the device. The request returns most settings to default values, but keeps the IP number.

#### Request

```
http://<deviceIP>/axis-cgi/factorydefault.cgi
```

#### Example

Reset the device. The request returns all settings including IP number to default values.

#### Request

```
http://<deviceIP>/axis-cgi/hardfactorydefault.cgi
```

#### Example

See a list of all device parameters.

#### Request

```
http://<deviceIP>/axis-cgi/param.cgi?action=list
```

#### Example

Get a debug archive

#### Request

```
http://<deviceIP>/axis-cgi/debug/debug.tgz
```

#### Example

Get a server report

#### Request

```
http://<deviceIP>/axis-cgi/serverreport.cgi
```

#### Example

Capture a network trace of 300 seconds

#### Request

```
http://<deviceIP>/axis-cgi/debug/debug.tgz?cmd=pcapdump&duration=300
```

#### Example

Enable FTP

#### Request

```
http://<deviceIP>/axis-cgi/param.cgi?action=update&Network.FTP.Enabled=yes
```

#### Example

# AXIS C8210 Network Audio Amplifier

## API commands

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Disable FTP

**Request**

`http://<deviceIP>/axis-cgi/param.cgi?action=update&Network.FTP.Enabled=no`

Example

Enable SSH

**Request**

`http://<deviceIP>/axis-cgi/param.cgi?action=update&Network.SSH.Enabled=yes`

Example

Disable SSH

**Request**

`http://<deviceIP>/axis-cgi/param.cgi?action=update&Network.SSH.Enabled=no`

