AXIS Audio Manager Pro C7050 Mk III

User Manual

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Solution overview

With AXIS Audio Manager Pro pre-installed on the C7050 Mk III server, you can control large and advanced audio installations from a single point. You can set up zones, audio sources, and schedules.

System requirements

Recommended browsers for the client:

- Chrome

- Firefox

Get started

Installation

1. Initial Windows® setup. After installing your device, you are guided through a few steps to set up the region, language, keyboard layout, and an administrator account and its password.

2. We recommend to update Windows® to the latest version. See *Update Windows® on page 22*.

Update AXIS Audio Manager Pro

1. Go to *axis.com* and download the latest version of AXIS Audio Manager Pro.

2. Download and run the installation file.

3. Select a certificate and click **Next**.

   - If you don't have a certificate, then select **Self-signed certificate**.

Note

When using a self-signed certificate you will be prompted the first time you start AXIS Audio Manager Pro 4 and asked to add a security exception in your browser. All you need to do is to accept the security exception and you will not be prompted again.

If you want to replace your certificate in the future, go to **System settings** > **Security** in the web client.

For more information about certificates, see *Certificate management*.

4. Select **Finish**.

Download audio drivers

In some cases you may want to use the hardware inputs and outputs on the PC instead of ports on the network devices. Depending on the use case, you may have to change the default configuration of the hardware ports. To switch functionality between the 3.5 mm audio jacks, you need to update the audio drivers.

To update the audio drivers:

1. See *Dell's support page* and download the latest .exe file.

2. Launch the file in Windows® and follow the instructions provided on screen.

Start the application

1. On the Windows system tray, click [icon] > [icon] > **Open AXIS Audio Manager Pro Client**.

2. Enter password and log in.

Configure the network

All devices must be connected to the same multicast domain as the server that AXIS Audio Manager Pro is installed on.

Audio streaming between the server and all the devices use multicast. The default range is 239.0.0.0 - 239.0.0.254.

Make sure you have reserved enough bandwidth. The maximum consumption for each multicast stream is 443 kbps.

Port	TCP	UDP	Adjustable	Description
443	x		x	Web UI [1]
5433	x		x	System port [2]
6992	x			System port [3]
6999	x			System port
6999		x		System port (multicast audio streaming)
7010	x		x	System port [2]
5060	x	x	x	SIP [4]
30000–31999		x	x	RTP stream for SIP calls

[1] If the default port is already in use, the user must choose a different port when installing AXIS Audio Manager Pro.
[2] If the default port is already in use, then the next available port will be used.
[3] If the default port is already in use, then the Traceview application for capturing server logs will not be able to connect to the AXIS Audio Manager Pro server.
[4] The default port for the SIP server is 5060. You can choose a different port. If you set up several SIP servers, you need one port for each server.

Configure the network settings:

1. Go to the AXIS Audio Manager Pro client.

    -   See *Start the application on page 4*

2. Go to ⚙ **System settings** > **Network**.

3. Change the multicast range if needed.

Note

> If you want to set multicast or unicast for a physical zone, go to 🔊 **Physical zones**, click a zone, and then go to **NETWORK COMMUNICATION**.

4. Under **Network interface**, select the same IP address as your server.

5. If you intend to stream content from the web, go to ⚙ **System settings** > **Proxy** and set up your proxy settings.

Prepare your devices

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

help.axis.com/?&piaId=85591&section=prepare-your-devices

Prepare your Axis devices:

1. Run AXIS Device Manager Client.

    -   To download and install AXIS Device Manager, go to *axis.com/products/axis-device-manager*.

2. When AXIS Device Manager starts, it will automatically search for devices.

    -   To start the search manually, click ⊞ .

    -   If no devices are found, check your network configuration. See *Configure the network on page 4* .

    -   If the application informs you that some devices have old firmware, then click the link to upgrade to the latest firmware.

    -   Select the devices you want to add, click **Next**, and then click **Finish**.

3. Set a password for the devices:

    3.1 Select all your devices and click 🔒 .

    3.2 Enter username and password, and click **OK**.

4. Install the application files on your devices:

    4.1 Select all your devices in the list.

    4.2 Right-click the selection and choose **Install Camera Application...**.

    4.3 Browse to this folder on the server:

    ```
    \Program files\Axis Communications\AXIS Audio Manager Pro\Manager
    \Firmware\
    ```

    4.4 Select the file `AXIS_Audio_Manager_Pro_*_mipsisa32r2el.eap` and click **OK**.

    This will install the application on the following devices:

    -   AXIS C8033 Network Audio Bridge

    -   AXIS C2005 Network Ceiling Speaker

    -   AXIS C1004-E Network Cabinet Speaker

Get started

> **Note**
>
> If you have other types of devices, then you will get an error message, since they use a different application. This is not a problem. Just close the error message and continue.
>
> The reason we recommend this solution, is that it is simply easier to select all devices than to select only those that apply to the selected application file.

    4.4   Click **Next**.

    4.5   Click **No** and **Next**.

    4.6   Click **Finish**.

    4.7   Select all your devices again, right-click and choose **Install Camera Application...**.

    4.8   Browse to this folder on your computer:

           `\Program files\Axis Communications\AXIS Audio Manager Pro\Manager \Firmware\`

    4.9   Select the file `AXIS_Audio_Manager_Pro_*_armv7hf.eap` and click **OK**.

           This will install the application on the following devices:

    -   AXIS C1310–E Network Horn Speaker

    -   AXIS C1410 Network Mini Speaker

    -   AXIS C1210-E Network Ceiling Speaker

    -   AXIS C1211-E Network Ceiling Speaker

    -   AXIS C1510 Network Ceiling Speaker

    -   AXIS C1511 Network Ceiling Speaker

    -   AXIS C1610-VE Network Sound Projector

    -   AXIS C8110 Network Audio Bridge

    -   AXIS C8210 Network Audio Amplifier

    -   AXIS D3110 Connectivity Hub

> **Note**
>
> If you have other types of devices, then you will get an error message, since they use a different application. This is not a problem. Just close the error message and continue.
>
> The reason we recommend this solution, is that it is simply easier to select all devices than to select only those that apply to the selected application file.

    4.11 Click **Next**.

    4.12 Click **No** and **Finish**.

5.   Restart the devices:

    5.1   Select all the devices you want to use.

    5.2   Right-click the selection and click **Restart**.

    5.3   Click **Yes** to confirm.

6.   Configure the AXIS Audio Manager Pro application:

6.1   Select all the devices you want to use.

6.2   Right-click the selection and choose **Configure Devices** > **Configure...**.

6.3   In the search field, type 'audiomanagerpro'.

6.4   In the **Primary server ip address** field, enter the IP address of the server that AXIS Audio Manager Pro is running on.

6.5   Click **Next** and **Finish**.

To use a 2N SIP Mic, you need to upgrade to firmware version 1.17.0 or later.

For more information, see the *2N SIP Mic user manual*.

Set up your first site

Once you have configured the network and prepared your devices, you are ready to set up a site.

Suggested workflow:

1. *Add and organize devices on page 9*

2. *Set volumes on page 19*

3. *Set your opening hours on page 14*

4. *Schedule content on page 10*

5. *Set up paging on page 15*

Add and organize devices

Before you can add a device, make sure it is prepared for use. See *Prepare your devices on page 5* .

A device can only be used by the system if it belongs to a physical zone. Physical zones can be created in a hierarchy. If you click a zone and create a new zone, then the new zone will become a sub-zone. The hierarchy can be up to ten levels deep.

Before you create a zone structure, you should think about how you want to use your audio system. For instance, in a school you might want to create one zone called "All classrooms". In this zone you could create sub-zones for each classroom. This will give you the possibility to adjust the volume or play content in all the classrooms simultaneously by working only with the "All classrooms" zone.

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

help.axis.com/?&piaId=85591&section=add-and-organize-devices

Set up the zone structure for a school.

1. Go to 🔲 **Physical zones**.

2. If you want to create a sub zone, click the parent zone in the tree structure.

3. Click [+] to create a new physical zone.

4. To add a device to the physical zone, go to **DEVICES** and click **+ ADD**.

Identify a device

You can make a device play a test tone, to make it easy for you to locate the speaker.

1. Go to **Physical zones**.

2. Click 🔔 for the device and select how long time the test tone will play.

Schedule content

Scheduling & destinations is where you plan your audio content.

You create a destination to define where to play your audio content. You can add multiple physical zones as well as individual speakers.

Once you have created your destination, you can add schedules for planning your announcements and music. If you intend to do paging, you add paging sources to the destination.

Schedule announcements

You can schedule when to play a playlist. The full playlist will be played. If you want to play only one audio file, then you need to create a playlist containing only that file.

1. Go to **Announcements**.

2. To add sound files to the library, click **ADD AUDIO FILES**.

3. Create a playlist:

    3.1 Under **PLAYLISTS**, click [+] .

    3.2 Add audio files to the playlist.

4. Create a destination.

    4.1 Go to **Scheduling & destinations**.

    4.2 Under **DESTINATIONS**, click [+] .

    4.3 Name the destination and click **CREATE**.

    4.4 Define where to play your audio for the destination by selecting paging sources, physical zones or individual speakers.

5. Click **+ EDIT SCHEDULE**.

6. Click **+ EVENT**.

7. Under **Source type**, select **Announcement**.

8. Fill in the other fields and click **SAVE**.

Example

In a school, you want a bell to ring in the whole school building at 8:30 and 16:30, every weekday for the rest of the semester.

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

help.axis.com/?&piaId=85591&section=schedule-announcements

Schedule music

First define the content you want to play, by setting up a playlist, web stream, device source or server source. Then schedule when and where to play the content.

If you want to use a web stream or RTP stream, make sure you have set up your proxy. See *Configure the network on page 4* .

Create a playlist from audio files:

1. To add audio files to the server, go to **Music** > **Library**.

2. You can create folders to organize your audio files.

   To create a folder, click **CREATE FOLDER**.

3. To add an audio file to the library, click **ADD CONTENT**.

   - Supported formats: mp3, mp4, mpeg, aac, wma, ogg, flac, wav

4. Click **PLAYLISTS** > ➕ .

5. Name your playlist and click **CREATE**.

6. To add a file from the library, click **ADD TRACKS FROM LIBRARY**.

7. To add a file from the web, click **ADD A TRACK FROM URL**.

   - Supported formats: mp3, mp4, mpeg, aac, wma, ogg, flac, wav

Create an internet radio stream:

1. Go to **Music** > **WEB STREAMS**.

2. Click ➕ .

3. Under **Web stream type**, select **Internet radio**.

4. Name your web stream.

5. Enter a URL for the web stream.

   - Supported formats: m3u, pls, asx

6. Click **CREATE**.

7. Adjust the stream delay.

8. Select an audio quality.

Schedule content

9. Click **SAVE**.

Create an RTP stream:

1. Go to ♩ **Music** > **WEB STREAMS**.

2. Click ⊞ .

3. Under **Web stream type**, select **RTP stream**.

4. Name your web stream.

5. Enter a listening port.

6. Click **CREATE**.

7. To use unicast streaming, turn off **Multicast IP address**.

8. To use multicast streaming, turn on **Multicast IP address** and enter an IP address.

9. If you want to receive content only from one IP address for security reasons, then turn on **Source IP address** and enter the IP address.

10. Click **SAVE**.

Stream music from a device using an audio bridge:

1. Connect a device, such as a mobile phone, to the line-in of an audio bridge or amplifier in your system.

2. Go to the device interface of the audio bridge or amplifier by entering the IP address of the device in your web browser.

3. Go to **Device settings > General** and select **Full duplex** or **Simplex – microphone only** under **Audio mode**.

4. Go to **Input** to adjust the input gain.

5. In AXIS Audio Manager Pro, go to ♩ **Music** > **DEVICE SOURCES** to see your device sources.

Stream music from audio devices in your Windows operating system:

1. Go to ♩ **Music** > **SERVER SOURCES**.

2. Click ⊞ .

3. Name the source.

4. Under **Audio device**, select the input device you want to use. Available devices are detected automatically.

5. Click **CREATE**.

Schedule your content:

1. Go to 📅 **Scheduling & destinations**.

2. Under **DESTINATIONS**, click ⊞ .

3. Name the destination and click **CREATE**.

Schedule content

4. Click **+ EDIT SCHEDULE**.

5. Click **+ EVENT**.

6. Name the schedule.

7. Under **Source type**, select **Music**.

8. Under **Select source**, select your source (a playlist, web stream, device source or server source).

9. Define when to play the music and click **SAVE**.

10. Click ✕ to exit.

11. Under **Destinations**, click your destination.

12. Add physical zones and individual speakers to define where to play the music.

Edit events

Music and announcements will appear as events in your content schedule.

To view your events, go to 📅 **Scheduling & destinations** and click **+ EDIT SCHEDULE**

- To edit or remove an event series, click the event in the list to the right.

- To edit or remove a single event, click the event in the schedule.

Note

If you edit a single event, then the changes will be lost if you edit the series that the event belongs to.

Set your opening hours

Opening hours are useful for relative scheduling.

Example

You want a bell to play an announcement every school day ten minutes before the school closes.

Set up the announcement to play ten minutes before closing time. This way the bell will always ring at the correct time even if you change the closing time, or if the closing time vary from day to day.

1. Go to ⊗ **Opening hours**.

2. Set the opening hours of your site and click **SAVE**.

Set up paging

Before you set up paging, you should prepare the destinations you want to use. A destination contains the zones and devices that the paging will be sent to.

If you want to page an announcement, you must first create a playlist containing one or several audio files.

Paging with a 2N SIP Mic

1. Set up a SIP server:

   1.1 Go to SIP settings.

   1.2 Click **+ SERVER**.

   1.3 Name the SIP server.

   1.4 Enter the domain name or IP address of your server.

   1.5 Click **CREATE**.

2. Set up a SIP client for your 2N SIP Mic:

   2.1 Click for the SIP server.

   2.2 Go to **CLIENTS**.

   2.3 Click **+ CLIENT**.

   2.4 Name the client.

   2.5 Enter a user ID.

   2.6 Enter credentials for authentication.

   2.7 Click **CREATE**.

3. Configure the 2N SIP Mic:

   3.1 Go to the 2N SIP Mic interface.

   -    The interface is reached by entering the IP address for the mic in a web browser.

   3.2 Go to **VoIP > SIP Proxy account**.

   3.3 Under **Caller ID**, enter the user ID you used for the client.

   3.4 Turn on **Use SIP account**.

   3.5 Under **SIP Proxy address**, enter the server IP address or domain name.

   3.6 Turn on **Use registration**.

   3.7 Under **Registration server address**, enter the server IP address or domain name.

   3.8 Enter the credentials you used for authentication in your SIP client.

   3.9 Click **APPLY**.

Set up paging

4. Check that the paging device is registered on the SIP server:

    4.1 In the **2N SIP Mic** interface, go to **System status** and check that it says **Registered** under **SIP Proxy line status**.

    4.2 Return to AXIS Audio Manager Pro.

    4.3 Press F5 to refresh the browser.

    4.4 Go to 🎤 **Paging sources** > **2N SIP MIC**.

    4.5 Check that your mic has the status **Registered**.

    Note

    > If the registration didn't work, check your network settings and SIP account credentials.

5. Set up a paging source to define where your paging will be played:

    5.1 Go to 🎤 **Paging sources** > **PAGING SOURCES**.

    5.2 Click **+ SOURCE**.

    5.3 Name the source.

    5.4 Enter a call number.

    5.5 Select your destination.

6. Configure a button on the 2N SIP Mic for paging a live callout:

    6.1 Go to 🎤 **Paging sources** > **2N SIP MIC**.

    6.2 Click ✏ for the mic.

    6.3 Turn on the button you want to use for paging.

    6.4 Enter a name.

    6.5 Select **Paging** as action.

    6.6 Select your paging source.

    6.7 Click **SAVE**.

7. Configure a button on the 2N SIP Mic for paging an announcement:

    7.1 Go to 🎤 **Paging sources** > **2N SIP MIC**.

    7.2 Click ✏ for the mic.

    7.3 Turn on the button you want to use for paging.

    7.4 Enter a name.

    7.5 Select **Play announcement** as action.

    7.6 Select a destination.

    7.7 Select a playlist.

  7.8 Select a priority.

8. Start paging a live message:

  8.1 Press the configured button on the 2N SIP Mic.

  8.2 Start speaking.

  8.3 To stop paging, press the same button again.

9. Start paging an announcement:

  9.1 Press the configured button on the 2N SIP Mic. The playlist is played once.

Paging with SIP trunk

You can page by calling a number that is redirected by a PBX to AXIS Audio Manager Pro, which will forward the audio to a destination.

Before you start, you need to have a configured PBX environment, such as Cisco. In AXIS Audio Manager Pro, you must have created a destination that the audio will be sent to. For more information about destinations, see *Schedule content on page 10*.

1. Add a SIP server:

  1.1 Go to   🎤   **SIP settings**.

  1.2 Click **+ SERVER**.

  1.3 Name the SIP server.

  1.4 Enter the domain name or IP address or your server.

  1.5 Enter port number.

  1.6 Click **CREATE**.

2. Add a SIP trunk to the SIP server:

  2.1 Click the pen icon for your SIP server.

  2.2 Go to **TRUNKS**.

  2.3 Click **+ TRUNK**.

  2.4 Name the SIP trunk.

  2.5 Enter the domain name or IP address of your PBX as remote address.

  2.6 Enter the SIP port used in the PBX as remote port.

  2.7 Select a transport type depending on your network requirements.

  2.8 If the PBX requires identification, enter the credentials.

> Note
>
> If your PBX doesn't require identification, then go to   🎤   **SIP settings** > **ADVANCED** to disable it.

  2.9 If your PBX server requires registration, select **Use registration** and enter the details.

  2.10 Click **CREATE**.

3. Add a paging source:

3.1 Go to 🎤 **Paging sources**.

3.2 Click **+ SOURCE**.

3.3 Name the paging source.

3.4 Enter a call number that corresponds to the route pattern set in the PBX.

3.5 Select a destination.

3.6 Click **Save**.

Set priority for paging

If you are paging to several destinations at the same time, then the one with the highest priority will be used.

Change the priority order of your destinations:

1. Go to 📅 **Scheduling & destinations**.

2. Under **CONTENT PRIORITIES**, click **Paging**.

3. Drag and drop the destinations to change their priority.

Talkback to an Axis device

It is possible to call from a SIP device to an Axis device, so that audio is communicated in both direction.

Requirements:

- A SIP device configured to your SIP server (see *Paging with a 2N SIP Mic on page 15*)

- An Axis device that has both a microphone and a speaker

Set up a talkback device:

1. Go to **Paging sources** > **TALKBACK DEVICES**.

2. Click **+ TALKBACK DEVICE**.

3. Enter a name and a SIP call number.

4. To select your talkback device, click **SELECT DEVICE**.

5. Under **Device source configuration**, select a source type, input gain and an audio profile.

6. Select a priority.

7. Click **SAVE**.

To initiate talkback, call the SIP number of the talkback device from your SIP device.

Set volumes

Calibrate master volumes

The system has a master volume for each content type. By default, music is set to 20 db lower than other content types, to make them sound louder as they are usually more important.

You can adjust the volumes for individual speakers as well as groups of speakers by adjusting the volume for the physical zones.

Example

In a school you have a physical zone called `All classrooms`. Inside this physical zone, you have the physical zones `Classroom 1`, `Classroom 2` and `Classroom 3`.

If you adjust the volume for `All classrooms`, then this will affect all the speakers located in all the classrooms.

If you adjust the volume for `Classroom 1`, then only the speakers in that classroom will be affected.

The resulting volume for each speaker will be the sum of the following:

- The maximum volume of the speaker (this is different for different products)

- The set volume for the individual speaker

- The sum of all the volumes set for the zones that the speaker belongs to

- The master volume for the content type

If the final sum of all volumes exceed the maximum volume of the speaker, then the maximum volume will be used.

1. Go to ![icon] **Volume calibration** > **Master site calibration**.

2. Set the master volume for each content type.

3. Play a content type and listen to the sound. Adjust the volume to a suitable level.

4. Click the zones and calibrate the volume for each zone.

    - Adjust the volumes of the physical zones by starting at the top of the hierarchy and then further down in the sub-zones.

5. To adjust the volume for an individual speaker:

    5.1 Go to the device interface by entering the IP address of the device in a web browser.

    5.2 Go to **Audio** > **Device settings** and adjust the gain.

Set volume levels

To change volumes temporarily, go to ![icon] **Music volumes**.

- To mute the entire site:

    1. Go to **Site volumes**.

    2. Turn on **Mute site**.

        No sound will be played from the system.

- To mute all music:

    1. Go to **Site volumes**.

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2. Turn on **Mute music**.

   Music will be muted, but you can still play announcements and paging.

- To set the volume of a zone:

  1. Click a zone.

  2. Adjust the volume.

Manage your database

If you want to reinstall or transfer your system, you can backup and restore your database. The backup will include all your configurations, but not your files.

- On the Windows system tray, click > > **Backup database** or **Restore database**.

You can also clear your database. All configurations will be removed, but your files will remain.

- On the Windows system tray, click > > **Clean and reinitialize database**.

Manage your device

Update Windows®

Windows® 10 periodically checks for updates. When an update is available, your device automatically downloads the update but you've to install it manually.

Note

Recording will be interrupted during a scheduled system restart.

To manually check for updates:

1. Go to **Settings > Update & Security > Windows Update**.

2. Click **Check for updates**.

Configure Windows update settings

Sometimes you might want to change how and when Windows® updates.

Note

All ongoing recordings stop during a scheduled system restart.

1. Open the Run app.

   - Go to **Windows System > Run**, or

   - press WIN and R.

2. Type `gpedit.msc` and click **OK**. The Local Group Policy Editor opens.

3. Go to **Computer Configuration > Administrative Templates > Windows Components > Windows Update**.

4. Configure the settings as required, see example.

Example

To automatically download and install updates without any user interaction and have the device restart if necessary out of office hours use the following configuration:

1. Open **Always automatically restart at the scheduled time** and select:

   1.1 **Enabled**

   1.2 **The restart timer will give users this much time to save their work (minutes)**: 15.

   1.3 Click **OK**.

2. Open **Configure Automatic Updates** and select:

   2.1 **Enabled**

   2.2 **Configure Automatic updates**: Auto download and schedule the install

   2.3 **Schedule Install day**: Every Sunday

   2.4 **Schedule Install time**: 00:00

   2.5 Click **OK**.

3. Open **Allow Automatic Updates immediate installation** and select:

Manage your device

3.1 **Enabled**

3.2 Click **OK**.

Need more help?

Contact support at *axis.com/support*.

To make it easier for Axis support to diagnose your problem, you can download a diagnostic package:

- On the Windows system tray, click > > **Download diagnostic package.**